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MASTER THESIS

Competition, Interest Rate and Over-indebtedness in the Microfinance Industry in Ghana

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Dedication

This work is dedicated to Fati Abu Banda, who became love incarnate, and to my grandmother Comfort Vorsah Apedo.

Declaration

I declare that I carried out this thesis: The role of competition and interest rate in over-indebtedness in the microfinance industry in Ghana independently, and only with the cited sources, literature and other professional sources.

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Brno, 22nd May, 2015　　　　　　　　　　Othniel Apedo Binney

ABSTRACT

The main aim of the paper is to determine the role of competition and high interest rate on customer over-indebtedness. Over-indebtedness here defined, from a customer-protection perspective, as continuously struggling with debt repayment and experiencing unacceptable sacrifices related to the debt. To achieve this, a total of ten microfinance firms were selected from the study area, as well as 85 microfinance customers using a random and cross-sectional collection of data. Analysis of the data showed that even though there is a high level of competition among the microfinance firms, this has not exerted any downward pull on interest rates charged to benefit customers. Secondly, clients are more concern about repayment regimes and prevailing macroeconomic conditions than the interest charged on loans. Customer characteristics such as employment status and financial literacy were found to be directly related to possibility of over-indebtedness. Finally the study noted that interest rates of microfinance firms in Ghana have been steadily declining, even the though county has one of the highest microfinance interest rates in the world.

Key words: over-indebtedness, Financial literacy, Interest rate, Competition, Microfinance.

ABSTRAKTNÍ

Cílem výzkumu provedeného v rámci předkládané práce je zjistit vliv hospodářské soutěže a úrokové sazby na předluženost zákazníků. Předluženost, z pohledu zákazníka, vzniká v momentě, kdy zákazník nemůže dostát svým závazkům a musí přistoupit k sebeobětování, které umožní splacení dluhu. V rámci realizovaného výzkumu bylo pro řízené interview vybráno deset mikrofinancovaných firem a 85 zákazníků metodou náhodného výběru. Analýza dat ukazuje vysokou úroveň hospodářské soutěže mezi společnostmi. Zákazníci se, na druhou stranu, více zajímají o výhodnost ekonomických podmínek než o výši úroků z úvěru. Následný vznik a výše dluhu zákazníka mohou být také ovlivněny úrovní dosaženého vzdělání a zaměstnání. Úrokové sazby v Ghaně sice od roku 2007 klesají, avšak stále patří k nejvyšším na světě.

Klíčová slova: předluženost, finanční gramotnost, úroková míra, konkurence, mikrofinancování

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CHAPTER ONE

1.0 BACKGROUND TO THE STUDY

1.1 INTRODUCTION

"The idea of granting loans at fair conditions to alleviate financial constraints of the poor has gained widespread acceptance among academics, investors and the public sector alike. The market for microcredit has expanded over many years, with microfinance institutions (MFIs) extending loans to more than 200 million clients by the end of 2010. Through various socio-economic ties of the borrowers and their families, microfinance has impacted upon the lives of around 1 billion people in emerging markets and developing countries".

The World Bank in 2008 declared that, microfinance promises improvements in both the efficiency and fairness of capital markets. The multilateral institution even believes that microfinance holds the promise to correcting market failures by improving the allocation of capital and by expanding opportunities for the poor (World Bank 2008).

The success story or record of the industry's first institution gives more glimpses into the development potential benefits of microfinance. Founded in 1983, Dr. Yunus's for-profit Grameen Bank has lent more than $5.7 billion to over 6.1 million borrowers, 97% of whom are poor women, in Bangladesh, to help them establish small businesses and become self-sufficient.

Several development theorists such as Morduch (2000) have asserted that "few recent innovations have held much hope for reducing poverty in developing countries as microfinance". When the United Nations published its Millennium Development Goals 2000, most researches in the field saw microfinance as a crucial driving mechanism towards achieving the millennium development target of halving extreme poverty and hunger by 2015 (Simanowitz, 2002; Arun, Imai and Sinha, 2006). According to Dr. Mohammed Yunus, the pioneer of modern day microfinance, and leading advocates in the field, microfinance has the capacity to efficiently and effectively provide sustainable financial services to poor households who are otherwise excluded from the conventional financial systems for lack of collateral. Through the provision of financial capital to low-income, small and medium scale entrepreneurs, these microfinance institutions act as the financial life-line to the financially excluded in the formal economy. These credits are secured for purposes like financing business ventures, acquiring assets, managing emergencies, or even improve normal daily consumption.

The financially excluded are not the only beneficiaries of the microfinance phenomenon. Microfinance finance now constitutes a significant part of the gross domestic product (GDP) of some countries. The microfinance industry is now a key component of the private sector of low income countries Vietnam, Cambodia, Mongolia, Bolivia, Nicaragua, Kenya, Tanzania; economies in transition like Bosnia & Herzegovina, Armenia, Kyrgyz Republic; and other emerging economics (Bella, 2011).

Microfinance institutions constitute a very heterogeneous group that includes different types of institutions depending on the formal structure of their organization and the type of services or products they offer. These are banks, rural banks, and non-bank financial institutions (NBFIs), non-governmental organizations, credit unions, and cooperatives. They differ also in terms of legal status (regulated or not regulated), and purpose (for profit and nonprofit organizations). The type of lending portfolio offered also depends largely on the type of microfinance institution. Banks and NBFLs often focus on larger customers and small scale businesses, while cooperatives and NGOs extend loans to clients in small sizes. The NGOs usually focus on lending to groups of people with a shared respondent in the repayment of the loan and interest.

However, microcredit is no more what it used to be. Over the past three decades, microfinance has evolved and become completely mutated. Microfinance started as a simple idea, which is to provide loans to poor entrepreneurs; but today it is a far-ranging and dynamic sector, featuring institutions that provide savings and remittance services, sell insurance, and offer loans for a wide range of purposes.

As the microfinance industry experienced increases in its portfolio and increasingly achieved self reliance from traditional sources of capital (aid agencies and multilateral organizations), the industry became exposed to the perennial risks that plague the mainstream financial sector. The wave of sustainability that swept the industry as it began to prove to be a viable economic development model meant that the industry began to adopt the same practices of traditional mainstream financial institutions. The effect is that, microfinance sector of most developing countries began to increasing lose their immunity to national and international economic conditions (SDC, 2005). According to a working paper published by the International Monetary Fund, prior to the global financial crisis of 2007/2008, the literature and data gathered on the microfinance industry showed a very weak connection or linkage between the performance of the industry and development in the international capital market (Krauss and Walter, 2009; Ahlin, Lin and Maio, 2010).

The Grameen model, pioneered by Dr. Mohammed Yunus in Bangladesh, has been subjected to more creative financial rebranding in ways that have altered the character and true mission of microcredit. In spite of the euphoria by stakeholders in the field and some development agencies, the question of whether microfinance really has the potential to eradicate poverty and deliver the level of human and societal development needed in the Global South is one of the central debates in the research on microfinance. Advocates of microfinance claim that it aims to reach some of the world's poorest citizens and help lift them from poverty (Daley-Harris 2009). But increasing number of research on the impact microfinance is having on extremely deprived communities shows that there is the need for closer re-examination of these assertions. According to Robert Cull, et (2009) in practice, microfinance often entails distinct trade-offs between meeting social goals and maximizing financial performance. Bateman and Chang (2009) questioned the implicit assumption in the argument of proponents of microfinance that simply providing the poor with microfinance services will invariably lead to poverty reduction.

One of the earliest researches that tried to point to the fact that microfinance improves the economic conditions of the poor was conducted by Pitt and Khandker in 2008. Their study, reputed to be one of the most rigorous studies at the time, found positive effects of microfinance on poverty reduction. However doubts have been cast on this study by Roodman and Morduch (2009) after a review of the data employed in the study.

Weiss, Montgomery and Kurmanalieva (2003) have also examined some of this evidence by studying data obtained from microfinance impact on poverty in Asia and Latin American and came to the following conclusion:

"That whilst microfinance clearly may have had positive impacts on poverty it is unlikely to be a simple panacea for reaching the core poor remains broadly valid. 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."

Meyer (2002) came to the same conclusion. After reviewing the available data for Asian countries, he concluded that while access to microcredit seems to have an overall positive effect on income and education, results show significant variations across countries and programs both in magnitude and statistical significance and robustness."

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. Montgomery (2006) using data from Pakistan found a mild significant impact on per capita food expenditure in the months after the beneficiary first borrowed. However, access to microcredit did not have a significant impact on non-food expenditure.

The rigorous impact studies of microcredit conducted in the past 10 years show mixed results regarding impact on income and expenditure. Some studies show a significant, positive impact on beneficiaries while others show no significant impact. One area of intense debate is the level of over-indebtedness suffered by the poor through this microfinance. According to a study conducted by Deutsche Bank on the global microfinance industry, between 2003 and 2008, MFI asset volume grew on average by 35% per year, and microfinance was seen by many as a secure and profitable investment opportunity. However, in 2008, more and more borrowers were unable to repay their loans. MFI average portfolio quality started to deteriorate and MFIs had to realize write-offs, which in turn weighed on their profitability (Deutsche Bank, 2010). Most Microloans are backed by no collateral, or by collateral that is unlikely to cover a defaulted loan amount once collection expenses are taken into account. As a result, outbreaks of late payment or default become dangerous for the microfinance firms, but most importantly it becomes nightmare for the poor customers who become trapped in perpetual debt.

1.2 AIMS AND OBJECTIVE OF THE STUDY

Considering the numerous challenges enumerated in the literature on microfinance, the main aim of this study is to determine the role of competition in the microfinance industry and interest rate charged on credit on the level of customer over-indebtedness. The specific objectives are:

1. To determine the level of competition in the selected area in Accra.

2. To determine the borrowing characteristics of the customers.

3. To determine the impact of loan repayment conditions on the borrowers.

4. To determine how the interest rate charged contribute to customer over-indebtedness.

1.3 RESEARCH HYPOTHESIS

A hypothesis is a logical supposition, reasonable guess, an educated conjecture, which provides a tentative explanation for a phenomenon under investigation (Creswell, 1994). They can also be seen as formal statements that present the expected relationship between dependent and independent variables in a research. Hypothesis testing involves setting the hypothesis, setting the criteria for decision, collecting data, and evaluating the null and alternative hypothesis. The main function of the hypothesis is to serve as a guide to the researcher. The hypothesis aids the researcher to collect the right data needed for exactly what is to be studied.

As revealed in the introduction, one of the lasting arguments in microfinance today is the issue of interest rate charges and level of over-indebtedness accumulating in the industry in each country. The hypotheses to guide this work have been formulated in relation to the interest rate issue and the perceived over-indebtedness in the microfinance industry in Ghana. It is hoped that the responses to these hypotheses will clarify these issues in relation to over-indebtedness in microfinance. The following are the research hypotheses:

H1: **High interest rate is not the main cause of over-indebtedness.**

One of the major concerns of critics of microfinance is the fear that the borrowers are being exploited by excessive interest rates. The majority of these microfinance customers are people with very little bargaining power (CGAP, 2011). The possibility that the level of over-indebtedness in the sector is due solely to the exorbitant interest rates of these firms have been the subject few researches in the literature. The main reason for this is the implicit assumption that the administrative costs of these firms make the high interest rates realistic. This hypothesis is designed in light of this assumption.

H2: **A borrower's employment status is negatively related to over-indebtedness.**

Microfinance institutions have target groups that often want to extend loans to. Some institutions focus on small scale businesses that need capital injection for expansion while others focus on clients with permanent jobs that receive fixed amounts of salaries monthly. The choice of customer preferred by these firms is normally informed by perceived capacity of the prospective client to pay back on time and in full. The above hypothesis seeks to verify if the employment status of a client is a good indicator of repayment ability.

***H3:* Financial literacy is not significantly related to over-indebtedness.**

According to Nelson and Wambugu, (2008), financially literate customers function in the market in a way that promotes consumer protection. The financial institutions tend to present appropriate price and act transparently. In the microfinance sector, emphasis is often place on customers to be financially literate in order to reduce the incidence of over-indebtedness. This hypothesis tests the general assumption that financial literacy of clients has a direct bearing on over-indebtedness.

1.4 JUSTIFICATION OF THE STUDY

The current body of research on microfinance is almost completely focused on the institutional sustainability of the microfinance model (Hulme and Arun, 2009). Research into the microfinance industry is now dominated by development of strategies of sustainability which aims at ending the industry's dependence on subsidies and external finance from external donor organizations. According to Robinson (2003), financial sustainability pertaining to microfinance institutions refers to ability to grow and achieve wide outreach and significant impact on customers without dependence on external support and government subsidies.

The idea of striving for financial sustainability is founded on the premise that microfinance institutions can grow and function profitably without having to depend on external support or subsidies and still achieve wide outreach and maximum impact on service users (Robinson, 2003). This idea coupled with an unbridled conviction in the power of microfinance to transform the lives of those living at the margins of modern capitalist and market-oriented modes of socio-economic system has hampered effective debates and critical research into the true impacts of the microfinance model.

Institutional sustainability, as a measure of the effectiveness of the microfinance model does not in any way reveal the true nature of microfinance. When effectiveness is ever considered, it usually takes the form of loan repayment rates, which is used as an indication of poverty reduction. Several empirical evidences indicate that repayment rates may not necessarily be a good indicator of poverty reduction (Copeland, 2009). The orientation of the researches currently going on in the field hardly looks at the problem from the perspectives of the users of these financial services. Most of the emphasis is placed on the financial health of the lending institutions rather than the long term effect on the households of the customers.

Right from the beginning, its most controversial dimension has always been the interest rates charged by the micro lenders. The rates often received by these borrowers are usually far higher than what normal banks charge. This high interest rate is justified by some as making for the high administrative costs necessary for the functioning and survival of the microfinance institution. Currently, over-indebtedness is gradually building up in most microfinance industry around the world.

In light of these deficiencies found in the literature of microfinance research, this work is extremely important since it seeks to clarify the debate over whether competition among the microfinance firms and the interest rate that they charge are actually leading to the prevalence of over-indebtedness in the industry. This paper will investigate this problem of over-indebtedness from the perspective of the users of the services instead of the providers of the credit. Very few studies explicitly study microfinance interventions through the eyes of the beneficiaries (Johnson and Copestake, 2002). This work will also shed more light on why people who are supposed to be financially liberated through the promise of microfinance may end up saddled by excessive debt. Another significance of this research comes from the need to specifically identify the real causes of over-indebtedness in Ghana. The tendency in most research is to assume that the knowledge gleaned from one industry in one country can be generalized to all other microfinance industry. Mknelly and Kevane (2002) have asserted that lessons learned from Asian and Latin American experiences may not be applicable to West Africa in the field microfinance. The work is not only aimed at contributing to the already existing work on over-indebtedness, but seeks to subject some of the common beliefs held about over-indebtedness to a critical review in order to broaden the knowledge on how microfinance can be use to tackle poverty.

1.5 SCOPE AND LIMITATIONS OF THE STUDY

The central focus of this study is how competition among the various microfinance institutions in the selected area in Ghana creates customer over-indebtedness. The study will concern itself with both competition and interest rate charged by these microfinance institutions and how it relates to consumer distresses such as over-indebtedness in the microfinance sector in Ghana.

In the process of conducting this study, as competition, high interest rates and over-indebtedness are taken as primary independent and dependent variables respectively, other factors that have been alleged as contributing to over-indebtedness by other authors will be treated as moderating variables. These moderating factors include level of financial literacy of the client, income level of the client, integrity to the stated purpose of the credit, size of microenterprise of the borrower, and the general macroeconomic conditions of the country.

The study will be limited to specific business district of Accra, the main capital and financial centre of the country. This area was chosen as against rural areas - which are the preferred area of choice in most researches on microfinance - because this study area has more small scale businesses than most parts of the capital city, second only to the main business district of the capital, Accra Central. Secondly, since this study will focus on competition as the main driver of over-indebtedness, it is important that the selected area exhibits a strong activity of microfinance institutions in order to test the level of saturation of the market.

The data collection for this work will focus more on the customers of the selected microfinance firms. Some particular data will also be obtained from the microfinance institutions. This is one of the limitations of the study, as firms will not be willing to provide the researcher will full data of financial transactions and other related confidential information of their clients selected for this study. Secondly most of these firms may not be willing to paint the true picture of the level of indebtedness of their customers. So the researcher will have to construct this and other key parameters needed for this study through data that can be obtained directly from the customers.

Another limitation of this study is the time limitation and financial resources needed to carry out an extensive survey of whole district selected for this study. As such, the study will focus on specific areas with more concentration of businesses and microfinance institutions. Finally, most Ghanaian businesses do not exhibit strict code of bookkeeping in their business transactions. This is mostly the case with small scale businesses. Another challenge for the researcher may be the tendency on the part of people to be evasive about matters concerning their personal finances and about their household. Therefore, it is often not so easy to be certain of the accuracy of the data provided. But after giving them assurance that the information given would not be disclosed or be used for any other purpose, most of the people are willing to participate. This is also one of the main limitations that may affect the nature of the results obtained from this research and the kind of generalization that can be made from it.

1.6 STRUCTURE OF THE STUDY

The thesis work is structured in six distinct parts. Each chapter of this work is devoted to a specific aspect of the study and it is designed in logical sequence towards answering the research questions. The first chapter introduces microfinance as a poverty reduction tool and what it has achieved so far. Against this background, it presents the research questions. The chapter also contains the objectives of the study divided into main objectives and the specific objectives guiding this work. The chapter states the significance of the work, and also identifies the scope of the study and the limitation of the whole project. The final part of chapter is devoted to the theoretical framework within which this study is conducted.

