CHRISTIAN SERVICE UNIVERSITY COLLEGE

SCHOOL OF BUSINESS

DEPARTMENT OF ACCOUNTING AND FINANCE

DETERMINANTS OF LOAN DEFAULT OF MICROFINANCE INSTITUTIONS IN GHANA

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DECLARATION

We have read the university regulations relating to plagiarism and certify that this report is all our own work and do not contain any unacknowledged work from any other source. We also declare that we have been under supervision for this report herein submitted.

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SUPERVISOR'S DECLARATION

I hereby declare that the Preparation and Presentation of this dissertation was Supervised In accordance with the guidelines on supervision laid down by Christian Service University College.

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DEDICATION

This thesis work is dedicated to the almighty God for the gift of life, grace and good health, it been him from the beginning and we are grateful. Also to our husbands, they have been a constant source of support and encouragement during the challenges of graduate school and life. We are truly thankful for having them in our lives. This work is also dedicated to our parents and family, who have always loved us unconditionally and whose good examples have taught us to work hard for the things that I aspire to achieve and to Mr. Abraham Osei-Wusu (CA) our able supervisor and the entire staff of the Accounting and Finance Department .

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ABSTRACT

A growing challenge that threatens the sustainability of microfinancing in Ghana and developing countries is loan default. This is the situation where customers fail to repay the loans granted to them. This study thus examines the determinants of loan default in Ghana, considering demographic factors neglected in research. This study uses the available financial dataset of five deposit-taking microfinance institutions for eight years (2010 to 2018). The study also employs quantitative analysis (including logistic regression) to assess the effect of gender, loan frequency, amount of loan, and loan type on the default rate of selected microfinance institutions in Ghana. The study finds that that gender does not influence the loan default of microfinance institutions. This was statistically insignificant (β=-0.286; p-value=0.32). Other factors such as loan frequency and amount of loan given were equally not statistically significant. Therefore, they do not influence the loan default rate of microfinance. Only loan type was statically proven to be significant in the influence of loan default. The study recommends that microfinance institutions should not pay too much attention to individual characteristics but rather to the business and loan characteristics when assessing the creditworthiness of potential borrowers. Also, Priority should be given to female clients than males when given loans. Moreover, the institution should have clear and effective credit policies and procedures and must be regularly reviewed. In addition, the government and hence the Bank of Ghana should periodically monitor and supervise the MFIs to ensure the safety of clients' deposits and customers' confidence.

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CHAPTER ONE

INTRODUCTION

1.0 Introduction

The chapter provides insight into the study with a background, statement of the problem, research objectives, and research questions that serve as the driving force for this study. This chapter further provides the significance, scope, and limitation of the study, and finally, the organization of the study.

1.1 Background of the Study

There have been calls from different players and stakeholders to alter the means and mechanisms used for poverty alleviation (Gyimah and Ogechi, 2021). Varied means and policies have been instituted to find a sustainable solution to poverty (Ogechi et al., 2021). The United Nations Millennium Development goals and now the Sustainable Development Goals (SDGs) (UN, 2015) have all focused on improving the lives of people through poverty alleviation (Gyimah and Ogechi, 2021). Most governments' projects and policies equally target poverty alleviation and financial inclusion of the poor, especially with microfinance (Gyimah and Boachie, 2018).

Microfinancing through granting credit to the less-privileged has come a long way (Bichanga and Aseyo, 2013). Certainly, microfinance is not a new concept in Ghana because it has been common for people to save or set aside part of their income or take small loans from individuals, groups, or institutions for economic activities (Gyimah and Boachie, 2018). History reveals that the first credit union in Africa was established in Ghana (Bank of Ghana, 2007). "Susu," on the other hand, is believed to have originated from Nigeria. These strides have progressed to become microfinance institutions whose primary goal is to provide access to credit to low-income earners.

Such advancement, therefore, is recognized as a solution to poverty alleviation and a platform for economic development (Bichanga and Aseyo, 2013; Jalloh, Appiah, and Gyimah, 2019). In developing countries, access to financial aid to respond to emergencies is hard nuts to crack, especially for poor households without collateral. The inception of microfinance has been a milestone in the roadmap to financial inclusion (Bichanga and Aseyo, 2013). Access to financial means may not entirely solve all problems of the poor but give them the power to create a gradual resilience strategy toward wealth creation (Gyimah and Boachie, 2018).

