

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND
TECHNOLOGY

COLLEGE OF ARTS AND SOCIAL SCIENCES

FACULTY OF SOCIAL SCIENCES

DEPARTMENT OF ECONOMICS

THE EFFECT OF MICROCREDIT ON BENEFICIARIES IN
KOFORIDUA

BY

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A THESIS PRESENTED TO THE DEPARTMENT OF ECONOMICS,
KWAME NKRUMAH UNIVERSITY OF SCIENCE AND
TECHNOLOGY, IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE AWARD OF A MASTER OF
PHILOSOPHY DEGREE IN ECONOMICS

NOVEMBER, 2014

DECLARATION

I hereby declare that this work is the results of my own investigations and that apart from the works of those which have been duly acknowledged in the text, this work has never been presented to this University or any other university elsewhere for the award of any certificate, diploma or degree.

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ABSTRACT

Microfinance has become wide spread in the country. The assertion that needs to be discussed is how do these MFIs affect the lives of the people who access their products in the areas where they are operating? To what extent are these institutions having impact on their beneficiaries through the microcredit they provide? Has the poverty level reduced in those areas as microfinance is claimed to do? What are the answers to these questions? It is for this reason that this study has been undertaken to know what microfinance does for the clients in Koforidua.

This study therefore investigated the effect of microfinance on clients in Koforidua focusing on household income, poverty reduction and expenditure on food.

The study employed the Ordinary Least Squares (OLS), logit analysis and probit analysis. These were used to estimate the effect of loans on household income and relationship between household participation and food expenditure, effect of loans on poverty and probability of households to participate in microfinance programme respectively.

The study found that the amount of loans received by a household had a positive and significant impact on household income. This same variable on the other hand reduced the poverty level of those living below the poverty line. However the depth of the impact of microfinance on poverty was found to be shallow when the poverty levels of programme and non-programme households were compared. The expenditure on food by households in the low income bracket who normally access microfinance services mostly

takes a high percentage of their income. The participation of a household, however, in microfinance programme has no significant effect on the households' expenditure on food.

The study concludes that apart from loans the other services provided by microfinance institutions need to be marketed effectively. This will help assess the overall effect of microfinance on clients in Ghana and the world at large.



DEDICATION

I dedicate this work to my late father, Mr. C. N Djamoe, Mum and Siblings.

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ACKNOWLEDGEMENT

Thanks be to God whose strength and might has brought me this far. I sincerely acknowledge how far he has brought me.

I wish to extend my sincere gratitude to my supervisor, Mr J. Appiah-Nkrumah for the guidance he offered to me throughout the study. I am most grateful to him for the comments and suggestions he offered to bring out the best out of my work.

Appreciation goes to my family for the love, support and encouragement given me especially my parents and siblings.

Special thanks to all lecturers in the department whose advice has helped to shape me especially Dr Hadrat M. Yussif and Dr. Daniel Sakyi

Finally, I thank all friends who supported me in various ways to make my work come to a success, most especially Obed Afrifa Asamoah, Emmanuel Gbertey, Karim Suale and Solomon Samanhyia.

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LIST OF ABBREVIATIONS

AMC	Amount of Credit taken
ASCAs	Accumulating Savings and Credit Associations
BoG	Bank of Ghana
CGAP	Consultative Group to Assist the Poor
CUs	Credit Unions
EXFOD	Expenditure on food
FINSSP	Financial Sector Strategic Plan
FNGOs	Financial Non-Governmental Organisations
GHAMFIN	Ghana Microfinance Institutions Network
HINC	Household Income
LEDU	Level of Education
MDGs	Millennium Development Goals
MFI	Microfinance Institutions
MPAYW	Monthly payment to workers
MPROF	Monthly Profit
MST	Marital Status
NBFIs	Non-Bank Financial Institutions
NDEP	Number of Dependents
NGOs	Non-Government Organisations
NHME	Number of Household Members
OCC	Occupation of a Respondent
OLS	Ordinary Least Square

PART	Participation
PNDCL	Provisional National Defence Council Law
RCBs	Rural and Community Banks
REM	Remittances from relatives and friends elsewhere
REP	Rural Enterprise Project
RFSP	Rural Financial Services Project
ROSCAs	Rotating Savings and Credit Associations
SAT	Sinapi Aba Trust
SIF	Social Investment Fund
SOMED	Soweto Microenterprise Development
UNDP	United Nations Development Programme



CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The United Nations designated 2005 as the International Year of Microcredit, explaining on its website that micro-entrepreneurs can use their small loans to “grow thriving business and, in turn, provide for their families, leading to strong and flourishing local economies.” The Nobel Committee awarded the 2006 Nobel Peace Prize to Muhammad Yunus and Grameen Bank, declaring that microcredit is “an ever more important instrument in the fight against poverty.”

Successive governments over the years have tackled the issue of poverty in Ghana with several intervention programmes of actions. The Structural Adjustment Programme (SAP) and Economic Recovery Programme (ERP) were all implemented to ensure that the lives of people are improved. Apart from these, other programmes such as the Ghana Poverty Reduction Strategy 1 (GPRS 1) and Growth and Poverty Reduction Strategy (GPRS II) have also been geared towards poverty reduction. GPRS 1 focused mainly on poverty reduction and projects. The goal of GPRS II has also been geared towards achieving sustainable equitable growth, accelerated poverty reduction and the protection of the vulnerable and the excluded within a decentralized democratic environment.

Programmes that have been implemented in Ghana so far include the Financial Sector Strategic Plan (FINSSP), Microfinance Project, the Rural Financial Services Project (RFSP), Agricultural Services Investment Project, the Social Investment Fund; the Community Based Rural Development Programme, and Rural Enterprise Project (REP).

Microfinance institutions or programmes are also becoming increasingly important component of strategies to reduce poverty or promote micro and small enterprise development (Hulme, 1997). In view of this most policy makers have come to believe that microfinance can help eliminate poverty. It was at this point that the idea of microfinance was developed in Ghana. This was after there had been proof of the efficacy of microfinance in reducing poverty in the Asia and Latin America.

As the idea of microfinance began to spread, so many Microfinance Institutions (MFIs) also began to spring up. According to the Ghana Microfinance Institutions Network (GHAMFIN) (2003), there are more than 233 MFIs operating in Ghana. Some are banking institutions, NGOs, Christian Organizations and Non-banking Financial Institutions. They are spread across the whole country. As at March 2014, the Bank of Ghana had issued final licenses to 394 Microfinance institutions comprising 344 Microfinance Companies, 45 Money Lending Companies and 5 Financial Non-Governmental Organisations (FNGOs) (www.ghana.gov.gh).

Traditionally commercial banks have not provided financial services such as loans to clients with little or no cash income mainly because costs incurred in processing loans are too high. Additionally, these poor people do not have high assets that the banks accept as collateral. Thus, lack of access by the poor to these financial institutions causes them to resort to informal local money lenders whose interest rates are high.

In Ghana, the informal lending is usually associated with the Susu system. This system provided micro entrepreneurs who are usually women with collection of savings and

safekeeping services of these savings. Loans were therefore given by the Susu collectors to these people out of their savings.

This therefore brings to the fore the idea of microfinance. So then microfinance is a movement whose objective is a world in which as many poor and near poor households as possible have permanent access to an appropriate range of high quality financial services (Adams and Graham, 1984). So the objective of MFI according to Otero (1994) is not providing capital to the poor to combat poverty; it seeks to create an institution that delivers financial services to the poor who are ignored by the formal banking sector.

One of such MFIs is the Grameen Bank of Bangladesh founded by Muhammad Yunus in 1976. He made a first experimental loan of \$1.5 to 43 poor people in the village of Jobra in Bangladesh. These loans were made without collateral and interest rate and with the aim of letting these people have a small capital. This enabled them to pay in advance and get far better prices both for buying and selling (Espinosa 2012). There are other MFIs in other developing countries such as Banco Sol in Bolivia and Bank Rakyat Indonesia.

Ghana, like these developing countries, which is doing everything possible to reach the middle income status, needs to look at the role of MFI in reducing poverty.

In discussing this issue, it is important to look at how many clients benefit from microfinance and whether the poor actually benefit from these loans more than others. If there are more than 233 regulated and non-regulated MFIs in Ghana as at 2003 with more than 360,000 clients and currently 344 MFIs, then the ongoing activities of these MFIs need to be assessed to know the impact on their clients.

With the emergence of many MFIs in Ghana there seem to be some hope for the poor, but some questions that come to mind are: what is the degree of the effect of these micro-loans on the livelihood of the poor? Have those who contracted these loans rather not been burdened with the problem of repayment and thereby becoming poorer.

A study conducted by Afrane (2002) in South Africa and Ghana showed that impact studies have established that microfinance projects have imparted the businesses and lives of the beneficiaries in several positive ways, particularly in their economic circumstances and access to essential life-enhancing facilities and services. On the other hand, some disturbing and unintended effects have also been observed in the social and spiritual dimensions of the lives of the clients.

