

**MICROFINANCE AND POVERTY REDUCTION AMONG
WOMEN IN LAMBUSSIE AND NANDOM DISTRICTS IN UPPER
WEST REGION**

KNUST

BY

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DECLARATION

I hereby declare that this submission is my own work towards the Master of Philosophy. And that, to my best of knowledge, it contains no material previously published by another person or material which has been accepted for the award of any other Certificate, Diploma or Degree of the elsewhere, except where due acknowledgement has been made in text.

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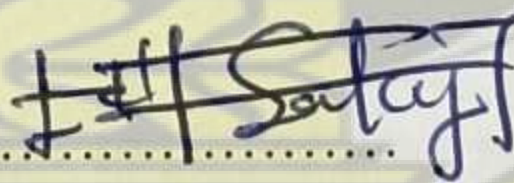
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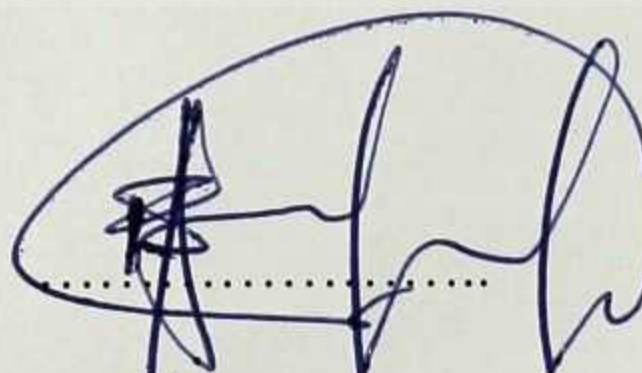
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ABSTRACT

One of the means for poverty reduction that has assumed universal acceptance and adoption in Ghana is the provision of micro finance services, particularly to the economically active poor. Consequently, several studies have been conducted regarding the impact of microfinance on poverty reduction and the results have been inconclusive.

This thesis investigated the impact of micro finance on poverty reduction among women in upper west region in Ghana. The study used basically only primary data. Data was collected from a sample of 400 women from Lambussie and Nandom districts for the study. Logistic Regression was applied to the study. Three models were used for the estimation.

Questionnaires were used for the Data collection, and were made up of both closed and open ended questions.

It was found that microfinance has positive impact on poverty reduction among women in Lambussie and Nandom districts.

It was also found that women who were employed were more able to save than those not employed and that, increase in income positively impacted on the lives of respondents.

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DEDICATION

This work is dedicated to my mum madam Ziro Memunatu, for the love and care and without whose support my education would have ended prematurely, and then my lovely daugther Umaida and my son Shuraim Wikana.

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LIST OF ACRONYMS AND ABBREVIATIONS

IFAD	International Fund for Agricultural Development
MFIs	Microfinance Institutions
NGO	Non Governmental Organisation
NRB	Nandom Rural Bank
SAT	Snapi Aba Trust



CHAPTER ONE

INTRODUCTION

1.1 Background to the study

The issue of poverty has become a global concern in recent times, and this has called for strategies and development programs which may alleviate poverty and promote self-reliance.

According to the World Bank (2000) about half of the 6.5 billion population of the world live on \$2 a day or less.

Between 1990 and 2001 the headcount ratio of poverty for all Least Developed Countries (LDCs) fell from 27.9% to 21.1%, but the ratio for Africa actually increased from 44.6% to 46.4% (Ravallion 1994).

Poverty in Ghana, like in most other sub-Saharan African countries, is predominantly a rural phenomenon. The poorest parts of Ghana are the savannah regions of the north i.e. the Northern, Upper East and Upper West regions (Lamptey Alfred, 2010).

In Ghana the total population as of 2008 was about 23,350,927, the total population of those living in rural areas was about 11,670,793, and among these about 4,574,951 were poor.(Lamptey Alfred).

One major cause of poverty in developing countries is lack of access to productive capital, with formal financial institutions denying the poor access to loans due to their inability to provide the necessary collateral,(Chirwa, 2002).

In Ghana it is estimated that only about 6 percent of the entire population have access to formal financial services, with the majority being denied access (Aryeetey, 1994).

NGOs and government agencies have therefore adopted the concept of micro-credit schemes as a major tool for poverty reduction (Fisher et.al. 2002).

Microcredit is seen as a major tool of poverty reduction; for providing poor people with credit for income generating activities can help them work their way out of poverty (Fisher et.al. 2002).

To combat poverty and enhance economic growth, the financial sector in most African economies, including Ghana, have undergone restructuring since the late 1980s with some positive results. Several studies have concluded that deepening of the financial sector contributes to reduction in poverty (Beck *et al* -2007;Jalilian and Kirkpatrick-2005; Quartey -2005). Evidence from Sutton and Jenkins (2007) suggest that countries that have well-established, efficient and properly utilised financial systems have less poverty.

It is assumed that like the positive relationship between financial investment and economic growth, financial investment in the poor through microfinance services will lead to increased incomes of the poor and ultimately result in poverty reduction (Hulme, 1997)

Credit is an important instrument for improving the welfare of the poor directly as well as for enhancing their productive capacity through financing investment in human and physical capital (Khandker, 1995).

Through a number of impact analysis it has been proved at international levels that Microfinance programs contribute to the achievement of several aspects of the Millennium Development Goals (MDGs) including poverty reduction; and from the success stories of countries like Bangladesh, many developing countries including Ghana have formally introduced microfinance as one of the interventions to reduce poverty.

A key feature of microfinance has been the targeting of women on the grounds that, compared to men, they perform better as clients of microfinance institutions and that their participation has more desirable development outcomes (Pitt and Khandker 1998).

The Nobel Peace Prize winner Muhammad Yunus was the first to introduce the concept of microcredit in Bangladesh. Professor Yunus started Grameen Bank (GB) more than 30 years ago with the aim of reducing poverty by providing small loans to the country's rural poor (Yunus 1998).

In Ghana, even though Microfinance has existed in some form for many years various governments formally and consciously started implementing the strategy to deal with poverty in the 1990s. The 1990s saw the formalization of microfinance institutions (MFIs) and by the mid-1990s we saw the advent of commercialization in microfinance and the mainstreaming of microfinance institutions into the financial sector (Microfinance in Ghana: An Overview, (2007),)<http://www.mofep.gov.gh>

According to Ghana Microfinance Network (GHAMFIN), there were about 233 regulated and non-regulated MFIs in Ghana as of 2001 and these MFIs together served over 360,000 clients.

The researcher is conducting his study in the upper west region in Ghana where poverty is acute.

1.2 STATEMENT OF THE PROBLEM

One of the means for poverty reduction that has assumed universal acceptance and adoption in Ghana is the provision of micro finance services, particularly to the economically active poor. This is as a result of the fact that conventional banks do not

cater for the needs of the poor. The poor have no access to loans from the banking system, because they cannot raise the acceptable collateral.

As a result of the inability of the poor households to access loans from the formal sector financial services to finance their small business activities led to the development of microfinance as a development tool in Ghana.

According to Ghana Microfinance Network (GHAMFIN), there were about 233 regulated and non-regulated MFIs in Ghana as of 2001 and these MFIs together served over 360,000 clients.

Consequently, several studies have been conducted on the effects of microfinance on poverty reduction and the results have been inconclusive.

In studies conducted in the Central and Eastern regions of Ghana, (Nanor(2008), Adae-Korankye(2012), reported that MFIs have positive impact on poverty reduction.

On the other hand, other studies have also reported that microcredit (MFIs) do not have any significant impact on poverty reduction, and that rather the poor becomes poorer due to the additional burden of accumulated debt.

(Hulme and Mosley(1996)) concluded that micro-credit schemes are less effective than they might be in poverty reduction.

Paxton et al (2000), and Onyuma et al (2005), argued that credit from microfinance institutions might worsen the plight of beneficiaries as their lending rates are seemingly higher.

In addition to the above analysis on studies regarding poverty reduction in Ghana, the northern regions where poverty is acute have not seen enough investigations regarding poverty reduction.

In fact poverty rates in the north are two to three times the national average (IFAD). Northern Ghana is one of the areas where the incidence of poverty is very high. As stipulated in the Ghana Poverty Reduction Strategy (2003-5) document, 9 out of 10 is poor in the Upper East Region, 8 and 7 out of 10 are poor in the Upper West and Northern regions respectively.

Therefore there is the need for further investigation on the impact of microfinance on poverty reduction that considers the northern part of Ghana. This thesis proposes to fill this knowledge gap.

1.3 Objectives of the study

The general objective of the study is to assess the impact of microfinance on poverty reduction among women in Lambussie and Nandom districts. The specific objectives of the study include the following:

- i. Measure the impact of micro credit on poverty reduction among beneficiary women.
- ii. Measure the impact of micro credit on savings among beneficiary women.
- iii. Measure the impact of micro credit on improvement in life of beneficiary women.

1.4 Hypotheses

1. H_0 : Microcredit to women does not have any impact on poverty reduction.

H_1 : Microcredit to women have impact on poverty reduction.

2. Ho: Microcredit does not have any impact on the ability to save of the beneficiary women.

H₁: Microcredit have impact on the ability of the beneficiary women to save .

3. Ho: : Microcredit does not have any impact on improvement in life of beneficiary women in the past one year.

H₁: : Microcredit has an impact on improvement in life of beneficiary women in the past one year.

1.5. Significance of the study

The findings of the study will help to provide policy direction as to the benefits or otherwise of microfinance and subsequently future directions as to what could be done to maximize the expected benefits from microfinance.

Findings from this study would also clarify the suspicion of people as to whether micro

credit is beneficial to subscribers.

I believe that the study will be of interest to policy-makers, development practitioners, academics and civil society, and enrich our understanding of the impact of microfinance.

1.6. Organization of the study

The study was organized in five chapters as follows. Chapter One provides general background issues to the study. It also provides the statement of the problem. Again, it sets out the objectives of the study and statement of hypothesis. Chapter Two reviews pertinent literature of the study. Both theoretical and empirical issues were

reviewed in the literature. Chapter Three discusses the methodological issues of the study. Chapter Four also deals with the analysis of the empirical results. The final chapter which is chapter Five summarises the main findings of the study and provide suggestions and policy recommendations.

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CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter provides information about aspects of previous works done by other researchers which relate to this study. Here we are making a survey of borrowed academic materials, which might help us in better understanding the core issue of the research project.

This chapter covers a review of theoretical literature as well as empirical literature on microfinance. Also the origins, concept and theories of microfinance, the concept of poverty as well as the evolution of microfinance in Ghana are presented.

2.1 Origin of Microfinance

For a long time in the past the poorer part of the community in developing nations did not get access to formal financial sectors. They were left out of the reach of the formal financial institutions for several reasons which are: formal financial sectors required collateral and credit rationing, the processes and procedures of giving loan are bureaucratic and very lengthy, formal institutions have preference for high-income clients and large loans, they are often urban based and give lending to those engaged in trade and industry and they usually consider the demand for loan by the poor as unattractive and unprofitable (Bamalaku 2006).

On the other hand, informal financial sectors were also not good. They normally require high interest rates, which the poor cannot afford to pay. Such conditions have also been found to restrict the access of the poor towards informal financial sectors (Bamalaku 2006).

The year 1974 was a landmark in the evolution of microfinance development. This was when Professor Muhammad Yunus, a Bangladeshi economist introduced the idea of providing the poor with small loans. While he was on a field trip to a less endowed village with his students, he met a woman and interviewed her. She was earning her living from the sale of stool (prepared from bamboo). From the interview he got to know that the woman was making only a penny margin of profit for each stool. Then he began to think that the woman would be able to raise herself above subsistence level if she were given the loan with a more advantageous rate: then, he did it from his own pocket. In 1983 he officially formed the Grameen Bank (meaning “village bank”).

Currently, in Bangladesh, Grameen Bank has 1,175 branches, 12,500 staff and 2.4 million borrowers. The geographical coverage is 41, 000 villages, which means more than 60% of the total villages in Bangladesh (Bamalaku 2006).

2.2 Definitions and Concepts of Microfinance

The term ‘micro-credit’ was first introduced in the 1970s to represent the provision of loans to the poor to establish income-generating projects, while the term ‘microfinance’ has come to be used since the late 1990s to indicate the so-called second revolution in credit theory and policy that are customer-centred instead of product-centred (Elahi and Rahman 2006:477, cited in Stewart R, and others, 2010). But both ‘micro-credit’ and ‘microfinance’ tend to be used interchangeably to represent the range of financial services offered specifically to poor, low-income households and micro-enterprises (CGAP website 2010; Stewart et al, 2010).

Microfinance basically covers microcredit, micro saving, micro insurance and money transfers for the poor. Microcredit, which is part of microfinance, is the practice of giving small, collateral-free loans to usually unsalaried borrowers or groups of cooperatives who otherwise cannot get access to credit (CGAP website 2010; Hossain 2002:79, cited in Stewart et al, 2010).

Alternatively, 'microfinance' refers to the provision of numerous financial services to people who may have no access to such financial services from formal banks. These financial services travels far beyond providing credit to include, amongst a myriad of products, training clients in entrepreneurial and vocation skills (such as the Grameen telephone project in Bangladesh); enhancing other income generating activities (for example livestock rearing); educating members on the significance of technical skills in their field of operation; and providing social safety nets to poor people such as food grain subsidies, and basic health care (Rhyne and Otero, 2006; Maes and Foose, 2006, cited in Pual Onyina and Sean Turmell(2010)

Microfinance also refers to the method of lending capital in small amounts to poor people who are traditionally considered unbankable to help them to invest in self-employment (Kasim and Jayasooria, 2001 cited in Abur and Torrum, 2012).

Abur and Torrum, (2012), describes microcredit as “a process in which poor families borrow large amounts (or lump sums) of money at one time and repay the amount in a stream of small, manageable payments over a realistic time period using social collateral in the short run and institutional credit history in the long run”.

Moreover, microcredit is the “provision of a broad range of financial services such as deposits, loans, payment services, money transfers, and insurance to poor and low-income households”, and it comprises microsavings, microcredit, and microinsurance (Abur and Torrum(2012).