Indeed, empirical studies have shown that micro-finance helps indigent households meet basic needs and protects against risks, thus improving household economic welfare. The role of microfinance can be better explained by the Bank of Ghana (2007). They posit that microfinance seeks to create institutions that deliver financial services to the poor, continuously ignoring the formal banking sector. The poor are generally excluded from the financial services sector of the economy, so MFIs have emerged to address this market failure. Credit products offer clients the ability to borrow money in exchange for an agreement to repay the funds with interest or fees at some future point(s) in time (Ledgerwood, Earne, and Nelson, 2013).

Despite several decades of significant investments in the sector, access to and usage of formal financial services remains low, particularly in Sub-Saharan Africa. In Ghana, the rate of inclusion was ranked at 56% of the total adult population in 2013

(Ledgerwood et al., 2013). The progress and the call for financial inclusion through the establishment of microfinance institutions face the threat of loan default that jeopardizes their viability and capacity to increase their loanable incomes (Jalloh et al., 2019). Ledgerwood et al. (2013) revealed that clients of MFIs do not always use loans for productive purposes. The possibility that an MFI may not receive its money back from borrowers is the most common (Aidoo and Mensah, 2018). This is a serious vulnerability to the operation of microfinance which may have long-term consequences if not addressed. Most micro loaners are unsecured; default can quickly spread from a handful of loans to a significant portion of their portfolio. This is because microfinanciers are located within some geographical regions, and their portfolios are invested in these areas; therefore, such incidences become contagious (Aidoo and Mensah, 2018). A crash in a leading economic sector employing the majority of credit recipients is likely to cause high default turnover (Jalloh et al., 2019).

MFIs need a monitoring system that clarifies repayment problems clearly and quickly so that loan officers and their supervisors can effectively manage repayment rates. An alternate means of looking at this challenge is considering gender roles and other determinants in loan default. Therefore, a study to examine the determinants of loan default is welcome. To make an in-depth inquiry and get a firm grip on the context-specific issues underlying microfinance institutions, the study employs financial and non-financial datasets to ascertain the determinants of loan default in Ghana.

1.2 Problem Statement

Microfinance in Africa has significantly boosted the continent's development through credit creation and increasing the poor's access to soft loans (Jalloh et al., 2019). This is undertaken by granting soft loans, rendering savings, insurance, transfer services, and other financial products and services. The bank sees the microcredit of Ghana as one of the critical dimensions of the broad range of financial tools for the poor (Gyimah and Boachie, 2018). The sector upon its institutions in the mid 90's has encountered several challenges, including capacity building, inadequate and expensive infrastructure base; credit delivery and management; information gathering and dissemination; regulation, and supervision (Boateng and Agyei, 2013). Microfinanciers in Ghana are challenged with improper regulations, increased competition from the formal banking sector, instability, limited management capacity, political interference, high transaction cost, inadequate investment in agriculture development, low level of knowledge (Muhammad, 2010).

A growing challenge that threatens the sustainability of microfinancing in Ghana and developing countries is loan default (Addae-Korankye, 2014, Boateng and Agyei, 2013). This is the situation where customers fail to repay the loans granted to them. The sustainability of financial institutions such as microfinance is not acquiring customers but ensuring high portfolio quality (Addae-Korankye, 2014). Financial institutions' ability to collect their loans or credit granted to individuals, firms, and associations effectively and efficiently should be assessed at 100% repayment, or worst low delinquency/default, cost recovery, and efficiency (Jalloh et al., 2019). This ensures higher security of depositor's money; higher liquidity rate and ability increase their lending ability in the quest to improve the poor and lower-income earners' access to credit. Aidoo and Mensah (2018) argue that credit risk continues to be a danger to microfinance sustainability.

There has been an increase in complaints about the high rate of default (Addae-Korankye, 2014). MFIs record a high default rate, which means that most microfinance institutions are not attaining the internationally accepted standard risk of 3% of their bank's portfolio, which raises concern about the impact on businesses, individuals, and the economy. Surprisingly, previous studies that have delved into ascertaining the factors or determinants of loan defaults of microfinance or financial institutions are unknown (Jalloh et al., 2019). Existing studies also focus on risk and performance (Awo and Akotey, 2019), gender (Jalloh et al., 2019), small farmers (Awunyo-Vitor, 2012), and large banks (Mabvure et al., 2009); neglecting microfinance and demographics factors. Against this background, the study seeks to find out the role of gender, loan amount, loan frequency, and loan type in loan default risks in the operations of microfinance institutions in Ghana.

1.3 Research Objectives

This research aims to examine the determinants of loan default among Microfinance clients in Ghana. The study, therefore, seeks to fulfill these objectives;

1. To find out whether gender affects loan default of microfinance institutions in Ghana.
2. To examine the effect of the loan amount on the loan default rate of microfinance institutions in Ghana.
3. To ascertain whether loan frequency has an impact on the loan default rate of microfinance institutions in Ghana.