Some schools of thought remain skeptical about the role of micro-credit in development. For example, while acknowledging the role micro-credit can play in helping to reduce poverty, Hulme and Mosley (1996) concluded from their research on micro-credit that most contemporary schemes are less effective than they might be. The authors argued that micro-credit is not a panacea for poverty-alleviation and that in some cases the poorest people have been made worse-off.

This study investigates the effect of microcredit which is the major service patronized by respondents on beneficiaries in the New Juaben Municipality (specifically Koforidua - The municipal Capital). The main beneficiaries of Microfinance happen to be households and medium and small scale enterprises who either boost their income levels or expand businesses through the loans given by these institutions.

1.2 Problem Statement

Much research has been done in the area of microfinance. Most of these researches have assessed the impact of microfinance on the areas in which they are located and how they are able to reduce poverty.

Microfinance programmes are becoming an increasingly important component of strategies to reduce poverty or to promote micro and small enterprise development (Hulme, 1997).

Microfinance has a slightly higher impact on extreme poverty than on moderate poverty for everybody (Khandker, 2005).

Most theoretical literature focuses on the joint liability group lending and its implications for reducing information asymmetries. That is, the emphasis is on why and how microfinance works (Herms and Lensink, 2007) but not whether it actually works or for whom it works.

In spite of the abundance of theoretical literature, empirical work on the impact of microfinance is relatively sparse compared to the scale of operation of this important program worldwide (Islam, 2007).

A lot of MFIs are located in every region in Ghana not to talk of the number in each district but emphasis here should be what they actually do for their clients. The assertion that needs to be discussed is how do these MFIs affect the lives of the people who access their products in the areas where they are operating? To what extent are these institutions having impact on their beneficiaries through the microcredit they provide? Has the poverty level reduced in those areas as microfinance is claimed to do? What are the

answers to these questions? It is for this reason that this study is being undertaken to know what microfinance does for the clients in Koforidua.

1.3 Objectives of the Study

The main objective of the study is to assess the effect of microfinance of beneficiaries in Koforidua.

Specifically, the study attempts to

- Assess the effect of loans on household income
- Identify the relationship that exists between household participation in microfinance and the expenditure on food
- Determine the extent to which poverty has been reduced by MFIs in the Koforidua municipality

1.4 Hypotheses of the Study

The study has three hypotheses as outlined below:

1. H_0 : There is no significant relationship between income and access to loans from MFI
 H_1 : There is a significant relationship between income and access to loans from MFI
2. H_0 : Household participation in MFI has no significant effect on household expenditure on food
 H_1 : Household participation in MFI has significant effect on household expenditure on food

3. H₀: Loans from MFI has no significant effect on poverty reduction in Koforidua
H₁: Loans from MFI has significant effect on poverty reduction in Koforidua

1.5 Significance of the Study

First, the study will contribute to the body of knowledge on the effect of microfinance especially microcredit on their beneficiaries. Second, this study will offer empirical evidence to microfinance institutions of their role in the fight against poverty so as to strategise effectively. A study of this nature is equally very important for public policy and private investment initiatives. It will enlighten the government, business players and the general public on the role of MFIs to the beneficiaries, government poverty reductions initiatives and the welfare of the society as a whole.

1.6 Organization of the Study

The study is organized into five chapters. Chapter one is the introductory chapter which present the background of the study, problem statement, objectives of the study, hypotheses, and significance of the study. Chapter two reviews related literature, both theoretical and empirical. Chapter three presents a historical and operational overview of the microfinance sector in Ghana with the methodological framework and techniques used in the study. Chapter four examines and discusses the results and main findings with references to data and literature. Chapter five, which is the final chapter presents summary, conclusion and recommendations.

CHAPTER TWO

REVIEW OF LITERATURE

2.1 Introduction

This chapter presents a review of related literature on microfinance and its effect on beneficiaries. The chapter is divided into three main sections. The first section presents the general overview of the framework. This includes the background of the evolution, definitions and role of microfinance institutions.

The second section presents the theoretical review of literature. This specifically includes theories of impact assessment.

The final section presents the empirical studies on microfinance. This section is subdivided into empirical studies on the effect of microfinance on clients in other areas apart from Ghana, and the empirical studies on the effect of microfinance on clients in Ghana.

2.2 Definitions and Theories of Microfinance

Microfinance, according to Otero (1999) is “the provision of financial services to low-income poor and very poor self-employed people”. Ledgerwood (1999) generally refers to these financial services as savings and credit but can also include other financial services such as insurance and payment services. Schreiner and Colombet (2001, p.339) define microfinance as “the attempt to improve access to small deposits and small loans for poor households neglected by banks.” Therefore, microfinance 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.

Microfinance is an economic development approach that involves providing financial services, through institutions, to low-income clients, where the market fails to provide appropriate services. The services provided by Microfinance Institutions (MFIs) include credit, saving and insurance services. Many microfinance institutions also provide social intermediation services such as training and education, organizational support, health and skills in line with their development objectives.

Microfinance therefore encompasses the provision of financial services and the management of small amounts of money through a range of products and a system of intermediary functions that are targeted at low income clients. It includes loans, savings, insurance, transfer services and other financial products and services

Microfinance refers to the provision of appropriate financial services to significant numbers of low income, economically active people with an end objective to alleviate poverty (Ledgerwood, 1998). Microfinance is recognized as an effective tool to fight poverty by providing financial services to those who do not have access to or are neglected by the commercial banks and other formal financial institutions. Financial services provided by Microfinance Institutions (MFIs) may include one or combination of savings, credit, insurance, pension/retirement and payment services (Chijoriga, 2000).

Robinson (2001) describes microfinance as small scale financial services for both credits and deposits- that are provided to people who farm or fish or herd; operate small or micro-enterprise where goods are produced, recycled, repaired, or traded; provide

services; work for wages or commissions; gain income from renting out small amounts of land, vehicles, draft animals, or machinery and tools; and to other individuals and local groups in developing countries in both rural and urban areas.

Microfinance is also frequently combined with the provision of social and business development services, such as literacy training, education on health issues, management or accounting.

Microfinance can be a critical element for effective poverty reduction/eradication. Improved access and efficient provision of savings, credits and insurance services can enable the poor to smooth out their consumption, manage risk better; build assets gradually develop micro enterprises, enhance their income earning capacity and enjoy improved quality life (Rubambey, 2001).

The main features of a microfinance institution which differentiate it from other commercial institutions, are such that, it is a substitute for formal credit; generally requires no collateral; have simple procedures and less documentation; easy and flexible repayment schemes; financial assistance of members of group in case of emergency; most deprived segments of population are efficiently targeted; and, allows for groups interaction.

2.2.1 Microfinance Products and Services

Microfinance Institutions (MFIs) are formal and registered organizations that provide savings and/or facilities to micro and small scale business operators. They also provide financial services to poor people who have experienced difficulties in obtaining these

services from the traditional financial institutions such as commercial banks and insurance companies.

Usually, the products and services provided by MFIs are similar to those provided by the formal financial institutions. The method of delivery may differ but the basic services of savings, loans and insurance are the same. The most outstanding of products offered by MFIs is loans (credit) for formation and development of small scale enterprises.

Nourse (2001) in reviewing the context and rise of microfinance products has argued that there is a need for savings and insurance services for the poor and not just credit products. He therefore argued that MFIs need to provide tailored lending services for the poor instead of rigid loan products.

MFIs have now begun to offer additional products such as savings, consumption or emergency loans, insurance and business education (Brau et al, 2004). MFIs are therefore becoming more client-focused by providing a range of products for the varied needs and wants of the poor consumers.

Microcredit is one of the critical dimensions of the broad range of financial tools for the poor. The increasing role of microcredit in development has emanated from a key number of factors that include the fact that the poor need access to productive resources, with financial services being a key resource if they are to be able to improve their conditions of life; the realization that the poor have the capacity to use loans effectively for income-generation, to solve and to re-pay loans.

This product is often provided without physical collateral due to the poverty level of clients. Thus, MFIs focus on using social collateral through group lending. Under group

lending, the group takes over the underwriting, monitoring and enforcement of loan contracts from the lending institution (Wenner, 1995).

Group lending is based on the principle of joint liability. Here, each group member is responsible for the loans of other members such that if a member defaults, the other group members are supposed to pay for the loans from their own resources else they lose access to future loans. Woolcock (2001) states that social collateral works through reputational effects on group members in which repayment of loans is seen by group members as necessary to maintain their social standing in the community.

A look at the savings services provided by MFIs can be categorized into forced and voluntary savings; the forced savings programme requires that members save a minimum amount each week or any time period. Practically, this is used as a form of cash collateral. Normally, how and when these savings may be withdrawn by members is quite restrictive.