Microfinance could further be referred to as a development strategy that gives credit and savings services to the poor, particularly rural women, for income-generating projects.

Beginning from the mid-1980s, microfinance programs have reached nearly 100 million clients in Asia, Africa, and Latin America.(Microcredit Summit Campaign. State of the Microcredit Summit Campaign Report 2005. Washington, DC: Microcredit Summit Campaign; 2005.) Also

Microfinance is the provision of financial service to the economically active poor who hitherto could not access the mainstream financial service provider. “Microcredit is commonly defined in terms of loan amount as a percentage of average per capita income” (Abiola, 2011).

“Microfinance refers to the provision of financial services to the poor. In the last thirty years, it has emerged from a grassroots movement to a global industry with about 70 million clients in 40 countries” (Harris, 2005 cited in Hong Son Nghiem 2007).

According to Tiyas Biswas (nd), “the term microfinance, sometimes is used interchangeably with the term micro credit. However while micro credit refers to purveyance of loans in small quantities, the term microfinance has a broader meaning covering in its ambit other financial services like saving, insurance etc. as well.

The mantra “Microfinance” is banking through groups. The essential features of the approach are to provide financial services through the groups of individuals, formed either in joint liability or co-obligation mode.”

From the above definitions one can generally define microfinance for loans (i.e., microcredit) as the provision of small scale financial services to people who lack access to traditional banking services.

The term microfinance normally implies very small loans to low-income clients for self employment, often with the simultaneous collection of small amounts of savings. The issue is about how to define “small” and “poor” since this affects what does and does not constitute microfinance.

“Microfinance” by its name obviously is about more than just credit, otherwise we should always call it microcredit. Many microfinance programs offer stand-alone savings products as well as remittances and insurance which are becoming popular innovations in the suite of services offered by financial institutions for the poor.

In fact, it is no longer true that, it is only institutions for the poor that offer microfinance services. Commercial banks and insurance companies are beginning to move downscale to reach new markets and consumer durables companies are targeting the poor with microcredit scheme. Hence, not all programs branded as “microfinance” will fit everybody’s perception of the term or concept but it, depends on the model, target group, and services offered (Dean Karlan and Nathanael Goldberg, 2007)

The Grameen Bank of Bangladesh, one of the pioneers of the microfinance entities and of the group lending model has since moved towards individual lending. The focus on “poor” clients is almost universal, with different definitions of the word “poor.” This issue has been made more significantly recently due to legislation from the United States Congress that requires USAID to restrict funding to programs that focus on the poor. Some opine that microfinance should focus on the “economically active poor,” or those just at or below the poverty level (Robinson 2001, cited in Dean Karlan and Nathanael Goldberg, 2007). Others, on the other hand, suggest that microfinance institutions should try to reach the indigent (Daley-Harris 2005 cited in Dean Karlan and Nathanael Goldberg, 2007)).

Most microfinance programs focus on women and women have been shown to repay their loans more often and to direct a higher share of enterprise proceeds to their families. The Microcredit Summit Campaign reports that 80% of microfinance clients worldwide are female. However, the number or percentage of female clients varies considerably by region, with the highest percentages in Asia, followed by Africa and Latin America, with the fewest women served by microfinance institutions (MFIs) in the Middle East and North Africa.

This focus on the poor, and on women, together with the simple application process and the provision of financial services in clients' communities together form financial *access*, that is, the provision of financial services to the *unbanked*—those who have been excluded from financial services because they are poor, illiterate, or live in rural areas.

Finally, microcredit loans are made to be offered at market rates of interest such that the MFIs can recover their costs but not so high that they make supernormal profits off the poor. This is an important concept because institutions that charge high interest rates can be scarcely cheaper than the moneylenders they intended to replace, and institutions that charge subsidized rates can alter markets by undercutting other lenders that are attempting to recover their costs.

This has implications for impact assessments because the less clients must pay in interest the more they could be expected to show in increased income. If we compare the effectiveness of organizations that fall outside of “normal” microfinance interest rates, we could end up with unreasonable conclusions about the effectiveness of one program versus another, since each type of program attracts different clients and imposes different costs on their borrowers.

Note that sustainability of an organization (as defined roughly by *de facto* World Bank policy) does not require each and every product or target market is sustainable but rather that the organization in totality is sustainable. Thus organizations could charge interest rates that are lower for indigent or particularly poor individuals, as long as there were enough profits from lending to the not-so-poor to be able to cross-subsidize such a program. Such programs may, in the long term, be sustainable (if the initially-subsidized program leads to client loyalty and a long-term relationship with the MFI)((Dean Karlan and Nathanael Goldberg, 2007).

Also the issue of access to credit and participation to credit program are used interchangeably in the literature. Some scholars think that a distinction must be made between the two (Zeller, 1994, cited in Edith 2009). For example, Diagne and Zeller (2001, cited in Edith 2009) think that there is a distinction between access to credit and participation to a credit program and hence a household has access to credit from a particular source if it can borrow from that source whilst a household participates if it borrows from that source of credit. Thus, a household can have access to credit but choose not to borrow, i.e., do not participate to the credit market. Participation could be defined as the effective access to credit program (Edith 2009)

2.3 Theories of Microfinance

According to Duvendack M. e'tal (2011) the theoretical literature on Microfinance can be divided into two. One strand of the literature explores impact pathways of microfinance on enterprises, households, and individuals. The second strand addresses the challenges that poor people have in gaining access to financial services at an affordable cost, particularly as a result of their lack of collateral. Would-be lenders are also discouraged by the high costs of gathering reliable information about the actual,

or projected, incomes that borrowers might be able to lend against, particularly for prospective clients with low overall 'debt capacity' (Duvendack M. e'tal).

2.3.1 Impact Pathways of Microfinance

According to Hulme and Mosley (1996), the notion that capital investment and other financial initiatives constitute key determinants of economic growth and income improvement continues to drive most development efforts including microfinance(cited in Eric Henry Yeboah, 2010).

Hulme and Mosley (1996) cited a number of empirical research results that show a strong and positive correlation between growth and the share of investments in GDP(cited in Eric Henry Yeboah, 2010).. It is exactly this idea that drives microfinance. It is assumed that like the positive relationship between financial investment and economic growth, financial investment in the poor through microfinance services will lead to increased incomes of the poor and ultimately result in poverty reduction (Hulme, 1997, cited in Eric Henry Yeboah, 2010).

By ensuring the establishment of new micro-enterprises, microfinance ensures the efficient use of labour and capital as factors of production and therefore contributing to economic growth and ultimately to sustainable development. The human resources theory is more or less like the economic one. Since it is generally agreed that microfinance is labour-intensive, facilitating access to microfinance is likely to result in the acquisition of new skills and the upgrading of existing ones and thus improve on the capacity of the poor to generate income and improve their livelihood (Yeboah, 2010).

Also other theories on microfinance deals with empowerment, which postulates that, the poor become empowered when they participate in microfinance activities (Hashemi; Cheston and Kuhn, 2002).

By self-selecting themselves into groups and self-managing their groups, and gaining control over the means of making a living, poor people become empowered and independent. Empowerment has been particularly relevant for women who are perceived as being marginalised in most developing countries (Yeboah, 2010).

In total, the most outstanding among all the microfinance theories have been the economic dimension that stands out as most significant. Poor people are given with capital which they invest in income-generating endeavours and make profit. This should end in a virtuous cycle: credit leads to rising production and incomes, and allow for increase in consumption and savings, and result in further investment (Meyer, 2002).

2.3.2 Imperfections in the microfinance markets

The second part of the literature on microfinance has to do with an imperfect market due to Information Asymmetry and Moral Hazard. Information asymmetries may result in the phenomena of adverse selection and moral hazard.

With respect to adverse selection, the lender lacks enough information on the riskiness of its borrowers. Thus riskier borrowers are more likely to default than safer borrowers, and thus should be charged higher interest rates to compensate for the increased risk of default. Also, safer borrowers should be charged less if each type can be accurately identified. Since the lender has incomplete information about the risk profile of its borrowers, higher

average interest rates are passed on to all borrowers irrespective of their risk profile (Armendáriz de Aghion and Morduch 2005, 2010 Duvendack M. e'tal 2011).

The issue of 'moral hazard' has to do with the loan utilisation by the borrower in that the lender cannot be sure as to whether a loan once disbursed, is used for its intended purpose, or that the borrower applies the expected amounts of complementary factors, especially effort and entrepreneurial skill, that are the basis for the agreement to provide the loan. If these inputs or factors are below the expected then the borrower may be less able to repay it (Ghatak and Guinnane 1999, cited in Duvendack M. e'tal 2011). Also aside adverse selection and moral hazard there are issues of high transactions costs, the provision of incentives to borrowers for timely repayment as well as the creation and implementation of adequate loan contracts are also challenges that play a role in explaining the failure of rural credit markets. Thus this context calls for microfinance and its group lending approach.

Microfinance proponents therefore claim that the formation of joint liability groups (JLGs) with its focus on peer pressure and monitoring help in responding to these challenges. As a result, the theoretical microfinance literature has focused mainly on developing models that explain the workings of the JLG concept and its success, in particular, in overcoming information asymmetries (Duvendack M. e'tal 2011)

2.4 Evolution of Microfinance in Ghana

According to Sefa and Jeffery (2010), "The concept of microfinance is not new in Ghana. Traditionally, people have saved with and taken small loans from individuals and groups within the context of self-help to start businesses or farming ventures.

According to the Ministry of Finance and Economic Planning, the first Micro financing Union in Africa was established in Northern Ghana in 1955 by Canadian

Catholic Missionaries (<http://www.mofep.gov.gh/microfinance.htm>). Susu, which is one of the current microfinance methodologies, is thought to have originated in Nigeria and spread to Ghana in the early 1990s (<http://www.mofep.gov.gh/microfinance.htm>)’’.

In Ghana, the concept of microfinance is understood as a sub-sector of the financial sector, comprising financial institutions which use a particular financial method to reach the poor. Microfinance sector in Ghana is made up of various types of institutions and these have been grouped into four (4) categories, namely:

1. Formal suppliers such as savings and loans companies, rural and community banks, as well as some development and commercial banks;
2. Semi-formal suppliers such as micro financing unions, financial non-governmental organizations (FNGOs), and cooperatives;
3. Informal suppliers such as susu collectors and clubs, rotating and accumulating savings and micro financing associations (ROSCAs and ASCAs), traders, moneylenders and other individuals.
4. Public sector programmes that have developed financial and nonfinancial services for their clients (Sefa and Jeffery, 2010)

2.5 Definitions of Poverty

The World Bank Organization contends that "The most commonly used way to measure poverty is based on incomes. A person is considered poor if his or her income level falls below some minimum level necessary to meet basic needs. This minimum level is usually called the "poverty line".

What is necessary to satisfy basic needs varies across time and societies. Therefore, poverty lines vary in time and place, and each country uses lines which are

appropriate to its level of development, societal norms and values."(Sefa and Jeffery, 2010)

Poverty is traditionally seen as lack of income, assets and the resources but recent works recognise that it includes issues related to dignity and autonomy (Cagatay, 1998).

According to the United Nations, basically, poverty is a denial of options and opportunities, a violation of human dignity. It means lack of basic capacity to engage effectively in society. It means that one does not have enough to feed and clothe a family, not being able to afford education or clinic to, not having the land on which to grow one's food or a job to earn one's living, not having access to micro financing. It means insecurity, powerlessness and exclusion of individuals, households and communities. It means vulnerable to violence, and it often implies living on peripheral environments, without access to hygienic water or sanitation. (Human Right Facts (94), cited in Sefa and Jeffery, 2010)

On the Measurement of poverty, Weiss, et al., (2003) differentiates the various groups of poor in order to understand degree and range of measure of poverty. Weiss divided poor into two categories, one that are long term or chronic poor and other that are transitory poor, those who temporarily fall into poverty as a result of the adverse shock". He further divided the Chronic poor are into groups of destitute "those who are either so physically or socially disadvantaged that without welfare support they will always remain in poverty" and non destitute "the larger group who are poor because of their lack of assets or opportunities". The non destitute group may be differentiated by the depth of poverty with those significantly below the poverty line termed 'core poor' and transitory poor in order to develop strategic bespoke policies directed at specific cause (Weiss, et al., 2003).

2.6: Empirical Review

This section reviews several empirical works conducted on the impact of microfinance on poverty reduction and women empowerment. Below are some of these empirical studies.

Javed Ghulam Hussain and Samia Mahmood(2012), embarked on a study in Pakistan to examine the impact of microfinance loan on poverty reduction for female entrepreneurs by administering, 123 semi structured questionnaires using a case study of 10 female entrepreneurs who secured funds for their enterprises. The study found that entrepreneurial attributes and characteristics are critical for the success for an enterprise in general and the improvement in household of women in particular.

Abur and Torrum(2012) investigated microcredit as a strategy for poverty reduction in Benue state, Nigeria using primary data applied on a cross-sectional data of 274 respondents in 2012. Descriptive statistics and the logit regression model were adopted. The result shows that 0.52 and 0.022 incidence of sever poverty existed before and after microcredit. The Gini coefficient also indicates a high and low income inequality of 0.6 and 0.04 existed before and after microcredit.

The result from logit regression techniques, indicates that the computed value of Nagelkerke R² is as high as 0.723, this implies that microcredit influence the poverty status of the respondents. The study concluded that microcredit institutions in the study area are bisected with myriad of problems. However, microcredit has helped in reducing poverty among the respondents.

Kwansah(2011) conducted a study to examine women's access to micro credit and impact of credit on income from formal financial institution in Agona East and West districts of Central Region of Ghana using set of questionnaire to interview 200 women.

Data analysis followed a two prong approach by making use of both qualitative (percentages, means, frequencies and cross tabulations) and quantitative techniques (logit regression and propensity score matching).

The findings showed that formal education, perception of application procedures, level of income, farm size, membership to economic associations, savings with financial institutions the type of business, the perception of interest charged and the distance from respondents' residence to the financial institution are the factors that influence respondents' probability of access to micro credit from the financial institutions. It also revealed that, access to credit has significant impact on income.