4. To determine the effect of loan type on the loan default rate of microfinance institutions in Ghana.

1.4 Research Questions

1. Does gender affect the loan default rate of microfinance institutions in Ghana?
2. What is the effect of the loan amount on the loan default rate of microfinance institutions in Ghana?
3. Does loan frequency have an impact on the loan default rate of microfinance institutions in Ghana?
4. What is the effect of loan type on the loan default rate of microfinance institutions in Ghana?

1.5 Significance of the Study

The growing number of loan defaulters in the country is hindering the capacity of microfinance to increase wealth creation through credit. Their activities reduce their loanable income and profitability to run loans schemes. Accessing the factors or determinants of loan defaulters can open up further studies on approaching each variable with loan products. Different products can be developed to support each determinant to suit their needs and increase risk portfolio for microfinance in the country, hence, their viability. This discovery gives the bank of Ghana and other regulating bodies the evidence to probe further to control the increasing level of loan default in Ghana.

Moreover, the study's findings would benefit governments in terms of policy decisions because improved loan repayment is more likely to sustain microfinance institutions.

The sustainability of microfinance institutions would create more employment that can help reduce the unemployment rate in Ghana. In addition, the study can aid the management of microfinance institutions to detect factors that cause non-repayment of loans to put up prudent measures to mitigate such risks or incidences in the future. Finally, the study adds to extant literature to understanding determinants of loan defaults in a broader perspective. This can serve as a reference point for researchers who would like to conduct similar research in this perspective.

1.6 Research Methodology

This study examines the determinants of loan default in Ghana, considering demographic factors neglected in research. This study uses the available financial dataset of five deposit-taking microfinance institutions for eight years (2010 to 2018). The study also employs quantitative analysis (including logistic regression) to assess the effect of gender, loan frequency, amount of loan, and loan type on the default rate of selected microfinance institutions in Ghana.

1.7 Scope of Study

The study focuses on loan default in the financial sector using microfinance institutions as an evidence-based perspective in Ghana. Various causes of loan default, especially the role of gender, loan amount, loan frequency, and type of loan and their impact on the operations and activities of microfinance, are only issues considered or the scope for the study.

1.8 Limitation of the Study

The study assesses loan history over the years (precisely eight years, 2010-2018) to make inferences to answer the questions posed. The findings, therefore, cannot be generalized for other geographical areas with different socio-economic characteristics since the ability of clients to repay loans is highly influenced by economic standards. Bardhan and Mukherjee (2013) add that loans default is higher in developing countries than developed ones. This infers that findings for this study can be used with other research findings to make decisions, but depending solely on it may be misleading and inaccurate. Moreover, most microfinance institutions are located within a suburban-dormitory community that has a predominantly lower native population and high migrant populace. These and other findings should equally be taken into consideration when using data obtained.

1.9 Organisation of the Study

The study is in five chapters. Chapter one encompasses the background of the study together with the problem statement, research objectives, research questions, significance, scope, limitation, and organization of the study. Chapter two consists of the review of substantial literature about the topic under investigation. Chapter three presents the methods used to collect and analyze data and a detailed description of the research design, techniques, data collection methods, models, and validity and reliability of data. Chapters four presents the results and discussions to achieve the study's objectives. Finally, the final chapter (chapter five) summarizes the findings, provides the study's conclusions and suggests implications or recommendations for stakeholders.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter seeks to present a comprehensive review of microfinancing and loan default in perspective. The inception of microfinance in 1955 by the Canadian Catholic missionaries has increased access to credit to the rural residents and urban poor (Bank of Ghana, 2007). The performance of this responsibility, however, faces a backslash. Microfinance institutions face various challenges that affect the effective delivery of their role to increase the ordinary person's access to credit (Boateng and Agyei, 2013). These challenges affect their operation and expansion and include loan default poses a significant threat to funds mobilization and access to credit among poor and lower-income earners. This chapter, therefore, presents the history of microfinance in Ghana, the theoretical review underpinning this study, a comprehensive look at the concept of loan default, causes and control of loan default, and the conceptual framework of this study.

2.1 Theoretical Framework (Village Savings and Loans Associations -VSLAs)

Various practices in Africa lead to the development and improvement of the informal sector. Innovations developed and nurtured in Africa have contributed to the development of women and informal activities in the continent. Several initiatives such as susu, cooperative associations, Village Savings and Loans Associations, etc., have immensely impacted funds mobilization and organization of informal activities. Village savings and loans associations have proved sustainable and thriving in the microfinancing sector. This study, therefore, is guided by this model.