The second type is voluntary savings which is also referred to as flexible savings (Nourse, 2001). Clients save small amounts at irregular intervals; that is when they deem fit to save. This helps the poor households to withstand external shocks and emergencies that may occur.

Just as a large demand for formal savings and loans exist among the poor, there also exist large demand for formal insurance (Churchill, 2002). Micro insurance started in the mid-to late-1990s. It represents a new and emerging area in the field of microfinance. This helps clients to withstand shock and other contingencies by providing them with financial assistance.

The terms microfinance and microcredit are normally used interchangeably. However, in operational terms microcredit and microfinance are different. Microcredit is the provision of cash and in kind loans in smaller amounts to micro, small entrepreneurs meant to improve their business operations. Microfinance on the other hand consists primarily of providing financial services including savings, microcredit, micro insurance designed to be accessible to microenterprises and to lower income households. It may be complemented by non-financial services especially training to improve the ability of clients who utilize their facilities effectively

2.2.2 The Evolution of Microfinance in Ghana

Financial services were provided by donors or governments from the 1950s through to 1970s in the form of subsidized rural credit programmes. According to Robinson (2001), most people often defaulted which led to high losses and as such the inability to reach poor households.

However in the 1980s, with the springing up of MFIs such as the Grameen Bank and Bank Rakyat who could provide loans and savings to most households; microfinance seemed to receive a turning point in its history.

Microfinance in Ghana is no new idea because people either saved or took small loans from certain individuals or groups to start businesses or farming ventures with the aim of providing some form of help (self-help).

It is believed that 'susu' which is one of the microfinance schemes in Ghana may have originated from Nigeria and later spread to Ghana in the 20th century. This indicates that

this idea had sprang up somewhere and later spread to Ghana. The first credit union in Africa was established in northern Ghana in 1955 by Canadian Catholic Missionaries (Asiama, 2007).

Microfinance globally has undergone four distinct phases worldwide of which Ghana is no exception. These stages are described below:

Phase One: The provision of subsidized credit by Governments starting in the 1950's when it was assumed that the lack of money was the ultimate hindrance to the elimination of poverty.

Phase Two: Involved the provision of micro credit mainly through Non-Government Organisations (NGOs) to the poor in the 1960's and 1970's. During this period sustainability and financial self-sufficiency were still not considered important.

Phase Three: In the 1990's the formalization of Microfinance Institutions (MFIs) began.

Phase Four: Since the mid 1990's the commercialization of MFIs has gained importance with the mainstreaming of microfinance and its institutions into the financial sector.

In Ghana, the term microfinance is understood as a sub-sector of the financial sector, comprising most different financial institutions which use a particular financial method to reach the poor.

The microfinance sector in Ghana comprises of various types of institutions and these have been grouped into four categories. This could be based on the type of service and whether it is owned and managed by the users themselves or other providers according to Rutherford (1996). Moreover, Staschen (1999) attributed it to the source of funds.

The categories are outlined below:

- Formal suppliers such as savings and loans companies, rural and community banks, as well as some development and commercial banks. These are the formal financial institutions that are incorporated under the Companies' Code 1963 (Act 179) which gives them the legal identity as limited liability companies. They receive their license through the Bank of Ghana (BoG) under either the Banking law 1989 (PNDCL 225) or the financial institutions (Non-Banking) law 1993 (PNDCL 328) to deliver financial services under Bank of Ghana regulation. The Rural and Community Banks (RCBs) function as commercial banks except undertaking foreign exchange operations. The savings and loans companies are also restricted to a narrow range of services. These according to Steel et al (2003) operate most actively as micro and small-scale financial intermediation by means of microfinance methodologies.

- Semi-formal suppliers comprise of credit unions (CUs), financial non-governmental organizations (FNGOs) and cooperatives. They are registered formally but no license is given to them by the Bank of Ghana. NGOs are incorporated as companies limited by guarantee (not for profit) under the companies' code. They normally use external sources from donor funds for microcredit because they do not have license to take deposits from the public.

- Informal suppliers consist of *susu* collectors and clubs, rotating and accumulating savings and credit associations (ROSCAs and ASCAs), traders, moneylenders and other individuals. Moneylenders receive license from the police under money lender ordinance 1957. These rotating savings and credit associations (ROSCAS) do not have legal and regulatory frameworks as asserted by Steel et al (2003).

- There are also public sector programmes that have developed financial and non-financial services for their clients and these are also recognized as such.

There is a form of regulatory framework for controlling community and rural banks under the Banking Act 2004 (Act 673). Saving and loans companies are also regulated by Law 1993 (PNDCL, 328) on the Non-Bank Financial Institutions (NBFIs). The Credit Unions regulatory framework is being prepared and will recognize the dual nature as financial institutions and as cooperatives.

2.2.3 The Role of Microfinance Institutions

MFIs have become important in the fight against poverty, growing in number of organizations, clients and amount of donor funding (www.mixmarket.org).

The people who do not have collateral usually have difficulties in accessing loans from the formal financial institutions. This makes them rely on local money lenders who usually charge high interest rates. This brings into the picture the role of MFIs to ensure that poor people have access to finance for productive purposes. The idea of microfinance therefore serves a remedy for the failures of the formal financial institutions in providing financial services to poor households and individuals.

According to Robinson (2001), the role of MFI can be summarized into the following;

- Improve financial security
- Facilitate growth of enterprises
- Allow storage of excess liquidity for future use
- Improve the livelihoods of low income earners and those of their dependents

- Help low-income people to reduce risk, improve management, realize high return on investments
- Social change through empowering women and changing gender relations in the community and households.

It can be deduced from these that the provision of financial and non-financial services by MFIs to their clients helps to ensure that these roles are performed.

Anyanwu (2004) argued that microfinance bank does not just provide capital to the poor, but also combat poverty at an individual level; it also has a role at institutional level. So it seeks to create the atmosphere for financial services to be delivered to the poor who are mostly ignored by the formal financial sector.

Some writers have argued that microcredit is not a panacea for poverty alleviation and in some cases the poorest people have been made worse-off. However, microfinance is emerging as a leading strategy for the reduction of poverty and for that matter having impact on the lives of poor people.

It is believed that microfinance can facilitate the achievement of the Millennium Development Goals (MDGs) as well as national policies that target poverty reduction, women empowerment, assisting vulnerable groups and improving standards of living as pointed out by the former Secretary General Kofi Annan.

2.3 Theoretical Literature Review

There are two broadly different approaches to microfinance: the welfarists and institutionists.

This is what is referred to as “microfinance schism” by Morduch (1998).

The institutionists approach has interest in creating financial institutions to serve clients who either are not served or underserved by the formal financial system. They believe in achieving financial sufficiency which deals with taking breadth of outreach (number of clients) over depth of outreach (level of poverty reached) where positive client impacts are assumed. This shows that emphasis is placed on financial self-sufficiency. Thus, institutionists centre on institutional success which is measured by the institution’s progress towards achieving financial self-sufficiency. They argue that every microfinance institution should have the primary objective of financial deepening which seeks to achieve numerous large-scale, profit seeking financial institutions that provide high quality financial services to large number of poor clients. Their insistence on financial sufficiency makes them abstain from subsidies of any kind. Institutions which are practising this concept are Bank Rakyat Indonesia and Banco Solidario (BancoSol) in Bolivia.

The welfarist approach on the other hand places emphasis on depth of outreach; the level of poverty reached. They believe that the welfare (well-being) of participants (clients) must be improved. This can be in the form of subsidies being introduced in financial services to alleviate effects of poverty among participants and community. Thus, their objective tends to self-employment of women who are especially the economically active yet poor people so as to increase their incomes and savings to improve the conditions of life for themselves and their children. Examples of institutions which fall in line with the welfarist approach are the Grameen Bank of Bangladesh, the FINCA-style village banking programmes in Latin America, now in Africa and Asia.

The institutionists believe that poverty reduction requires large scale financial resources because of the fact that there is a worldwide prevalence of poverty and the estimated demand for microfinance services. Estimates done by Consultative Group to Assist the Poor (CGAP) (1995) put the total demand for microcredit at \$12.5 billion by 2005 and \$90 billion by 2025. Therefore this large scale requires sufficient resources which go far beyond what donors are able to provide since these donors who may not have sufficient resources have their own motive and may not be reliable long-term source of funds. It is from this idea that the institutionists advocate for financial self-sufficiency. For these resources to be attracted is by tapping into private sources of capital. This means that the MFIs need to run efficiently so as to be profitable. There is the need to create a new financial system which comprises of a large number of privately owned large-scale financial intermediaries that provide financial services to the poor. This can help meet the world demand for microfinance services and as such reduce the world poverty.

They have therefore suggested best practices for industry options which refer to those practices that improve institutional efficiency and effectiveness in areas such as management and management systems, finance and accounting, marketing, service delivery or product design and development.