Noran Mohammed Faray(2011), conducted a study to ascertain whether microcredit offered by MFIs succeeded in reducing the poverty of borrowers in poor areas in Cairo using a tailored questionnaire on a sample of 151 beneficiaries. A linear regression model was used with the dependent variable as the difference in wealth indices before and after acquiring the loan and a set of independent variables. The study revealed microfinance to have a positive effect on poverty reduction but with a small magnitude. The results show that the lack of training provided to beneficiaries and the haphazard types of micro-projects are the main reasons for this limited effect. This conclusion was also validated using a qualitative research.

Yeboah(2010), conducted a study to investigate, from a contextual and user perspective, the implementation processes of microfinance interventions and the effect of the implementation processes on households and businesses. The studies main argument is that microfinance discourse has neglected the perspective of microfinance users and this can negatively affect microfinance interventions as development tools.

The study was conducted by examining two microfinance interventions, Nsoatreman Women Empowerment Programme and Sinapi Aba Trust, in Nsoatre, a rural community in Ghana. Data for the study was from secondary sources, 26 interviews and 100 questionnaires. “Using qualitative, cross-tabulations and ordinal logistic regression, the analysis found that the microfinance institutions studied essentially employ top-down approaches and that the perception of microfinance as non-paternalistic is not supported by this study.

The mode of group formation has significant ramifications on subsequent group activities and peer monitoring played a limited role in mitigating moral hazard.

Service users exhibited noticeable lack of knowledge on intervention activities. Microfinance interventions contribute to household consumption more than it does to household asset accumulation. Poorer service users reported more household and business benefits. The findings suggest a reappraisal of the design of microfinance interventions, especially in rural areas”

Awawoyi and Kkorankyi(2010) this study was conducted in Ghana to find out the role of microfinance and socio economic education in poverty alleviation using a regression and simple descriptive statistics by means of SPSS software. One hundred (100) respondents were selected from the Greater Accra and Ashanti Regions. 40 out of the 100 respondents were micro financed and the remaining 60 not micro financed.

The study revealed that participation in the microfinance programmes has enabled clients to improve upon their income level as well as their standard of living as compared to the non-clients. The study further concluded that microfinance plays an active role in reducing poverty in Ghana.

Imai and Azam (2010) using panel data from 1997 to 2005 from Bangladesh, examined whether microfinance reduces poverty . They used a treatment effects

model and propensity score matching for the participants and non-participants of microfinance programs. The study found that household access to microfinance loans from MFIs has increased per capita household income if only taken for productive purposes.

Katsushi Imai (2010) conducted a study in India to find out whether access to microfinance reduces poverty using national household data from India by adopting the treatment effects model. The study revealed a significant positive effect of MFI productive loans on multidimensional welfare indicator. It further revealed that loans for productive purposes were more important for poverty reduction in rural areas than in urban areas. However in urban areas, simple access to MFIs has larger average poverty-reducing effects than the access to loans from MFIs for productive purposes. This leads to exploring service delivery opportunities that provide an additional avenue to monitor the usage of loans to enhance the outreach.

Nanor(2008), conducted a study in four selected districts in the Eastern Region of Ghana using a quasi-experimental questionnaire by interviewing 710 households. The study found that, there was a significant disparity in the expenditure made on children's education by program households and non program households in all the districts except the Manya Krobo District. It also revealed that Micro-finance had positive impact on the household income of households in the Manya Krobo and West Akim districts and no impact on income in the other two districts.

The study further showed that, Microfinance had a positive impact on the profit levels in the Manya Krobo and West Akim districts but negative in the Yilo Krobo district.

Hong Son Nghiem, e' tal (2007) analysed the effects of microfinance programs upon household welfare in Vietnam by building upon the rural household models of Singh *et al.* (1986) and Rosenzweig (1990) using data on 470 households across 25 villages

through a quasi experiment survey approach to overcome self-selection bias. The study found that, that participation in microfinance has a positive effect upon household welfare, with the size of the effect increasing at a decreasing rate as a household spends more time in the microfinance program.

Islam (2007) using an instrumental variable estimate (IV) found that the effect of microfinance on household consumption expenditure was not strong. He did not find statistically significant effects in most cases. However, he concluded that the IV estimates of program impact are larger in the consumption expenditure of the 15 relatively poor participating households. His overall results indicate that the positive effects are found more for male than female borrowers. This result contradicts Pitt and Khandker (1998), who found stronger positive effects for women than for men borrowers.

Bamalaku (2006), conducted a study in Ethiopia to find out the impact of Amhara Credit and Savings Institute (ACSI) in Ethiopia taking a sample of 500 households from five different zones in the Amhara Region. Using Chi-Square, Paired T-test and ANOVA and econometric analysis (Logistic Regression), the study revealed that that the poor have smoothed their income in the study area. It was also revealed that clients lacked the technical skills to engage in more profitable business activities and also it was found that clients were using the loan for unintended purposes.

Helms, (2006) conducted a study in Bolivia, Bangladesh, Uganda and the Phillippines on seven microfinance institutions in these countries to compare clients of MFIs with non-clients, concluded that “most clients come from moderately poor and vulnerable non-poor households, with some clients from extreme-poor households also participating; programs that explicitly target poorer segments of the population

generally have a greater percentage of clients from extreme-poor households; and destitute households are outside the reach of microfinance programs”

Weiss and Montgomery (2005) did a review of the impact of Microfinance on poverty in Asia and Latin America and found that whilst microfinance clearly may have had positive impacts on poverty it is unlikely to be a simple panacea for reaching the core poor. Reaching the core poor is difficult and some of the reasons that made them difficult to reach with conventional financial instruments mean that they may also be high risk and therefore unattractive microfinance clients.

Khandker (2003) conducted a study in Bangladesh and revealed that, microfinance is serving an important purpose in helping the poorest segment of the clients and in reducing poverty in Bangladesh.

Mosley and Rock, (2004), studied six African microfinance institutions and found that microfinance has the advantage of reaching the vulnerable, non-poor, the working poor or entrepreneurial poor. It further revealed that, microfinance benefits the extreme poor indirectly through labour market as poor people enter into labour market as employees of microfinance clients, and human capital as increased expenditures on education and health extend to poor through intra-household and inter-generational effects and social capital externalities (enhancement of social capital for the clients extends to poor through extension of credit groups to include poor and through stabilisation of village income) than by direct lending.

Meyer (2002) reached a similar conclusion. Surveying available evidence for Asian countries, he concluded that while access to microcredit seems to have an overall positive effect on income and education, results differ substantially across countries and programs both in magnitude and statistical significance and robustness.

Simanowitz and Walters, (2002) found in India that, in addition to increased economic wellbeing, clients of SHARE an MFI have shown a striking shift from irregular, low-paid daily labour to more diversified sources of income, with a strong reliance on small businesses.

Barnes (2001) conducted a study in Zimbabwe and found that the extremely poor clients of Zambuko Trust, a local MFI, increased their consumption of high protein foods at a time when food expenditures across the country as a whole were decreasing.

Zeller et al. (2001) estimated the impact of microfinance on household income microfinance by comparing eligible households in the Association for Social Advancement and Bangladesh Rural Advancement Committee villages with eligible households in the Rangpur Dinajpur Rural Service village. They found different impact estimates depending on the season. The estimated annual average impact was Tk37 per Tk100 credit available. They noted the substantial difference between their estimate and that of Pitt and Khandker (1998) and explained that their “measures were not only the effect of actual borrowing, but also the effect of access to credit, that is, the ability to borrow sometime in the future even if the household in the current period chooses not to borrow.” These indirect benefits would include “reduced cost of consumption smoothing, such as decrease in distress sale.

In contrast to these earlier mentioned studies, Coleman (1999) found no significant impact of access to microcredit on improving household wealth using a sample of households from north-eastern Thailand. However, when the sample was broken down into general beneficiaries and committee members, Coleman (2006) found that the insignificance was limited to general beneficiaries and that a positive impact was found among committee members who received access to financing.

Also Kabeer (1998), conducted a gender impact study of four microfinance programs in Bangladesh found that, women clients experienced positive change at a personal level, in the form of increased self-worth, as well as the household level, in the form of decreased violence and increased affection resulting from their contribution of resources.

Paul Onyina and Sean Tumell (nd), This study was conducted in Ghana in order to assess the impact of microfinance on clients who have received loans from the Sinapi Aba Trust of Ghana. The study further found that years of membership or duration with the microfinance scheme determines the level of empowerment. The results show that old clients are more likely to acquire assets, improve their businesses, and spend larger amounts on their children's education than new clients.

In conclusion, we could say that most of the studies reviewed were done in developing countries with most of them confirming the significance of Microfinance in Poverty reduction using methods such as semi structured questionnaires, Logit regressions, Propensity score matching, Ordinal logistic regression, Treatment effects model, Experimental questionnaires, Path analysis regression, Instrumental variable estimates, Chi-squared, Paired T-test and Analysis of Variance (ANOVA).

Despite the apparent success and popularity of microfinance, no clear evidence yet exists that microfinance programmes have positive impacts (Armendáriz de Aghion and Morduch 2005, 2010).

There have been four major reviews examining impacts of microfinance (Sebstad and Chen, 1996; Gaile and Foster 1996, Goldberg 2005, Odell 2010). These reviews concluded that, while anecdotes and other inspiring stories (such as Todd 1996) purported to show that microfinance can make a real difference in the lives of those served, rigorous quantitative evidence on the nature, magnitude and

balance of microfinance impact is still scarce and inconclusive (Armendáriz de Aghion and Morduch 2005, 2010).

Overall, it is widely acknowledged that no well-known study robustly shows any strong impacts of microfinance (Armendáriz de Aghion and Morduch 2005, p199-230).

Moreover because of the growth of the microfinance industry and the attention the sector has received in recent years, existing microfinance impact evaluations need to be re-investigated: claims that microfinance alleviates poverty and empowers women must be scrutinised more carefully.

Even though most of the citizens in Ghana are very poor and most Microfinance institutions are emerging, very few studies have been done on the impact of Micro finance on poverty reduction in Ghana. The few work done were focused in the Greater Accra Region, Ashanti Region, Eastern and the Western Regions whilst ignoring the three Northern regions which includes upper west region where poverty is acute. Hence there is a knowledge gap which this thesis proposes to fill.

Thus this study will explore further beyond the frontiers of previous studies in Ghana by finding out the impact of Microfinance on Poverty reduction among women in the Upper West Region, which has seen increased participation of women in microfinance activities.

2.8 Conclusion

This chapter reviewed the theoretical and empirical studies on the impact of MFIs on poverty reduction. It looked at the origins of MFIs, definitions and concepts, evolution of MFIs, imperfections in the microfinance markets and the group of people targeted by MFIs.

CHAPTER THREE

METHODOLOGY

3.0. Introduction

This chapter is in two parts. Part one is the methodology and part two is the profile of the study area.

3.1. Methodology

This part presents the methodology employed by the study. It presents the model specification, data collection method, the data source, definition and description of variables used in the models. Descriptive and quantitative methods were used for the data analysis. The study used logit regression as the empirical method of estimation under the quantitative analysis. SINAPI ABA and Nandom Rural Bank were the two institutions involved in this study.

3.1.1 Model Specification

Logistic regression or model is used to model dichotomous variables. It is a univariate or multivariate technique which allows the estimation of the probability that an event occurs or not, by the prediction of a binary dependent outcome from a set of dependent variables.

The binary nature of the dependent variables in the study warranted the use of any of the available binary choice models. The researcher confined himself to the logit model which attempts to relate the probability of making a particular choice to

various explanatory factors (McFadden,1973). A person is said to be poor if his income falls below a certain minimum level necessary to meet basic needs.

Since the dependent variables are dichotomous, Logistic Regression Model was used as suggested by several studies for its manageability, simplicity and appropriateness (Maddala,1983).

In this study binary logit regression models were used to determine the impact of MFIs on poverty reduction and ability to save among women in Lambussie and Nandom districts in upper west region of Ghana. The model specification follows a logit model specified in Gujarati Damodar (2003) and H Stock and Watson (2007).

The model is as follows;

$$P_i = g(Y_i)$$

Where g is the functional relationship between observed level of poverty (P_i) and the random variable (Y_i) which determines the probability of being poor or not.

For the purpose of this study P_i is a dummy variable which takes the value 1 if a woman is not poor and 0 if otherwise, and g is the functional form of the model. Y_i is a vector of variables that affect P_i .

3.1.2 Types and Sources of Data.

This paper used data gathered from 400 women from Lambussie and Nandom districts. Structured questionnaires containing both close and open-ended questions were used.

Two categories of women were involved in the study. They were made up of 200 MFIs participants and 200 non participants from the two districts. The data collected was analysed using both descriptive and logistic model. The data source was basically primary. The personally administered questionnaires gathered information on the age,

marital status, household size, whether women were microfinance participants, women's level of education, ability to save and whether women have taken loans from MFIs among others.

Convenient Random sampling technique was used in selecting women in the Lambussie and Nandom districts

3.1.3. Estimation Technique

Three models or equations are estimated under this section. Model 1 estimated the impact of loan or microcredit taken from MFI on poverty reduction among beneficiary women. Model 2 estimated the impact of loan or microcredit taken on the ability of beneficiary women to save. Finally, model 3 estimated the impact of loan taken on the lives of the beneficiary women.

Model 1

The dependent variable in model 1 is represented by absolute poverty line definition. The papers of the Ghana Poverty Reduction Strategy estimated the poverty line of Ghana to be \$2 a day and said about 88% of the Ghanaian populace lived in poverty though the World Bank defines its poverty line to be \$1 per day.

This study used \$2 as proxy for poverty. Therefore if a woman spends 2 dollars or more it means she is not poor but if a woman spends below 2 dollars a day, it means she is poor(Control group).