Chapter two reviews the state of knowledge and research on microfinance. This involves explaining exactly what microfinance is means and how the idea has evolved over the years. The review focuses on the microfinance industry in the country under study and its role in poverty reduction. Over indebtedness, competition and the issue of interest rates in microfinance are all addressed in this chapter with respect to the research topic. Chapter three looks at the research methodology and the limitations of the study. Data collections, sample size selection, and the data analysis techniques to be employed in the work are carefully explained in this chapter.

Chapter four of the study presents the results and an analysis of the data obtained. Chapter five, which is the last part of the work, is devoted to conclusion and recommendation.

CHAPTER TWO

2.0 LITERATURE REVIEW

This chapter presents an in-depth over-view of important definitions and explanation of some terms, ideas, and some theoretical definitions in the field of microfinance as a discipline. The chapter looks at the prevailing ideas shaping the theory and practice of microfinance.

2.1 Overview of Microfinance and its Evolution

2.1.1 Definitions of microfinance

One of the broadest definitions of microfinance is the definition by Robinson (2001). According to him, microfinance;

“refers to small-scale financial services for both credits and deposits — that are provided to people who farm or fish or herd; operate small or microenterprises where goods are produced, recycled, repaired, or traded; provide services; work for wages or commissions; gain income from renting out small amounts of land, vehicles, draft animals, or machinery and tools; and to other individuals and local groups in developing countries, in both rural and urban areas”.

This definition captures the classic goals and rationale of microfinance which would most appropriately be called microcredit even though the term is used interchangeably in the literature on the subject. Over the years, the discourse on the subject has shifted from “microcredit” to “microfinance”, which aptly captures the transformation the model has been through since it was first pioneered by Muhammad Yunus in the late 1970s. Microfinance has also been defined as financial services for poor and low-income clients. In practice, the term is often used more narrowly to refer to loans and other services from providers called microfinance institutions. These institutions commonly tend to use new methods developed over the last 30 years to deliver very small loans to unsalaried borrowers, taking little or no collateral. Azevedo (2007) also defined microfinance as the extension of financial services to low-income households and micro entrepreneurs (in urban and rural areas) for productive purposes. Microfinance can also be described as encompassing the provision of financial services and the management of small amounts of money through a range of products and a system of intermediary functions targeting low income customers. The industry which began as an alternative solution to the problem of credit accessibility by the poor who are normally unqualified for traditional bank credit are increasing taking the shape of banks through the range of services they offer. Consequently the definition of microfinance is also changing constantly. Today, microfinance defined in terms of the services they offer can be defined as the provision of small loans and other facilities like savings, insurance, transfer services to poor low-income household and microenterprises. It can also refer to a small loan to a client made by banks or other institutions. Microfinance is used to designate the provision of financial services to the poor who have no access to traditional financial resources. Ledgerwood (1999) provides a more elaborate definition of institutional microfinance as a model that combines both banking and developmental tools to achieve the following:

1. Small loans typically for working capital

2. Informal appraisal of borrowers and investments

3. Collateral substitutes, such as group guarantees and compulsory savings

4. Access to repeat and larger loans, based on repayment performance

5. Streamlined loan disbursement and monitoring

7. Secure savings products

Ledgerwood‘s definition incorporates non-financial services, an essential but often neglected component in the definitions, which enables the poor to make efficient use of microfinance.

From the perspective of the central bank of Ghana (BoG), classifies Non-Bank Financial Institutions (NBFI) as those that lend to clients who can manage loans of less than GH¢100. With regards to group lending, the amount must not exceed GH¢500, all subject to the inflation rate of the country at any point in time (Yeboah, 2010).

The declared goal of microfinance is poverty reduction. The mainstream consensus is that microfinance is an effective and efficient tool in tackling poverty reduction (Haynes, Seawright, Giauque, 2000). UNCDF (2005) argues that microfinance underpins the achievement of many Millennium Development Goals and plays a key role in many of its strategies.

2.1.2 Microfinance Institutions and Microfinance Interventions

According to Yeboah (2010), it is misleading to say that microfinance is provided solely by microfinance institutions. In recent times it is common to find many essentially non-profit NGOs and commercial banks involved in microfinance. Even though the activities of these organizations can be classified as microfinance, they cannot be considered as microfinance institutions. It is important to make the distinction between microfinance institution and microfinance intervention, even though the two are used loosely in the literature. A microfinance institution refers to a formal establishment or organization whose primary purpose is to dispense microfinance services. A microfinance institution specializes in banking services for low-income groups or individuals. They provide account services to small-balance accounts that will not normally be accepted by traditional banks. They also offer transaction services for amounts that may be smaller than the average transaction fee charged by mainstream financial institutions.

Almost all of these institutions only take back small amounts of savings from their own borrowers instead of the general public. It is important to note that, these organizations have a for-profit business operation structure. If an institution is defined as a microfinance institution today, it is expected to incorporate the traditional business models and practices into the original Grameen model of microcredit. The current state of acceptable practice demands that the organization makes a turnover to keep the institution alive without depending on external donors.

Microfinance interventions refer to programmes that provide microfinance services. Microfinance interventions can be provided by microfinance institutions, orthodox financial institutions or can be a component of a development intervention. Over the years, microfinance gained recognition as a poverty-reduction tool; international development agencies such as NGOs have been transforming themselves into regulated institutions or simply adopted the microfinance model without the business component. Today, NGOs, credit unions, cooperatives, private commercial banks, and non-bank financial institutions are all offering microcredit without necessarily being a microfinance institution. All the above mentioned institutions can be said be offering microfinance intervention but are not by definition microfinance institutions.

2.1.3 Evolution and Commercialization of Microfinance

The concept of microcredit is not new. Savings and credit groups that have operated for centuries include the "susus" of Ghana, "chit funds" in India, "tandas" in Mexico, "arisan" in Indonesia, and "pasanaku" in Bolivia, and several other places where similar practices existed.

The exact origin of microfinance is not so clear, but an earlier form of it has been traced to a few countries. Germany's village bank movement and Chicago's Shore bank are a few examples. Modern day model and practice of microfinance was first pioneered by Dr. Muhammad Yunus. With the creation of his organization Grameen Foundation of Bangladesh, he set the grounds for further advancements in the area of poverty alleviation. The very first approach to Microfinance could be considered the Solidarity Lending Method (Dupas, Robinson, 2009). The Grameen model became the basis for microfinance that focused on group lending, and women-centered. The Grameen model took off after the 1970s and soon spread across the globe, gaining the attention of governments and international development agencies.

By the 1980s, the microcredit concept had taken a great leap with renowned institutions like the ACCION International in Venezuela, and the Yunus Grameen Bank in Bangladesh (Copestake et all, 2002). Gradually, through formalization and expansion of the basic concept of sharing programs, these pioneering microfinance institutions pave the way in building capital for small businesses rather than just loaning for basic necessities. The successes of these pioneering institutions drew the attention of academics, development theorists, institutional economists and government agencies around the world. The commercialization of the original traditional microfinance model began to take shape as the industry gain the attention of stakeholders in poverty-reduction. The Microfinance Handbook (2002**)** which defines microfinance from an institutional and financial perspective has defined microfinance as an economic development approach intended to benefit low-income people.

Today, the face of microfinance has been transformed dramatically. The microfinance industry currently offers a wide range of financial services and products, including consumer loans, savings accounts, time deposits, micro insurance, and international money transfers (Schreiner, 2003). According to the Microfinance Bulletin in 2007, some microfinance institutions in Latin America, which is considered one of the industry's most diverse regions institutionally and conceptually, which traditionally provided loans to micro entrepreneurs are beginning to move into the consumer, mortgage and low-end commercial loan segments. At the same time large consumer lenders are trying to compete on the microfinance market (Morduch, et al, 2005).

The Microfinance industry in almost every part of the world is now heavily dominated by Nongovernmental organizations (NGOs), which are recently starting to look more like commercial institutions (Ledgerwood,1999). Taking into account the great profitability of the sector, it seems that this transformation process has been very successful and has impacted the region in a very positive way (Dacheva, 2009). The shift towards commercialization has influenced the industry significantly. However, opinions on this alteration in Microfinance perspective have been divided. There are two opposing views of Microfinance that represent different ideas and approaches. These are the welfarist and institutional approaches. Welfarists are solely focused on the social mission of microfinance, while Institutionalists believe in the creation of institutions as being more useful than the actual transfer of funds. Welfarists see the whole commercialization process as driving microfinance institutions away from its original mission.

The gradual commercialization of the microcredit model into what is most appropriately referred to as microfinance has been governed by a general consensus that any economic activity without the qualities of a market system, even if it aims and interventions are social in nature, is bound to lead to inefficiency and failure. Thus, the trajectory of the model since it success story spread around in the late 1970s has been the injection of market-based principle into the practice of making credit available to the poor. This process has eventually transformed the industry essentially into institutions with social interventionist goals that operate with profitability principles of practice. In effect, issues plaguing traditional banking sectors such as over-indebtedness have gradually become a feature of the microfinance industry.

2.2 Evolution of Microfinance in Ghana

Microcredit has a long history in Ghana. Saving and accessing small credits from individuals or groups for the purposes of starting a business or farming ventures, has always existed in most traditionally agricultural societies like Ghana. There is lot of evidence which suggests that the first Credit Union in Africa was established in Northern Ghana in 1955 by Canadian Catholic Missionaries. One of the oldest of this microcredit form Susu, which is one of the current microfinance methodologies, is thought to have originated in Nigeria and spread to Ghana in the early 1990s.

Microfinance has undergone four (4) distinct phases worldwide of which Ghana is no exception. These stages are described below:

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

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

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

Phase Four: Since the mid 1990s, the commercialization of MFIs has coincided with the mainstreaming of microfinance and its institutions into the financial sector

In Ghana, the term microfinance is understood as a sub-sector of the financial sector, comprising different financial institutions which use a particular financial method to reach the poor. The microfinance sector in Ghana comprises various types of institutions grouped into four (4) categories, namely:

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

In terms of the regulatory framework, rural and community banks are regulated under the Banking Act 2004 (Act 673), while the Savings and Loans Companies are currently regulated under the Non-Bank Financial Institutions (NBFI) Law 1993 (PNDCL 328). On the other hand, the regulatory framework for credit unions is now being prepared, and this would recognize their dual nature as cooperatives and financial institutions. The rest of the players such as FNGOs, ROSCAS, and ASCAs do not have legal and regulatory frameworks (Asiama, 2007). Programmes currently addressing the sub-sector in Ghana include the Financial Sector Improvement Project, Financial Sector Strategic Plan (FINSSP), the Rural Financial Services Project (RFSP), the United Nations Development Programme (UNDP) Microfinance Project, the Social Investment Fund (SIF), the Community Based Rural Development Programme (CBRDP), Rural Enterprise Project (REP), and Agricultural Services Investment Project (ASSIP).

2.2.1 Microfinance and Development in Ghana

The main philosophy of microfinance operations in any country is the empowerment of the poor and disadvantaged through provision of financial services and the management of small amounts of monetary credit using a range of products and a system of intermediary functions that targets low income earners. It includes loans, savings, insurance, transfer services and other financial products and services. But most importantly, a cache of societal problems deeply rooted in developmental issues have been found to be partly addressed through economic empowerment using the tools of microfinance. Studies have shown that micro-finance plays three broad roles in development:

- It helps very poor households meet basic needs and protects against risks,
- It is associated with improvements in household economic welfare,
- It helps to empower women by supporting women's economic participation and so promotes gender equality.

According to Oakley (1991), providing material capital to the poor person, their sense of dignity is strengthened and this can help to empower the person to participate in the economy and society in a meaningful way. Accessing capital through microfinance, enhancing human capital through education has the potential to lift people out of poverty.

The paramount goal of the country’s growth and poverty reduction strategy (GPRS II) has been to achieve sustainable equitable growth, accelerated poverty reduction and the protection of the vulnerable and excluded within a decentralized, democratic environment.

The strategy is to tackle widespread economic poverty and growing social inequality, especially among the productive poor who constitute the majority of the working population. According to the 2000 Population and Housing Census, 80% of the working population is found in the private informal sector. The country also realizes that the poor are often characterized by lack of access to credit, constraining the development and growth of that sector of the economy. The observation was stressed in the International Monetary Fund Country report on Ghana of May 2003 that "weaknesses in the financial sector that restrict financing opportunities for productive private investment are a particular impediment to business expansion in Ghana" (IMF, 2013)

Microfinance today is unanimously seen as a financially sustainable instrument with the potential to reach significant number of the poor of which most are not able to access financial services due to lack of strong retailing financial intermediaries. Easy access to financial services is imperative for the transformation of the informal sector - which often outsize the formal sector of most developing countries like Ghana - into vibrant and developmental component of the national economy. This will also help in mopping up excess liquidity through savings that can be made available as investment capital for national development (World Bank Africa Region, 1999).

Simanowitz and Brody (2004, p.1), believe that micro-credit is a key strategy in reaching the MDGs and in building global financial systems that meet the needs of the poor." According to Littlefield, et al (2003), micro-credit is a critical contextual factor with strong impact on the achievements of the MDGs. Micro-credit is unique among development interventions: it can deliver social benefits on an ongoing, permanent basis and on a large scale.

2.2.2 Challenges Facing the Microfinance Sector in Ghana

The microfinance industry in Ghana has its origins in the 1950s heavily involved by the government of Ghana. Throughout that period the industry operated without any specific policy guidelines and goals. This partially accounts for the slow growth of the sector and the apparent lack of direction, fragmentation and lack of coordination. There has so far not been a coherent approach to dealing with the constraints facing the sub-sector. Inappropriate institutional arrangements, poor regulatory environment, inadequate capacities, lack of coordination and collaboration, poor institutional linkages are just a few of the problems faced by the industry from an institutional point of view. There has always been a lack of linkages between formal and informal financial institutions, inadequate skill and professionalism, and inadequate capital.

Another area of concern is the fact that using commercial banking approaches to microfinance delivery often does not work. According to traditional commercial banking principles, the credit methodology requires documentary evidence, long-standing bank-customer relationship and collateral, which most micro and small businesses do not possess. The commercial banking system, which has about twenty-three (23) major banks, reaches only about 5% of households and captures 40% of the money supply of the country.(Asiama, 2007). According to Asiama, there is a lot of room for expanding the microfinance sector in Ghana. The Bank of Ghana summarizes the key challenges facing the industry as:

- Institutional arrangements
- Capacity building and funding of the sector
- Credit delivery and management
- Targeting the vulnerable and the marginalized
- Information gathering and dissemination
- Regulation and supervision
- Collaboration and coordination.

2.3 Microfinance and Women

All over the world the general understanding of microfinance is that it is to empower women. Pioneering microfinance institutions such as Grameen Bank and Bancosol have often designed their strategy in the market (Armendariz de Aghion and Morduch, 2005). In the world of microfinance, women are seen as having better credit rating than men. In Bangladesh, women are known to default less on loan than men.

2.3.1 Why Microfinance Institutions Target Women

According to the UN, women represent the majority of the world's poor. They tend to have a higher unemployment rate than men and receive lower wages than their male counterpart. Women are also often excluded from access to financial services. As compared to men, women are socially disenfranchised, geographically isolated and mostly undereducated compared to men.

Right from its inception, especially from the model pioneered by Mohammed Yunus, women have been at the forefront of the developmental strategies of microfinance. This originated from a well known socio-demographic fact that in most cultures and countries around the world, women are especially affected by poverty. They often bear greater part of the burden in spite of having limited decision-making powers. Women represent about half of the human population and are disproportionately burden by work and poverty, and face various exclusions from political, economic, and social power structures.

According to Cheston and Kuhn (2009), microfinance institutions aim to reach women when considering efficiency and sustainability due to their belief that women have a better cooperation and repayment records. Women tend to have lower arrears and loan loss rates which have an important effect on the efficiency and sustainability of the institution. Armendariz de Aghion & Murdoch (2005) found that women are more likely than men to follow the requirements of certain microfinance institutions which have to do with training sessions, weekly meetings and joint responsibility. Johnson and Rogaly (1997) also support this general idea of why women are usually targeted to ensure better loan repayment rates and efficiency in implementation of microfinance services.

Several authors have produced empirical backing for this practice of targeting women. Rahman (1999) made an observation in some villages in Bangladesh which revealed that Grameen Bank is more willing to lend to women than men as a matter of strategic reasons. In Malawi repayments rates for women clients have been found to be 92% against that of 83% for men (Hulme, 1991). A review of World Bank projects conducted by Rhyne and Holt‘s (1994) indicates higher rate of repayment when interventions focuses on women than when it is generalized.

Another reason why women have often been targeted can be found in believe in gender equality and the conviction that benefits to households are more likely to be achieved when women receive the credit than men. According to Khandker (2001), women are the targets of most microfinance interventions because the perception that they are more disadvantaged than men, they participate less in the labour market and suffer inequitable share of power in domestic issues and the in the community as a whole. According to Ledgerwood (1999), increase in women‘s income benefits the household to a greater extent than a proportional increase in the income of the male who normally heads the family.

2.3.2 Disadvantages of Focusing on Women in Microfinance

The fact that microfinance strategies deliberately focus on women in any industry has its own drawbacks in the whole development process. Some researchers such as Mayoux (2002) have called into the question this assumption that there is a positive impact on women and their households through microfinance. The expected impact that microfinance is assumed to have on women does not necessarily materialize due to the social structure of these societies within which the microfinance is operating. Power in whatever form within the patriarchical system does not in itself empower the women and mostly acts to prevent any form of empowerment. As observed by Mayoux, many women have limited control over income, and whatever income they earn may actually go substitute for some household responsibility of the man.