The welfarists however distinguish themselves from the institutionists by their value-based commitment to serve the poor. They do not disassociate from ensuring institutional efficiency but believe that just as increasing financial sufficiency is desirable, it is not necessary to fulfill institutional missions.

2.3.1 Impact Assessment

Afrane (2002) described the impact of MFIs as a management process mainly associated with and driven by donor agencies in the initial years. As time moved on the impact of microfinance has attracted the attention of stakeholders such as policymakers, MFIs, researchers and academicians.

Writers such as Roche (1999) defines impact assessment as a systematic analysis of the long-term significant changes either positive or negative, intended or not, brought about by a given action or a series of actions. This definition as reviewed by Kessy (2013) suggests that the results of an assessment can match or differ from the original or the actions taken. Therefore if the objective of a microfinance project is to provide loans to poor people in order to improve their standard of living, then the impact assessment study will reveal whether or not the standard of living of the targeted group has actually improved. For example: if the objective of the microfinance providers is to facilitate the growth of enterprises, impact assessment will show whether it has failed or succeeded.

Barnes and Sebstad (2000) also define impact assessment as a study to identify the changes that result from a programme. This should show the changes experienced by beneficiaries if they engage in a programme. This therefore assumes that there should at least be a change to be measured in the lives of the beneficiaries.

These definitions therefore give the results (either positive or negative) that are derived from a programme. Positive in the sense that the lives of beneficiaries are improved and negative if intended objectives of the programme is not realized. It should be noted

however that if there is no impact then that as well could be termed as a negative impact in the lives of beneficiaries.

When the idea of impact assessment in microfinance is mentioned, two schools of thought come to mind; intermediary and intended schools of thought.

According to Johnson (1998), the intended beneficiary school of thought cites the traditional project cycle approach and is derived from the view that the impact of the aid-funded projects on the poor people needs to be measured and attributed in order to justify the intervention. This school views financial services as a means of improving the livelihood opportunities especially through a combination of raising incomes and reducing vulnerability. Therefore, it assesses the changes in the lives of individual, growth of enterprises and overall economic changes as a result of benefitting from a programme or project. Hulme (2000) therefore states that impact assessment on the users assume that the intervention will change the behavior and practice in such ways that lead to the achievement (or raise the probability of achievement) of the desired outcomes.

The intermediary approach centres on the changes in the MFI and its operations. This school concerns itself with the health of the financial organization in terms of its sustainability (both operational and financial) and judges the social benefit of this intervention in terms of its outreach to a number of poor people and their poverty profile (Johnson, 1998). Measuring the performance of MFIs are done through common indicators such as outreach, clients' poverty level, loan repayment rate, financial sustainability and efficiency in terms of controlling administrative costs.

In line with the two schools of thought, the objectives of conducting impact assessment in microfinance are divided on a continuum, ranging between proving the impact and improving the impact approaches (Tandrup, 2002; and Manroth, 2001). We have the situation where donors are looking for evidence where the impact observations can be attributed to the participation in the microfinance programme with high degree of confidence (Manroth, 2001). This however is different from how MFIs will convince the donors of how well the programme is doing so they can provide more financial support.

The intermediary school is associated with *proving impact* while the intended beneficiary has to do with *improving impact*. Impact assessment deals purely with proving objective targets an audience consisting of the donors, the policy makers and the academicians with the aim of proving that the interventions have an impact to justify future assessment (Sebstad, 1998; and Manroth, 2001). Kessy (2013) described the assessors to be independent actors whose studies are not initiated or influenced within the microfinance programme. Thus, those who do impact assessment should be neutral of the operations of the microfinance so as to give the true impact of the programme.

Impact assessment with the pure objective of improving the impact focuses mainly on understanding the impact process and suggesting how the programmes can become responsive to the clients' demands and needs to help the microfinance schemes to improve their programmes (Tandrup, 2002 and Hulme, 1997). This gives microfinance much impetus to improve their services.

2.4 Empirical Studies on Microfinance

A lot of studies have been done on the impact of microfinance on poverty reduction, rural and small enterprises development, and income of poor households and individuals. This section presents some of the studies.

The available evidence from sub-Saharan Africa as researched by Rooyen et al (2012) supports that microcredit has both positive and negative impacts on the poor people, while micro savings intervention by itself appears to have no impact. Both microcredit and micro savings have a generally positive impact on the health of poor people, and on their food security and nutrition, although the effect on the latter is not observed across board. They noted that microsavings should not be promoted as a means to reduce poverty; microcredit could be used but because of the potential to harm, it should not be promoted as a solution to the poorest clients. In their research; in some cases microfinance can increase poverty, reduce levels on children's education and disempower women particularly relevant in the context of MDGs as some authors have argued microfinance as a key tool to achieve MDGs.

Nichols (2004) used a case study approach to investigate the impact of microfinance upon the lives of the poor in rural China and found that the participation of the poor in MFI program had led to positive impact in their lives. Their incomes have increased, spending on educational and health have increased hence improved their standard of living and also women have benefited out of the program. There were visible signs of higher wealth level within the village.

In a research conducted Sinha et al (2003) in India showed that microcredit had resulted in the expansion of non-farm enterprises through the use of working capital to diversify the quality of goods or to take advantage of seasonal bulk purchase. The finding indicated that microcredit had positive impacts on household welfare and business development. More specifically, it had positive impacts on household income, business investment and business registration. There was also positive impact on employment among newest borrowers.

Amin et al (2003) used a unique panel dataset from northern Bangladesh with monthly consumption and income data for 229 households before they received loans. They find that while microcredit is successful in reaching the poor, it is less successful in reaching the vulnerable, especially the group most prone to destitution (the vulnerable poor). Coleman (1999) also finds little evidence of an impact on the programme participants. The results, Coleman further explains, are consistent with Adams and von Pischke's assertion that "debt is not an effective tool for helping most poor people enhance their economic condition" and that the poor are poor because of reasons other than lack of access to credit.

Afrane (2002) studied the effect of microfinance on clients' businesses in Ghana and South Africa using two microfinance institutions, Sinapi Aba Trust (SAT) for Ghana and Soweto Microenterprise Development (SOMED) for South Africa. He established that the turnover of the businesses of clients in both projects increased significantly after the disbursement of the loans. On the average, the turnover of clients of increased (\$900; 157%) higher than that of their counterparts of (\$400; 118%), both in monetary and percentage terms. 43% and 44% of the enterprises sampled in Ghana and South Africa,

respectively, took on new workers. In addition, the total number of people employed by the enterprises surveyed increased by 46% and 49%, respectively, for SAT and SOMED. The data showed that the injection of capital into the enterprises had positive impacts on all the four selected indicators.

Mosley (2001), in his research on microfinance and poverty in Bolivia, assessed the impact of microfinance on poverty, through small sample surveys of four microfinance institutions. Two urban and two rural, using a range of poverty concepts such as income, assets holdings and diversity, and different measures of vulnerability. All the institutions studied had on average, positive impacts on income and asset levels, with income impacts correlating negatively with income on account of poor households choosing to invest in low-risk and low-return assets. The studies revealed also that in comparison with other anti-poverty measures, microfinance appears to be successfully and relatively cheap at reducing the poverty of those close to the poverty line. However, it was revealed to be ineffective, by comparison with labour-market and infrastructural measures, in reducing extreme poverty.

Mosley (2001), using data from Latin American countries, found a positive growth of income and assets of the borrowers than control group. The growth of income of the better-off borrowers was larger. However, he could not find any evidence of impact of microfinance on extreme poverty. Banegas et al. (2002), employing logit model, found positive impact on the income of borrowers.

Robinson (2001) in a study of 16 different MFIs from all over the world shows that having access to microfinance services has led to an enhancement in the quality of life of

clients, an increased in their self-confidence, and has helped them to diversify their livelihood security strategies and thereby increase their income.

According to Mosley (1999), microfinance makes a considerable contribution to the reduction of poverty through its impact on income and also has a positive impact on asset level. But the mechanism through which poverty reduction works varies between institutions. Generally, institutions that give, on average, smaller loans reduce poverty much more by lifting borrowers above the poverty line, whilst institutions giving larger loans reduce it much more by expanding the demand for labour amongst poor people.

Mosley and Hulme (1998) found evidence of a trade-off between reaching the very poor and having substantial impact on household income. They found that programmes that targeted higher-income households (those near the poverty level) had a greater impact on household income. Those below the poverty line were not helped much and the very poor were somewhat negatively affected. The poorest tended to be more averse to risk-taking. They also used their loans for working capital or to maintain consumption levels rather than for fixed capital or improved technology. Since, microcredit programmes typically require loan repayment on a weekly basis; some critics argue that repayment comes from selling assets rather than from profits of micro-enterprises.