Thus we have the following below:

Let P_i (Binary variable) represents the observed response of each sampled woman (ith observation). Therefore, $P_i = 1$ if woman is not poor and $P_i = 0$ if woman is poor. It follows that:

$$P_i = g(Y_i)$$

Where g is the functional relationship between observed level of poverty (P_i) and the random variable (Y_i) which determines the probability of being poor or not. The equation to be estimated is given as:

$$Y_i = \ln \frac{p}{1-p} = \beta_1 + \beta_2 A + \beta_3 I + \beta_4 H + \beta_5 M + \beta_6 E + \beta_7 B + \beta_8 S + \beta_9 UN + \varepsilon_i$$

Where Y_i = Qualitative dependent variable: 1 if not poor; 0 if poor.

A = Age

I = Income

H = Household size

M = Dummy variable ($M=1$ if woman has taken a loan from an MFI, $M=0$ if otherwise)

E = Dummy variable ($E=1$ if employed, $E=0$ if unemployed)

B = Dummy variable ($B=1$ if woman has basic education, $B=0$ if otherwise)

S = Dummy variable ($S=1$ if woman has senior high education, $S=0$ if otherwise)

UN = Dummy variable ($UN=1$ if woman is uneducated, $UN=0$ if otherwise)

ε_i = Stochastic error term.

The probability (likelihood) of not being poor among the sample population is given by:

$$P = e^{\beta X} / (1 + e^{\beta X})$$

Where βX = the mean of the predicted Y_i values.

If $P \approx 1$, there is a likelihood of not being poor. On the other hand, if $P \approx 0$ there is the likelihood of being poor.

Model 2

Ability to save is the dependent variable in this model.

Let V_i (Binary variable) represents the observed response of each sampled women (ith observation). Therefore, $V_i = 1$ if woman is able to save and $V_i = 0$ if woman is not able to save. It follows that:

$$V_i = g(Y_i)$$

Where g is the functional relationship between observed ability to save (V_i) and the random variable (Y_i) which determines the probability of being able to save. The equation to be estimated is given as:

$$Y_i = \ln \frac{p}{1-p} = \beta_1 + \beta_2 A + \beta_3 I + \beta_4 H + \beta_5 M + \beta_6 E + \beta_7 B + \beta_8 S + \beta_9 UN + \varepsilon_i$$

Where Y_i = Qualitative dependent variable: 1 if able to save ; 0 if not able to save.

Where:

A = Age

I = Income

H = Household size

M = Dummy variable ($M=1$ if woman has taken a loan from an MFI, $M=0$ if otherwise)

E = Dummy variable ($E= 1$ if employed, $E=0$ if unemployed)

B = Dummy variable ($B= 1$ if woman has basic education, $B= 0$ if otherwise)

S = Dummy variable ($S= 1$ if woman has senior high education, $S= 0$ if otherwise)

UN = Dummy variable ($UN=1$ if woman is uneducated, $UN=0$ if otherwise)

The probability (likelihood) of being able to save among the sample population is given by:

$$P = e^{\beta X} / (1 + e^{\beta X})$$

Where βX = the mean of the predicted Y_i values.

If $P \approx 1$, there is a likelihood of being able to save. On the other hand, if $P \approx 0$ there is the likelihood of not being able to save.

Model 3

Improvement in lives is the dependent variable in this model

Let D_i (Binary variable) represents the observed response of each sampled woman (ith observation). Therefore, $D_i = 1$ if woman's life has improved in the past one year and $D_i = 0$ if otherwise. It follows that:

$$D_i = g(Y_i)$$

Where g is the functional relationship between observed improvement in life in the past one year (D_i) and the random variable (Y_i) which determines the probability of life improvement in the past one year. The equation to be estimated is given as:

$$Y_i = \ln \frac{p}{1-p} = \beta_1 + \beta_2 A + \beta_3 I + \beta_4 H + \beta_5 M + \beta_6 E + \beta_7 B + \beta_8 S + \beta_9 UN + \varepsilon_i$$

Where Y_i = Qualitative dependent variable: 1 if life has improved in the past one year ; 0 if life has not improved in the past one year.

Where:

A = Age

I = Income

H = Household size

M = Dummy variable ($M=1$ if woman has taken a loan from an MFI, $M=0$ if otherwise)

E = Dummy variable ($E= 1$ if employed, $E=0$ if unemployed)

B = Dummy variable ($B= 1$ if woman has basic education, $B= 0$ if otherwise)

S = Dummy variable (S= 1 if woman has senior high education, S= 0 if otherwise)

UN=Dummy variable (UN=1 if woman is uneducated, UN=0 if otherwise)

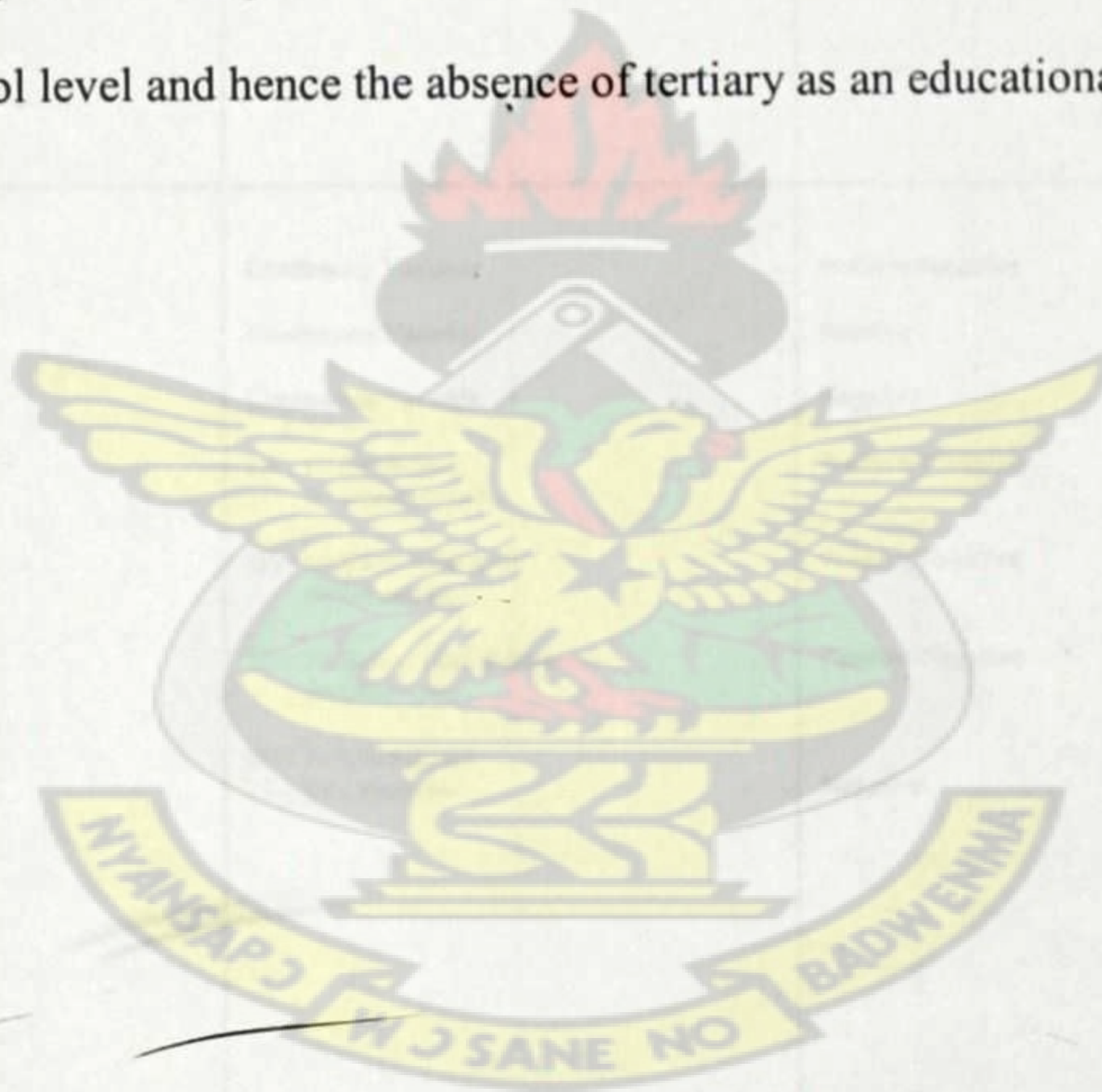
The probability (likelihood) of an improvement in life in the past one year among the sampled population is given by:

$$P = e^{\beta X} / (1 + e^{\beta X})$$

Where βX = the mean of the predicted Y_i values.

If $P \approx 1$, there is a likelihood of seeing an improvement in life in the past one year.

On the other hand, if $P \approx 0$ there is the likelihood of not seeing an improvement in life in the past one year. The highest educational level of the sampled women was the senior high school level and hence the absence of tertiary as an educational variable



3.1.4Description of Variables

The table below is used to describe the variables that were used for the empirical estimation.

Table 3.1: Variable Description

Variable	Description	Expected Signs
Dependent Variables		
Loans	DV: 1=Took loan 0= otherwise	Positive
Ability to Save	DV: 1= Able to save 0= Otherwise	Positive/Negative
Improvement in life in the past one year	DV: 1= Life has improved 0= Otherwise	Positive/Negative
Explanatory Variables		
Age	Continuous Variable	Positive/Negative
Income	Continuous Variable	Positive
Household size	Continuous Variable	Negative
Employment Status	DV: 1= Employed 0= Unemployed	Positive/Negative
Basic Education	DV: 1= Basic Education 0= Otherwise	Positive/Negative
Senior High Education	DV: 1= Senior High Education 0= Otherwise	Positive/Negative
No Formal Education	DV: 1= Uneducated 0= Otherwise	Negative

3.1.5. Expected signs of the estimated parameters

The study expects age (A) to predict positively in Model 1 but negative in model 2.

Thus in Model 1, a positive sign of β_2 means that as an individual advances in age, there is a high tendency for the person not to be poor.

On the hand, the younger a person is, the assumption is that the person has not worked for a long time and thus the higher likelihood for the person to be poor.

As a person advances in age his commitments also increase and therefore his ability to save also decreases. Hence β_2 is expected to have a negative sign in model 2.

The expected sign of age (A) in Model 3 is unknown and hence it is very difficult to predict how age can affect an improvement in life in the past one year.

The study expects Income (I) to predict positively in Model 1 (probability of not being poor) and also positively in Models 2 and 3. Thus the higher a person's income, the higher the probability that the person will not be poor and the lower the income, the higher the likelihood that the person will be poor. Hence the expected sign of β_3 in Model 1 is positive.

Concerning Models 2 and 3, the higher a person's income (I), the higher the probability that, the person will be able to save and also experience an improvement in life in the past one year.

Also the lower the level of income the lower the probability that, a person will be able to save and experience an improvement in life in the past one year. Thus the level of income (I) is expected to impact positively in Models 2 and 3 therefore β_3 is expected to have a positive sign .

The study expects the household size (H) to predict negatively in Model 1 (probability of not being poor) and also negatively in Models 2 and 3. Thus the higher the family

size of a person, the higher the number of dependents(expenditure) of the family and hence the higher the probability that the person will be poor .

The lower the household size the lower the number of dependents in a family and hence the higher the probability that a person will not be poor. Hence the expected sign of β_4 is negative in model1.

With regard to Models 2 and 3, the higher the household size (H), the lower the probability that, the person will be able to save and experience an improvement in life in the past one year.

Thus the household size (H) is expected to predict negatively in Models 2, 3 and therefore β_4 is expected to have a negative sign.

The study expects that, women who took microcredit (loan (M)) to predict positively in Model 1(probability of not being poor) and also positively in Models 2 and 3. Thus if a woman took loan, the higher the probability that the person will not be poor as compared to women who did not participate in microfinance and hence did not take loan . Thus women who participate in microfinance are expected to work with the loan, get profit and expand their businesses and therefore β_5 is expected to have a positive sign in model1

Regarding Models 2 and 3, women who participate in microfinance through loan or credit (M) are well placed to be able to save and experience an improvement in life in the past one year as compared to the women who have not taken loans from MFIs (control group). Thus women who have taken loans from a microfinance (M) are expected to predict positively in Models 2 and 3, therefore β_5 is expected to have a positive sign with regards to the ability to save and experience an improvement in life in the past one year.

Regarding employment, the employed(E) are expected to have positive signs in Models 1,2 and 3 and hence if somebody is employed, the probability that the person will not be poor, will be able to save and experience an improvement in life in the past one year is very high as compared to the control group(the unemployed women). Hence the expected sign of β_6 is positive in all the three models.

Finally, the level of education of the sampled women, the study expects women who are educated (basic and senior high) to impact positively on the probability of not being poor in Model 1 as compared with the uneducated women (the control group) and hence β_7 and β_8 are expected to have positive signs in Model 1 . Thus the educated women are expected to be able to secure good jobs and earn higher income.

Hence the education variables (basic and senior high) are expected to impact positively in Models 2 and 3 hence β_7 and β_8 are expected to have positive signs in Models 2 and 3.

3.1.6 Data Analysis

The dependent variables in the study were whether a respondent is poor or not, whether a respondent is able to save or not and whether a respondent has seen an improvement in life in the past one year or not. All these dependent variables are binary and hence necessitated the use of a binary model.

The binary nature of the dependent variables warranted the use of any of the available binary choice models. The researcher confined himself to the logit model which attempts to relate the probability of making a particular choice to various explanatory factors(McFadden,1973).

The data gathered was analysed using both qualitative (descriptive) and quantitative methods.

Under the Descriptive methods, frequency tables and percentages were used.

Under the quantitative section, logistic regression model was employed because the dependent variables of the study were dichotomous. Since the dependent variables are dichotomous, Logistic Regression Model was used as suggested by several studies for its manageability, simplicity and appropriateness (Maddala, 1983).

Quantitative methods are useful to reveal knowledge and to ensure the understanding of phenomenon that little is known about (Strauss and Corbin, 1990). It also helps us to know the actual relationship between variables.

3.2.1 Profile of the study Area

This section presents a brief description of Lambussie and Nandom districts in upper west region of Ghana. It includes the establishment of the districts, location and size, population structure of the area, strategic sectors of the area and poverty profile of the area.

3.2.2 Establishment of the District

The Lambussie-Karni District was created from the then Jirapa /Lambussie District by a legislative Instrument LI 1849 in 2007 with Lambussie as its district capital.