Hulme and Mosley (1996) believe that microfinance institutions must begin to develop new and more productive participation for women. According to them emphasizing special forms of distributions favoring women is likely to be counterproductive by reinforcing the existing gender roles. In Ghana, women have been found to take an increasing share of household expenses immediately they start to earn incomes, while their husbands reduced their contribution towards the upkeep of the household (Cheston and Kuhn, 2002)

Somehow, as their income begins to improve, they become progressively overburdened, thus constraining their progression towards financial independence and empowerment. For example, Rahman (1999) found that in Bangladesh, if wives experienced repayment problems, it is the honor of their husbands that are affected. Under these conditions, husbands have been found to put pressure on their wives when it came to loan repayment. The result is that often women are pressured by the microfinance institutions and the family, a situation some described as intolerable. In effect, instead serving as a means to achieve gender inequality, the microfinance intervention suddenly becomes another avenue to exploit the women. Some critics of the way microfinance functions believe that, in some countries and cultures, the model is reinforcing the existing gender inequality while operating within the old structures of social injustice.

2.3.3 Women and Entrepreneurship

Women play a significant role in the economic development of their families and their countries at large. In the field of microfinance, business activities by women turn out to more sustainable and profitable than their male counterparts, and how they can potentially be affected by microfinance interventions. According to the UN’s Capital Development Fund, comprehensive impact studies have shown that:

1. Microfinance helps very poor households meet basic needs and protect against risk.

2. The use of financial services by low income households is associated with improvements in household economic welfare and enterprise stability.

3. By supporting women's economic participation, microfinance helps in the empowerment of women, thus promoting gender-equality and improving household wellbeing.

Nevertheless, according to Akanji (2006), women entrepreneurs have low business performance compared to their male counterparts yet the rate of women participation in the informal sector of the economy is higher than males. This situation has been attributed to lack of credit, saving, education or training, and social capital on the part of the women. However, the normal challenges associated with the early stages of an entrepreneurial venture cannot be ruled out. Women have been found to be more concerned with the maintenance of the household and risk reduction in their business strategies. They place less priority on the growth of their income-generating activities; they tend to invest profits in their households and family. They have been found to focus on services, trade and soft traditional manufacturing (Ledgerwood 1991).

The productive activities are often small and most do not grow beyond that. Their social conditions restrict them activities characterized by easy entry and exit which also requires less amount of starting capital, fixed assets or special managerial skills. The advantage of this arrangement is that the women can balance their economic activities and domestic obligations. The kind of economic or productive ventures they engage in are usually seasonal transferable to another place and suited to domestic conditions (Yeboah 2010).

Microfinance in the first place focused on women in because they believe they have better repayment pattern and are better targets for interventions using microfinance. This has been transformed into a gender equality tool to strengthen women and achieve financial inclusion for all. Another reason for focusing on women is the conviction that women are more likely to work toward the poverty reduction on the family level. It is now a common experience among the microfinance practitioners that Households with women at the centre of microfinance interventions yield better results.

2.4 The Economics of Microloans and Poverty Reduction

2.4.1 The Problem of Loan Diversion

Microfinance is basically founded on the model of the microloan. The literature on the subject reveals that microcredit and microfinance are used interchangeably; however it is important to make the distinction between these two words. Microcredit refers to the classical practice of extending loans to an individual to be invested in an enterprise. Microfinance refers to the provision of a number of financial services including microcredit. The microfinance industry stared by making loans available to the financially excluded, and so most of the literature on microfinance is focused on the provision of credit or loans (Yeboah 2010).

Do microfinance clients use the loans they receive exactly for what they promised to use it for? Measuring usage is not an easy task. If loans are restricted to business investments, the customers may not necessarily report using some of the funds for unintended consumptions. A microfinance client may claim to have bought an asset needed for his/her business with the loan as stated earlier in an agreement before securing the loan. However it is impossible to establish with certainty the asset was acquired with the loan or with an initial saving kept by the client. This means that the real usage of the loan was not the reason for securing the asset.

This raises the question of whether or not the microfinance institutions should care about how and what loans are used for. Some consider this attempt by the microfinance institutions as too conservative in their insistence that clients borrow only for productive purposes. Others have argued that understanding the specific uses of loans can help maximize the impact of the microfinance intervention.

The loans given in the form of cash has always generated some fears of misuse or diversion of intended purpose. As such Farmers are often not offered cash because it was believed it would be diverted from agricultural production (Johnson, Rogaly 1997). Microfinance interventions today are targeting poor people who are actually engaged in income-generating activities or the entrepreneurial poor as a means of addressing the problem of loan diversion. The projection has always been that the entrepreneurial client will invest in income-generating activities that will gradually lead to reduction in poverty. However, empirical evidence has pointed to the fact that loans are routinely used for purposes other than for income-generation (Yaboah 2010). In spite of this awareness most microfinance institutions provide loans only for business investment purposes. Microfinance interventions monitor loan use through staff and peer monitoring. It is not advisable for the microfinance companies to prevent loans from being used for non-business purposes even though some microfinance interventions tend to take such actions.

2.4.2 Loan Distribution Strategies

One of the steps in before a loan is extended to a customer is to verify the document of the applicant. When this successfully conducted, members who qualify can then be given the loan. This is often the standard practice in every case, including group lending. Another consideration that may come up in the process of applying for the loan is the kind of enterprise the applicant is engaged in. This often determines whether the applicant should be extended the requested loan amount.

Kah, Olds and Kah (2005) have looked into ten microfinance institutions in Gossas, a small town in Senegal in which women were requested to indicate how they plan to use their loans and also how they intend to service the loan repayment. Then the best projects were selected to receive loans on the basis of the information provided. Loan application process often took a few days to some months to be processed. Applications involving a joint liability lending arrangement were considered a single loan application. Sometimes some applications were delayed when the application seemed to be questionable.

Another case involves the Sita Devi Foundation (SDF) a microfinance institution in India and the Association of Forest Communities in Petén (ACOFOP) which administers a microcredit fund in Guatemala. loan application had to be presented as a package and if there were problems with a member‘s documentation the group application process was put on hold (Yeboah 2010).

Westley (2005) looked into four microloaders in the Caribbean and discovered that loan processing times could range from 1.5 to 5 weeks for those approaching the microlenders for the first time. It was also discovered that those with shorter processing times coincidentally employed group lending strategy and/or loan officers spent 80% or more of their time in the field. According to Churchill (2000), it is common for the entire process to take three to four months. Westley also observed that reducing the time taken from loan enquiry to disbursement increased the value of credit services to service users and encouraged client loyalty and repayment. Some of these micro lenders imposed greater transaction costs on first time applicants and often take longer period when processing and disbursing loans. Another possibility is that microfinance interventions which processed applications more quickly tended to be more efficient in their business operations (Yeboah).

In some microfinance industries, depending on the special needs of the clients, the microfinance institutions take it upon themselves to come to the community of the applicants to give them the loans when their applications are successful. For example, in South Africa, some clients of the microfinance companies decided to abandon the loan all together even though they were successful simply because of the high cost of transporting themselves to where the offices of the microfinance companies are located. It is not uncommon in some markets to find that the transportation cost incurred by the beneficiary often exceeding the interest payments in the case of small loans (Simanowitz, 2000).

According to (Churchill, 2000) any other loan application after the first one took much shorter time to process because the microfinance companies do not have carry out any thorough on-site business evaluations. Due to the rigid pattern of loan disbursement, microfinance institutions have been criticized for operating without regard to the contexts within which they operate. Johnson and Rogaly (1997) have asserted that while this system can be helpful in terms of being uncomplicated and mechanical, service users take loans when they become available rather than when they require them. In rural areas where there are considerable fluctuations in demand for goods and services, the period of loan reception is also considered an important factor whether the loan will be profitable or not.

2.4.3 The Size of the Loan

Microfinance interventions make loans available for the specifically for investment and generation of wealth. This is the promoted purpose of microfinance loans. Empirically, loans obtained from microcredit institutions goes into income-generation and a host of other purposes, the most notable being for consumption. Johnson and Rogaly (1997) have shown that loans are used to pay school fees, to repay other loans and for consumption. The poor have been found to use loans to smoothen consumption in many developing countries (Hulme and Mosley, 1996).

Ledgerwood (1999) indicated that since money is fungible, some customers divert money away from income-generating activities. The most common of these is what some have called loan substitution, often characterized by loans tending to replace the capital in the business. Even though evidence exists which seems to show that service users often utilize the credit for non-business purposes, few studies have looked at the effect of loan diversion on loan repayment or on poverty reduction. Through the techniques of qualitative analysis and econometric in a case study in Ethiopia, Abafita (2003) showed that using the loan for purposes other than the intended one negatively influences possibility of the loan being settled properly and on time.

Not every customer gets into repayment difficulty when they engage in loan diversion. A beneficiary of the microfinance credit may choose to apply the loan to various ends such as seasonal income-generating activities, social investments, and payment of school fees or even basic household consumption. Sometimes, it is also the case that the person securing the loan with the microfinance intervention will not be the person using the loan.

2.4.4 Repayment of Loan

Microfinance clients normally make repayment of their loans out of the profits generated from investing the credit in income-generating activities. The literature on repayment also reveals that clients also make repayment not only from their productive economic ventures; they may also rely on family, friends, or even their peers. Others like Rutherford (2000) have indicated that surplus and savings generated from overall economic activities of the household constitute the source of loan repayment.

Every microfinance institution has created its own mode of repayment that ensures that the customer does not default. Repayments regime often follows weekly, fortnightly and monthly installments. One of the major motivations for this strict repayment regime is to achieve a certain amount of fiscal discipline in the financial dealing of the clients. Can this repayment pattern really affect repayment rates?

A randomized experiment carried out in urban India to assess whether repayment schedules affected repayment rates, using weekly and monthly repayment schedules, revealed that there was no statistically significant disparities between weekly to monthly repayment rates (Field and Pande 2008).The authors also indicated that increasing the period of repayment has the potential to significantly reduce transaction costs for the microfinance company. The possibility that customers will benefit the reduction in transaction cost has also been explored and has yielded positive results. According to Johnson and Rogaly (1997), some client expressed dissatisfaction at having to expend productive time attending compulsory weekly meetings to repay loans.

The practice of designing installments in a rigid form which often take effect immediately after the loans have been extended to these people puts clients at a disadvantage has the potential of putting the very people at great disadvantage (Jain & Mansuri 2003). Repayment regimes of this nature have been found to be highly unsuitable for the poor who usually make the bulk of their incomes seasonally. Most of these clients often want a flexible repayments arrangement which takes into consideration changes in their incomes. A good example is the practice of allowing flexible repayment schedules often permitting repayment at periods to coincide with periods when customers tend to earn or make money, usually during harvest time in most agricultural societies. Flexibility of this kind is microfinance institutions have survived in areas where there seems to a high level of competition. Hickson (1997) made some important observations on the effectiveness of a flexible loan product in the Qinghai Community Development Project (microfinance scheme) in China. Nearly all service users opted for this loan product whose principal did not have to be paid until the end of the loan term. It was observed that most of the client paid off loans before they were due.

Grameen Bank from an early stage saw the importance of allowing flexibility in loan repayment and made flexible payment a key component of its model in what has come to be known as the new Grameen II. Rutherford (2006) however, indicated that this strategy is not implemented because staff consider this new scheme as being too complicated to implement and therefore discouraged the use of the facility.

Mknelly and Kevane (2002) have demonstrated that there can be wide gaps in rigid regimes of loan repayment and economic opportunity. They focused on their study on Nagereongo, a village in Burkina Faso. The main form economic activity in their study area was the cultivation of onions, which was thought to be a profitable venture in the village. The repayment regime of the microfinance firms operating in the area was monthly repayment. From their investigation, it became apparent that the mode of repayment practice by the microfinance firms operating in the village was not amenable to the nature of the business of onion cultivation in the area. Harvested onions, in order to yield a higher market price had to be stored for four to five months before being sold on the market. However, the loan repayment regime was such that the farmers are forced to sell the onions much earlier in order to meet their debt obligations.

2.4.5 Loans and Poverty Reduction

The whole microfinance model is based on what Hume and Mosley have termed as the virtuous cycle principle: low income, investment, more income, more credit, more investment, more income (Hulme and Mosley, 1996). The simple conviction is that credit can lead to productive purposes and generate additional income for borrowers. This has the motivation behind the provision of credit to poor but enterprising individuals in the society. Today it is unanimously deemed as a key mechanism for reducing poverty and has also been described as a crucial element in the achievement of the millennium development goals (MDGs).

When a Loan is invested in income-generating ventures, the expectations are that it will reduce poverty, especially if the business is viable. These Loans, when used properly has the potential to save the poor from falling further into poverty, making him/her less vulnerable. Being less vulnerable means that, the individual has increased his/her capability to invest in more risky but potentially profitable activities. The big question here is whether successful loan repayment always implies poverty reduction? The fact that borrowers have been able to successfully repay their loans does not necessarily mean a reduction in their level of poverty.

For example (Marr, 2003) discovered that in Peru some group-based microfinance interventions resort to extreme sanctions to ensure that loan repayments are high. It is not rare for most microfinance beneficiaries to resort to selling off assets or borrowing from multiple financial sources in order to meet their debt obligations to another microfinance company pay (Copeland, 2009). The possible end result of this is a debt spiral where borrowers locked up in multiple debts. The group that most affected by these practices is the poorest and the vulnerable, increasing their existing poverty level and while also undermining the foundations of microfinance interventions. Empirical evidence pointing to the fact that access to credit leads to poverty reduction are very few. According to most academics on this topic assessing the impact of microfinance intervention on poverty reduction can be very difficult due to the multifaceted nature of the problem of poverty itself. Access to microcredit, according to some has led to only partial improvement in the well-being of most of the beneficiaries simply because of the low absorptive capacity of rural poor communities (Osmani 1998).

According to Zaman (2000), the impact of income poverty depends on borrowing beyond a certain limit. Balkenhol (2007) believes that employment generation is not a goal achievable by microfinance; however microfinance institutions have made it as one of its key goals. Ample researches suggest that microfinance interventions can benefit self employment and unpaid household labour but does not in any way affect wage employment. Available empirical evidence of loans on poverty is not always on the positive side. Hulme and Mosley (1996) have observed that loans can kick start economic activity to the extent that the rate of return falls below the cost of borrowing. Yeboah (2007) indicates that there is considerable underreporting of credit-induced crisis in most studies of finance for the poor. Shiva (2004) and Sharma (2006) have also reported that commercial microfinance loans has trapped several thousands of very small farms into a downward spiral of dependency and growing debt with an estimated 160,000 farmer suicides since 1997 in India. Nevertheless, the literature on microfinance generally posits a positive relationship between income levels of service users and poverty reduction.

2.5 SAVINGS AND MICROFINANCE

The perception of the poor by the mainstream system of finance has always been a class of people incapable of saving. The effect was that, when the idea of poverty alleviation took off, the capacity of the poor, an economically disadvantaged group, to save part of their income, was never factored into any of the interventions (Wisniwski, 1998).

Research into poverty alleviation in the early 1980s began to show that the poor can also save. Empirical evidence changed old perception of the poor as incapable of taking advantage of saving facilities (Adams and Graham, 1981). Today it is well established that the poor can and do save; and even pay others to take their money for safe-keeping (Rutherford, 2000). The poor's capacity to save is supported by overwhelming empirical evidence that show that the poor all over the world save in different forms. According to Wenner et al. (2003), provision of savings facilities to the poor in developing countries especially those in rural areas, is paramount due to the fact that in most developing countries commercial banks, expected to collect savings, have not entered rural credit markets on a substantial scale and in the wake of the global financial liberalization most commercial banks began to move out of the rural areas. According to Zeller (2003), as a result of the favorable macroeconomic and political conditions in many developing countries that undertook structural and financial sector reforms in 1980s and 1990s, microfinance institutions are stepping in and expanding their operations in rural and encouraging more rural savings.

2.5.1 Why the Poor Save

The general perception is that the poor have next to nothing to save. In the first place these are people who barely have enough to subsist on. In spite of having very little disposal income, saving is necessary for a number of reasons. According to Johnson and Rogaly, (1997) the poor save because they require small amounts of money to finance daily livelihood activities and to keep up household expenditures due to seasonality and unemployment. Saving is even more critical societies that depend heavily on financing of subsistence agriculture. In such economic systems, investment requirements and the bulk of incomes are generally seasonal (CGAP, 2001). Rutherford (2000) is of the opinion that the poor save in order to prepare for lifecycle events, emergency needs and other investment opportunities just every group of people in the economy.

These Lifecycle events of most of these poor communities require sums of money for events such as childbirth, marriage, education and festival celebration which are not cheap. Second, the poor save for emergencies (personal and impersonal) which often result in unanticipated situations requiring large sums of money. Unexpected sicknesses, death, and unemployment are just some of the personal emergencies that can affect these people. Impersonal events such as war, famine, famine and floods also take a toll on the poor. But most importantly these households also save to accumulate capital for investment opportunities like purchasing of agricultural implements, buying land, housing materials and other productive assets (Yeboah, 2010).

Maloney and Ahmed (1998) showed through a study in rural Bangladesh that the most significant reason for saving is to buy land, and the need to provide family security against unforeseen future happenings.