Pitt and Khandker (1998) reasoned that given the small loan size and the type of activities undertaken by micro-entrepreneurs, it is unlikely that capital intensity has increased. Given that the labour and the capital intensity of rural non-farm production are unchanged, increased microfinance implies that employment can be expected to rise. However, if increased income as a result of microfinance programmes results in a

decrease in labour supply (income effect), it can negatively affect labour supply of particular type, for example male labour supply. As a result employment may decline, given the demand for labour. Therefore, the net impact cannot be determined a priori. Microcredit programmes seem to reduce wage-employment and income, but raise self-employment and corresponding income for programme- participating households. One might expect that a reduction of employment in the wage market might increase wages, but this may not happen because the wage-employment gap may be filled by previously unemployed or underemployed wage workers.

Fatchamps (1997) noted that with insufficient funds, farmers and fishers cannot invest in new equipment and machinery, and it becomes difficult to reach out to new markets and products. He further contends that without financial assistance, small farmers and artisanal fishermen cannot cope with temporary cash flow problems, and are thus slowed down in their desire to innovate and expand. The general perception is that access to external finance is critical for poor entrepreneurs, who may never have funds proportional to their ambitions.

2.4.1 Empirical Review in Ghana

Karikari (2011) showed that some beneficiaries of Social Investment Fund (SIF) MFI programme in the Mfantseman municipality had realized increases in income. It was observed that the average income of beneficiaries before the loan was GHC355.04 and the average income after the loan was GHC580.89.

Obeng (2011) showed positive changes in the assets acquired by most programme beneficiaries in relation to non-beneficiaries in Jaman North District.

Findings from the study conducted by Aflakpui (2009) in the South Tongu District in Ghana confirmed that microfinance has the ability to reduce poverty in its clients when the products given to clients were incorporated with training, supply of equipment and regular monitoring. Microfinance has the ability to increase income level, labour employment and improve standard of living.

Nanor (2008) in a research conducted in four districts in the Eastern Region namely: Kwahu North, Yilo Krobo, Manya Krobo and West Akim districts indicated that microfinance had had some positive impact on variables like expenditure on children's education, household income and profits of small businesses belonging to households. Despite the positive impacts, there was no evidence to show that poverty had reduced among households which are beneficiaries to the services of microfinance. The findings showed that the impact of microfinance scheme on household income was positive and significant in Kwahu North, Manya Krobo and West Akim districts. However positive and significant nature of the programmes, the coefficients of the impact variables were not large at all. The regression results showed that remittance had a greater impact on household income more than the credit in all the districts. This paints a picture that household income increases not only as a result of credit from the MFIs but through other sources such as remittances.

Hishigsuren, et al (2004) in a report on client impact monitoring of some clients of Sinapi Aba Trust (SAT) in Ghana showed that out of the total of 487 clients sampled, 71% were

old clients, 25% were new clients and 4% were old clients who did not receive credit in their first cycle of loan. Out the total sample 87% were women. Only 0.4% of the clients complained about the interest rate. The report showed that there was a significant difference in sales revenue for old clients and new clients, and no significant difference in net profits, saving and expenditure on children education for old clients and new client. The report also showed that remittance had a significant impact on the income of both old and new clients. Most of the clients were interested in the Training programmes offered by SAT.



CHAPTER THREE

METHODOLOGY AND CONCEPTUAL FRAMEWORK

3.1 Introduction

This chapter presents the overview of the study area, methodology and conceptualized framework of the study. The chapter is in three main sections. The first section discusses the overview of the study area. The second section describes the methodology of the study which presents detailed discussion of the research design, data collection instruments, population, sample size and the sampling techniques. The third section is devoted to the models specifications, variables of interest to the study, the empirical estimation process, and the econometric tools employed in the study.

3.2 Overview of the Study Area

3.2.1 Introduction

This section gives a brief description of the study area along the lines of location, size, demographic characteristics, and occupational distribution. Information on the area is based on the information provided by the municipal area on their website. New Juaben whose capital is Koforidua is the first municipality out of 21 administrative assemblies in the Eastern Region of Ghana and covering a land area of 110 square kilometres. It shares boundaries on the North-east with East Akim district, to the South-East with Akwapim North, Yilo Krobo on the East and Suhum Kraboa Coaltar District on the West.

The strategic location of New Juaben, sharing boundaries with districts that are famous in agricultural production, provides an opportunity to develop agro processing facilities to make use of raw materials from these areas. The rural portion is rich in fertile

agricultural lands and suitable for small to medium scale farming, cattle rearing and poultry. The 2000 Population and Housing Census put the population of the Municipality at 136,768 with a growth rate of 2.6% which is lower than the national average of 3.1. The projected population for 2005 is 154,531 with female population constituting 51.5% and 48.5% for males. The population density is 684 persons per square kilometre.

Koforidua, the regional and municipal capital, harbours over 65% of the entire population of the district. The population of the capital as at 2013 was 130,810.

The remaining 52 settlements have smaller population sizes which do not normally measure up to the population thresholds required for the provision of essential socio-economic services. The municipality has a dependency ratio of 64.7 which implies that there are about 65 persons in the dependent age for every 100 persons in the working age group.

3.2.2 Age and Sex Composition of Population

This section presents the distribution of the population of the municipal in the various age groups. It can be seen from table 3.1 below that majority of the population is found between the 15-64 age group with 60.6% males and 60.8% females. This is followed by the under 15 age group which has 35.4% males and 34.0 females. The least number of the population is found in the 65+ age group with 4.0% males and 5.2% females.

Table 3.1 A table showing the Age and Sex Composition of New Juaben Municipal

Age/Sex	Under 15years (%)	15-64years (%)	Above 65years (%)
Male	35.4	60.6	4.0
Female	34.0	60.8	5.2

Source: Ghana Statistical Services (2006)

3.2.3 Households Characteristics

This section presents the characteristics of households in terms of the number of households, number of houses and households per house.

The proportion of the urban population in the Municipality is 88.4%. The rural-urban split is 15.7% rural and 84.3% urban. The municipality's household size of 10.9 persons is the highest in the region. Table 3.2 below depicts a comparison of the stock of houses and households in the municipality and the region.

Table 3.2 A table showing the household characteristics of New Juaben municipal

Population	Number of Houses	Number of Households	Household per Size	Average Household Size
136,768	12,571	34,295	2.7	4.0

Source: Statistical Services (2006)

The New Juaben Municipality also has the highest percentage of households living in room(s) in compound houses, i.e. 67.1% which is higher than the regional average of 43.1%. The district however has 11.3% of households living in separate houses which are the least common in the region. The ratio of male heads to female heads is 2:1.

Households in the municipality living in flats, apartments and dwelling units is 7.4%. About 1.7% of households live in kiosks and other improvised dwelling units.

3.2.4 Employment Status

The Municipality has a high proportion of self-employed individual businesses. The percentage of workers in the employee category is 27.9% which is the highest in the region. A huge proportion of the employed population is engaged in the public service, industrial, service and education sectors. About 29.3% of workers are engaged in commerce while 28.6% are in production, transport and equipment operation.

3.3 Methodology

3.3.1 Research Design

Both quantitative and qualitative data are used in the study. For the qualitative data, tables are used to describe the information gathered. In terms of the quantitative analysis, the ordinary least squares method, the logit and probit models are employed.

3.3.2 Population

The population size takes into consideration both programme and non-programme households of microfinance institutions within the New-Juaben Municipal area.

The programme-household group comprised of those who are fully participating in the microfinance programme and have been accepted by the lenders as beneficiaries of loans. Those with loans in arrears are also included in the programme-household to strengthen the validity of the research.

The non-programme household group included households who have been accepted by the lender and participate in microfinance programme but have not received a loan by the time the research was conducted. This also included those who are not participating in any microfinance programme at all.

3.3.3 Sample size

Information was gathered from 400 households. The study collected information from 200 households of the non-programme household. In the case of the programme households, 200 households were also randomly selected. The sample size was chosen based on sample size calculator by Yamane (1967).

3.3.4 Data Source, Collection and Sampling Techniques

Primary data sources are used in the study. The primary data was collected through observation, structured questionnaires and semi-structured interviews using checklist of leading questions. The questionnaire used comprised of personal information such as age, sex, education and general livelihood questions.

The random sampling technique which is a probability sampling technique was used in selecting the programme households and non-programme households. The random sampling technique was adopted because each member of the population had the same chance of responding to the questionnaire. The respondents were, therefore, randomly selected.

3.4 Measurement and Description of Variables

The major variables for the regression analysis are defined below:

Age= (*age*). This is defined as the age of the respondent.

Sex = (*sex*). This is defined as the gender of the respondent, either a male or female

Marital status = (*mst*). This is measures whether a respondent is single or married.

Number of household members= (*nhme*). This is measured by the number of people living in a particular programme or non-programme household

Number of dependents= (*ndep*). This measures the number of people who depend on the respondent.