2.1.1 History and Definition of VSLAs

The formal financial sector became difficult for low-income farmers and rural dwellers in developing nations to benefit from credit facilities (Cheng and Li, 2009). Informal financial mechanisms such as 'Susu,' VSLAs, etc., became alternatives that served as solutions to market failures. These were under various Community Development Funds (CDFs) born to solve the problems faced by rural and smallholder farmers. These developments brought forth several mediums to facilitate credit services in the informal sector. These CDFs operated in savings and loans devoid of the institutional, legal framework and bureaucracies. Some CDFs are Rotating Savings and Credit Associations (ROSCAs), Village Savings and Loans Associations (VSLAs), 'Susu' Associations, etc. The concept or term Village Savings and Loans Associations share similarities with several microfinancing schemes and models implemented in Africa. One similar practice found in literature was Village Savings and Credit Association (VSCAs), cited by Gichuki, Mulu-Mutuku, and Kinuthia (2014). Their definition of VSCAs did not differ from what was quoted in the literature. This review, therefore, considers the two, Village Savings and Loans Associations and Village Savings and Credit Association, to be the same and can be used interchangeably. However, VSLAs can be used in reference to both.

The concept originated in Niger in 1991 by a non-for-profit organization called care (Adams, Mohammed, and Boateng-Kwakye, 2014). CARE was initially founded in 1945 to bring emergency relief to the survivors of World War II in Europe and East Asia. Still, over the years, the organization has expanded its work and now operates in more than 65 developing countries across the globe. CARE's mission is to help tackle the underlying causes of poverty so that people can become self-sufficient and live in dignity and security. Gichuki, Mulu-Mutuku, and Kinuthia (2014) posit that VSCAs have become a common medium of funding for women in rural areas and urban slums of Sub-Saharan African countries.

According to Anyango et al. (2006), "VSLA is a time-bound Accumulating Savings and Credit Association (ASCA), where between 15 and 30 people save regularly and borrow from the group fund" (cited by Adams, Mohammed, and Boateng-Kwakye, 2014). A Village Savings and Loan Association is born when a group of 20 to 30 people save money together, earn interest and give each other loans. Gichuki, Mulu-Mutuku, and Kinuthia (2014) found that demand for credit may not always offset the supply of credit services in the credit market (Gichuki et al., 2014), but some challenges prevent loan providers from meeting borrowers demand. Such as there is a lack of a well-organized credit market and accompanying higher transaction and interest charges due to the lack of demand for credit from small firms' owners. Karlan et al. (2011) defend that VSLAs was a solution from Non-Governmental Organizations (NGOs) to provide microcredit and micro-savings products to the poor. Many of these mediums of promoting informal savings-led microfinance have contributed to improving the model of informal associations indigenous to many societies. Most microfinancing schemes and associations features follow VSLAs (Karlan et al., 2011).

The models have afterward been replicated in many African countries such as Tanzania, Zimbabwe, and Ghana. CARE has promoted the methodology across Africa, Asia, and Latin America based on its proven impact. Currently, VSLAs number 54,000 in 21 African countries in Africa. It also operates in more than 54 developing nations across the globe.

2.1.2 How VSLAs Operates

The VSLA overpowers many obstacles encountered in accessing credit services from formal financial providers. VSLAs adopted an approach to reach the very poor and rural population better than the institutions mentioned above. A Village Savings and Loan Association (VSLA) is practiced among a group of people with a common goal to contribute and raise funds to finance their activities communally. The model was based on CARE's blueprint implemented in Niger in 1991. VSLAs involve 15-25 people (mostly women) who save together and take small, low-interest loans from their savings. VSLAs are self-formed and managed by elected members. Leaders can be replaced before their turn of office for underperformance. The management consists of a five-member management committee. It is made of a chairperson, treasurer/box keeper, secretary/record keeper, and two money counters. The association operates with a constitution that members draw that with the help of Village Agents. VSLAs constitutions contain a social fund and share purchase and loan policies.

Contribution is made in the form of share purchase. The share value is decided by themselves and documented in their constitution when the group is formed. The loan fund is comprised of share money and loan profits (from interest), and all the members have the right to borrow up to 3 times the value of their shares. All members of a VSLA are qualified to take advances that are given for purposes that are consented to by the relationship, as noted in its constitution. The affiliations set credit terms. In the first cycle, credit terms don't typically surpass three months. It can even be shorter. The span of advance access to a member might be connected to the complete estimation of his or her share value but not their need. This averts possible situations where a member may obtain definitely more than they have spared and be overpowered by an excessive amount of credit. In the meantime, it is significant that the most extreme sum that a member can obtain is in overabundance of his or her reserve funds to expand the level of assets being used. Interest is charged on advances and falls due at regular intervals. The measure of interest charged fluctuates from relationship to affiliation, fixed as they choose.