2.5.2 Informal Forms OF Savings

Traditionally, poor households have always practice savings. These savings are often in asserts including land, jewellery, grains, and even livestock. According to Johnson and Rogaly (1997), these assets serve the purpose of acting as a form of insurance against unexpected events have the potential of being converted into monetary asserts in times of emergencies. One observation here is that these people prefer to save in monetary values since it is less prone to in-kind savings which are often characterized by indivisibility, insecurity and inconvenience. Informal savings arrangements in countries like Uganda consist of savings in kind, which takes the form of land or livestock; saving with a trust relation who acts as a money guard. Some also prefer to save the cash in the home.

Wright, et al (1999, 2002) examined the savings habits of poor people. It was observed that sometimes people keep monetary asserts hidden in their homes for emergency use, or lend to others on the basis of receiving the money in times of need. In another study of 42 households in rural and urban Bangladesh, it was discovered that savings at home was the most popular form of savings mechanism (Rutherford (2002). Some also give money to trusted people with businesses like shop-keeping and other trading for safekeeping and do not expect any interest when taking the money back. Another important observation is that in spite of the effort to bring formal financial services to the poor, majority still engage in informal savings arrangements. This is due to the fact that Informal savings is usually suitable to the needs and circumstances of the savers. For instance, the savings collector (Susu collector) maintains a personalized relationship with the saver and accepts flexible terms of payment of deposits. Traditional Moneylenders are also flexible when it comes to loan repayment this takes the form of loans that do not accrue further interests after the loan is overdue. Overall this form of savings involves low transaction costs to the advantage of the customer.

Nevertheless, informal savers may be faced with insecurity in terms of the safety of their money. The very impermanence nature of informal savings makes it unable to a serve large proportion of the poor. According to Woolcock (1999), informal savings can provide some measure of short-term assistance but cannot adequately cater for the risks innovatively and are may not be suitable for big projects. Most informal savings practices are often seen as self-liquidating (Wright 1999). Several stories abound of savings collectors absconding with the savings of their customers. Aryeetey and Gockel (1991) noted in a study on Ghana that almost 40% of informal savers lost their money to a collector and about 80% knew or are related to someone who had lost money the same way. The nature of Informal savings renders it unsuitable for meeting the immense demand for savings facilities by poor people. The poor people become limited to unpredicted crisis requirements, flexibility in payments and pressure to save up to larger sums. However, formal savings structures have the ability to surmount most of the challenges that besets the informal savings arrangements.

2.5.3 Formal Saving Institutions

Formal saving institutions offer very important instruments for management. One advantage that these formal institutions offer is a better mixture of easy accessibility to money, rate of return on savings, security (Wisniwski 1998). Several evidence points to the fact that formal savings facilities are in high demand. In most cases savings accounts are far more than loan accounts because savings are controlled based on preference. Nevertheless, there is still a high demand for savings among the poor. What kind of saving facilities are favored by the poor? Wright, et al (1999, 2006), have shown that microfinance clients want accessible, convenient and secure savings facilities.

2.5.4 Accessibility of Savings

The ease of accessibility to savings for liquidity management is a key factor influencing savings of most poor households. Also most of these savers tend to want easily liquidable arrangements and reassurances that they can have access to their money when it is required. Wright (1999) also indicated that although the majority of the poor require liquid savings schemes, they hardly make frequent withdrawals. These clients also prefer the option of being able to withdraw whenever they want to.

Even though liquidity is important to local savings mobilization, in many situations, the poor have a rather illiquidity preference. Elser et al., (1999), have indicated that Poor households require safe and secure microfinance firms where they can put their savings. Poor households will only save with the microfinance institution if their level of trust in the microfinance institution‘s ability to protect their deposits is sufficient. Also microfinance companies that have been in business for a long period are more likely to win the confidence of these customers through their relations or friends. For example in member-owned microfinance institutions in Uganda, confidence of customers in the security of their savings was found to be very dependent on the perceived honesty of managers and the organization. Some customers also considered modern, strong looking physical structures as more stable institution to save with (Deshpande et al., 2006).

The occurrence of banking failures is not uncommon in countries. However, formal savings are safer than informal savings arrangement. For instance, in a survey conducted in Uganda, out of 1500 respondents, 99% who saved using informal arrangements had lost some money, against only 26% in institutional savings facilities (Deshpande et al. 2006). One of the paramount priorities of poor savers is the saving arrangement that allow them to save and withdraw variable sums of money as frequently as possible. Informal savers also prefer saving arrangements that are close to them and also have short transaction times. According to Aryeetey and Gockel (1991), Susu collectors are very popular in because they go to the visit the customers at their businesses and transact the business in a fashion that ensures that transaction cost and time is very minimal.

2.6 Interest Rates in Microfinance

Right from its inception, the issue of interest rates associated with an economic model defined to help the poor has always been very problematic for academics. Microfinance set out to make available to the poor much needed financial credit to help poor households to increase their consumption, reduce risk and increase food security, reduce malnutrition, and empower these people.

Microfinance institutions engage in careful calculations of interest rates charged on loans and the decisions that informs this evaluation are usually contingent on observations and assumptions about their clients, past occurrences and on their aims for taking the loan (Wright and Alamgir, 2004; and Morduch, 2005). The interest rates in this case are often much higher compared to normal bank rates. The general explanation given for this is that it is more costly to lend and collect a given amount through thousands of tiny loans than to lend and collect the same amount in a few large loans. Another requirement usually factored into the calculation of these interest rates is the administrative costs of running the business itself. As evidence of how strong administrative costs impact on the final interest rates charged by these firms, Rosenberg, et al (2013) reported that globally, interest rates declined substantially through 2007, but then leveled off, partly due to the behavior of operating costs, whose long-term decline was interrupted in 2008 and 2011. According to these authors, another factor that has contribute interest rates of microlenders over the years has been a rise in microfinance institutions' cost of funds, as they expanded beyond external and subsidized sources, forcing them to turn increasingly to commercial borrowings.

Critics of the microfinance model worry that the poor borrowers are often exploited by excessive interest rates, considering that most of these borrowers have little bargaining power. Another area of concern is the fact that the industry is now gravitating evermore towards for-profit organizational working principles where higher interest rates could mean higher returns for the shareholders. For example, in 2011, about a third of microcredit clients in the industry globally faced compulsory savings in order to secure credit (Rosenberg et al, 2013). That is, microlenders required of borrowers to maintain a percentage of their loan on deposit with the lender. This practice raises the effective interest rate, because the deposit requirement reduces the net loan disbursement that the borrower can actually use, while the borrower pays interest on the full loan amount. The interest rate debate is also compounded by the subsidy or market dimension of the whole microfinance architecture.

2.6.1 Microcredit versus Bank Interest Rates

It is undeniable that microfinance institutions have higher interest rates than traditional banks. However, very few people take the time to look into why this is so. It is important to make some distinctions between these two financial models. First of all, the operational costs on large loans issued by traditional banks practically the identical to small loans issued by microfinance firms. However, there are significant differences that make the microfinance model unique: the operational follow ups required on the borrower, and the having to pay in order to secure their own capital means more challenges for the microfinance institution. Secondly, microfinance is characterized by small size credits and from the arithmetic of finance small loans mean higher interest rates. Another feature of microfinance is that, very few practice savings and deposits, so most microfinance institutions lack their own resources and have to procure most of their financing from local banks (Janvier, 2007). Sometimes they also have to depend on financing from the global North which is hardly free of interest. Some of these funds also come in the form of preferential loans from the World Bank, philanthropic donations or loan facilities from other investment funds. However, since the sustainability drive in the industry, these kinds of external financial sources of financing have been on the decline.

The cost of unpaid debts and the service charges is another area the microfinance setup differs from the traditional banks. In microfinance, unpaid debts are very minimal or almost the same as in traditional banking sector. However, some microcredit institutions create support services involving campaigns to increase awareness of excess debt. This is one of the sources of additional cost in microfinance, even though this can be seen as an added value to the microfinance customers. Another reason for the relatively high interest rates in microfinance is the search for viability as a financial establishment. In order to remain sustainable, microfinance institutions must both cover their various costs associated with operating while also breaking even.

2.6.2 The Subsidy Issue in Microfinance

The exact impact of subsidies on microfinance effectiveness and sustainability has been one of the central debates in microfinance studies. For more than two decades, the industry has relied on these subsidies from governments and other international multilateral organizations for support in order to meet their goals. Since the 1980s, microfinance has absorbed close to a US$ 1 billion each year in subsidies from private and public donors (CGAP, 2005). However, in spite of some success stories in the industry, UNCD reports that less than 5 % of microfinance institutions actually are operationally sustainable. The remaining 95% still need subsidies to be able to meet their costs and service their loans. Hudon and Traca, (2008), in a research on the impact of subsidy intensity on the efficiency of microfinance showed that subsidies have contributed to raise efficiency in most of the firms studied. They also concluded that there is a level beyond which increased subsidization taxes efficiency (Hudon, Traca, 2008). The concern of those against excessive subsidization is that this will hamper the promise of sustainability in the long run in the quest to achieve financial inclusion for the poor. Subsidies they insist undercut both scale and efficiency, which eventually distorts the market by favoring more institutions that cannot compete. Proponents of the subsidies like Armendariz and Morduch (2005) believe that a potentially efficiency-enhancing role of "smart subsidies", which allows the microfinance institutions to build their infrastructure and develop much needed skills. Microbanking Bulletin report in July, 2003 revealed that 58 microfinance institutions out of 124 surveyed took some form of subsidy. Surprisingly, significant numbers of these microfinance companies which received subsidies proved to be highly efficient and even profit-making.

A new development in the area of finance in recent decades has been activist investors. The microfinance sector is currently also being impacted by the emergence of these social or activist investors; people who are willing to put their money into profitable ends with demonstrable poverty reduction impact.

Morduch (2005) also believes that subsidies themselves are not good or bad. The effectiveness of a subsidy is contingent on how well they are designed and implemented. For subsidies to work effectively, it is also important for the structure of these subsidies to imitate the features of hard budget constraints, clear bottom lines and competitive pressures, similar to the same pattern of constraints that drive efficient outcomes in profit oriented setups in the business markets. If microcredit is to achieve it stated goal of really helping the poor, initial subsidy in the whole intervention scheme may be necessary. This is a way to develop the capacity of the poor and to give them a foothold financially before they can be made to use loans at market rates (Yaron, 1992).

Subsidies essentially break down the cost of funds and help cover administrative costs, which in the long run increases the outreach of an MFI among the poor. Zeller and Meyer, (2002) have argue that subsidies are the only way for microfinance to fulfill its role in alleviating poverty, probably even for the long-run, particularly in some very remote areas where the targeted goal is to reach a large number of people.

According to Lapenu (2000) there is the need to integrate these two views on the subsidies issues in microfinance. He also questioned the level of subsidization of microfinance institutions that should be accepted, stressing the empirical nature of the problem.

2.6.3 Interest Rates and Competition

Most microfinance institutions in the early stage of the industry benefited from subsidies from governments and other multilateral organizations. Most of these microfinance institutions began to underperform. However, as the sustainability revolution swept through the industry in the 1990s, these firms began to face pressure to charge market interest rates (Morduch, 1999a; Armendariz de Aghion and Morduch, 2005). In general the industry was also impacted by the ideological shift from state-led development approach to liberalization or market-driven approaches which began at the latter part of the 1970s catalyzed the movement from subsidized credit to commercial interest rates in the microfinance industry (Yeboah, 2010).

The gradual commercialization of microfinance which took the concrete form of charging market interest rates was perceived as a means making microfinance institutions profitable. The hope was that this will attract private and corporate capital into the industry. Profitability was alien to the idea of microfinance was soon incorporated into the microfinance strategy (Alindogan, 2002). The main driver of the sustainability policy of microfinance model was the need to wean the business from its original sources of finance. Being profitable was expected to make these institutions independent of donor supports and recommendations which some often consider unwarranted intrusion into the politics of global poverty. However, Morduch (2005) have observed that profitability does not automatically produce access to commercial credit by the very poor.

Some of have resorted to microeconomics justify commercial interest rates as likely to promote prudent and profitable management of credits if beneficiaries become conscious of the fact that continued access to the services they enjoy is dependent on their rates of repayment (Yeboah, 2010). Another school of thought believe that making these poor customers access Loans at market interest rates will automatically render these kinds of loans very unattractive to the those who actually do not deserve the loan or those who are better-off but simply want to exploit the interventions to the poor. However, the eventual effect will be a defeat of the very idea or intentions for running these microfinance programs.

Sustainability advocates have stressed that entrepreneurs categorized as poor make sufficient return on investment and can actually take these loans at market rates without necessarily harming the poor. Morduch (2008) also believes that the very idea that the poor have high economic returns on capital is the very foundation of microfinance and that these poor households are capable of paying the high interest rates.

CHAPTER THREE

3.0 AIM AND METHODOLOGY

3.1 Introduction

The main aim of this chapter of the work is to present the area chosen for this study, describe the various methods that will be employed in the collection of data, delving into the sample size for this work and how to ensure that the selection of both the microfinance firms and clients are randomly selected. The chapter will also look at the various analytical frameworks that will be used in the sampling of respondents and the interpretations of the results obtained from collected data. The last part of the chapter will consider the various statistical techniques that will be employed in interpreting the collected data.

3.2 Study Area

The study area selected for this study is Darkuman, located in the Ga west district of the capital city, Accra. The western part of the capital Accra is a predominantly residential and business area. Though not located in the central business district of the Accra, the network of first class roads and transport system linking it to the main business district makes this district almost an extension of the business district of the capital.

This study area was selected because of the level of economic activities that goes on there. It is one of the most populated areas in the capital, but also with more business activities than any part of the western part of Accra. Apart from the central business district of the capital, Darkuman boost of the highest business activities per square meter of the whole capital. Darkuman is housed to the nation’s largest auto-parts market that bears the characteristics and features of an industrial cluster, specializing in auto-parts of almost every car imported into the country. This very nature of the area makes it more attractive to financial institutions like savings and loans companies that target small scale entrepreneurs. Even though the area is a complex mixture of stores and apartment buildings, majority of the population of the area have their work and source of income within the same area, unlike other parts of the country people live in one place and work in a different place.

The selection of a study area where a research will be carried out is normally informed by several factors. According to Patterson and Bechhofer (2000), the factors that inform the selection has to do more with imagination and ingenuity than the application of rigid scientific methods. Prominent among them is familiarity with the area or sheer fascination with the selected area. The second and most reason is the suitability of the place for such a study. The selected area features numerous small scale businesses competing with residential apartments for the same space. This creates a complex community of businesses and people who live and work within the selected area.

Another reason why this area is most suited for study of competition and over-indebtedness is the sheer number of microfinance companies operating in the area. Most of the businesses found in the selected area are businesses that often require capital to make purchase of fixed tangible assets like cars or car parts which are later sold to customers willing to buy them. All data that will be collected will be restricted to the microfinance firms in this area and their customers. The map below gives the geographical location of the study area.

3.3 Data Collection Procedure

The data used in this work were mainly from primary sources. Primary sources of data refer to agents or agencies that are directly involved in the phenomenon to be studied or actually produce or generate these data through their activities and decisions. The primary sources of data used in this work were microfinance institutions operating in the selected area and the people who live or work in the area and have actually taken loans from these microfinance firms. Using purposive and simple random sampling techniques, ten microfinance firms were selected for the study.

The researcher ensured that all microfinance institutions selected for this work have been licensed by the Bank of Ghana (BoG) and are as well registered members of the Ghana Association of Microfinance Companies (GAMC). Since the research was being conducted in Accra, all the businesses or small and medium scale enterprises approached in this work should have registered and are operating within the Accra Metropolitan Area (AMA).

In order to obtain the kind of data needed for this work, the data collection combined both qualitative and quantitative methods of data collection. The essence of qualitative data collection methods basically providing the researcher with important information to understand the processes governing or shaping observed results. Another good characteristic of the qualitative methods is the ability to reveal changes, no matter how small, in respondents' attitude toward the subject of the study. The main form of qualitative method employed in this work was interview of some of the stuffs and owners of the microfinance firms selected for the work in order to fulfill certain parts of the data required which may not be collected properly if administered through the questionnaire.

The quantitative methods used were administering questionnaire and interviews. In administering the questionnaire, face-to-face while interviewing method was used. This method was chosen due the busy nature of the respondents and also because of the need to ensure that the questions are well understood and answered correctly. In the case of the microfinance firms, the questionnaires were delivered to each of them and came back for them on a later date decided by the firms themselves. This was to give enough time to provide reliable responses to the questions instead providing any answer because they fill pressured. Another reason for this is the fact that, most of these firms are normally busy during the day and hardly wants to take time off to just to answer some questionnaires. However, questionnaires administered to clients of the microfinance firms were conducted in a different way. Respondents were visited in their shops; market place, homes, and where ever the researcher came across them based a well defined random sampling and structured selection of respondents.

Overall, 10 questionnaires were sent out to ten microfinance institution. The return rate was 100%, that is, all the questionnaires sent out were retrieved. A total of 100 questionnaires were administered clients of the microfinance institutions. 85 of the total questionnaires to the customers of the microfinance firms were deemed useful for the analyses needed in work. In accordance with current standard practice of data protection and privacy of respondents' information, all necessary measures were taken to ensure that data obtained from these microfinance institutions and their clients do not end being used in any way other than was specified to secure the cooperation and openness of the respondents. Particularly, with respect to the data from the microfinance institutions, it was very important that the data supplied by one firm does not end up in the hands of other microfinance operators in the vicinity.

3.4 Analytical Framework

The theoretical framework seeks to present a logically structured representation of the concepts, variables and relationships being examined in this study with the purpose of clearly identifying what will be explained and examined.