3.2.3 Location and Size

The district lies in the north-western corner of the upper West region of Ghana. It shares boundaries to the south with Jirapa District, to the East with Sisaala West District, to the West with the Lawra District and to the north with Burkina Faso. The District therefore, serves as the national Gate way to Burkina Faso.

3.2.4 Population Structure

According to the 2000 population and housing census the District has a population of 35,063, made up of 16,489 males and 18,574 females. The projected population for 2010 is 43,016 consisting of 19,755 males and 22,261 females with a growth rate of 1.7 percent. (Population Census (2000))

3.2.5 Strategic Sectors of the Local Economy Agriculture

Agriculture is the mainstay of the economy. It engages about 80% of the population. Some of the major crops cultivated are maize, guinea corn, millet, groundnuts and rice. With regards to livestock: goats, sheep, cattle, pigs and fowls are produced. The vast tract of arable land in the District is a potential for large scale farming and animal production.

Tourism

The District abounds in interesting tourist sites some of which are the Billaw caves and Dahile caves. The caves were dug by the people and used as hiding places during the Babatu and Samori slave raids. These sites remain undeveloped and needs some attention.

3.2.6 Profile of Nandom district.

Location

Nandom district is one of the newly created districts in 2012 carved out of the Lawra district. The district, lies within the Savannah high plains. It is bounded between latitudes 2° 25'' W and 2° 45'' W and longitudes 10° 20'' N and 11° 00''N

approximately. It's bounded to the North and West by the Republic of Burkina Faso and to the East and South by the Lambussie -Karni District (Lawra District Medium Term Development Plan, 2002-2004). Its location makes it possible for the inhabitants to move into nearby Francophone towns in Burkina Faso in search of better economic activities or opportunities.'

2.2.7.Climate

The climate of Nandom is the tropical continental type with Mean Annual Temperatures ranging between 27°C and 36°C. The period between February and April is the hottest part of the year. Between April and October, the Tropical Maritime Air-Mass blowing over the area gives it the only wet season in the year. From November to January, the area experiences the harmattan, a cold but dry wind which comes with the North-East Trade winds blowing over the Sahara desert (Lawra District Assembly Medium Term Development Plan, 1996-2000).

3.2.8 Environmental Factors

The environment is very important in the lives of the people of Nandom, for they rely on it for their welfare needs. Farming is their major occupation, which demands the clearing of the environment. This in a way contributes to soil erosion and deforestation in the area. Soil water is usually lost through evaporation. The soil organisms too are destroyed by the high intensity of heat in the area. Thus agricultural productivity is always low. —

Bush fire that is seasonal is a usual phenomenon in Nandom during the dry season. There are no organized fire volunteer fighters, and so the act of bush burning has always led to the destruction of the environment and farm produce. As a result of soil

erosion, loss of soil water, soil organisms and deforestation, agricultural productivity is always low. This compels the inhabitants to diversify their source of livelihood.

3.2.9 Vegetation

The Nandom District lies within the Guinea Savannah Zone which is characterized by short grasses and a few woody plants. Common trees in Nandom include baobab, *dawadawa*, sheanut, ebony, nim, among others. The vegetation was in the past years very conducive for livestock production, which contributes significantly to household incomes. But the activities of man such as continuous cropping, fuel wood fetching, bush burning, over grazing, sand/or gravel winning, among others have affected the vegetation (Medium Term Development Plan 1996-2000). The prolonged dry season have also influence the vegetation greatly. During this period, the grasses dries up and the subsequent bush burning leaves the vegetation patchy and mostly bare. Meanwhile, it is a well known fact that bush burning has the effect of reducing the vegetative cover and affect negatively on the pattern of rainfall.

3.2.10 Economic Activities

The main economic activities in the area are agriculture, manufacturing/processing, banking and commerce (Medium Term Development Plan, 1996-2000).

Agriculture is the major economic activity in Northern Ghana, and the success of it depends on rainfall. They have one rainy season in the area, making it a matter of livelihood concern to the people. This in fact, made it incumbent on most people to resort to non-farm activities as a source of income and livelihood. This justifies why the people had to go into non-farm activities.

Even though women contribute by way of helping their husbands on farm activities, they do not have control over the farm produce when harvested and brought to the house.

Food crops grown in Nandom are millet, maize, groundnuts, bambara groundnuts, guinea corn, groundnuts, rice, and etcetera. Both men and women engage in the rearing of animals for both domestic consumption and the market.

The people of Nandom engage mostly in subsistence agriculture for the up-keep of their families. The main source of their farm labour is household family labour (that is, husband, wife, children and dependants). Non-farm activities are practiced as their second source of livelihood strategy because of the low agricultural yield that is mostly realized every year. This may be due to the low fertility of the soil. Therefore men usually focus on wood carving, blacksmithing, poultry keeping, petty trading and bicycle repairs while the women engage in basketry, *pitol* brewing, sheabutter extraction, and *dawadawa* processing.

Mention must be made that, there are a few of them who are employed in the secondary and tertiary sectors such as teachers, security service, health workers and banking. The revenue generated from these works, especially those at the primary sector are also low, thus compelling most families to engage in multiple occupations.

Commercial activities in Nandom are mostly in farm produce and manufactured goods brought in from outside. The market linkages are very strong between Nandom and other major market centres such as *Wa*, *Tumu*, *Lawra*, *Babile*, *Hamile*, *Fielmuo*, *Piina* and *Samuo*. In short, the markets are opened and one can move in and out at any time without any hindrance.

3.2.11. Poverty profile of Nandom and Lambussie districts

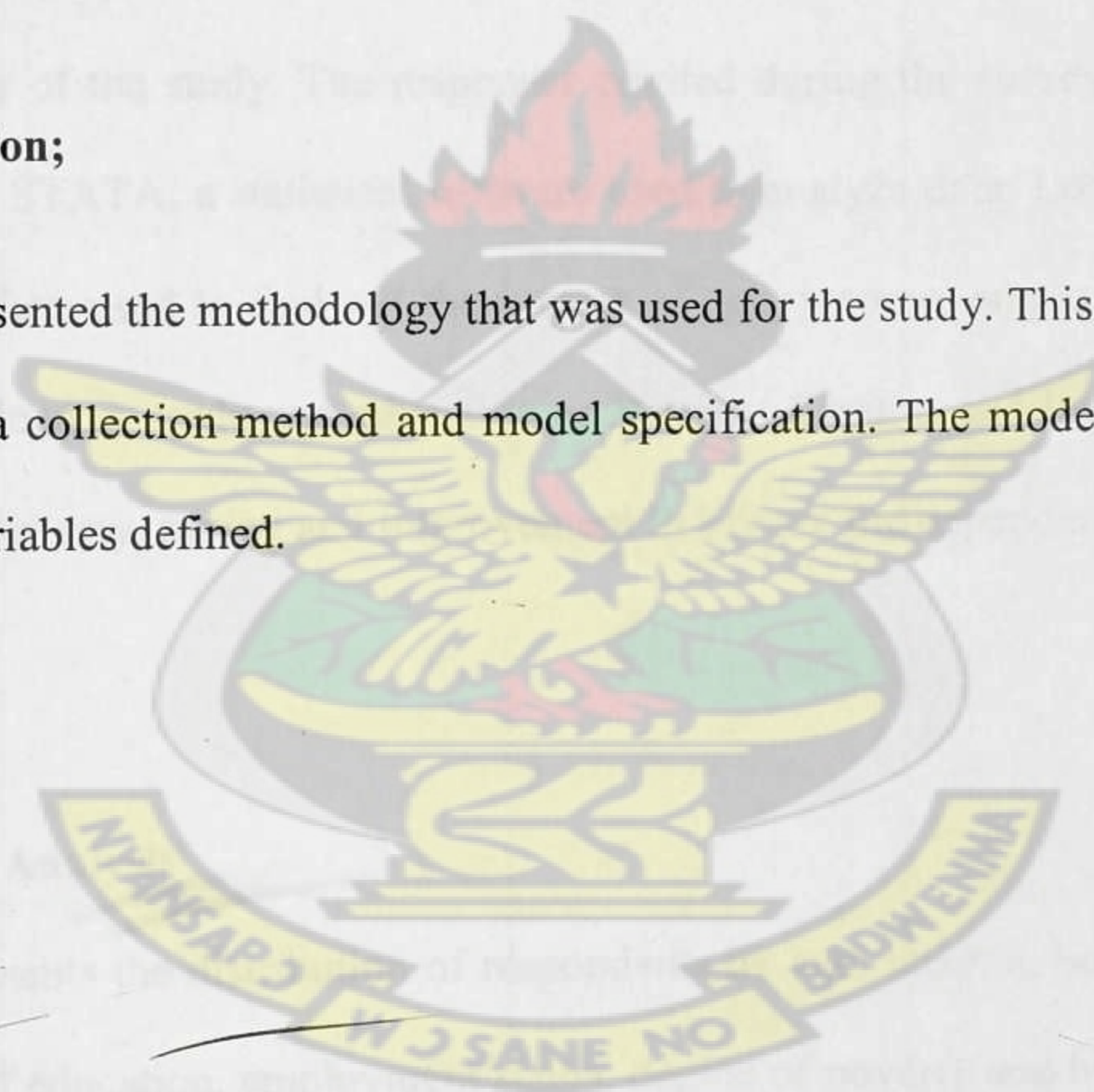
Agriculture is the major activity of the people of these two districts. The key Problem to Agricultural Production is poor soils, cost of land preparation, high cost of Fertilizers, post harvest losses and low prices of Agricultural products at harvest.

The effects of these conditions have been wide spread of poverty and hunger among the people. The inadequate water bodies in the district coupled with the long dry season further

draw away the youth and economically active population down to the urban centers for seasonal jobs.

3.2.12. Conclusion;

This chapter presented the methodology that was used for the study. This included the data source, data collection method and model specification. The models used were stated and all variables defined.



CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Introduction

This chapter is in two parts. The first part presents the descriptive analysis of the respondents' personal characteristic information; district characteristic information, educational status of the respondents, employment status, income status of the respondents, respondents accessibility to MFIs and whether loans granted were used for their intended purposes. The second part presents the quantitative analysis of the various variables of the study. The responses elicited during the survey were coded and entered into STATA, a statistical software used to analyze data. Logit regression estimates were then used to find out the impact of age, income, employment status, household size, loan or credit and education on Poverty, Savings and Improvement in life. Therefore, poverty, saving and improvement in life are the dependent variables in this study.

4.1 Descriptive Analysis

This section presents the distribution of respondents by age, income, household size, districts, level of education, employment status, degree of poverty and by their access to loan.

Table 4.1.1 Distribution of Respondents by Age, Income and Household Size.

Table 4.1.1 reveals the ages, income and household size of the sampled women, their ages ranging from 23 years to 60 years with the average age being 42.8775 years.

Variable	Mean	Standard	Minimum	Maximum
	Value	Deviation	Value	Value
Age (Years)	42.8775	7.850259	23	60
Income	248.67	172.1186	20	800
(Monthly)			1	
	4.885	2.158338		9
Household Size				

Source: Field Survey, 2013

The mean age as indicated in the table above is 42.8775 which is within the economically active population. Most of the women economic activity involves the use of ‘manpower’, and that might have explained the reason. It could also be the period that these women welfare needs are high, since that is the reproductive age group and the needs of their growing children could also call for additional resources.

The average monthly income of the sampled women was GH¢248.67cedis with Gh¢20.00 cedis being the minimum monthly income and Gh¢800.00 cedis being the maximum monthly income. From a list of several socio-economic variables, it was observed that the people in the area are very poor. Their major economic activity is subsistence agriculture. It is rain-fed and hence susceptible to the vagaries of nature. Their income levels revealed from the table above attest to this.

With regards to the household size, the average size was 4.885 individuals with the minimum and the maximum household size being 1 and 9 individuals respectively. The average household size reflects the mean age which is in the reproductive age group.

Gonzalez et al. (2001) have documented that the size of a household and the availability of income earners are very important elements of vulnerability. Poverty therefore is more prevalent in large household size with few income earners. This means that, in households where the woman is the only breadwinner, members are likely to remain to be poor. This is because; there will always be pressure on her little resources for the upkeep of the household.

Table 4.1.2: Descriptive Statistics of the selected Districts

Table4.1. 2: Descriptive Statistics of the selected Districts

Table4.1.2 presents the distribution of the sampled women among the selected Districts.

District	Frequency	Percentage	Cumulative Frequency
Lambusie	180	45	45
Nandom	220	55	100
Total	400	100	

Source: Field Survey, 2013

The table indicates 180 women representing 45% of the respondents were from Lambusie district and 220 of them representing 55% of the respondents were from the Nandom district. The difference in the number of respondents in the two districts is not attributed to any special reason. It was because respondents were randomly selected.

Table 4.1.3: Distribution of Respondents by Level of Education.

Table 4.1.3 presents the educational status of the respondents in Lambussie and Nandom districts.

Education	Frequency	Percentage	Cumulative Frequency
Basic	103	25.75	25.75
SHS	81	20.25	46
None	216	54.00	100
Total	400	100	

Source: Field Survey, 2013

The table above indicates that, out of 400 sampled women, 103 of them constituting 25.75% of the respondents had education up to the Basic level, 81 of them representing 20.25% of respondents had education up to the Senior High School (SHS) level and 216 of them forming 54% of the respondents were uneducated. The percentage of the respondents who have basic education or not having any education at all were 79.25. This means that majority of the sampled women were uneducated. Not even a single respondent had tertiary education.

Table 4.1.4 Distribution of Respondents by Employment Status.

Table 4.1.4 presents the employment status of the sampled women. It shows that out of the 400 sampled women, 297 of them constituting 74.25% of the respondents were employed whiles 103 of them forming 25.75% of the respondents were unemployed.

Employment Frequency Status	Percentage	Cumulative Frequency
Employed 297	74.25	74.25
Unemployed 103	25.75	100
Total	400	100

Source: Field Survey, 2013

It was revealed during the survey that the respondents who said they were unemployed were those who were engaged in subsistence farming and hence did not take any loan.