Occupation of the respondent = (*occ*). The type of occupation the respondent engages in

Household income= (*hinc*). The amount of income received by the households monthly

Monthly profit= (*mprof*). The monthly profit of small scale businesses of a household

Remittance from friends and relative elsewhere = (*rem*)

Total amount of credit taken = (*amc*). The amount of loan accessed by a household from Microfinance Institutions.

Level of education = (*ledu*). This measures the level of education of respondent.

Payment to workers = (*mpayw*). This is defined as the amount paid to workers of household small scale businesses monthly.

Expenditure on food monthly = (*exfod*). This is defined as the total spending made by a household on food monthly.

3.5 Model Specification

This section presents the specification of models used in this study. Three main models are used. The first model is the ordinary least squares (OLS), the second model is the logit analysis while the third model employed the probit analysis.

The study follows a model proposed by Maddala (1983) as in equation (1) as cited in Nanor (2008) regarding the benefit microfinance customers received from an intervention programme as specified in the model below;

$$Y_i = X_i\beta_1 + I_i\beta_2 + u_i \dots\dots\dots (1)$$

where Y_i is the outcome (household income, household food expenditure and poverty reduction). X_i is a vector of exogenous households characteristics and I_i is a dummy variable with value $I = 1$ if household is a programme-household, or $I = 0$ if otherwise.

The study also adopted a probit regression model from Maddala (1983) to determine the probability of sample households' participation in a microfinance programme.

3.5.1 Estimating the Effect of Microcredit on Household's Income

The study investigates the effect of microcredit on households' income. For the purpose of estimation, the study specifies a model for household income as in equation (2).

- $y_t = \alpha_0 + \alpha_1mst + \alpha_2amc + \alpha_3mpayw + \alpha_4mprof + \mu_t \dots\dots\dots (2)$

where y_t is household income

(*amc*) is the total amount of credit taken by a participating household

$amc > 0$ if respondent is a programme participant

mst is the marital status of the respondent

μ_t is the disturbance term

$\alpha_0, \alpha_1, \alpha_2, \alpha_3$ and α_4 are parameters to be estimated.

This equation will be estimated using OLS regression method.

The model measures the impact of programme participation by the coefficient of the parameter estimate, α_2 . Therefore, the coefficient of amc , α_2 measures the actual impact.

Programme participation is *always* voluntary. amc cannot be treated as exogenous if it is assumed there is a potential problem of *selection bias*, that is, if the decision of a household to participate in the microfinance programme or not depends not only on the effort, abilities, preferences and attitudes towards risk that generate individual *self-selection*, usually referred to as a demand-related bias. If it also depends on the *selectivity discrimination* made by credit programme, then it is referred to as a *supply-related bias* (Nanor, 2008).

3.5.2 Estimating the effect of household participation on food expenditure

In order to estimate the effect of household participation on food expenditure of beneficiaries the study specifies equation (3).

$$\ln(exfod) = \delta_0 + \delta_1 part + \delta_2 \ln(hinc) + \delta_3 rem + \delta_4 \ln(nhme) + \varepsilon_t \dots \dots \dots (3)$$

where the dependent and independent variables are as already defined in section 3.4.

3.5.3 Estimating the Effect of Microcredit on Poverty

Poverty has several definitions but this study is based on the definition of poverty by the World Bank. The World Bank defines poverty as basically living on less than US\$2 a day. Living on less than US\$2 is considered as below the poverty line. Using the exchange rate of \$1 to ₪2.80 for analysis means that a household living on less than ₪5.60 is below the poverty line. The study estimates the effect of microfinance on poverty with a regression.

First, it is important to establish the objective status of both programme and non-programme households. Poverty is measured as a dummy variable to establish the effect of microfinance on the poverty status of the programme and non programme groups. A household living on US\$2 or more has a dummy of 1, and 0 if otherwise. The Pearson chi-square is used for statistical analysis.

In order to estimate the effect of microcredit on poverty, the logit model below is specified as in equation (4).

$$Prob(Pl_{ij} = 1) = f(X_{hij}, amc, u_{ij}) \dots\dots\dots (4)$$

where $Pl_{ij}=1$ if respondent is above poverty line and $Pl_{ij}=0$ if otherwise

amc = amount of credit taken by the participating household

u_{ij} = error term of the i^{th} household and j^{th} observation

X_{hij} = vector of household characteristics for the i^{th} household and j^{th} observation

The household characteristics used are occupation, marital status and number of dependents.

3.5.4 Estimating the Probability of Household Participation in Microfinance Programme

This section examines the probability of household participation in microfinance in the study area. The participation equation is given in equation (5) as;

$$P_i^* = K_i\gamma_i + u_i \dots\dots\dots (5)$$

where P_i^* = the i^{th} household status variable (*part*);

$P_i = 1$ (for a programme household) or $P_i = 0$ (for a non programme household).

K_i = key business characteristics and household characteristics which indicates the i^{th} household participation in microfinance scheme.

The **probit method** of estimation was used to estimate the household participation function. The probit specifications are designed to analyze the qualitative data reflecting a choice between two alternatives. It provides a way of qualifying the relationship between the individual characteristics in addition to other explanatory variables and the probability of choosing an alternative. Estimating the probit model is performed by maximizing the likelihood function with respect to all coefficients. A probit model is an appropriate choice here, as the information is available only on whether a credit transaction was observed or not, rather than on the amounts of credit received (Nanor, 2008).

3.6 Data Analysis

The main equations were stated for regression purpose. Equations 2 and 4 were estimated with probit and logit models respectively whereas equation (3) was estimated using OLS method.

The STATA software was used in the coding of the variables for the probit, logit and OLS regression methods.

P-values as well as the R^2 were used for statistical decisions in all the models.

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CHAPTER FOUR

EMPIRICAL RESULTS, DISCUSSION AND ANALYSIS

4.1 Introduction

This chapter presents the empirical results and discussions of the study. The first section presents the effect of loans on beneficiaries which comprises of the effect on income and poverty reduction. The rest of the second section presents the results from the effect of respondent participation in MFIs on expenditure on food, and a probit analysis of the probability of a household to participate in microfinance.

The results are presented in tables and statistical decisions are made at 5% statistical significance level.

4.2 The Effect of Microcredit

Microcredit from Microfinance Institutions is one of the most rendered services to beneficiaries and in fact in most cases loans attract beneficiaries of MFIs. Indeed microfinance was developed in the 1990s to cater for the bulk of the informal sector to increase income generation. On the part of MFIs, one of the motives is to improve household income of beneficiaries through services rendered by them. In view of the fact that loans are the most traded services of MFIs, the study investigated the effect of loans on beneficiaries with a specific focus on two key household characteristics; household income and poverty reduction

4.2.1 The Effect of Microcredit on Income

This section uses two approaches to investigate the effect of loans on income. The first approach is statistical analysis and the second approach is regression analysis.

For the statistical analysis the study compares the averages and standard deviation of income of programme group and non-programme group. This is presented in table 4.1

Table 4.1 Mean Household Income for Programme and Non-Programme Groups

	Min	Max	Mean	Std Dev
Participants	100	4500	1369.535	975.6552
Non-participants	100	7500	1399.82	1332.173

Source: Computed with Stata 11 package

From the table, the mean income of participating respondents is less than that of non-participating respondents. This is however not surprising because the maximum income of non-participating is also greater than participating households despite the fact that both groups have the same level of minimum income. In essence loans may not have any effect on the average income of beneficiaries of MFIs

The standard deviation which measures the variability of income of participating and non-participating groups shows that non-participants have a wider spread of variability in their income as compared to participants.

This simple statistical analysis is not however sufficient to draw conclusions. The second step is therefore the regression analysis.

Equation (2) was estimated to measure the effect of loans on income. The results are presented in table 4.2

Table 4.2 Estimates of the effect of microcredit on income

Variable	Parameter	Coefficient	p-value
Constant	α_0	114.37	0.374
<i>mst</i>	α_1	201.51*	0.081
<i>amc</i>	α_2	0.340***	0.000
<i>mpayw</i>	α_3	0.466***	0.000
<i>mprof</i>	α_4	0.153**	0.034
n	150		
R²	0.559		
Adjusted-R²	0.547		
F-Statistic	(4, 145) = 45.94		

Source: Estimated with Stata 11 package
Significance level (2014) (Sig. 10%, ** sig. 5%, *** sig. 1%)*

Testing of hypothesis

The hypothesis tested in this section was the effect of loans on household income with the null hypothesis; H_0 : There is no relationship between income and access to loans from MFI as against the alternative hypothesis; H_1 : There is a relationship between income and access to loans from MFIs.

From the results in table 4.2, the amount of loans has a positive relationship with household income. The study therefore rejects H_0 and concludes that there is a positive relationship between income and access to loans from MFIs.