3.4.1 Over-indebtedness

The definitions of over-indebtedness are normally either from the perspectives of the customers or the microfinance institution itself. Considering that microfinance originated out of a desire to make socioeconomic impacts, the most ethical and appropriate definition should be a customer-based definition of over-indebtedness. There are two main approaches to the study of over-indebtedness: the traditional debt service approach (Kappel, 2010; Maurer and Pytkowska 2010) and the new consumer protection approach called a sacrifice approach to over-indebtedness pioneered by Jessica Schicks (Schicks, J. 2011.).

According to Kappel (2010), Indebtedness is the ratio of a household's monthly repayments divided by its monthly net income, i.e. total monthly gross income minus total monthly expenses:

Indebtedness = total monthly installments on household debt/ (total monthly gross income of the household – total monthly expenses of the household).

Let I_{HD} = Total monthly installment on household debt.

G_I = Total monthly gross income of the household.

E_H = Total monthly expenses of the household.

Over-indebtedness, $I_{OID} = I_{HD} \diagup G_I - E_H$

All expenses except debt-related expenses are included in the total monthly expenses. A ratio of 100% indicates that the total monthly net income is used for installments on household debt. As soon as this ratio exceeds a certain threshold, indebtedness turns into over-indebtedness. This may occur if either repayments increase while net income does not increase at the same rate or net income decreases while repayments do not simultaneously decrease at the same rate. This is a classic example of debt service approach to the study of over-indebtedness.

In spite of its objective nature, this method of determining over-indebtedness does not consider sociological and psychological and most importantly the economic pressure imposed on the customer in the process of serving their debt obligations.

According to some researchers, led by Jessica Schicks, who prefer to quantify over-indebtedness from a client perspective, a customer who has to meet his/her debt obligations only at unacceptably high costs such as going hungry, selling essential household assets, or taking their children out of school should count as over-indebted. In the opinion of Jessica Schicks, a microfinance customer is over-indebted if he/she is continuously struggling to meet repayment deadlines and structurally has to make unduly high sacrifices related to his/her loan obligations" (Schicks, 2010). The sacrifice-based definition excludes borrowers who strategically default on their loans or deliberately run up unsustainable amounts of debt, relying on a bailout or the option to switch to a new provider. This way of studying over-indebtedness seeks to examine the effects of having to forego certain basic needs and even losing existing personal assets. This approach is often considered a subjective approach because as indicated by Schicks (2011) from her study of over-indebtedness in Ghana, not all those who can be classified as over-indebted really feel they are overburdened by the servicing of their debt.

This research will combine both the subjective approach and objective approach to the study of the over-indebtedness in the microfinance sector in Ghana. Both of these criteria will be applied to the data collected to group respondents into those who are over-indebted and those who are not.

3.4.2 Competition

Stigler (2008) has defined Competition as the situation in which several firms are competing for a limited market share and thus having to adjust ever closer to the needs of the customers as well as lowering prices down to a point where marginal revenue equals marginal cost. Competition is also said to produce gains for the whole economy, through promoting consumer sovereignty.

However, Contrary to conventional economic theory, which highlights the benefits of competition for the consumer, the empirical and theoretical literature finds adverse effects in the case of microfinance, especially for the clients. From theory, it is expected that competition among microfinance within an area will yield benefits such as easy access to credit and most importantly lowered interest rate. Very few researches have really investigated this phenomenon. There is the tendency for access to credit to increase while the rate charged by these firms to remain extremely high. As indicated from the introduction, competition in the microfinance industry has the effect of changing the lending practices of the microfinance firms which in turn alters the borrowing behavior of the customers.

It is important to decide a concrete definition of competition in the microfinance industry and then how it is linked to over-indebtedness. One of the central arguments of this paper is that with competition in the microfinance industry, easy accessibility to credit does not necessarily maximize the socioeconomic gains of the customers within a specified area. Competition in this paper will defined in this paper in terms of (1) level of saturation of the market, (2) level of acceptance of higher risk customers and (3) information asymmetries among the MFI. The level of competition will then be measured to see how it affects the interest rate charged by the members in the industry.

3.4.2.1 Niche Dimension and Coefficient of competition

In any competition study, whether biological, sociological, or business relations, the relevant niche dimension is critical. This helps to quantify the degree of niche overlap we are dealing with (Levin, 1968).Niche overlap expressed in numerical values is known as competition coefficient (Levins, 1968). For any pair of microfinance companies selected, two coefficients, C_{ij} and C_{ji} are computed. Where:

C_{ij} = Amount of competition that i receives from j.

C_{ji} = Amount of competition that j generates towards i.

Note: i and j represent two different microfinance firms operating within the same vicinity.

Since asymmetry is the feature of every competition among organizations, two coefficients will be needed to capture the competition being measured here.

If we suppose that there is N*M matrix with N microfinances and M zip code areas of the origin the customers, then each row of the resulting matrix represents a vector that contains the number of customers from a zip code that came for a loan from that microfinance company represented by the vector (Sohn,2002). By comparing the two vectors, one can calculate the degree of association between the two microfinance institutions, indicating similarities in their customers. Using algorithms, we can then compare the niche overlap.

$$C_{ij} = \frac{\Sigma k\ \omega ikmin\ (xik - xjk)}{\Sigma k \omega ikxik}$$

$$C_{ij} = \frac{\text{the sum of overlap between microfinance firms } \mathbf{i} \text{ and } \mathbf{j}}{\text{Total resources (customers) niche of microfinance } \mathbf{i}}$$

There are three main types of competitions that firms clustered within the same geographical area or proximity may face. The pure effect of competition a microfinance firm faces from another microfinance firm is called *direct competition*. When two firms compete based on the competitive pressure exerted on them by a third or another firm, the competition here is described as *indirect competition*. The final type of competition, called diffused competition is the total competitive force experienced by one microfinance firm as a result of all other microfinance firms in within its sphere of influence (MacArthur, 1972). Once the diffused competition is computed, it can be used indirectly as the quantum of effective competition prevailing in the market being examined.

3.5 Model Analysis and Statistical Techniques

The level of analysis that can be conducted on a collected data and the interpretations drawn from the analyses are all dependent on the framework designed for the collection of the data, and the method of collection of the data. The questionnaire and interview which constitute both qualitative and quantitative methods in this work were designed to follow the sequential approach suggested by Hentschel (1999). In this approach, the already designed hypotheses formulated before the data collection are tested with the result of information gathered as presented in tables and charts.

The handling of the quantitative part of the work involved organizing and feeding the data into a Microsoft Excel for preliminary processing. Using the statistical package for social sciences (SPSS) software, the data was further analyzed using frequency distribution and percentages to draw a better understanding of the collected data.

3.5.1 Analysis of Variance (ANOVA)

One the common technique for testing the difference between two variables in an experiment is the ANOVA analysis. ANOVA is designed to determine if two or more populations have the same mean. Even though the main purpose of ANOVA is to test for differences in population means the test also involves the examination of the sample variances. This is why it is often described as the analysis of variance. In more specific terms the test is deployed to ascertain whether a particular factor when applied to a sample population will yield an impact on its mean.

The factor refers to the force whose impact on the dependent variable is being ascertained. In this study the factors comprise firm financial characteristics while the dependent variables (experimental units) include the different types of innovations rolled out by MFIs.

On the basis of the above reasons, this study uses the ANOVA approach. In ANOVA test, the F-ratio is a ratio of the variation between samples to the variation within samples. The ANOVA F-ratio for a test of means is given by:

$$F = MSTR / MSE \quad \ldots\ldots (1)$$

Where MSTR is the mean squares treatment and is given by:

$MSTR = SSTR/\ c - 1$ …………………………………………………………………… (2)

Where c is the number of treatments, SSTR is the sum of squares treatment and is given by:

$SSTR = \Sigma r_j\ (x_j - X)^2$ ……………………………………………….... (3)

Where X = grand mean of all observation.

X = each factor mean.

r_j = number of rows in each treatment.

MSE = Mean squares error.

$MSE = SSE/n - c$ ………………………………………………………………………… (4)

n is the total number of observations and SSE is sum of squares error algebraically written as:

$SSE = \Sigma_r\ \Sigma_c\ (x_{ij} - X_j)^2$ …………………………………………………. (5)

The hypothesis to be tested is that all factor means are equal against the alternate hypothesis that not all treatment means are equal. That is:

Ho =μ1 = μ2 =…………..= μn

H1 = not all means are equal

In the equations above MSTR measures the variation between treatments. If the factors are having different effects, MSTR will reflect this by increasing. The F-ratio itself will then increase. Thus if the F-ratio gets significantly large because MSTR exceeds MSE by such a great margin, the factor effects probably exist. The theoretical F value is read from the F-table and compared with the empirical value obtained from Equation (1). In the results that were produced by the ANOVA test, the P-value was considered for the rejection or acceptance of the null hypothesis. A P-value less than 0.05 signal the rejection of the null hypothesis in favor of the alternative hypothesis and vice versa.

3.5.2 Econometric Analysis

Simple regression analysis as an econometric technique can be used to analyze the relationship between a single dependent variable and several predictor variables. In multiple regression analysis, the objective is to use the independent variable, whose values are known, to predict the single dependent value chosen by the researcher. A Series of regression analysis was run using measures of education level, financial literacy, loan purpose, employment status, loan interest, and default history as independent variable in each case. The independent variable was over-indebtedness. Then, the hypothesized relationship between these independent variables and dependent variable (over-indebtedness) is given below as by the baseline model

$$Y^*_{it} = \beta_0 + \sum_{i=1}^{i} + \beta_i X_{ti} + \varepsilon_t \text{ ………………… (1)}$$

Simplifying (1) yields the following regression model.

$$Y^*_t = \beta_0 + \beta_1 X + \varepsilon_t \text{ …………………………….. (2)}$$

Where;

Y^*= the dependent variable (s)

X = the independent variable (s)

β_0 = A constant

β_1 = n are regression coefficients to be estimated.

t = time

The above baseline models will be adapted for three separate functional forms of the model which capture the research hypotheses of the work and always reflect the regression analysis to be performed.

I. **First model**

The first model is constructed to look at the relationship between interest rate (independent variable) and over-indebtedness (dependent variable).

$OID = \beta_0 + \beta_1 IR + \varepsilon_t$ …………………………….. M_1

Where β_0 = A constant showing the over-indebtedness when interest rate is zero.

β_1 = effect of each additional in interest rate on over-indebtedness.

IR = Interest rate

II. **Second model**

The first model is constructed to look at the relationship between financial literacy level (independent variable) and over-indebtedness (dependent variable).

$OID = \beta_0 + \beta_1 E + \varepsilon_{t \ldots}$ …………………………… M_2

Where β_0 = A constant showing the over-indebtedness when employment is zero.

β_1 = the impact of a unit improvement in employment status on over-indebtedness.

E = Employment status

III. Third model

The first model is constructed to look at the relationship between financial literacy level (independent variable) and over-indebtedness (dependent variable).

OID = $\beta_0 + \beta_1 F + \varepsilon_{t\ ...}$……………………………… M_3

Where β_0 = A constant showing the over-indebtedness when financial literacy is zero.

β_1 = effect of each increase in financial literacy on over-indebtedness.

F = Financial literacy.

Knowing and establishing the specification of the models to suit the variables employed in the study, the following estimation tools would be used following the rules inscribed by economic research laws;

1. Simple regression theory as established above
2. Statistical Test significance (t-test for hypothesis under confidence level 0.05)

Statistical software such as Excel, Statistika and SPSS would be used for the data analysis. Data obtained will be analyzed with use of standard statistical software using descriptive statistics. The objectives will be tested using simple regression method. Data would be analyzed using frequencies and Percentages to indicate to indicate relative distributions. Dependent and independent variables will be used for regression analysis. Other data will be statistically treated for scientific, objective interpretations.

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Level of Competition in the Area Studied

Table 1 below gives the vital statistics of the area that was studied. The main objective was to quantify the level of competition existing among the microfinance firms in the area by examining the nature of the market in terms of certain key characteristics. The table illustrates the population density of the area, the main form of economic activities there, and the total number of microfinance firms operating in the area. This gives a picture of the ease of accessibility to credit in the area. From the table, the area has an estimated population density of 340 persons per km^2. There are 16 microfinance firms, each having at least 9 branches in the entire area. This gives a total of 144 microfinance firms within that area, in addition to 5 traditional banks that operate there. This represents 7% of the 1,993 registered microfinance institutions in Accra (Bank of Ghana, 2014).

Table 1: Characteristics of the area studied.

Estimated population density of area studied	340 persons per km^2
Major economic activity in the area studied	Small scale business (1,850)
Number of microfinance firms in the area and branches for per firm	16 * 9 = 144 MFIs
Inter-firm communication among the MFIs.	zero
Average interest rate of firms compared to national average	Firms = 52 ± 3 National =48
Credit agency for accessing clients credit worthiness	None

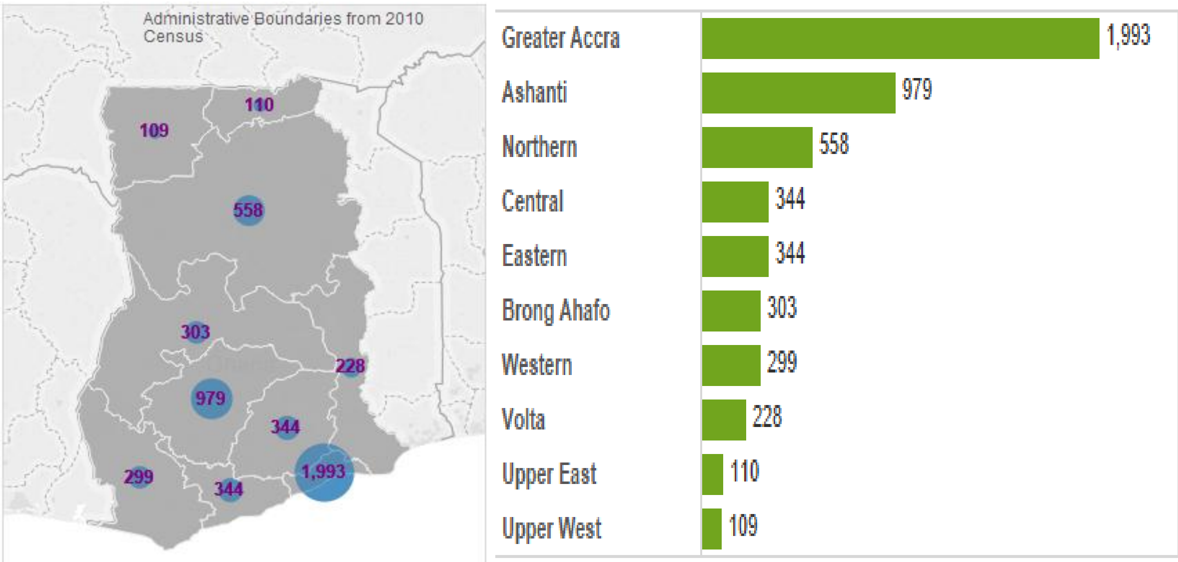
Source: Accra Municipality Assembly office

The area, a relatively small part of north Accra, has more microfinance per square meter than most parts of the capital city. This is explained by the relatively high level of economic activities occupying the area. Darkuman is housed to the capital’s largest auto-parts market. A rough estimation puts the number of small scale businesses in the area at around 1,850 (Accra Metropolitan Assembly 2014).

Another way to indicate the level of competition is to measure the inter-firm communication among these microfinance firms. From the table above, inter-firm communication is absolutely zero. This means that the various firms operating within the studied area have no way of measuring credit worthiness of the customers. Potential hazard that may result from this market condition is the tendency for multiple and cross-borrowing which can lead to customer over-indebtedness. Financial inclusion is highest in the capital city Accra, and as such it is by size and scope easier for customers to obtain credit. The diagrams in figure 1 below show the financial inclusion level of Accra. From the diagram, out of a total of 1,993 microfinance firms in Accra, 144 are located in Darkuman, representing 7% of the total microfinance firms in Accra.

As already indicated in the literature review, competition among firms and its effects on the price consumers pay do not usually apply in the context of microfinance market. When does competition lead to interest rate decline in microfinance industry? Microfinance industries actually begin to compete on price when the market reaches a consolidation phase (CGAP, 2006). This is the point where the market as a whole becomes saturated at the prevailing market price level (Goodwin, 2004). Looking at table 1 again, the average interest rate of all the 10 firms sampled is 52, which is a little above the national average.

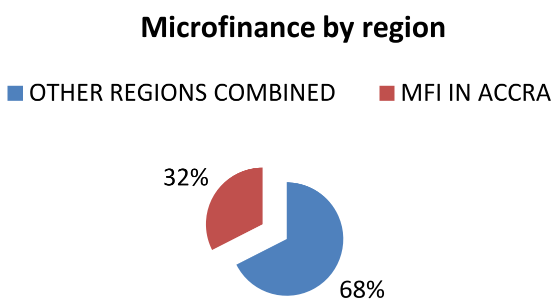
Figure 1: Financial inclusion level in Ghana by region.



Source: mixmarket

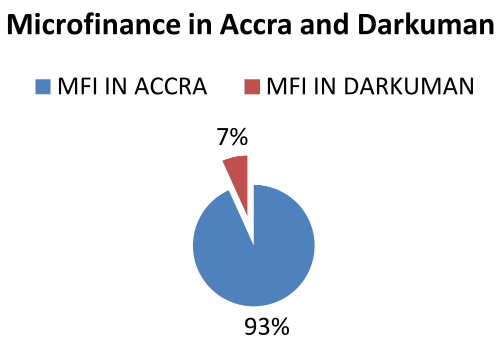
The financial inclusion of the capital city Accra, as compared to other parts of the country is illustrated in figure 1 above. Out of the entire ten regions into which the country is divided, Accra alone takes about 32% of all the microfinance companies in the country as can be seen by the representation on figure 2. Figure 3 shows the number of microfinance companies in the selected area – Darkuman - as a percentage of all the microfinance firms in Accra.