From a list of several socio-economic variables, it was observed that the people in the area are very poor. Their major economic activity is subsistence agriculture. It is rain-fed and hence susceptible to the vagaries of nature.

Table 4.1.5: Distribution of Respondents by poverty levels.

Table4.1.5 shows the poverty status of the sampled women.

Poverty	Percentage		Cumulative Frequency
Frequency			
Status			
Not poor	257	64.25	64.25
Poor	143	35.75	100
Total	400	100	

Source: Field Survey, 2013

Table 4.1.5, indicates that out of the 400 sampled women, 257 were not poor and they represented 64.25% of the respondents whiles 143 of them were poor and they represented 35.75% of the respondents. Loans granted by the MFIs might account for the reason why about 64.25% of the respondents are not poor.

Table 4.1.6a. Distribution of Respondents by their participation in MFI'S.

Table 4.1.6a indicates whether respondents were participants of MFIs.

MFI	Percentage	Cumulative
Frequency		Frequency
Status		
MFI Participant	50	50
200		
Non Participant	50	100
200		
Total	100	
400		

Source: Field Survey, 2013

It is shown from the table that 200 out of the 400 sampled women representing 50% were with Microfinance Institution (MFIs) whiles 200 of them also representing 50% were not with any MFI. This was because the researcher wanted to have equal number of participants and non participants to ensure fairness.

The study went further to investigate the proportion of loan applicants who were granted loan. The results is shown in table 4.1.6b.

Table 4.1.6b: Distribution of MFI’s Participants by their access to loan.

Table 4.1.6b, shows the proportion of MFI participants who were granted loans.

The table reveals that all the 200 women who were associated with MFIs were given loans. Thus none of them was refused the loan.

Loan	Percentage	Cumulative
Frequency		Frequency
Status		
Granted	100	100
200		
	0	0
Not Granted	0	
Total	200	100

Source: Field Survey, 2013

The reason that might account for this is that, the MFIs did not require collateral. What they required was group formation. Moreover, loans granted by MFIs are usually not huge compared with the conventional banks, so they were better placed to cover a large number of applicants.

Table 4.1.7:Analysis of Relationship between Poverty levels of Respondents and access to Loans.

Table 4.1.7 shows a comparison between poverty levels of respondents and loan acquisition.

The table shows cross tabulation between Poverty status (poor or not poor) of the sampled women and whether the person had taken a loan or not.

Poverty /Loan Status	MFI	No M FI / No Loan	Total
Not poor		64	257
193			
		136	143
Poor	7		
Total		200	400
200			

Source: Field Survey, 2013

Table 4.1.8 indicates that, out of the 200 respondents who benefited from loans , 193 of them were not poor. Only 7 of them were poor.

On the other hand 143 out of the 200 respondents who were not associated with any MFIs and for that matter were not granted any loan were poor. Only 64 of them were considered as not poor. This implies that, majority of the women who were not associated with any MFI spent less than \$2 a day.

What might account for the reason why 64 of the respondents who were not part of any MFIs but were not considered as being poor is that, during the survey it was revealed that some respondents who did not take loan from MFIs ,were granted micro loans by their relatives and this enabled them to engage in some form of economic activity. This helped them to improve their income levels.

Table 4.1.8: Distribution of Respondents by Accessibility to MFI’S

Table 4.1.8 shows how accessible MFIs are to the respondents. The difference between table 4.1.7 and table 4.1.8 is that, the former talks about respondents ability to get loan whiles the later talks about how easy or difficult it is to have access to MFIs.

Accessibility	Percentage	Cumulative
Frequency		Frequency
Easy	99.50	99.50
199		
	0.50	100
Competitive	1	
Total	200	100

Source: Field Survey, 2013 —

The table indicates that, out of the 200 women who were associated with MFI’s, 199 of them representing 99.50% said it was easy for them to access the MFI’s whiles only 1 of them representing 0.50% said it was competitive.

According to these women so far as you belong to a group you don't necessarily have to make any saving with SAT to be given a loan. You are required however, to deposit 10% of the total amount granted as loan with the SAT. This finding is consistent with Armendariz and Morduch (2005) and Kah *et al* (2005) that formation of economic associations helps improve access to macro credit since there is a joint guarantee by association members.

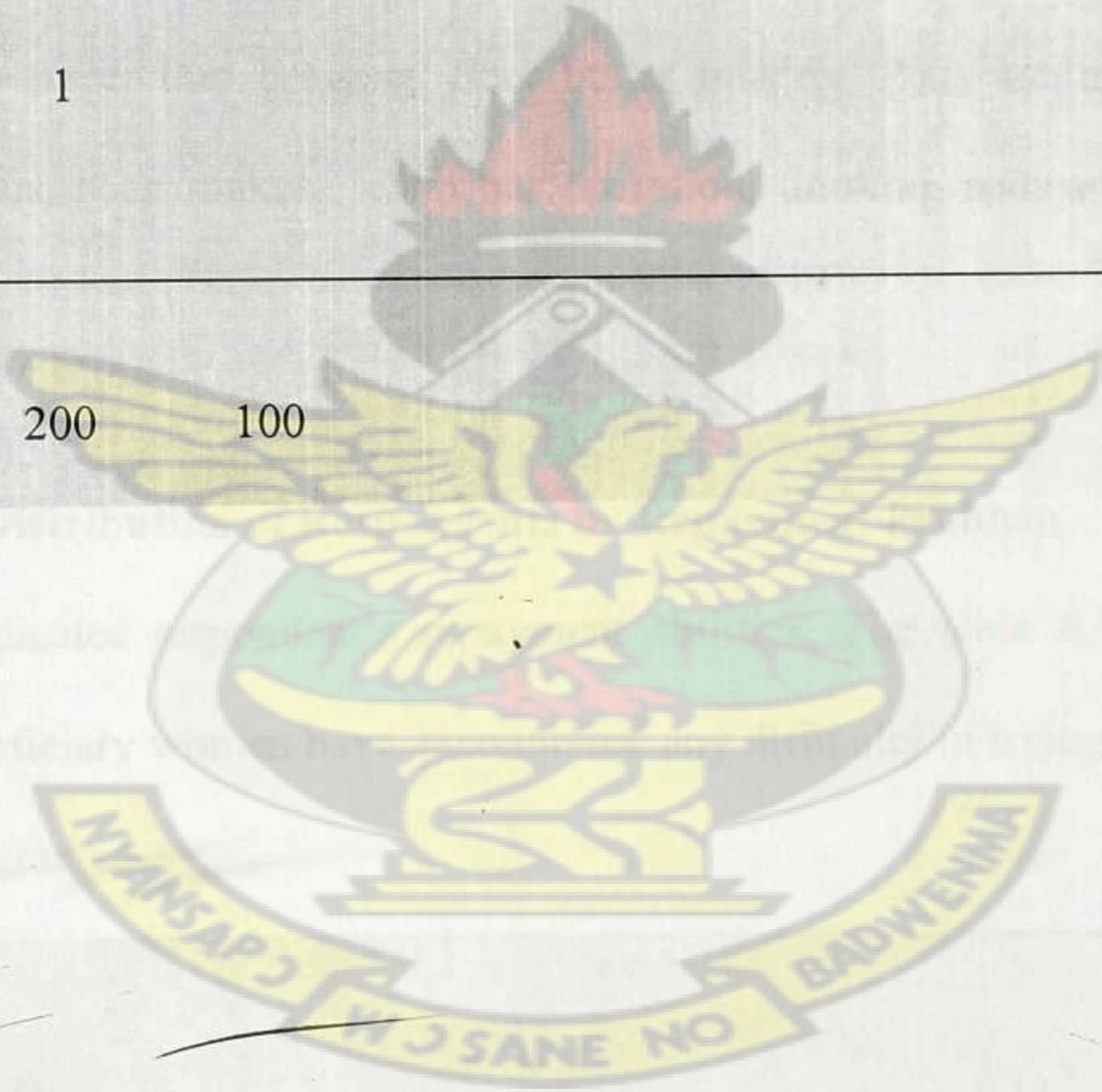
NRB on the other hand requires a group savings of 3 months before the group is granted loan. Although SAT members did not have to make any savings before they begin their first cycle, the intervention had a myriad of charges and deductions: loan application fee; processing fee; insurance; and compulsory savings. In addition to deductions and charges mentioned above, staff of SAT said that from every loan granted, SAT made a 10% compulsory deduction as loan guarantee. Many of the SAT clients complained that this deduction severely reduced the amount available to them. Total deductions amounted to about 20% of loans they were given and yet they had to pay interest on the total loan amount.

Staff of NRB claimed that the frequency and quantum of the savings was a determinant of the amount of money granted as loan. Some service users commented that there was pressure to increase the amount and frequency of savings in order to create the impression of being more creditworthy and attract bigger loans. In reality, however, some service users said they received the same amount of loan during the first cycle. Service users as a result could sometimes have large amounts of money locked up in the process.

Table 4.1.9: Analysis of Purpose for which loan was used for.

Table 4.1.9 shows whether respondents used the loan for its intended purpose.

Used	for	Percentage	Cumulative
Frequency			Frequency
Purpose			
Yes		99.50	99.50
199			
		0.50	100
No	1		
Total	200	100	



The table indicates that out of the 200 respondents who were granted the loan, 199 of them representing 99.5% used the money for the purpose based on which they applied for the loan while only 1 respondents representing 0.50% did not use the money for the intended purpose. Some respondents during the interview revealed that if one defaulted the punishment was imprisonment and therefore the group leaders ensured that they accepted only people who are trusted to the group. One should have identified an economic activity to invest the loan before you are allowed to belong to a group to be granted a loan. This probably accounted for the reason why 99.5% of the beneficiaries used the loan for its purpose. Some of the activities engaged in by the beneficiaries were; Pito brewing, Shea-butter making, Petty trading, weaving, rearing of animals, soap making, chop bar operation, drinking spot and baking of bread.

Table 4.1. 10: Distribution of Respondents by Repayment Problem

Table 4.1.10 indicates respondent's repayment abilities. The table 4.1.10 reveals, whether the beneficiary women have encountered any difficulty in trying to repay the loans they were granted.

Problems	Percentage		Cumulative
Frequency	Frequency		
In Repayment			
Yes	17	8.50	8.50
No	183	91.50	100
Total	200	100	

Source: Field Survey, 2013

It is indicated from the table that only 17 of the beneficiaries, representing 8.50% had difficulties in paying back the loans. The insistence that one must be honest and also identify an economic activity before admitted to a group to be granted loan might have accounted for the reason why 91,5% of the beneficiaries did not encounter repayment problem.

In forming a group through self-selection, such as done in SAT, the most important criteria for selection into a group to ensure loan repayment was the virtue of being trustworthy and noted for being reliable in honouring one's debts. This is what a service user said on group formation. We look for someone who is not difficult when it comes to debt repayment. Someone who will not give us problems when the time comes for repaying the loans. We seek for someone with a good character.

The strategy of selecting members for their trustworthiness and tenacity to repay debts backed by intense peer pressure was quite an effective strategy to induce repayment especially in a rural area. Interviewees in the two interventions talked about how they dreaded the extent of peer pressure and sanctions brought to bear on them in case of repayment difficulties.

Table 4.1. 11: Distribution of Respondents by their Ability to save.

Table 4.1.11 shows the ability of respondents to save.

Savings Frequency	Percentage	Cumulative Frequency
Yes 199	49.75	49.75
No 201	50.25	100
Total 400	100	

Source: Field Survey, 2013

It is indicated from the table that out of the 400 respondents, 199 of them representing 49.75% were able to save while 201 of them representing 50.25% were not able to save.

Table 4.1.12: Analysis of Access to Loan and Ability to Save.

Table 4.1.12 compares respondents who were granted loan and their ability to save as against respondents who were not granted loans.

Ability to /Loan Save	MFI	No MFI / No Loan	Total
Yes		39	199
160			
No	40	161	201
Total		200	400
200			

Source: Field Survey, 2013

Table 4.1.13 indicates that out of the 200 respondents who had taken loans or were associated with an MFI, 160 of them are able to save while 40 of them were not able to save. Also out of the 200 respondents who were not MFI's participant, 39 were able to save while 161 of them were not able to save. From this we could see that majority of the respondents who were MFI participants were able to save more as compared to those who were not. So it means MFI's enhance savings among women.

The reason that might account for the reason why MFIs participants are able to save more than non participants is that, those who were granted loans invested the money into economic activities that yielded profit. Hence they were able to pay the loan and also had some left for saving. Secondly they save more to enable them acquire more loans.

Table 4.1.13a: Distribution of Respondents by Quality of Life.

Table 4.1.13a shows whether respondents have seen improvement in their life for the past one year.

Improvement in Life	Percentage	Cumulative Frequency
Yes	49.25	49.25
197		
No	50.75	100
203		
Total	100	
400		

Source: Field Survey, 2013

From the table it is indicated that 197 of the respondents representing 49.25% said they have seen an improvement in their lives whiles 203 of them representing 50.75% said they have not seen any improvement in their lives in the past one year.

The study went further to investigate the proportion of those who were members of MFIs and were granted loans and whether this loan had improvement in their life. The results are shown in table 4.1.13b.

Table 4.1.13b: Impact of Access to MFI Loan on Quality of Life of Respondents

Table 4.1.13b compares improvement in life of respondents who are with MFIs and have benefited from a loan and respondents who are not with MFIs and therefore have not taken any loan. It shows the relationship between improvement in life and granting of loans.

Improved /Loan Life	MFI	No M FI / No Loan	Total
Yes	161	36	197
No	39	164	203
Total	200	200	400

Source: Field Survey, 2013

It is indicated from table 4.1.13b that, 161 out of the 200 women who took loans from the MFI’s had seen an improvement in their lives in the past one year whiles 39 had not seen any improvement in their lives. Also 36 out of the 200 women who did not take any loan from any MFI said they have seen an improvement in their lives whiles 164 of them said they have not seen any improvement in their lives. Thus

majority of the women who did not take loans from any MFI said they have not seen any improvement in their lives. This implies that loans from the MFI's did help in enhancing the lives of women participants.