Loans received by VSLAs beneficiaries are supposed to be used for productive activities, but the social fund caters to other social costs. It is an essential component of the VSLA as it enables the group to help cover unexpected financial emergencies, such as a fund to cover funeral expenses of family members, which are repaid per the group's constitution. Social VSLAs loans are interest-free (Abdul-Moomin et al., 2018). VSLAs are also run on a cycle basis. This means that members cannot access their contributions until the end of the operating cycle. When loans are repaid and a cycle ends, money is disbursed per member share of ownership. VSLAs operate in the form of share equity, where shareholders enjoy percentage returns based on their investment value. This sharing formula of means is agreed upon and stated in the constitution that guides an association's operation.

VSLAs is powered by Join My Village (JMV). Gichuki et al. (2014) found that VSLAs, although formed and managed by members, require more financial management skills because of record-keeping in the management of loans. JMV was then introduced, where Village Agents (VAs) are sent to communities to assist with the management of VSLAs. CARE field staff for Join My Village (JMV) plays an important role in helping to form, train and coach the group leaders. They bring aboard the expertise that the associations need to function effectively. The Village agents are members of VSLAs but have already gained enough skills through training and experience to help newly established associations grow. They work hand in hand with CARE's JMV field staff at the ground level. They empower the members and leaders to ensure sustainability, as they will have the skills necessary to continue supporting these groups on their own. JMV supports VAs through training and materials needed to execute their responsibilities effectively.

2.2 Definition of Microfinance

Bridging the financial gap between the rich and the poor has always been a key determinant of developing nations' policies and programs. At least every family or individual should have access to basic amenities and services that guarantees the fullness of life and happiness. This is believed to have encouraged state intervention in financial markets even in the absence of market failures since demand and supply factors do not always favours the poor or grant even distribution of resources (Boateng and Agyei, 2013). The Millennium Development Goals (MDGs) instituted by the United nations prompted the various global discussions to universally agree to respond to common challenges affecting the world citizens, especially in developing economies, and less deprives localities. Poverty alleviation was the number one target on the list. Major strides have been made since its inception and its successor, Sustainable Development Goals (SDGs), which seeks to reduce poverty to zero by 2050 (UN, 2015).

Many events have influenced the landscape for financial services for the poor. Today, there is broad recognition that access to capital is only one of the inputs required for economic development and poverty alleviation. Granting access to credit to the poor, less privileged, and financially advantaged in the society was instituted through the birth of MFI (Bank of Ghana, 2007). Schreiner and Colombet (2001) define microfinance as a means "… to improve ways by which small loans and small deposits from the poor are ignored by the commercial banks (Cited in Aidoo and Mensah, 2018). Boateng and Agyei (2013) broadly define microfinance as the; "small-scale financial services (credit and savings) provided to people who farm or fish or herd; who operate small enterprises or micro-enterprises where goods are produced, recycled, repaired, or sold; who provide services; who work for wages or commissions; who gain income from renting out small amounts of land, vehicles, draft animals, or machinery and tools; and to other individuals and groups at the local levels of developing countries, both rural and urban".

The terms microcredit and microfinance have been cited in the literature. The terms were used by Ledgerwood et al. (2013) in their "the new microfinance handbook" published by the Bank of Ghana, but no distinction was made. For the past years, microcredit and microfinance have been used interchangeably among people within the country; it is, therefore, essential to draw attention to the differences between the two, which sometimes confuse people (Boateng and Agyei, 2013). Boateng and Agyei (2013) explained microcredit as small loans, while microfinance is suitable where NGOs and MFIs complement the loans with other financial services such as saving, insurance, etc. Microcredit is an element of microfinance that involves giving credit facilities to poor people, but microfinance means providing extra noncredit financial services such as insurance, savings, and payment services (Bank of Ghana, 2007; Boateng and Agyei, 2013).

This brief review has opened up the reasons behind the birth of microfinance. MFIs create access to productive capital for the poor, which, together with human capital, is addressed through education and training. Social capital, achieved through local organization building, enables people to move out of poverty (Bank of Ghana, 2007). This increases their financial prowess and ability to participate in economic activities. Granting the poor access to credit reduces drains on government institutions to continuously create interventions to engage the increasing unemployed populace because they are able to set up small means of engagement to provide for their families.