Figure 2: Microfinance in Ghana by region.



Source: own data

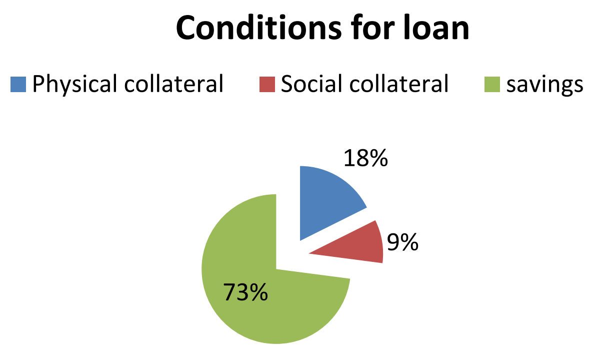
Figure 3: Microfinance in Darkuman and Accra



Source: own data

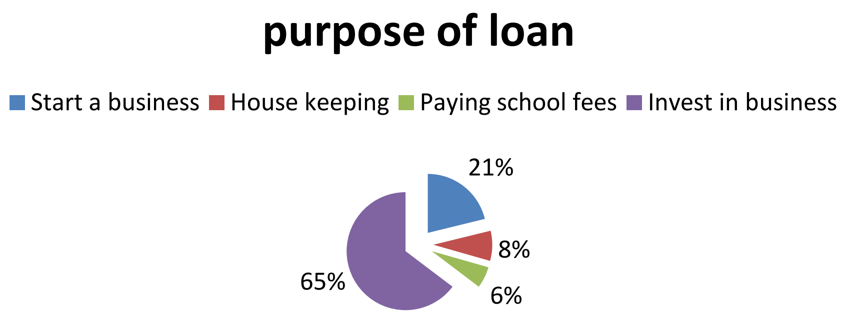
Competition in the selected area can also be looked at in terms of the lending characteristics of the microfinance institutions in the area. The assumption is that, when the competition is high, microfinance companies are much more flexible in issuing loans to customers in order to be competitive on the market. One of the ways of measuring how tight the competition among microfinance firms operating in a place is is by looking at the conditions for loan. From figure 4 it is obvious that majority of the microfinance firms in the area place emphasis on the customer having a savings account with them. Figure 5 also shows the various purposes for which these microfinance firms often give out loans. Majority of the loans disbursed are investment in business, usually small scale businesses.

Figure 4: Conditions for loans of microfinance firms



Source: own data

Figure 5: Major purposes of loans taken by clients



Source: own data

4.2 Descriptive Statistic and Over-indebtedness

4.2.1 Demographic variables and over-indebtedness.

The descriptive characteristics of the respondents are presented in table 2. In terms of gender of the microfinance clients, as expected, majority of the clients of most of the firms sampled for this work were women, constituting 61.2% of all the 85 respondents. This is a feature of most microfinance industries all over the world. Most microfinance companies target women based on the perception that women form the largest majority of the financially excluded group in the any community (Hulme, 2009). Other researchers have reviewed World Bank's data on microfinance and came to the conclusion that the rate of repayment of microfinance loan among the sexes is relatively higher among women than their male counterparts (Rhyne, 2004).

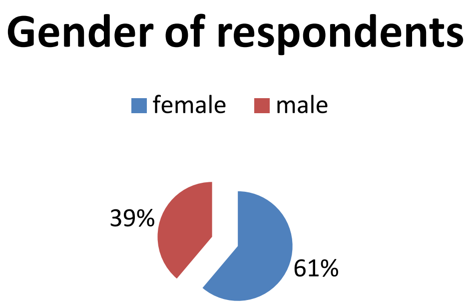
The table also shows the total number of indebtedness in terms of the gender of the respondents. Out of the 26 people judged to be indebted by the model used in this work, 61%

were males and females were 39%. This difference in the indebtedness level between the sexes may have more to do with the differences in occupation and choice of investment than with the usual stereotype of women being more reliable and honest in the intended or stated purposes of the loan. Another plausible explanation for this situation is the differences in the purposes and size of the loan often taken by the two groups in the area sampled. Most of the women in the area are into micro-businesses and usually take relatively smaller loan amount as compared to the men who are predominantly into small scale businesses that take loans to secure an asset which is later sold for profit. The very differences in the Businesses engaged in by the different sexes have different asset liquidity levels which may affect the ability of the individual to meet his or her debt obligations when they fall due.

TABLE 2: A table showing three demographic statistic and indebtedness.

VARIABLE	NUMBER =85		INDEBTED = 26		Not indebted = 59	
	N	%	N	%	N	%
GENDER						
Male	33	39	16	61	17	29
Female	52	61	10	39	42	71
LEVEL OF EDUCATION						
primary	25	28	17	66	8	14
Secondary	47	56	5	19	42	71
Tertiary	8	10	0	0	8	14
None	5	6	4	15	1	2
EMPLOYMENT STATUS						
Permanent Employ	10	12	2	8	8	14
Self Employed	70	82	24	92	46	78
student	0	0	0	0	0	0
Temporarily Employed	5	6	0	0	5	9
FINANCIAL Literacy						
Very good	4	5	1	4	3	5
Good	8	10	1	4	7	12
Average	20	24	6	23	14	24
Poor	52	61	18	69	35	58

Figure 6: Diagram showing the gender of the respondents.



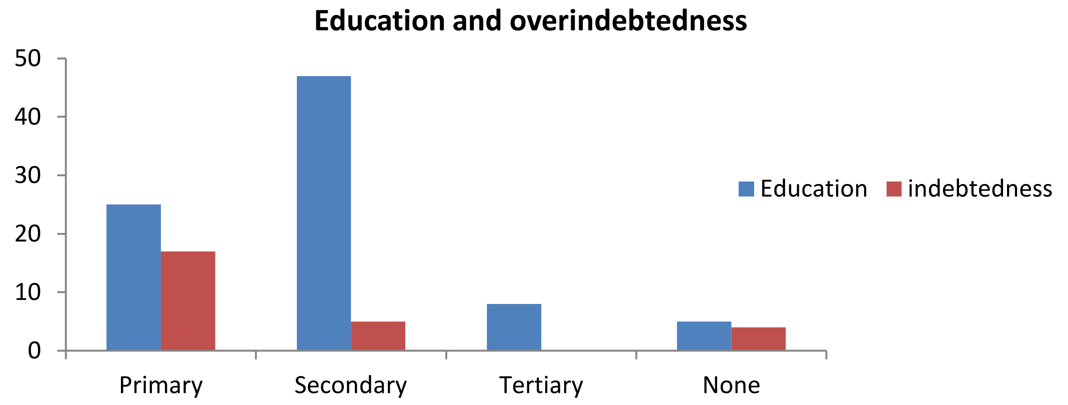
Source: own data

4.2.1.1 Education Level and Over-indebtedness

In terms of education level of the respondents, 56% of all respondent have attained a secondary level education, 28% have had primary education as their highest education level, and 10% of them have had tertiary level education. Only 6% of respondent have not had any form of formal education. With respect to indebtedness, 66% of the indebted 26 members of the total respondent had primary education as the highest education level. Respondents with only secondary level education accounted for only 19% of the indebted 26 respondents. Respondents with no formal education accounted for 15% of the people whole were found to be over-indebted. However, this can only be explained in terms of the relative numbers of the different educational level. Again a closer look at the values for education and over-indebtedness reveals that, indebtedness is lowest in the secondary level of education category. The highest number for indebted people in the respondents clusters around the primary and none-educated group. This may be due to the fact that these groups represent the largest number of respondents, and as such do not indicate anything about education level and indebtedness.

The results generally fall in line with a well researched fact in the microfinance sector linking the level of education of customers and the tendency to become over-indebted. Generally customers with a good level of formal education are assumed to have better understand of the terms of the contract they are engaging in and can strike a better bargain that serves their interests (Robinson, 2001). However, majority of people who constitute the customer base of microfinance companies do fall within that bracket of highly educated people. Most of these customers seeking financial or capital interventions often lack the required level of education required to be able to participate fully in the formal economy. They therefore constitute a high risk group of borrowers to any financial credit organization. This assumption, however, does not apply entirely to all microfinance borrowers.

Figure 7: Diagram showing education level and over-indebtedness

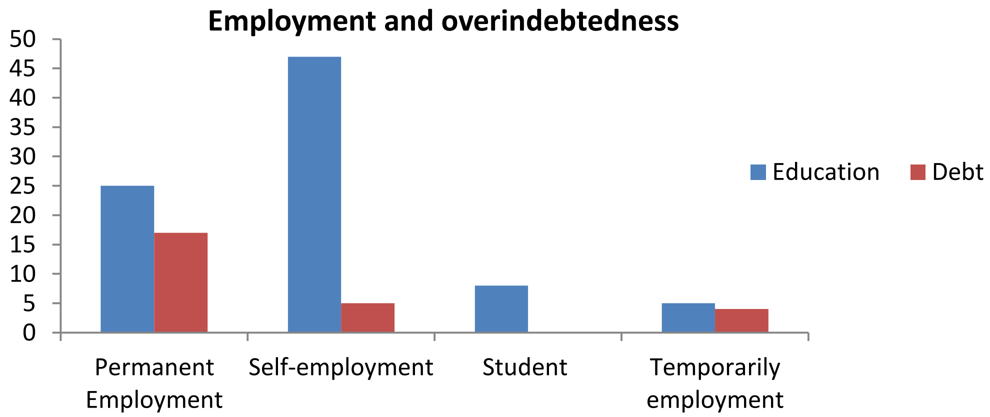


4.2.1.2 Employment Status and Over-indebtedness

From Table 2 82% of the respondents were in the self-employed category of the employment status, 12% were permanently employed, and 6% described themselves as being temporary employed. This distribution is normal for most microfinance industries in the country. The target customers for most microcredit organizations are self-employed, small scale and medium scale businesses. As such, they constitute the largest customer base for every microfinance company. They are also preferred to the rest of the economic groups due to their savings which has become mandatory as a condition for securing loans from most microfinance firms.

The second group of clients targeted by these firms is those with permanent employment status. These groups of borrowers are also preferred due to the certainty of obtaining a fixed amount of salary at the end of every month. This serves as a good guarantee against defaults. The microfinance firms refer to loans extended to this group as ‘payday loan’. Those with temporal form of employment often tend to face more scrutiny when applying for a loan from these microfinance firms because they tend not to have a steady source of income and pose more risk to these firms. Figure 3 depicts the relative amount of indebtedness associated with each employment category. Clearly, the self-employed group of respondent had the lowest indebtedness level. Customers in this category are often market women, provisions shop owners, restaurants businesses, and other forms of businesses that register daily sales. The microfinance firms actually compel these borrowers to have a savings account with them as a condition for securing loans. They also have to credit this account daily with a specified minimum amount. The highest level of indebtedness recorded by the permanent employment group is explained by the fact that, these clients do not have any profit generating activities. The main guarantee for the loans they take is a fixed amount of salary expected at the end of the month, which may not be adequate enough to service their debt and maintain their normal personal expenditures.

Figure 8: A bar chart of employment and over-indebtedness



Source: own data

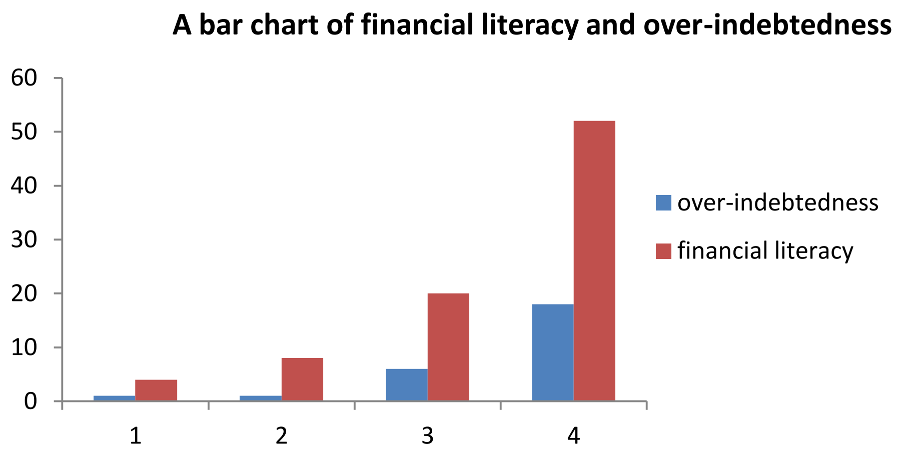
4.2.1.3 Financial Literacy and Over-indebtedness

A more solid way of quantifying debt and education level is to look at the financial literacy of the respondents. Financial literacy of an individual is his/her numeracy ability and understanding of financial products. This can indicate whether the individual can make sound financial decisions with respect to selecting favorable investment portfolio. As indicated on table 2. 5% of the respondents were found to be very good in terms of financial literacy, 10% were found to be good, 24% fell within the average group in terms of how good they were at financial literacy, and 61% of total respondents were to very poor at financial literacy. In relation to over-indebtedness, there seemed to be relationship between financial literacy and over-indebtedness. Those who scored a good mark for financial literacy often had very small corresponding number people found to be over-indebted, and vies versa.

The numeracy ability and level of understanding required of every population today in order to make sense of today’s financial world presents a big challenge to diverse people in the population, whether educated or not. Thaler (1985) has shown that individuals understand

and make financial decisions using what is termed as mental accounting, in which considerations focus on budget and not in terms of interest rates and time value of money. People may be educated to the highest level attainable and still lack the level of financial literacy required to make sound financial investment decisions.

Figure 9: A bar chart of financial literacy and over-indebtedness



Source: own data

4. 3 Characteristics of Microfinance Firms and Borrowers

This section of the results and discussion focuses on the characteristics of the competing firms in the area under study and the way they affect borrower's behaviour. The table presents four variables which measure the effects of defaults on customers and whether the credit history of borrowers can be used to gauge which customers are likely to be over-indebted.

Table 3: A table showing characteristics of firms and borrowers in relation to over-indebtedness

VARIABLE	NUMBER =85		INDEBTED = 26		Not indebted = 59	
	N	%	N	%	N	%
LOAN PURPOSE						
Start a business	18	21	9	35	9	15
House keeping	7	8	5	19	2	3
Paying school fees	5	6	1	4	4	7
Investing business	55	65	11	42	44	75
DEFAULT HISTORY						
Once	11	13	6	23	5	9
Twice	9	11	2	8	7	12
More	6	7	4	15	2	3
Never	59	69	14	54	45	76
REPAYMENT CHALLENGE						
Loan interest	31	37	12	46	19	32
Repayment schedule	19	22	5	19	14	24
Business conditions	35	41	9	35	26	44
OVERCOMING DEBT						
Selling personal assets	39	46	11	42	28	47
Borrow from another MFI	25	29	9	35	16	27
Borrow from family	7	8	0	0	7	12
Paying with business capit	14	17	6	23	8	14

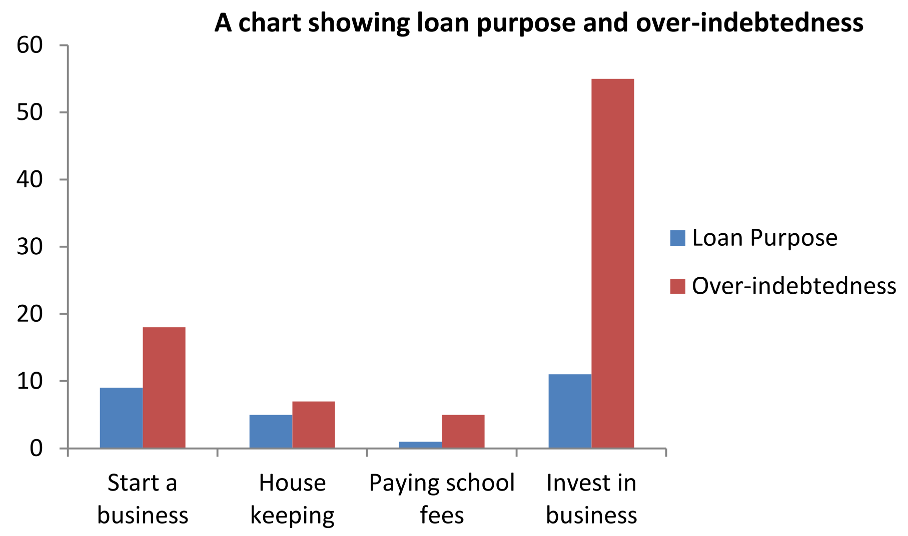
Source: own data

4. 3.1 Loan Purposes and Over-indebtedness

The figures in table 4 shows that, 65% of the total respondents took loans to invest in their businesses, 21% invested the loans they secured into new business ventures, personal uses of loans under housekeeping expenditures and bills like school fees represented 8% and 6% respectively. Out of the 26 respondents classified as over-indebted using the model employed in this work, the investment in business group constituted 42%, followed by those that take loans to start a business representing 35%. It is important to understand why these two categories of customers have more indebted people than those who took loans for non-business purposes. First of all, majority of the 85 respondents belong to the investment group, as such the probability of sampling someone who is indebted is higher. The same explanation goes for the customers who took loans to start a business. Nevertheless, there is a significant difference between these two groups. Indebtedness is higher in the first group than in the second group. This can be explained by considering that customers taking loans to start a business often represent high risk borrowers than those that already have businesses and are seeking for capital injection. Secondly, the latter group often have some assets or liquidity to turn to when the payment of loan is due.