The reason that might account for improvement in their lives might be that, access to loan gives the beneficiaries economic power to invest and hence make some profit. Their demand for goods and services therefore increases.

4.2.0 Analysis of Logit Regression Results.

This section presents analysis of the logit regression results. Three equations or models were estimated. The main explanatory variable that determines poverty reduction is the loan variable (loan from MFIs), among other variables like household size, age, education and employment.



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4.2.1 Analysis of Model 1

This section presents analysis of model 1 using not poor as dependent variable.

Table 4.2.14.: Logit Regression with Respondent (not Being Poor) as the Dependent Variable

Explanatory Variable.	Coefficient	Standard Error	P-Value
Constant	-2.425658	1.205159	0.044
Age	.019615	.0282114	0.487
Income	.0088771	.0019205	0.000
Household Size	-.4764146	.1158264	0.000
Loan	1.526318	.6158722	0.013
<u>Employment Status</u>			
Employed	2.534886	.4769643	0.000
<u>Educational Level</u>			
Basic Education	1.254601	.4688764	0.007
Senior High Education	3.133168	.7650476	0.000

Source: Field Survey, 2012

From Table 4.2.12 age had a positive coefficient but it was not significant at 5% level because its p-value was above 0.05.

Income, Household size and Loan were all significant at 5% level because their p-values were less than 0.05.

Income has positive coefficient and significant at 5% level, hence has positive impact on poverty reduction. Thus since income was positive and significant, it means that

the higher a woman's income the greater the probability that the person will not be poor. This met the prior expectation.

Household size had a negative coefficient and significant at 5% level. This means that the larger the household size of an individual the lesser the probability that the person will not be poor. Thus increasing household size is tantamount to higher poverty level. Thus the sign and significance of household size met the expectation of the study.

Loan had positive coefficient and significant at 5% level. This means that if a woman takes a loan, there is a greater probability that, that woman will not be poor as compared to those women who had not taken any loan from the MFI's (control group). Thus it means microfinance and hence microcredit increases the probability that a woman will not be poor and as such reduces poverty.

Employment had positive sign and was significant at 5% level. This implies that, if a woman is employed there is a higher probability that, the woman will not be poor as compared to an unemployed woman.

Education (SHS and Basic) had positive sign and was significant at 5% level. This means that if a woman has basic or senior high school level of education, the probability that, that women will not be poor is higher compared to the uneducated women (control group). This also met the expectation of the study.

4.2.2 Analysis of Model 2

This section presents analysis of model 2 using ability to save as the dependent variable.

Table 4.2.13: Logit Regression with (ability to Save) as the dependent variable.

Explanatory Variable.	Coefficient	Standard Error	P-Value
Constant	-1.685839	.8770318	0.055
Age	-.0388471	.0194632	0.046
Income	.0057902	.0013166	0.000
Household Size	-.1175613	.0705323	0.096
Loan	.7488075	.4007102	0.062
<u>Employment Status</u>			
Employed	2.351024	.4562715	0.000
<u>Educational Level</u>			
Basic Education	.1543927	.3396784	0.649
Senior High Education	.7575881	.383076	0.048

Source: Field Survey, 2013

From Table 4.2.13, age had a negative sign and was significant at 5% level since its p-value was less than 0.05. The negative sign means that, as a woman advances in age, her ability to save decreases. This is because as a woman in the sampled population ages her expenditure increases and thereby reducing savings.

Income was positive and significant at 5% level since its p-value was less than 0.05. This means that the higher the income of a woman in the sampled population, the greater her ability to save. This met the expectation of the study.

Household size was negative but not significant at 5% level since its p-value was greater than 0.05. This met the a prior expectation.

Loan (micro credit) had a positive sign which met the expectation of the study but it was not significant at 5% level since its p-value was above 0.05. This implies that if a woman in the sampled population takes a loan from an MFI it does not have any impact on her ability to save.

Employment was also positive and significant at 5% level and it met the expectation of the study. The positive significance of employment implies that if a woman in the sampled population is employed, the probability that she will be able to save is very high as compared to a woman who is not employed (control group). Thus if a woman is employed she is able to earn income which enables her to save.

With respect to education, basic was positive which met the expected sign of the study but it was not significant at 5% level. What it means is that, if a woman in the sampled population had basic level of education, it does not have any influence on her ability to save.

However Senior High School (SHS) was positive and significant at 5% level and what it means is that if a woman had SHS level of education, it influences her ability to save as compared to the uneducated women (control group). This means that if a

woman has higher education she is more able to manage her business and hence make profit which enables her to save more.

4.2.3 Analysis of Model 3

This section presents analysis of model 3 using improvement in life as the dependent variable.

Table 4.2.13: Logit regression with whether life has improved in the past one year as the dependent variable.

Explanatory Variable.	Coefficient	Standard Error	P-Value
Constant	-2.265484	.8536271	0.008
Age	-.0186625	.0190363	0.327
Income	.004718	.0012429	0.000
Household Size	-.0410105	.0696234	0.556
Loan	1.217858	.3890109	0.002
<u>Employment Status</u>			
Employed	1.330997	.3974543	0.001
<u>Educational Level</u>			
Basic Education	.6133942	.3356875	0.068
Senior High Education	1.139966	.3765696	0.002

Source: Field Survey, 2013

From Table 4.2.13, age and household size were negative but were not significant at 5% level. This means that age and household size did not have any significant impact on whether a respondent's life had improved in the past one year or not.

Income was positive and significant at 5% level since its p-value was less than 0.05 and this met the expectation of the study. The positive significance of income implies that, the higher the income of a woman in the sampled population, the greater the probability that her life did improve in the past one year.

Loan (micro credit), from MFI's had a positive sign which met the expectation of the study and was significant at 5% level since its p-value was below 0.05. This implies that if a woman in the sampled population takes a loan from an MFI, the probability that her life improved in the past one year is higher as compared to those women who were not associated with any MFI or had not taken any microcredit (control group). Thus microcredit leads to an improvement in life.

Employment was also positive and significant and it met the expectation of the study. The positive significance of employment implies that if a woman in the sampled population was employed, the probability that her life improved in the past one year is very high as compared to a woman who was not employed (control group). If a woman is employed she earns income and hence her life improves.

With respect to education, basic was positive which met the expected sign but it was not significant. What it means is that, if a woman in the sampled population had basic level of education, it does not have any influence on whether her life improved in the past year or not. However, Senior High School (SHS) was positive and significant at 5% and what it means is that if a woman had SHS level of education, it increases the probability that her life would improved in the past one year as compared to the uneducated women(control group).

4.3.0 Conclusion

This chapter presented the results and its discussion. This included a descriptive analysis of variables, analysis of the Logistic regression, descriptive analysis of the selected districts, age, and education and employment status of the respondents.

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CHAPTER FIVE

SUMMARY OF MAJOR FINDINGS AND RECOMMENDATION

5.0 Introduction

This study was carried out basically to find out the impact of Microfinance (microcredit) on poverty reduction among women in the Lambusie and Nandom Districts of Ghana. Chapter five will therefore deal with a review of the major findings of this study as well as prescribing recommendations and conclusions from the entire study.

5.1 Summary of Major Findings

The study found that 99.50% of the women who went for loans from these MFI's said the MFI's were easily accessible. It was also revealed that 99.50% of the women who went in for the loans used the loans for the intended purpose. Also it was found that only 17 of the women who went in for loans from MFI's representing 8.50% said they had difficulties in paying back the loans while 183 of them representing 91.50% said they had no difficulties in paying back the loan.

Also it was found that age did not have any significant impact on whether a woman will not be poor or not. Income, Household size and Loan had significant impact on whether a woman will not be poor or not. Household size had a negative coefficient and hence its significance means that the larger the household size of an individual the lesser the probability that the person will not be poor. Thus increasing household size is tantamount to higher poverty levels.

Also both income and Loan had positive coefficients which met the expectation of the study. Thus since income was positive and significant, it means that the higher a woman's income the greater the probability that the person will not be poor.

Also Loan was found to have a positive significant coefficient, what it means is that if a woman takes a loan from an MFI, there is a greater probability that, that woman will not be poor as compared to those women who had not taken any loan from the MFI (control group).

Finally employment, Education (SHS and Basic) had positive signs that met the expectation of the study. Thus, if a woman is employed there is a higher probability that, the women will not be poor as compared to an unemployed woman. Also the educational variables(SHS and Basic) were all positively significant and this means that if a woman has basic or senior high school level of education, the probability that, that women will not be poor is higher as compared to the uneducated women (control group).

Also with the ability to save as the dependent variable, age had a negative significant coefficient which means that as a woman advances in age, her ability to save decreases. This means that as a woman in the sampled population ages her expenditure increases. Income was positive and significant and this met the expectation of the study. Thus the higher the income of a woman in the sampled population, the greater her ability to save.

Household size was negative and met the expected sign of the study but it was not significant.

Loan representing women who took loans from MFI's had a positive sign which met the expectation of the study but it was not significant when it comes to the ability to save. This implies that if a woman in the sampled population takes a loan from an MFI it does not have any impact on her ability to save as compared to those women who were not associated with any MFI (control group) at 5% significance level.

Employment was also positive and significant and it met the expectation of the study. The positive significance of employment implies that if a woman in the sampled population is employed, the probability that she will be able to save was very high as compared to a woman who was not employed (control group).

With respect to education, basic was positive which met the expected sign but it was not significant. However Senior High School (SHS) was positive and significant and what it means is that if a woman has an SHS level of education, it influences her ability to save as compared to the uneducated women (control group).

Finally with regards to whether respondents lives have improved in the past one year (dependent variable), age and household size were negative and were not significant. Thus age and household size did not have any significant impact on whether a respondent's life improved in the past one year or not.

Income was found to be positive and significant which implies that, the higher the income of a woman in the sampled population, the greater the probability that her life improved in the past one year.

Loan representing women who took loans from MFI's had a positive sign and was significant implying that if a woman in the sampled population takes a loan from an MFI, the probability that her life improved in the past one year is higher as compared to those women who were not associated with any MFI or had not taken any microcredit (control group).

Employment was also positive and significant which implies that if a woman in the sampled population was employed, the probability that her life has improved in the past year is very high as compared to a woman who was not employed (control group).

With respect to education, basic was positive but it was not significant. What it means is that, if a woman in the sampled population had basic level of education, it does not have any influence on whether her life improved in the past year or not as compared to an uneducated woman or women (control group). However, Senior High School (SHS) was positive and significant and what it means is that if a woman had an SHS level of education, it influenced the probability that her life improved in the past one year as compared to the uneducated women (control group).

5.2 Conclusion

This study set out to find out the impact of MFIs on poverty reduction among women using a survey of SAT clients and NRB micro finance support for women in Nandom and Lambussie districts as case study. 400 women were sampled for the study in the two districts. 200 of them had been clients of the two institutions and have benefited from loan facilities while the remaining 200 were not clients and had not benefited from any loan facility.

From the findings it can be concluded that age does not have any significant impact on the probability that a woman in the sampled population will not be poor.

Income and ~~loan or microcredit from~~ the MFI's however can be concluded to have a positive significant impact on the probability that a respondent will not be poor. Thus income and microcredit can be concluded to have a positive significant impact on poverty reduction.

Also household size can be concluded to have a negative significant impact on poverty reduction and hence a higher household size increases poverty or reduces the probability that a respondent will not be poor.

Education (SHS and basic) and Employment can all be concluded to have a positive significant impact on the probability that a respondent will not be poor and hence poverty reduction.

Also age can be concluded to have a negative significant impact on the ability to save while income can be concluded to increase a respondent's ability to save.

Also it can be concluded that loan or microcredit from the MFI's, household size and basic education did not have any impact on the ability to save. However, employment and senior high education can be concluded to increase the ability to save.

Finally age and household size can be concluded to have no impact on the probability that a respondent's life improved in the past one year.

Income and microcredit can be concluded to have a positive significant impact on the probability that a respondent's life has improved in the past one year.

On education it can be concluded that basic education did not have any impact on the probability that a respondent's life improved in the past one year but SHS level of education and employment can be concluded to have a positive significant impact on the probability that a respondent's life improved in the past one year.

A general conclusion that emerges from this research study is that access to finance is important for females to unlock them from the shackles of poverty to realise their full potentials

5.3 Recommendation

Based on the above findings and conclusion, the study recommended that:

Firstly, MFIs must be encourage and supported to give more loans to women at lower interest rate since loans granted to women have shown to reduce poverty by

increasing the probability that a respondent will not be poor and also have improved their lives or well being in the past one year.

Secondly the study revealed that education have positive impact on poverty reduction.

Therefore opportunities should be created for more people to get access to education.

Thirdly, families must be encouraged to reduce the number of children they give birth to which will reduce the household size. This is because household size was found to have a negative impact on the probability that a woman will not be poor. Thus an increase in the household size reduces the probability that a woman will not be poor and hence increasing poverty.