Amidst the justification of microfinance's ability to reduce poverty among the poor, others differ owning their concerns to the effectiveness of contemporary schemes (Hulme and Mosley, 1996 cited in Bank of Ghana, 2007). They add that in some cases, the poor have been worst off with the advent of microfinance. This is evident in the Ghanaian context, where most savings and loans, credit unions, and microfinance fall under MFIs, collapsing, leaving customers stranded and indebted. Notwithstanding that microfinance is worth creating, the necessary measure should be put in place to address the developing challenges through encouraging research into realities on the ground.

2.3 Historical Development of Microfinancing in Ghana

The years of microcredit which was linked primarily to one product, the productive loan invested in a microenterprise, delivered primarily by one type of provider; thus, a microfinance institution (MFI) has gradually made way for microfinancing (Ledgerwood et al., 2013). Microfinance is believed to have surfaced informally in the eighteenth and nineteenth centuries. Microfinance was alternative banking to the commercial and private banking sector for the poor. In South Africa, it has a much longer history and existed in the form of savings and credit groups operating in the form of "susus" of Ghana, "chit funds" in India, "tandas" in Mexico, "arisan" in Indonesia, "cheetu" in Sri Lanka, "tontines" in West Africa, "hui" in China, "paluwagan" in the Philippines and "pasanaku" in Bolivia, as well as other clubs found in other parts of the world**.** Different stories and history back banking in each country cannot be presented in this research report. The study's primary focus is Ghana, and, therefore, a review of the development of microfinancing in Ghana is presented.

Certainly, microfinance is not a new concept in Ghana. It has always been common practice for people to save and/or take small loans from individuals and groups within the context of self-help in order to engage in small retail businesses or farming ventures. Anecdotal evidence suggests that the first credit union in Africa was probably established in Northern Ghana in 1955 by the Canadian Catholic missionaries that were there at the time. However, Susu, which is one of the current microfinance schemes in Ghana, is thought to have originated in Nigeria and spread to Ghana from the early 1900s. Over the years, the microfinance sector has thrived and evolved into its current state thanks to various financial sector policies and programmes such as the provision of subsidized credits, establishment of rural and community banks (RCBs), the liberalization of the financial sector and the promulgation of PNDC Law 328 of 1991, that allowed the establishment of different types of non-bank financial institutions, including savings and loans companies, finance houses, and credit unions, etc. (Bank of Ghana, 2007).

Many events have accounted for the changing landscape for financial services for the poor, but three significant "big picture" influences warrant discussion and are the subject of this opening chapter (Ledgerwood et al., 2013). The first has been a shift from a narrow focus on the institution and its performance to a much broader focus on clients. This is towards understanding clients' behavior, financial needs, and how providers can respond well to such needs**.** The widening view of microfinance has increased its reach and brought a major impact on the individual. Microfinance now includes all financial services rendered to the less privileged in societies to improve the quality of life of the poor. The second important shift has been from a narrow supply-led view to a broader focus on the financial ecosystem. In addition to a renewed focus on consumers, proponents of the "systems" approach acknowledge the variety of providers and services, including the substantial role of the informal sector. They also acknowledge the need for effective rules that govern the system and supporting functions such as credit bureaus or payment systems. The result has been a much more holistic view of the sector and a more coordinated effort by government and industry to focus on increasing financial inclusion and, ultimately, making markets work better for the poor. The third shift has been the massive opportunity to expand outreach through new business models based on branchless banking using technology and agent networks. However, while the opportunity seems vast, only a few branchless banking applications have reached a significant scale to date. At the time of writing, this area of tremendous promise requires a lot more work and testing to understand and determine ways to take advantage of the opportunities that technology presents.

The milestones achieved from the early 1950s were presented by Aidoo and Mensah (2018). The revealed that subsidised credit was introduced in the 1950s, which led to the establishment of the Agriculture Development Bank in the 1965. The main aim of this institution was to provide financial needs to farmers and fishermen. The setting up of Rural and Community Banks as well as regulations set out by the Central Bank was done in the 1970s and the early 1980s. Also, the movement from a limiting financial sector system to a liberalized system in 1986 as regulation by the mother bank. Dissemination of PNDC law 328 in 1991 to permit the setting up of the various categories on non-bank financial institutions as well as the saving and loans. Since then, the country's growing access to financial services has expanded the financial services that help economic activities.