Very small number of the respondents procured loans for personal use. It is not easy to secure a loan from most of these microfinance firms for purposes other than business investment. However, due to the current practice of mandatory savings as condition for securing loans, microfinance firms can afford to lend to this group if they have a saving accounts with them. Indebtedness among personal use of loan categories is not necessarily high as will be expected because most of these loans serve as emergency loans and are often paid back on time and in full.

Figure 10: Chart showing loan purpose and over-indebtedness level in each group.



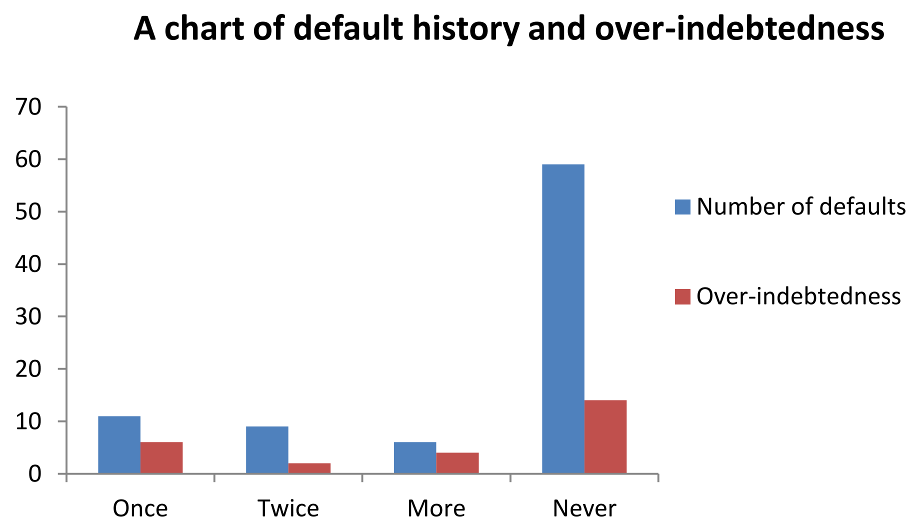
Source: collected data

The data presented on the table on loan purpose and over-indebtedness does not say much about the relationship between these variables. The chart presented above gives an even more distorted understanding of the relationship between loan purpose and over-indebtedness. However, this is purely a problem of the relative numbers or percentages calculated for each part of the overall 85 respondents.

4.3.2 Default History and Over-indebtedness

The default history of the clients refers to the number of times respondents have found themselves incapable of meeting their debt obligations when they fall due. The aim of this aspect of the research is to establish whether a borrower's credit history is related in any way to the possibility of becoming over-indebted. As shown by table 4, 69% of all respondents claim not to have been involved in any loan default since they began taking loans these microfinance firms. 13% have defaulted once, 11% have defaulted twice, and 6% have defaulted more than twice. Overall, out of the 85 respondents, 31 have defaulted at least once. In relation to over-indebtedness, majority of the 26 people judged to be over-indebted belong to the category that has no record of defaulting on loans. This may simply be because this group actually represents more than 50% of the total respondents and as such have a higher chance of containing more people who happen to be over- indebted. This may not be attributed in any way to their credit history. It may actually be as a result of proportional values of the four groups, but does not in any way give clues to the relationship between the parameter and over-indebtedness. The second largest debt group is formed by those who have defaulted on their loans only once.

Figure 11: A bar Chart showing default history and over-indebtedness



Source: own data

4.3.3 Repayment Challenge and Over-indebtedness

Under the repayment burden, 37% of respondents considered interest on loan to be their biggest challenge, 22% believe the repayment schedule they often demanded by the microfinance firms is their biggest challenge. The remaining 41% of the respondents do not see the interest on the loan or repayment schedule as the problem; they consider business conditions to be the main factor for why they may default on their debt obligation. This section of the work contains one of the most contest and debated issues in the literature on microfinance. This debate surrounds the possibility of the high interest rates charge by microfinance firms being the main cause of customer over-indebtedness in the industry. Microfinance companies often have higher interest rates as compared to traditional banks. The question has always been whether this higher interest rate is really effective, considering that the very people who need this capital are the very poor of society. The other concern is to prevent the situation where these people become trapped in a web of debts that may actually worsen their economic conditions.

The microfinance finance industry is often criticized for its relatively higher interest on loans. However, research after research seems to come to the same conclusion arrived in this paper on the subject; that is, high interest rate is not the main burden of most microfinance clients. According to Karlan, et al (2007), the result of a similar research carried out in some urban part of Accra, Ghana, to gauge customer's sensitivity to the interest rate issue, found that the economic activity engaged in by respondents shaped their attitudes toward the rate high interest rate question. They found that entrepreneurs tended to seek lower interest rates on loans as compared to poorer clients who are hardly concerned by the high interest rate. A possible explanation for the stance of the latter group is lack of understanding of the complexity of financial transactions conducted within the rigid and formal framework of traditional banks that hardly take any interest in break everything down to the level of a complete novice in the matters of banking or lending finance.

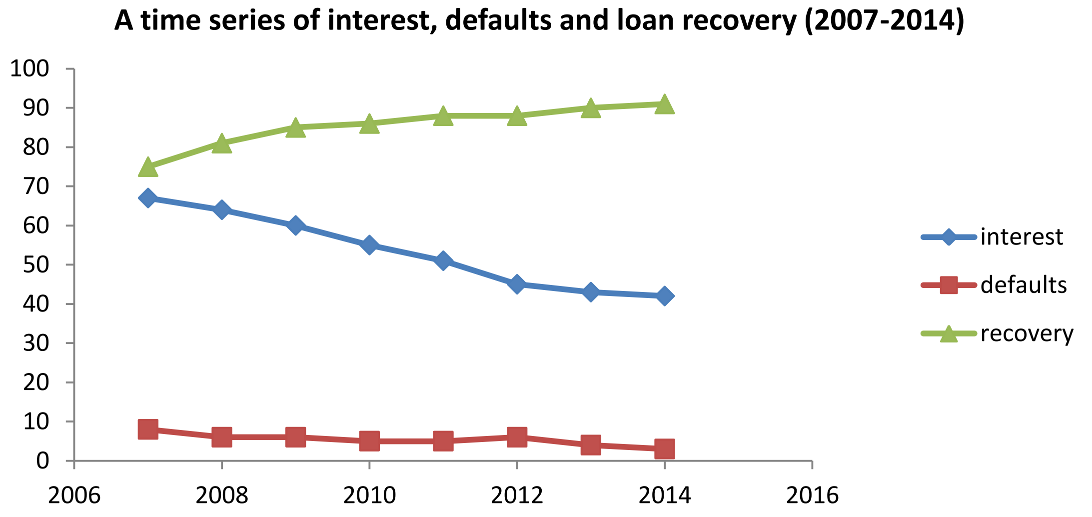
4.3.4 Interest Rates and Loan Recovery Rates of Firms

Interest rate matters in the microfinance industry should not be the concern of the clients alone. The literature on this issue is completely focused on the demand side of the market and this has led to the new emerging area of study in the microfinance literature which focuses solely on consumer protection in the business framework of the microfinance industry. However, it is possible to examine this interest rate issue purely from the supply side of the microfinance industry. This involves looking critically at what benefits declining interest might bring to the microfinance firms themselves. Globally, interests in the industry have been on the decline since the 1990s. In spite of the well-known factors that contribute to the high amount of interest rate that they charge, a shift of strategy towards increasing loan recovery rate will significantly impact on what innovative ways these microfinance firms employ to reduce interest rates significantly while still meeting their administrative cost.

The last part of this results and discussion section is devoted to establishing a relationship between declining interest rates over the years and loan recovery rates of the microfinance firms. The data for this analysis was obtained by collecting the annual interests rates of the ten microfinance firms sampled for this work. What this indicates is that, when the interest rates of the microfinance firms gradually declines with time, the companies themselves will begin to experience an increase in the rate of loan recovery, which also means low default rate among clients.

The chart provided below gives the loan recovery rate, average interest rates per year, and average loan defaults of customers per year over an 8 year period in the same vicinity or proximity. The charts shows that interest rates of these microfinance firms have been on the decline since 2007, as suggested by a report on global interest rates in the microfinance industry published by CGAP (2013).

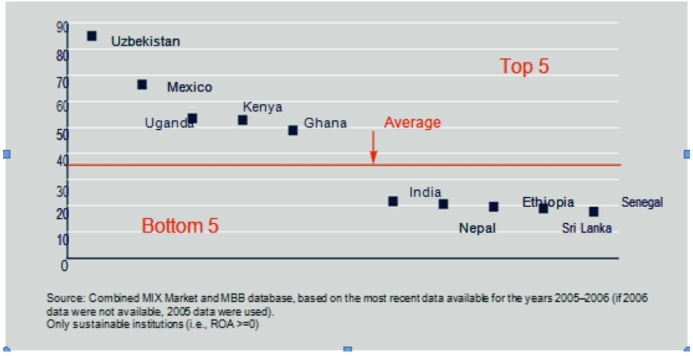
FIGURE 12: A time series of interest rates, defaults rate, and loan recovery of the ten firms



Source: collected data

The graph above gives a good summary of the performance of the specific microfinance industry studied for this work. Nevertheless, the result points in the same direction as global trends in the microfinance industry of which Ghana is key member.

FIGURE 13: A graph the nation interest rates of microfinance firms of selected countries.



Source: Mix market 2014

The series in blue which represents interest rates for all the firms used in this paper has been gradually declining since 2007. Interest rates in 2007 hovered around 68%. The prevailing current national average stands at 45% and 50%. This falls in place with the data produced by *Mix-market* for selected microfinance industry in around the world. Ghana as a country in terms of microfinance is one of the countries where interest rates are relatively high. All the countries below the global average in terms of interest rates are actually the countries where microfinance was first pioneered or started. These countries therefore have very matured microfinance industries in which the firms have attained the level of market saturation. The result is that, firms in these countries like India, Nepal, Sri Lanka, Ethiopia, and Senegal have already began to compete base on price.

Ghana and the countries above the global average have relatively high interest rates due the fact that most of the firms in the industries in these countries have not yet reached that stage of consolidation or maturity. The microfinance markets in these countries are still at the take-off stage in the microfinance market phase (CGAP, 2004). When the microfinance industry in a country attains the consolidation phase, the market becomes saturated and firms begin to reduce prices in order to capture new clients. At this point the firms are said to be competing on price (Goren, 2004). Until this stage is reached in a microfinance industry, the average difference in the interest rate charged independently by each firm is often not significant. Factors such as cost of funds out of which loan is generated, risk attached to the loan, operating (administrative) expense, and profit, which constitute the main determinants of interest rates of microfinance firms hardly change until the market conditions themselves have altered with the growth of the industry.

4.4 Analysis of Models, Results and Interpretation

4.4.1 High interest rate and Over-indebtedness

Hypothesis one (Null and Alternative)

H_o: $a_1 = 0$ High interest rate is not the main cause of over-indebtedness.

H_1: $a_1 \neq 0$ High interest rate is the major cause of over-indebtedness.

If p calculated < p at 0.05 significance level, we reject the null hypothesis (H_o) and accept the alternative hypothesis, otherwise, we accept it.

Also, if F- calculated > f- table (18.513), we conclude that the entire or overall regression result is statistically significant, otherwise it is not.

The table below shows the regression model results for high interest rates and over-indebtedness.

Table 4: Regression model results for interest rates and over-indebtedness.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.82051	1	14.8205	1.505	0.4365
	Residual	9.84615	1	9.84615		
	Total	24.667	2			

a. Dependent Variable: over-indebtedness
b. Predictors: (Constant), interest rates (%)

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-0.596	7.7643		0.0768	0.9512
Interest rate (%)	0.3269	0.2665	0.775	1.2269	0.4354

Source: own data

Model results and interpretation

Interest rates (%) : OID: OID = -0.5962 + 0.3269*X

$r = 0.7751$, $p = 0.435$, $r^2 = 0.6008$, $F = 1.5052$

The estimated model result indicated above shows that the relationship between high interest rates and over-indebtedness is positive. In essence, this means that any increase in the interest rate charged by the microfinance institutions results in a corresponding increase in the level of indebtedness of the clients at the minimal rate with reference to the level of significance set for the analysis. The proportion of the data analyzed which is correctly explained by the regression analysis is given by the adjusted R^2 value which is 0.6008. This means that the regression model was able to explain 60% of the data, while about 40% of the data are explained by other factors which were not captured by the structure of the model and are taken care of by the regression error term. Since the proportion of data explained by the regression is more than half of the data, we can comfortably declare that the high interest rates charged by microfinance institutions can to some extent explain the level of over-indebtedness in the industry.

The calculated P-value for this regression analysis as indicated on table 4 is 0.435. The designated P-value of significance for this work was 0.05. Since the calculated P-value is more than 0.05, we do not reject the null hypothesis. This means that high interest rate is not positively related to over-indebtedness.

For the F-test, F calculated (1.505) < F – critical = 18.513 at df of 2, which means that the regression analysis was statistically insignificant.

The conclusion from these results is that the outcome of the regression analysis was statistically insignificant, and interest rate is not positively related to over-indebtedness.

4.4.2 Employment Status and Over-indebtedness

Hypothesis one (Null and Alternative)

H_o: $a_1 = 0$ the employment status is not significantly related to over-indebtedness.

H_1: $a_1 \neq 0$ the employment status is significantly related to over-indebtedness.

If p calculated < p at 0.05 significance level, we reject the null hypothesis (H_o) and accept the alternative hypothesis, otherwise, we accept it.

Also, if F- calculated > f- table (9.5521), we conclude that the entire or overall regression result is statistically significant, otherwise it is not.

Table 5: Regression model result for employment status and over-indebtedness.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	469.089	1	409.089	428.213	0.00233
	Residual	1.91068	2	0.95534		
	Total	411	3			

a. Dependent Variable: over-indebtedness

b. Predictors: (Constant), employment status.

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-1.0757	0.6106		-1.7617	0.2202
Interest rate (%)	0.3565	0.0173	0.997	20.6933	0.00233

Source : own data

Model results and interpretation

Interest rates (%) : OID: OID = -1.0757 + 0.3565*X

r = 0.9977, p = 0.00233, r^2 = 0.9951, F = 428.212

The table above shows the results of the regression analysis using the model adopted for this work. The result shows that the relationship between employment status of customers and the level of their indebtedness is positive with respect to the level of significance set for the analysis. The proportion of the data analyzed which is explained by the regression analysis, which is given by the adjusted R^2 value, is 0.995. This essentially means that the regression model was able to explain about 99% of the data. Another interpretation of this is that, very little of the analyzed data and what it points to is explained by other factors aside what is found in the model. This result also establishes reinforces a strong confidence in suspicion that the independent variable is a sole determinant of the dependent variable. Since the percentage of the analyzed data correctly explained by the result of the regression is about 99%, we can confidently conclude that there is a positive relationship between employment status of microfinance clients and over-indebtedness.

Another important result of the analysis is the P-value produced by the analysis. The P-value generated by the analysis is 0.00233. The designated P-value of significance for this analysis was 0.05. Since the calculated P-value is far less than 0.05, we reject the null hypothesis that employment status of the clients is not positively related to over-indebtedness. In order words, we accept the alternative hypothesis that employment status is positively related to over-indebtedness.

For the F-test, F calculated (428.212) > F – critical = 9.5521 at df of 3. This means that the regression analysis was statistically significant.

Thus, we can confidently conclude from these results the regression analysis which was statistically significant that employment status of microfinance clients is a key determinant of the possibility of the client becoming over-indebted.

4.4.3 Financial literacy and Over-indebtedness

Hypothesis one (Null and Alternative)

H_o: $a_1 = 0$ financial literacy is not positively related to over-indebtedness.

H_1: $a_1 \neq 0$ financial literacy is positively related to over-indebtedness.

If p calculated < p at 0.05 significance level, we reject the null hypothesis (H_o) and accept the alternative hypothesis, otherwise, we accept it.

Also, if F- calculated > f- table (9.5521), we conclude that the entire or overall regression result is statistically significant, otherwise it is not.

Table 6: Regression model result for financial literacy and over-indebtedness.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	191.890	1	191.890	345.792	0.00288
	Residual	1.10986	2	0.5549		
	Total	193	3			

a. Dependent Variable: over-indebtedness

b. Predictors: (Constant), employment status.

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-1.2197	0.5577		-2.1869	0.1603
Interest rate (%)	0.3676	0.0197	0.997	18.5955	0.00288

Source : own data

Model results and interpretation

Interest rates (%) : OID: OID = 1.21197 - 0.367*X

r = 0.9971, p = 0.00288, r^2 = 0.9942, F = 345.792

The estimated model result as displayed on table 6 indicates the relationship between financial literacy of clients and the over-indebtedness. The value of the coefficient indicates that the relationship between these two variables is negative; meaning that when financial literacy level increases, there is a corresponding decrease in the level of the over-indebtedness of the clients and this is subject to the level of significance set for this analysis.

The proportion of the analyzed data correctly captured and can be explained by the regression analysis is the adjusted R^2. From table 6 the adjusted R^2 value is 0.997, meaning that the regression model was able to explain about 99% of the analyzed data. This also means that aside the factors captured by the model used in this work, no other external factor apart from financial literacy impacts on over-indebtedness. One can also see that the error term generated by the regression analysis is very small, which explains the relatively high adjusted R^2 value.