There are so many variables that can affect the income of households; microcredit is just one of them, which is the focus of this study. This accounts for the level of R^2 obtained from the estimation indicating that some other factors not captured in this study may probably account for household income. The constant is very high although not significant indicating that they may be other factors outside the fold of microfinance or which could be services of microfinance but not included in the specification of equation (2).

From table 4.2, marital status has a relatively high coefficient though not significant at 5% statistical level of significance. It is however significant at 10% statistical level of significance indicating that marital status of a beneficiary could have a positive effect on the level of income. This shows that a married person has increases in income more than a single person. The incomes of two people will definitely be greater than one person.

The amount of credit (*amc*) received by microfinance beneficiaries and amount paid to workers monthly (*mpayw*) of small businesses of both programme and non-programme households have strong statistical significance at 5% level. The coefficients are also positive and relatively significant in affecting household income. Another significant variable affecting household income is the profit (*mprof*) from small businesses. This means that payment to workers serve as an incentive to increasing productivity and hence profit. This therefore accounts for the positive relationship with income.

It is however important to note that the definition of household income in this particular study is not only relative to income obtained from the beneficiaries of microfinance services. It includes profits of small scale businesses which might benefit from services

of microfinance such as loans, expert advice and consultancy, risk management techniques and as well includes other businesses which do not benefit from microfinance services.

4.2.2 The Effect of microcredit on Poverty Reduction

This section analyses the effect of microfinance with particular focus on the effect of microcredit on reduction of poverty of beneficiaries. The objective poverty status of the household is calculated based on this formula:

$$\text{Objective Poverty Status} = (\text{Monthly income}/30)/\text{Number of household members} = \text{Daily per capita income}$$

If daily per capita income \geq ₦5.60 then household is above poverty line and given a dummy of “1” or otherwise “0”

The first section of the analysis presents the descriptive statistical comparison of poverty level of programme and non-programme households in a cross tabulation format. This is presented table 4.3

Table 4.3 Comparison of Poverty Status of Respondents

Status	Below the Poverty line	Above the Poverty line
Participants	153 (76.5%)	47 (23.5%)
Non- Participants	148 (74%)	52 (26%)
Total	301 (75.25%)	99 (24.75%)
Pearson chi- square test 0.3356		

Computed with Stata 11 package

From table 4.3, 153 participants representing 76.5% are below the poverty line as against only 47 representing only 23.5% who are above the poverty line. This means that microfinance may not probably have significant effect in reducing poverty. In the same vein, greater number of the non-participants (148) representing 74% are below the poverty line in contrast to 52 (26%). However, the Pearson chi-square test showed that there was no statistically significant difference between poverty of programme households and non-programme households.

In order to further analyse the impact of microfinance on poverty, the study estimated the logit model as specified in equation 4. The results are presented in table 4.4 below

Table 4.4 Estimates of microcredit on poverty

Variable	Coefficient	p-value
<i>Constant</i>	-0.300	0.886
<i>amc</i>	-0.001***	0.000
<i>mst</i>	-1.601***	0.000
<i>occ</i>	0.271	0.349
<i>ndep</i>	0.601***	0.000

n= 181
Pseudo R² = 0.342
Log likelihood =-67.497
Likelihood ratio test: Chi 2 =70.20

Estimated with Stata 11 package

Significance level (2014) (* Sig. 10%, ** sig. 5%, *** sig. 1%)

The intercept is negative but not significant. The *amc* and *mst* are both negative and highly statistically significant. *mst* however has a greater coefficient relative to the *amc*.

From the specification of the logit model the negativity of the coefficients of the variables means that if a person is below the poverty line, *amc* and *mst* of participants will reduce their poverty level. From the perspective of those who are above the poverty line it is the opposite. Their marital status and amount of credit taken from MFIs could actually be leading them towards living below the poverty line.

Occupation (*occ*) is not statistically significant in influencing the poverty level of respondents. The number of dependents is the only variable which shows a positive statistically significant on poverty. This means that those below the poverty line could have increases in their poverty level with increases in the number of dependents. On the other hand those who are above the poverty line will not be affected negatively with increases in the number of dependents. Indeed, it shows a positive influence on poverty.

The Pseudo R^2 as can be observed appears good for a logit model of this kind. The interpretation of Pseudo R^2 differs from the normal R^2 and the value of the Pseudo R^2 (0.34) obtained in the estimation is highly acceptable.

Testing of hypothesis

The study tested for the effect of loans from MFIs on poverty reduction of respondents with the following hypothesis;

H_0 : Loans from MFI has no significant effect on poverty reduction in Koforidua;

H_1 : Loans from MFI has significant effect on poverty reduction in Koforidua.

From the results in table 4.4, the amount of credit (*amc*) which is the main variable has a negative relationship with poverty. This is statistically significant at 5% level. The null hypothesis is therefore rejected in favour of the alternative hypothesis.

Although the result of the effect of loans on households' income is statistically significant, the cross tabulation results presented above in table 4.3 indicates that the depth of the impact is very shallow. The effect of loans was not enough to change the poverty status of participating households although a few households were found above the poverty line of \$2 (¢5.60) a day.

4.3 The effect of household participation on Food Expenditure

The expenditure on food by households in the low income bracket mostly takes a high percentage of their income. Since most microfinance beneficiaries are mostly located within lower income brackets of the society, the study estimated the effect of household participation in microfinance on household expenditure on food with equation 3. The results are presented in table 4.5

Table 4.5 Estimates of Household Participation on Food expenditure

Variable	Parameter	Coefficient	p-value
<i>Const</i>	δ_0	2.359***	0.000
<i>Part</i>	δ_1	0.059	0.180
<i>ln(hinc)</i>	δ_2	0.407***	0.000
<i>rem</i>	δ_3	0.151***	0.001
<i>ln(nhme)</i>	δ_4	0.307***	0.000

n= 400
R² =0.534
Adjusted R² =0.529
F= (4, 395 = 113.09)

Source: Estimated with Stata 11 package
(* Sig. 10%, ** sig. 5%, *** sig. 1%)

The constant is relatively high and statistically significant indicating that apart from microfinance, beneficiary households will be able to spend on food. Although households who participate in microfinance programme share a positive amount of their income on food, the coefficient of the *part* variable is however not statistically significant at 5% level of significance.

The level of household income (*hinc*) also has positive statistical significance on food expenditure. Remittance (*rem*) as an addition to household's income also has positive statistical effect on the household expenditure on food. This is expected because as beneficiaries' income increase and the fact that most of them are in the lower income group, they will usually increase their expenditure on food.

Testing of hypothesis

The hypothesis of the effect of household participation on the food expenditure of household was tested with the following hypothesis:

H₀: Household participation in MFI has no significant effect on household expenditure on food;

H₁: Household participation in MFI has significant effect on household expenditure on food.

In table 4.5, even though household participation in microfinance has a positive relationship with household expenditure on food as indicated by the coefficient of the *part* variable, it is not significant at 5% statistical level. The study therefore accepts the null hypothesis and concludes that indeed household participation has no significant effect on household expenditure on food.

4.4 Probability of Households Participation in a Microfinance Programme

The study attempted to estimate the probability of a household participation in microfinance with several factors as independent variables as specified in the probit model and presented in table 4.6.

Table 4.6 Estimates of Probability of Household Participation in Microfinance

Variable	Coefficient	p-value
Constant	.0552581	0.889
<i>age</i>	-.0012826	0.860
<i>sex</i>	.2043877	0.140
<i>mst</i>	.0988541	0.492
<i>ledu</i>	-.0026367	0.978
<i>ndep</i>	.0226255	0.620
<i>occ</i>	-.0567781	0.508
<i>hinc</i>	-.0000533	0.412

n= 356
Pseudo R² = 0.0083
Log likelihood =-244.66924
Likelihood ratio test: Chi 2 =4.08

Estimated with Stata 11 package
(* Sig. 10%, ** sig. 5%, *** sig. 1%)

From the table, none of the factors included in the estimation was statistically significant in influencing the probability of a household in participating in microfinance programme. This means that there could be other factors or several factors including some of those used in the estimation with very negligible influence on the probability of a household participating in microfinance programme. These results are also reflected in the relatively

low Pseudo R^2 obtained from the estimation. The focus of the study was however on the variables included in the estimation.

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CHAPTER FIVE

CONCLUSION

5.1 Introduction

This chapter is the concluding chapter of the study. It presents the major findings, recommendation, and limitations of the study.

5.2 Summary of Major Findings

The main aim of this study was to assess the effect of microfinance on clients in Koforidua and specifically on the poverty reduction of microfinance programme in the area. The study came out with the following findings.

Comparison of average household income of programme household and non-programme household showed that non-programme households had an average household income which was greater than average household income for programme households.

The impact of loans on household income indicated that the amount of credit taken by households had a greater significant impact on households' income than any of other the variables included in the study.

Payment to workers and monthly profit were found to have a positive and significant impact on income levels of programme households.