2.3.1 Classification of Microfinance Institutions in Ghana

The mother bank of Ghana, the Bank of Ghana, has grouped microfinance institutions into various categories rendering similar products to different people in other parts of the country. They include the saving and Loans companies, Rural and Community Banks, Credit Unions, and non-Governmental Financial Organizations (Aidoo and Mensah, 2018). Bank of Ghana (2007) put these into categories. They posit that there are three broad forms of microfinance institutions operating in the country, and they include: formal suppliers of microfinance (rural and community banks, savings and loans companies, commercial banks), semi-formal suppliers of microfinance (i.e., credit unions, financial non-governmental organizations (FNGOs), and cooperatives) and informal suppliers of microfinance (e.g., susu collectors and clubs, moneylenders and other individuals). The formal and informal MFIs are hereby discussed.

I. *Saving and Loans Companies:* Saving and loans companies are financial institutions controlled by the Central Bank which require minimum capital requirements lower than the commercial banks but higher than the rural and community banks under the Non-Bank Financial institution law 1993. The motive behind this law is to help the speedy expansion and transformation of the financial services belonging the private individuals and organizations into saving and loans companies working in the rural and urban areas in the country. These banks normally serve the informal sector, whose are mostly an unbanked population, and design products and services that meet the needs of the group within the country. These banks are controlled in terms of a range of financial services such as providing credit to SMEs and low-income clients, money transfer, mobilization of deposits by the Bank of Ghana. They used normally used methodologies of microfinance to provide an average loan size to their clients that are higher than the various microfinance institutions the spreading within the country.

II. *Rural Banks:* Rural banks are entity banks that belong and are directed by people living in the community. These banks are recorded under the company code and are accredited by the Bank of Ghana to participate in the banking business. Per the company code, these are not allowed to open branches throughout the country but are allowed to open agencies within their areas of operations. The key functions of these banks are saving mobilization and provision of credit facilities to reliable clients within their catchment areas. The aim reason why the Bank of Ghana licensed these rural banks is to serve as a way of developing the rural areas within the country.

III. *Credit Unions:* Credit unions are licensed under the Cooperatives branch as a cooperative parsimony society in Ghana and are allowed to receive a deposit and offer loans to only their members. These unions have set up an organization known as CUA, which serves as a regulatory apex body for its members and affiliates. Financial Non-Governmental Organizations are a semi-formal system that is included as companies certify under the companies' code. These FNGOs are recorded Registrar General but not accredited by the Bank of Ghana. FNGOs are usually vigorous within the rural communities and are usually done by the missions. They tailor their products and services to alleviate the poor customers living in the country. These FNGOs do not collect money in deposits from the customers but use external funds for microcredit. This money is generally from government programmes, donors, and social investors. Microfinance institutions in Ghana deal with the provision of financial services aiming to target low-income earners through designing products. These microfinance institutions manage their customers' funds.

2.3.2 Structure and Key Stakeholders of Microfinance in Ghana

The sector is regulated and managed by structures that affect the various stakeholders. Economics Web Institute (2007) revealed the system and critical microfinance stakeholders in Ghana to be the following

1. Microfinance Institutions include the Rural and Community Banks, Savings and Loans Companies, Financial NGOs, Primary Societies of CUA, Susu Collectors Association of GCSCA, Development and commercial banks with microfinance programs and linkages, Micro-insurance, and micro-leasing services.
2. Microfinance Apex Bodies, namely: Association of Rural Banks (ARB), ARB Apex Bank, Association of Financial NGOs (ASSFIN), Ghana Cooperative Credit Unions Association (CUA), Ghana Cooperative Susu Collectors Association (GCSCA)
3. End Users Economically active poor who are clients of microfinance products and services.

4. Technical Service Providers Business Development Service Providers to MFIs and their clients
5. Supporting Institutions comprises Microfinance and Small Loans Center (MASLOC); The Ghana Microfinance Institutions Network (GHAMFIN); Development partners and international non-governmental organizations and Universities, training and research institutions.

Government Institutions; Ministry of Finance and Economic Planning, Ministries, Departments, Agencies (MDAs) and Metropolitan, Municipal and District Assemblies (MMDAs), Bank of Ghana.

2.3.3 MFI Products and Lending Methodology

The financial products of most microfinance companies can be categorized into three. These include deposits, loans, and investments. The deposits may consist of micro-savings and special savings; the loan categories may consist of micro SME loans, personal loans, emergency loans, and microloans, among others. The investment option available at most microfinance institutions is fixed deposits (Daily Graphic, 2017). Lending Methodology Lending methodologies differ with respect to whether loans are made to groups or individuals and, in some cases, whether they must adhere to Islamic banking principles. The lending methodology chosen greatly influences product design, client selection, application and approval process, loan repayment, monitoring, and portfolio management. The lending methodology also impacts the institutional structure and staff requirements, including training and compensation. This was broadly discussed by Ledgerwood et al. (2013).