The next important result of the analysis is the P-value produced by the analysis. The P-value generated by the analysis is 0.00288. The designated P-value of significance for this analysis was 0.05. Since the calculated P-value is far less than 0.05, we reject the null hypothesis that financial literacy of the clients is not positively related to over-indebtedness. In order words, we accept the alternative hypothesis that financial literacy is positively related to over-indebtedness.

For the F-test, F calculated (345.792) > F – critical = 9.5521 at df of 3. This means that the regression analysis was statistically significant.

Since the proportion of the data explained by the regression is more than half of the total data, we comfortably declare that the financial literacy level of customers can be a good predictor of the possibility of a client to become over-indebted.

To summarize the result of this work, the first null hypothesis which postulated that high interest rate is not the direct cause of over-indebtedness was accepted, against the alternative. The second null hypothesis that declining interest over time does not improve loan recovery rate of microfinance firms was rejected, in favor of the alternative hypothesis. The third hypothesis that a borrower's employment status is negatively related to possibility of becoming over-indebted was rejected, in favor of the alternative hypothesis. And finally, the fourth hypothesis that financial literacy is negatively related to over-indebtedness was rejected, in favor of the alternative hypothesis.

CHAPTER FIVE

5.0 CONCLUSION AND RECOMMENDATION

5.1 Conclusion

This paper aimed at determining the role of competition and high interest rates in the over-indebtedness of microfinance customers. Debt itself is not considered a problem in today's financial world; the problem seems to be excessive debt to the point where the individual as well as the institution that made the credit possible begin to experience distress in the economic interaction. The microfinance industry, though distinctly different from the orthodox financial institutions like banks, has all the trappings of lending such as defaults, excessive debts, etc. Even though microfinance was designed initially to serve as an alternative form of credit sources people in the economy that are not covered by traditional banking system, the current state of the microfinance industry bears almost all the features of these traditional sources of the credit. The effect is that over-indebtedness, a feature of traditional banks, has become part of the microfinance industry. Nevertheless, very few of the body of research on over-indebtedness in microfinance focuses on the interest rate and competition among the firms as a cause of the problem. There seems to be a general consensus that the high interest rates charged by these microfinance firms can never be the cause of the over-indebtedness problem. It is this assumption or consensus in the literature of microfinance that was put to test in this paper.

Some of the objectives which guided the study were to measure the level of competition in the selected area; identifying the borrowing characteristics of the customers with respect to the competition among the firms; measuring the impact of loan repayment conditions on the borrowers especially when they default on the debt obligations, and to determine how the interest rate charged by these microfinance institutions contribute to customer over-indebtedness in that specific market. The study was conducted on the microfinance market in Darkuman, a predominantly business district of the capital city of Accra. The main factor or motivation for choosing this location is the scale of business activities that defines this district of the capital and the fact that it has become an attractive location for the business of lending institutions like the savings and loans companies, and even traditional banks that are eager to extend loans facilities to the business in the district.

Ten microfinance firms were randomly selected in the study area and questionnaires were administered to hundred customers of the microfinance firms in the area. Respondents were selected randomly from the district provided they have ever taking any form of loan facility from these microfinance firms in the area.

The study revealed that, as is the case in most microfinance industries in the all over the world, women constitute the majority of the microfinance clients. In relation to over-indebtedness, they tended to be less in number among clients judged to be over-indebted. This was explained in terms of the nature of the businesses engaged in by the women as compared to their male counterparts. Most of the women run business that involves daily sales such as provisions stores, restaurants, clothing and other merchandise that hardly remains in inventory for more than a week. The male customers tend to secure loans to invest in business that involves the purchase of fixed assets that are then sold later on. This distinction between the two genders on the basis of the nature of enterprise is crucial to the understanding of why females tend to have a high rate of repayment of loans as compared to their male clients. Aside, traditional beliefs of women having more integrity or better at managing businesses, a possible additional factor contributing to that phenomenon may be what are being asserted in this paper.

In terms of the competition level in the study area, using simple factors such the level of inter-firm communication about credit worthiness of potential clients, the sheer number of microfinance firms per the population of the area, and the distances separating the firms operating the area, the extent of competition existing among the firms was determined to be very high. Typically of most financial markets in country, there are absolutely no data base or credit agencies to determine the credit history of clients. The moral hazards of cross-borrowing by clients within the vicinity are extremely high. More than half of respondents declared never to have borrowed from two microfinance firms at the same time.

In terms of the microfinance institutions themselves and the interest rates they charge, the extremely high level of competition among the firms has not exerted any downward pull on the interest rates of the companies in the area. With a national average interest rate of 48% per annum, the average of the firms operating in the study area hovered around 52%. From the data provided by these firms covering their interest rates for the past eight years, there was little significance differences in the rates charge by these all the microfinance companies. One way to explain this is to consider the level of maturity of the particular microfinance industry used for this study. Most microfinance companies do not compete on the basis of price until the market they are operating in reaches the consolidation phase of market development. Before any industry reaches this stage, most of the competitors in the market would have captured their share of customers from the total number of available clients based on their market niche and ability. Any further increase in the customer base will have to occur at the expense of price charged by these firms. Until the market reaches this phase, customers are not likely to experience any significant amount of choices when deciding which microfinance firm offers a better bargain.

Another consideration of the interest rate looked that the role high interest rates of microfinance firms in Ghana play in the customer over-indebtedness often recorded in some parts of the industry. The study showed that high interest is not directly linked to customer over-indebtedness. out of the 85 respondents used for the study, less than 30% considered the high interest rates charged by the firms as the biggest challenge in the repaying the loans. In plays of the high interest rates they are charged, most respondents considered the general business conditions as their biggest fear when taking a loan from the microfinance firms. In other words, the microeconomic conditions of the country and how it can impact on their businesses ranks highest compared to interest charged and terms of payment.

In this study, over-indebtedness was hypothesized to be caused by the employment status of the customers. The study showed that the employment status of a potential microfinance client can be linked to the possibility of the client becoming over-indebted. Clients who self-employed ranked the lowest in terms of over-indebtedness, people with temporary employment ranked the highest the group that posed much more risk to the microfinance firms. People with permanent jobs often fell more into the latter group than the formal simply because of the same probable reason. Customers with small and medium scale businesses often take loans to invest in the business and so tend to make stead repayments as compared to clients without any business activity and only looking for a quick loan for personal use or make payment for bills like school fees, funeral expenses, etc. However, these loans for personal use are sometimes paid back much quicker and in bulk than those invest the loan into business and make payments in installment.

The financial literacy level of customers has also recently been considered in the literature on over-indebtedness in microfinance. The study found that financial literacy played a crucial role in the whether a customer may become over-indebted or not. This however, does not in any relate to the educational level of the customer. The study found that even some educated people have problem understanding certain financial terms and conditions. On the other hand, some people who have very little formal education tend to be very good in numeracy abilities and most acquired these skills through spending most parts of the life trading. Low financial literacy leading to misunderstanding of the terms and conditions of financial transactions is not endemic to the microfinance sector alone. This has been found to be one of the major causes of personal bankruptcies with individuals that deal with traditional lending institutions like the banks.

5.2 Recommendations

Microfinance has undergone tremendous transformation and bears very little resemblance to the model pioneered by Dr Yunus in Bangladesh two decades. The progression of the microfinance model from an innovative supplier of credit to poor but entrepreneur people in rural areas to a lender that combines traditional banking practices and new adaptable credit practices means that the industry needs to be examined to ensure the goals and aspirations of global microfinance are not sacrificed for mere profitability and sustainability of the microfinance institutions.

In order to address the level of over-indebtedness in the microfinance sector in Ghana, there is the need for greater transparency in the operations of the institutions. Greater transparency in terms of what customers are charged when they can enjoy lower tariffs or prices when the cost of the factors determining the interest rate decline. As at now, customers have no way of ascertaining whether they are getting a fair price on the loans they take.

Another important innovation currently needed in the microfinance industry is the need for data collection and storage, and existence of credit rating agencies that can provide information on the credit worthiness of customers. The absence financial infrastructures like credit agencies, central data management of these the microfinance activities make any innovations in lending almost impossible. Most institutions have resorted to mandatory savings with the microfinance firm as a condition for securing loans. This practice eliminates the risk of giving money to clients not bent on paying back. The result is that addresses some particular group in the market and deny the others, especially those who do not have the means to run a savings account.

Finally, the industry needs to be regulated to establish the distinction among microcredit agency, a microfinance institution and savings loans company. This is necessary in order to bring efficiency in the operation of these firms while not sacrificing the original goal the industry when it first began. This category will make that financial inclusion is achieved all groups of people within the economy. Villages and rural areas do not bear the same economic characteristics as the big towns and cities where this study was conducted. However, most of these organizations that began as true microcredit organizations are slowly morphing into savings and loan companies with business models totally alien to the original ideal of microfinance. These institutions have innovatively short-circuited the routes to traditional lenders and are operating standard banking services under the banner of microfinance. Nevertheless, since they address entrepreneurship at the basic level of society, it is important to keep them while not neglecting the original goals of microfinance.

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8.0 List of Abbreviations

ACOFOP - Community Forestry Association of the Petén

AMA – Accra Metropolitan Area

ASSIP – Agricultural Services Investment Project

BoG – Bank of Ghana

CGAP – Certified Government Auditing Professionals

FNGO – Financial Non-Governmental Organization

GAMC – Ghana Association of Microfinance Companies

GPRIS – Growth and Poverty Reduction Strategy

IMF – International Monetary Fund

MFI – Microfinance Finance Institution

MDG – Millennium Development Goals

NBFI-Non-Banking Financial Institution

NGO- Non-Governmental Organization

PNDCL – Provisional National Defense Council Law

UNCDF – United Nations Capital Development Fund

9.0 List of Figures

10.0 List of Tables

APPENDICES
APPENDIX A

Appendix 1: A map of Greater Accra showing the study area

Source: CERSGIS, University of Ghana.

APPENDIX 2: A Table of Average Loan Defaults per Year.

						Average loan defaults per year (%)						
Year						Microfinance firm						
	Multi	Abii	Melbone	Daakye	Eden	Capital	Adwenpa	G-Life	Obuoba	Shield	Mean	Standard Deviation
2007	7	8	6	11	9	7	6	5	8	10	7.7	1.9
2008	5	5	6	6	6	6	8	6	7	8	6.3	1.1
2009	6	4	8	4	6	4	6	5	8	11	6.2	2.3
2010	3	3	6	4	5	5	5	8	5	7	5.1	1.6
2011	5	4	7	5	4	4	5	6	6	5	5.1	1.0
2012	4	3	7	5	5	5	6	4	5	5	4.9	1.1
2013	5	6	8	6	5	4	4	5	7	4	5.4	1.3
2014	5	4	6	5	6	6	3	4	5	4	4.8	1.0

Source: own data

APPENDIX 3: A Table Showing Average Loan Recovery per Year of Ten Microfinances

				LOAN RECOVERY (%)						
Microfinance Firm	2007	2008	2009	2010	2011	2012	2013	2014	Mean	Standard Deviation
Multi	63.9	83.45	85.15	93.45	94.5	98.5	91.34	93.65	88.0	10.2
Abill	73.5	78.8	92.5	82	80.5	75	78.51	82	80.4	5.4
Melbone	82	85	80	92.5	90	95	91.3	90.5	88.3	5.0
Daakye	58.34	65	68.84	74.3	81.5	83.4	80.95	85.9	74.8	9.2
Eden	80.25	79.5	85.5	80.5	92.5	94.75	90.21	88.93	86.5	5.6
Capital	76.4	80.3	85	80	78.4	82.35	93.5	90	83.2	5.5
Adwenpa	85.5	90	94	88.5	95.5	90.2	98.35	93	91.9	3.9
G-Life	71.35	86.75	92.75	85.5	90	94.3	95.8	97.56	89.3	7.8
Obuoba	84	79.35	85	90.5	82.6	84.95	87	87.45	85.1	3.1
Shield	79.35	84	80.5	95	98.35	90	94	98	89.9	7.2

Source: own data

Appendix 4: A Table of Average Interest Rates per Year

							Average interest rate per year					
year						Microfinance firm						
	Multi	Abii	Melbone	Daakye	Eden	Capital	Adwenpa	G-Life	Obuoba	Shield	Mean	Stand Deviat
2007	65	76	62	75	64	72	56	65	74	76	68.5	6.6
2008	55	65	58	68	67	70	54	64	67	71	63.9	5.8
2009	47	67	55	56	58	67	54	67	54	65	59	6.7
2010	45	56	52	57	52	64	48	61	51	65	55.1	6.4
2012	30	47	41	52	43	47	46	46	45	54	45.1	6.2
2013	35	43	36	47	42	46	45	42	44	52	43.2	4.7
2014	35	42	34	45	42	45	45	42	45	53	42.8	5.1

Source: own data

Appendix 5 A tables of Regression Results for Interest rate and over-indebtedness

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.775133279
R Square	0.600831601
Adjusted R Square	0.201663202
Standard Error	3.137858162
Observations	3

ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	14.8205128	14.8205128	1.50520833	0.43536536
Residual	1	9.84615385	9.84615385		
Total	2	24.6666667			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-0.596153846	7.7642787	-0.0767816	0.95121503	-99.250669	98.0583609	-99.250669	98.0583609
X Variable 1	0.326923077	0.26646936	1.22686932	0.43536536	-3.0588911	3.71273726	-3.0588911	3.71273726

Source: own data

Appendix 6 A tables of Regression Results for Employment status and over-indebtedness

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.99767286
R Square	0.99535114
Adjusted R Square	0.99302672

Standard Error	0.97741486
Observations	4

ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	409.08932	409.08932	428.213415	0.00232714
Residual	2	1.91067961	0.95533981		
Total	3	411			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-1.0757282	0.61062327	-1.7616888	0.22018226	-3.703028	1.55157173	-3.703028	1.55157173
X Variable 1	0.35650485	0.01722802	20.6933181	0.00232714	0.28237868	0.43063103	0.28237868	0.43063103

Source: own data

Appendix 7 A Table of Regression Results for Financial Literacy and Over-indebtedness

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.77513328
R Square	0.6008316
Adjusted R Square	0.2016632
Standard Error	3.13785816
Observations	3

ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	14.8205128	14.8205128	1.50520833	0.43536536
Residual	1	9.84615385	9.84615385		
Total	2	24.6666667			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-0.5961538	7.7642787	-0.0767816	0.95121503	-99.250669	98.0583609	-99.250669	98.0583609
X Variable 1	0.32692308	0.26646936	1.22686932	0.43536536	-3.0588911	3.71273726	-3.0588911	3.71273726

Source: own data

Appendix B

A. DEMOGRAGHIC INFORMATION

1. Gender: 1. Male 2. Female

2. Age of respondent: ……………………………………………………..

3. Marital status: 1. Single 2. Married

4. Level of education

   A. Primary

   B. Secondary

   C. Tertiary

   D. No education

B. CREDIT ACQUISITION HISTORY

1. How many times have you applied for a loan with a microfinance firm? ………………..

2. What is the average amount you were granted in the loan application?

   A. 1 Ghs to 100 Ghs D. 500 Ghs and above

   B. 101 Ghs to 300 Ghs

   C. 301 to 500 Ghs

3. What was the interest rate charged on the loan? ……………………………..

4. How much was the instalment amount? ……………………………………

5. How long did it take for you to receive your loan from the Microfinance firm?

A. 1 day to two weeks

B. 3 weeks to 1 month

C. 2 months to 3 months

6. What was the purpose of the loan?

A. To start a new business

B. To expand an existing business

C. To serve as house keeping

D. To pay for ward school fees

E. Others, please specify……………………………………………….

7. Which of these requirements did you have to satisfy before the loan was given to you?

A. Physical collateral

B. Social collateral

C. Savings

D. Guarantors

E. Others, please specify………………………….

8. Were you able to pay the loan on time?

A. Yes

B. No   Why? ……………………………………………

9. Which of the following happens when you try to overcome your debt?

A. Selling essential personal assets

B. Borrowing from another microfinance firm

C. Sacrificing the school fees of your kids

D. Borrowing from friends and family

9. Which of the following is your biggest challenge in repaying a loan?

A. The interest rate

B. The repayment schedule (size of instalment and payment spacing)

C. The business conditions

10. How much do you earn from your economic activities monthly?

A. 10 Ghs to 100 Ghs

B. 150 Ghs to 300 Ghs

C. 500 Ghs to 1000 Ghs

D. 1000 Ghs and above

11. Have you ever borrowed from more than one microfinance firm at a time?

A. Yes. Why? …………………………………….

B. No.

C. QUESTIONS ON FINANCIAL LITERACY

1. Compute the answer for 7*4 = ………………………………

2. If 5 people have to share a profit of Ghs 2000, how much will each receive?

3. What is 10% of Ghs 500?

A. Ghs 100

B. Ghs 50

C. Ghs 250

4. This year, your income has doubled and the prices of all goods have also doubled. Your income can buy:

A. More goods

B. Same amount of goods

C. Less amount of goods

5. You owe Ghs 100 with 1% interest charged each month. You pay an instalment of Ghc 3 every month. How many years will it take to completely pay the debt?

A. Less than 5 years

B. 5 to 10 years

C. 10 years and more

6. You have taken a loan of Ghc 100. You are given two payment options: (1) Pay 12 monthly instalments of Ghc 10; (2) Pay Ghs 120 a year from now. Which is the better option?

A. Option 1

B. Option 2

C. They are the same