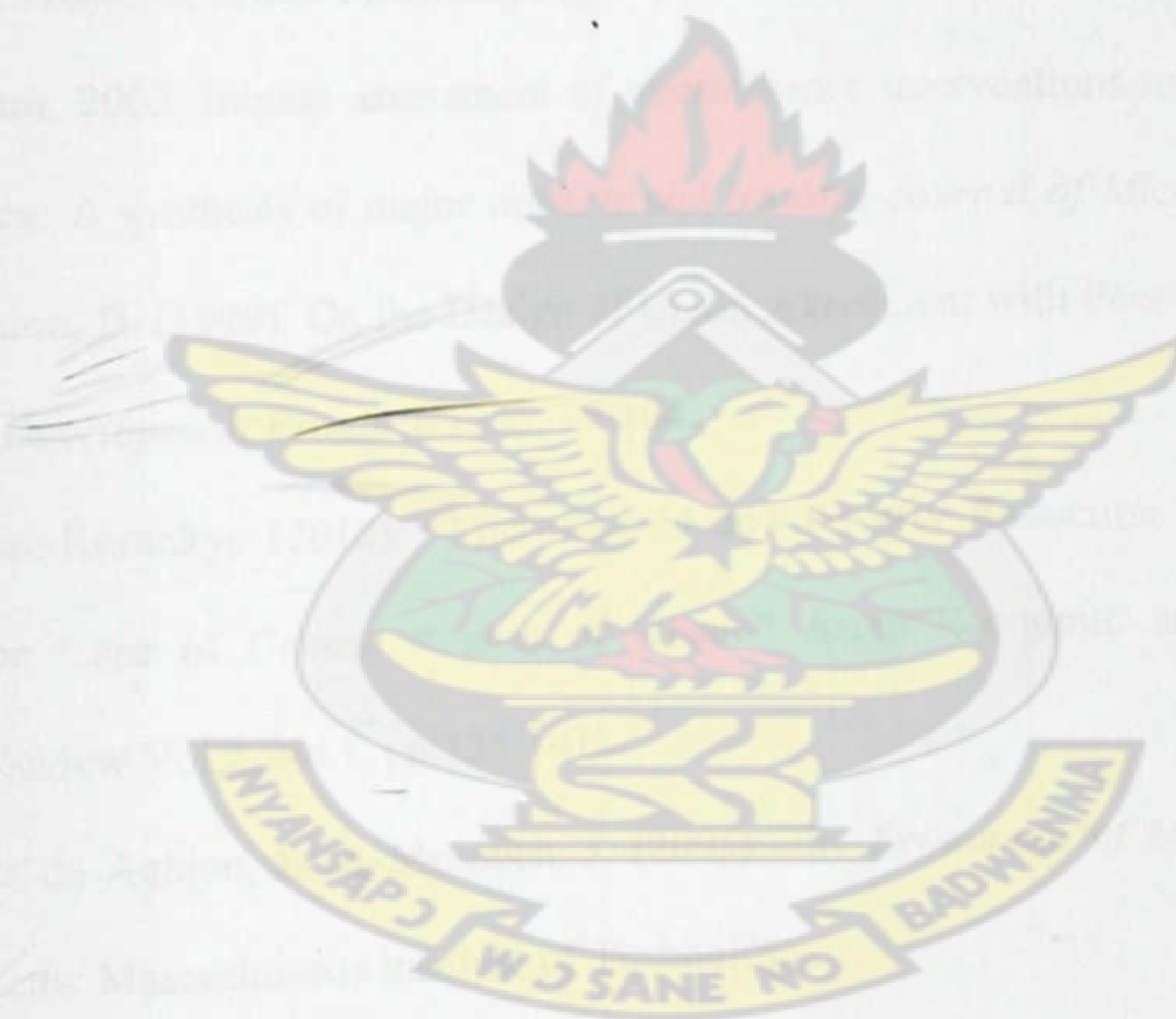
Fourthly, the study recommends that an affirmative action that tend to promote girl child education must be encouraged since education especially senior high level education, proved to have a significant impact on the probability that a respondent's life will improve, a respondent's ability to save will increase and the probability that a respondent will not be poor and hence contributing immensely towards poverty reduction. Also those women who have grown beyond the school going age and are uneducated must be given informal training on how to efficiently manage their businesses and finances.

Finally, it was also revealed during the interview that many of the non participants of MFIs attributed their non- participation to the fact that they would not be able to manage the loan. They lack the entrepreneurial skills that would enable them invest and repay the loan and hence their refusal to join and pick a loan. I would therefore recommend that proper training be given to them at free cost so as to acquire the necessary skills before loans are given out.

5.4 Limitations of the study

This study was limited in terms of the small sample size used since the Logit model adopted, is very useful for large samples and this could affect the efficiency and unbiasedness of the findings, such that variables that were expected to be significant were not.

KNUST



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Appendix 1 : Questionnaire

DEPARTMENT OF ECONOMICS KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI-GHANA

The impact of microfinance on poverty reduction in the Upper west Region of Ghana

This study is being conducted in partial fulfilment of the requirements for the award of a Master of philosophy degree in Economics. All information received would be used solely for academic purposes and treated with strict confidentiality.

1. District.....
2. Age: []
3. Marital status: Married [1] Single[2] Widowed[3] Separated[4]
4. Educational level: J.H.S [1] Senior High [2] Tertiary [3] middle sch. (4)
None[5]
5. Number of Children (no. of dependent children/wards): 0 (): 1-2 (): 3-4 ():
6. Household size: []
- 7.Are you employed YES: [1] NO,[2]
- 8.Type of occupation
9. What is your Monthly Income.....
10. How much on average do you spend a day.....
11. Are you a member of any microcredit scheme? Yes [1] No [2] (If No answer
11 and skip)
12. If No why?.....

If question 10 is yes

13. What type of microcredit scheme is it? .

14. How long have you been with the scheme?

15. How many times have you received loan from the scheme ?.....

16. Were you given the amount of loan you applied for? Yes [1] No [2]

17. If No why?.....

.....

18. What was the amount of first loan given ?

19. What is the amount of last or current loan?

20. Was the first loan your start up capital?

21. Has the size of your capital improved?

22. What is the interest rate charged on loan/savings? What is your opinion about that?

23. Do you borrow money from elsewhere apart from the MFI ? If yes, how does it (interest rate) compare with what is charged by the MFI?

24. What was the duration given to pay the full loan?

25. What is the mode of repayment ? daily(1) weekly(2) monthly(3)

26. Did you face problems of repayment? [1]Yes [2] No

27. If Yes give reasons.....

.....

.....

.....

28. If No give reasons.....

29. How do you describe access to credit facilities? (probe: easy, competitive, complicated, etc).
30. What conditions did you meet before the loan was given to you?.....
- 31.What motivated you to go for the loan?.....
- 32.Was the loan used for its intended purpose ?Yes [1] No [2]
33. What kind of activity did you put the loan to?
34. Number of other household borrowers.....
- 35.Has the loan you benefited from helped in expanding your business? YES [1] NO [2]
36. Are you able to save part of your income YES [1] NO [2]
- 37.if yes ,what is the mode of saving? Daily (1) weekly (2) monthly (3)
38. Would you say your life has improved within the past one year [1] Yes [2] No



Appendix 2: STATA Output

logit notpoor loan basic shs employed Income Age Household

Iteration 0: log likelihood = -260.78648

Iteration 1: log likelihood = -110.42102

Iteration 2: log likelihood = -94.763255

Iteration 3: log likelihood = -92.631822

Iteration 4: log likelihood = -92.61917

Iteration 5: log likelihood = -92.619168

Logistic regression

Number of obs = 400

LR chi2(7) = 336.33

Prob > chi2 = 0.0000

Log likelihood = -92.619168

Pseudo R2 = 0.6448

notpoor	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
loan	1.526318	.6158722	2.48	0.013	.3192306	2.733405
basic	1.254601	.4688764	2.68	0.007	.33562	2.173582
shs	3.133168	.7650476	4.10	0.000	1.633702	4.632634
employed	2.534886	.4769643	5.31	0.000	1.600053	3.469719
Income	.0088771	.0019205	4.62	0.000	.0051129	.0126413
Age	.019615	.0282114	0.70	0.487	-.0356784	.0749083
Household	-.4764146	.1158264	-4.11	0.000	-.7034302	-.249399
cons	-2.425658	1.205159	-2.01	0.044	-4.787727	-.0635896

. logit saves loan basic shs employed Income Age Household

Iteration 0: log likelihood = -277.25387

Iteration 1: log likelihood = -167.448

Iteration 2: log likelihood = -165.04558

Iteration 3: log likelihood = -165.0242

Iteration 4: log likelihood = -165.02419

Logistic regression

Number of obs = 400

LR chi2(7) = 224.46

Prob > chi2 = 0.0000

Log likelihood = -165.02419

Pseudo R2 = 0.4048

	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
--	-------	-----------	---	------	----------------------

loan	.7488075	.4007102	1.87	0.062	-.0365699 1.534185
------	----------	----------	------	-------	--------------------

basic	.1543927	.3396784	0.45	0.649	-.5113646 .8201501
-------	----------	----------	------	-------	--------------------

shs	.7575881	.383076	1.98	0.048	.0067728 1.508403
-----	----------	---------	------	-------	-------------------

employed	2.351024	.4562715	5.15	0.000	1.456748 3.245299
----------	----------	----------	------	-------	-------------------

Income	.0057902	.0013166	4.40	0.000	.0032096 .0083707
--------	----------	----------	------	-------	-------------------

Age	-.0388471	.0194632	-2.00	0.046	-.0769943 -.0006999
-----	-----------	----------	-------	-------	---------------------

Household	-.1175613	.0705323	-1.67	0.096	-.2558021 .0206795
-----------	-----------	----------	-------	-------	--------------------

_cons | -1.685839 .8770318 -1.92 0.055 -3.40479 .0331118

. logit improvedlife loan basic shs employed Income Age Household

Iteration 0: log likelihood = -277.21387

Iteration 1: log likelihood = -172.56121

Iteration 2: log likelihood = -171.16597

Iteration 3: log likelihood = -171.16241

Iteration 4: log likelihood = -171.16241

Logistic regression

Number of obs = 400

LR chi2(7) = 212.10

Prob > chi2 = 0.0000

Log likelihood = -171.16241

Pseudo R2 = 0.3826

improvedlif | Coef. Std. Err. z P>|z| [95% Conf. Interval]

loan | 1.217858 .3890109 3.13 0.002 .4554111 1.980306

basic | .6133942 .3356875 1.83 0.068 -.0445413 1.27133

shs | 1.139966 .3765696 3.03 0.002 .4019034 1.878029

employed | 1.330997 .3974543 3.35 0.001 .5520006 2.109993

Income | .004718 .0012429 3.80 0.000 .0022821 .007154

Age | -.0186625 .0190363 -0.98 0.327 -.055973 .018648

```
Household | -.0410105 .0696234 -0.59 0.556 -.1774698 .0954488
_cons | -2.265484 .8536271 -2.65 0.008 -3.938563 -.5924057
```

```
. summarize Age Income Household
```

Variable	Obs	Mean	Std. Dev.	Min	Max
Age	400	42.8775	7.850259	23	60
Income	400	248.67	172.1186	20	800
Household	400	4.885	2.158338	1	9

```
. tabulate District
```

District	Freq.	Percent	Cum.
lambusie	180	45.00	45.00
nandom	220	55.00	100.00
Total	400	100.00	

```
. tabulate Education
```

Education	Freq.	Percent	Cum.
-----------	-------	---------	------

shs	81	20.25	20.25
basic	103	25.75	46.00
none	216	54.00	100.00

-----+-----

Total	400	100.00
-------	-----	--------

. tabulate Employment

Employment	Freq.	Percent	Cum.
------------	-------	---------	------

-----+-----

employed	297	74.25	74.25
unemployed	103	25.75	100.00

-----+-----

Total	400	100.00
-------	-----	--------

. tabulate occupation

occupation	Freq.	Percent	Cum.
------------	-------	---------	------

-----+-----

pito	43	14.48	14.48
shea butter	27	9.09	23.57
chopbar	49	16.50	40.07
beerbar	12	4.04	44.11
trading	66	22.22	66.33
soap	13	4.38	70.71

weaving	12	4.04	74.75
farming	53	17.85	92.59
baking	5	1.68	94.28
chopbarassistant	17	5.72	100.00

-----+-----

Total	297	100.00
-------	-----	--------

. tabulate dailyspending

dailyspendi |

ng	Freq.	Percent	Cum.
----	-------	---------	------

-----+-----

notpoor	257	64.25	64.25
---------	-----	-------	-------

poor	143	35.75	100.00
------	-----	-------	--------

-----+-----

Total	400	100.00
-------	-----	--------

. tabulate MFI

MFI	Freq.	Percent	Cum.
-----	-------	---------	------

-----+-----

credit	200	50.00	50.00
--------	-----	-------	-------

nocredit	200	50.00	100.00
----------	-----	-------	--------

-----+-----

Total	400	100.00
-------	-----	--------

. tabulate dailyspending MFI

dailyspend MFI			
ing credit nocredit Total			
-----+-----+-----			
notpoor	193	64	257
poor	7	136	143
-----+-----+-----			
Total	200	200	400

. tabulate problemsofrepayment

problemsofr			
epayment Freq. Percent Cum.			
-----+-----			
yes	17	8.50	8.50
no	183	91.50	100.00
-----+-----			
Total	200	100.00	

. tabulate aces

aces	Freq.	Percent	Cum.
------	-------	---------	------

-----+-----

easy	199	99.50	99.50
competitive	1	0.50	100.00

-----+-----

Total	200	100.00
-------	-----	--------

. tabulate purpose

purpose	Freq.	Percent	Cum.
---------	-------	---------	------

-----+-----

yes	199	99.50	99.50
no	1	0.50	100.00

-----+-----

Total	200	100.00
-------	-----	--------

. tabulate save

save	Freq.	Percent	Cum.
------	-------	---------	------

-----+-----

yes	199	49.75	49.75
no	201	50.25	100.00

-----+-----

Total	400	100.00
-------	-----	--------

. tabulate improvedlife

improvedlif |

e	Freq.	Percent	Cum.
-----+-----			
yes	197	49.25	49.25
no	203	50.75	100.00
-----+-----			
Total	400	100.00	

. tabulate improvedlife typeofMFI

improvedli	typeofMFI		
fe	sinapiaba	ruralbank	Total
-----+-----+-----			
yes	128	33	161
no	33	6	39
-----+-----+-----			
Total	161	39	200

. tabulate save typeofMFI

typeofMFI			
save	sinapiaba	ruralbank	Total
-----+-----+-----			

yes	127	33	160
-----	-----	----	-----

no	34	6	40
----	----	---	----

-----+-----+-----			
Total	161	39	200

. tabulate MFI save

	save		
MFI	yes	no	Total

-----+-----+-----			
credit	160	40	200

nocredit	39	161	200
----------	----	-----	-----

-----+-----+-----			
Total	199	201	400

. tabulate MFI improvedlife

	improvedlife		
MFI	yes	no	Total

-----+-----+-----			
credit	161	39	200

nocredit	36	164	200
----------	----	-----	-----

-----+-----+-----			
Total	197	203	400