Marital status had relatively high coefficient though significant at 10% statistical level of significance indicating that marital status of a beneficiary could have a positive effect on

the level of income. This showed that a married person has increases in income more than a single person.

There was no statistically significant difference between the poverty of programme households and non-programme households. This means that poverty among programme-households was just the same as poverty among non-programme households. The effect of loans on household income, although statistically significant, had the propensity of bringing those above the poverty closer or below the poverty line. Thus, most of the programme households would be found below the poverty line of \$2 (¢5.60) a day.

The study found out that the number of dependents was the only variable which showed a positive statistically significant on poverty. This means that those living below the poverty line could be made worse off as a result of the number of dependents. This could be as a result of the fact that these households have a little or no amount to save as a result of the dependency rate.

Household participation in microfinance had a positive relationship with household expenditure on food although it wasn't significant at 5% statistical level. The study concludes that household participation had no significant effect on household expenditure on food.

Remittances which are an addition to household's income had a positive statistical effect on the households' expenditure on food. This meant that with increased income levels, most households in lower income group would normally increase their expenditure on food.

The product of microfinance institutions that attracted mainly households was microcredit (loans). This means that the other products such as micro savings and micro insurance are not widely patronized by households.

5.3 Recommendation

Based on the findings enumerated above, the study made the following recommendations.

Microfinance institutions need to widen their scope of services and delivery and not concentrate mainly on microcredit. Micro- savings and micro- insurance should likewise be promoted to have a greater impact on participants. MFIs should concentrate on savings mobilization which helps to reduce poverty.

Loan products given to households need to be designed with greater flexibility in terms amounts and repayment terms so that the impact on households will be realised. Repayment terms should be made at the client's convenience depending on the type of business, profit level, and poverty status of the individual.

Micro insurance services are important especially for assets and health. Micro insurance reduces the vulnerability of clients to risk. Microfinance institutions need to therefore effectively market micro insurance services to clients.

The study reveals that MFIs need to do more in terms poverty reduction of beneficiaries. This means that the aim of reducing poverty by MFIs has not yet been realised. MFIs should therefore critically look at measures targeted at reducing the poverty level of their clients drastically.

5.4 Limitation to the Study

The main limitation encountered by study was that some respondents may not have given accurate response because they consider certain information as “confidential” and as such may not want to give genuine responses. This is likely to affect the accuracy of the data collected.

5.5 Scope of Future Research

Future researchers may consider covering the whole Eastern Region of Ghana or the whole country to widen the scope to determining the total effect of microfinance on beneficiaries.

In the event of collapse of some MFIs in the country, further research needs to be done in order to determine factors that influence the collapse of MFIs and the attendant effect on beneficiaries.

Micro-savings scheme has less evidence of its effectiveness, either positive or negative. Further research is therefore recommended to assess its impact on clients.

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APPENDIX A:
REGRESSION RESULTS

. reg hinc mst amc mpayw mprof

Source	SS	df	MS			
Model	81408735.1	4	20352183.8	Number of obs = 150		
Residual	64233450.4	145	442989.313	F(4, 145) = 45.94		
Total	145642185	149	977464.332	Prob > F = 0.0000		
				R-squared = 0.5590		
				Adj R-squared = 0.5468		
				Root MSE = 665.57		

hinc	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
mst	201.5113	114.6102	1.76	0.081	-25.01109	428.0337
amc	.3404964	.0348785	9.76	0.000	.2715605	.4094323
mpayw	.4664188	.1246125	3.74	0.000	.2201272	.7127103
mprof	.1531153	.0716723	2.14	0.034	.0114579	.2947727
_cons	114.3655	128.2537	0.89	0.374	-139.1226	367.8537

. logit poverty amc mst occ ndep

Iteration 0: log likelihood = -102.59836
 Iteration 1: log likelihood = -71.94295
 Iteration 2: log likelihood = -67.628955
 Iteration 3: log likelihood = -67.497126
 Iteration 4: log likelihood = -67.496897
 Iteration 5: log likelihood = -67.496897

Logistic regression Number of obs = 181
 LR chi2(4) = 70.20
 Prob > chi2 = 0.0000
 Pseudo R2 = 0.3421

poverty	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
amc	-.0010271	.0002067	-4.97	0.000	-.0014323	-.0006219
mst	-1.601185	.4588694	-3.49	0.000	-2.500552	-.7018176
occ	.2713032	.2895777	0.94	0.349	-.2962587	.8388651
ndep	.6007267	.1577567	3.81	0.000	.2915293	.9099241
_cons	-.1296698	.9061311	-0.14	0.886	-1.905654	1.646315

APPENDIX B:

SAMPLE QUESTIONNAIRE

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF ECONOMICS

These questionnaires are to enable the researcher to get information from clients to achieve the research objectives of the topic, “THE EFFECT OF MICROFINANCE ON BENEFICIARIES IN KOFORIDUA”.

All information provided in this study will be treated as confidential and your anonymity is assured.

PERSONAL INFORMATION/ HOUSEHOLD’S GENERAL INFORMATION

1. Age
2. Gender Male [] Female []
3. Marital Status 1) Single [] 2) Married []
4. Level of Education 1) Basic 2) Secondary 3) Tertiary
5. Are you the head of your household? 1) Yes 2) No
6. How many are your household members?.....
7. What is your main occupation?.....
8. If married, what is your spouse’s occupation?
9. Do you have other sources of income? If yes, specify the sources
.....
10. How many are your dependents?.....
11. How many children do you have?
12. Are the children in school? 1) Yes 2) No
13. Which level are they? 1)Basic 2)Secondary 3)Tertiary

CREDIT HISTORY

14. Are you a client of any MFI? 1) Yes 2) No
15. If yes, what is the name of the MFI?.....
16. Length of membership with the MFI 1) Less than 1 month 2) 1 month- 6 months 3) 7 months- 1 year 4) more than 1 year
17. Do you save with the MFI? 1) Yes 2) No
18. Have you applied for a loan from the MFI? 1) Yes 2) No
19. Did you receive the loan from the MFI? 1) Yes 2) No
20. If yes, what did you use the loan for?
21. How much did you apply for?
22. How much were you given?

CREDIT FROM CURRENT MFI

23. How did you get to know about the MFI? 1) From a friend or relative 2) From advertisement 3) It is near home/ business
24. Which of the products attracted you to the MFI? 1) Savings 2) Credit 3) Insurance
25. Does the MFI require collateral for credit? 1) Yes 2) No
26. If yes, what do they normally require?
27. Have you had any problems with credit repayment? 1) Yes 2) No
If yes, give reasons
28. Have you sold off some of your assets to pay back credit to the MFI? 1) Yes 2) No
29. If yes, what assets have you sold out? 1) House 2) Land 3) Clothing 4) Electronics 5) Other assets, specify.....
30. How many other MFIs do you know of?

HOUSEHOLD INCOME AND EXPENDITURE

31. What is household's income per month?
32. What is household's expenditure per month (excluding repayments to credit and unexpected events)

33. How much do you spend on your children's education per term?

.....

34. What is expenditure on food per month?

.....

35. Do loans from MFI increase household income? 1)Yes 2)No

OTHER SOURCES OF INCOME

36. Do you receive money from relatives or friends elsewhere? 1) Yes 2) No

37. How often do you receive the money? 1) Every week 2) Every two weeks 3) Every month 4) Occasionally

SMALL BUSINESS (PHYSICAL CAPITAL)

38. What kind of business are you into? 1) Manufacturing 2)Trading 3) Services 4) Agriculture

39. Are you the owner of the business? 1) Yes 2) No

40. Where did you get the money to start the business? 1)Credit 2) Savings 3) A gift or Inheritance 4) By selling properties or assets

41. Where is your business located? 1) At Home 2) In a rented premises 3) In the market 4)In owned Premises (Not at home)

42. What is the value of your assets?

43. If Savings, where do you deposit? 1) Formal Institution 2) MFI 3)Informal system

44. If credit, where do you receive it from? 1) Formal Institution 2) MFI 3)Informal system

45. How many employees work with you (excluding household members)?

.....

46. How much do you pay them per week?

47. What is your level of profit per week?

48. Have you been able to purchase new assets after joining the MFI? 1)Yes 2) No
49. Have you been able to renovate your assets since you joined the MFI? 1) Yes 2) No
50. Does the MFI provide non-financial services such as technical assistance for your Business? 1)Yes 2)No
51. If yes, at what stage does the MFI withdraw such services?

.....

GENERAL LIVELIHOOD (QUALITY OF LIFE)

52. The loan from MFI has helped in income generation 1) Yes 2) No
53. The loan from MFI has helped in consumption smoothing) 1) Yes 2) No
54. Has your financial situation been worsened after joining the MFI? 1) Yes 2) No
55. How would you describe your livelihood after joining the MFI? 1)Much worse now 2) A little worse now 3) Same 4) A little better now 5) Much better now

THANK YOU.