Group Lending

Group-based approaches lend either to the group itself as one loan, to individuals who are members of a group, or to groups who then on-lend individually to the members. Group lending reduces transaction costs and risks to providers. It often facilitates greater access to financial services for those difficult and expensive to reach, including remote, rural populations, those with low debt capacity, and those with no collateral or credit history. The group mechanism effectively shifts the bulk of the responsibility for screening, monitoring, and enforcement from the provider to the borrowers, thus some of the costs.

Individual Lending

Individual lending requires greater up-front analysis of clients and their cash flows, sometimes physical collateral, and frequent and close contact with clients during the loan term. Loan approvals and amounts are based on an applicant's eligibility and debt capacity, which in turn are dependent upon some factors, including personal and business characteristics. Cash flow analysis is used primarily for individual loans. It focuses on the overall cost structure of the household or microenterprise, including all revenues flowing in and expenses flowing out, anticipated cash flows during the term of the loan, and the absorptive debt capacity of the borrower. For clients without a credit history and formal employment, providers use other data to better assess risk and help currently unbanked clients develop a formal credit history.

Islamic Lending

Islamic banking requires special lending methodologies. Islamic (or Sharia-compliant) financial principles strictly prohibit giving or receiving any fixed, predetermined rate of return on financial transactions. Because Islamic law forbids gains on lending money, Islamic loans are often treated more like equity than debt, with lenders considered investors rather than creditors. Other Islamic banking principles state that; all financial transactions must be linked to a "real" economic activity involving tangible assets, and funds may not be invested in activities inconsistent with Sharia.

2.4 Challenges facing MFIs in Ghana

Generally, since the beginning of government involvement in microfinance in the 1950s, the sub-sector has operated without specific policy guidelines and goals. This partially accounts for the slow growth of the sub-sector and the apparent lack of direction, fragmentation, and lack of coordination. There has not been a consistent approach to dealing with the constraints facing the sub-sector. It is gratifying to note that the Government of Ghana has adopted microfinance as one of the essential strategies for poverty reduction and wealth creation. Recognizing the role various institutions and individuals can play to ensure the achievement of this national vision of achieving the MDGs and also becoming a middle-income country by the year 2015, there is the need to quicken the pace of reforms in the microfinance sector to unleash its full potential for accelerated growth and poverty reduction.

Efficient delivery of financial services, maintaining lower portfolio risks, and viability and profitability of MFIs are crucial to their sustenance. To attain these, milestones are hindered by challenges that make it difficult for MFIs to achieve full credit granting and mobilizations of funds among poor and less affluent households. Bank of Ghana (2007) revealed that most MFIs are faced with an institutional framework, capacity enhancement and funding, credit delivery, and management, data/information and dissemination, regulation and supervision, coordination. Crash of jurisdictions of stakeholders due to the undefined scope of operations hinders the delivery of responsibilities. Lack of technology of means of disseminating information to the public hinders effective delivery of services to clients. Information about products and communications are equally hindered.

According to Adjei (2010), the key challenges confronting the microfinance sector in developing countries like Ghana are capacity building, inadequate and expensive infrastructure base; credit delivery and management; information gathering and dissemination; regulation and supervision (Boateng and Agyei, 2013). Key challenges facing microfinance businesses are improper regulations, increased competition from the formal banking sector, instability, limited management capacity, political interference, high transaction cost, inadequate investment in agriculture development, low level of knowledge. These and other challenges presented are identified as affecting the activities of microfinance in the country and preventing them from delivering effective credit creation and revenue mobilization. It is up to the regulating bodies and institutions to find sustainable solutions to the above-presented problems.

2.5 Definition of Loan Default

Loan default can be defined as the inability of a borrower to fulfill their loan obligation when due (Addae-Korankye, 2013). Loan default is explained as the incapability of the borrower to abide by their loan's responsibility as at when the time for payment is due (Aidoo and Mensah, 2018). Jalloh et al. (2019) also defined a loan default as the inability to repay a loan given to a client according to the agreement between the two parties within a particular period. The terms loan default, credit risk, portfolio at risk, and delinquency have similar meanings, and most literature uses them interchangeably.

A loan becomes a defaulted loan when the chance of recovery becomes minimal. Delinquency is measured because it indicates an increased risk of loss, warnings of operational problems and may help predict how much of the portfolio will eventually be lost because it never gets repaid (Addae-Korankye, 2014). He adds that there are three broad types of delinquency indicators: collection rates which measure amounts paid against amounts that have fallen due; arrears rates measure overdue amounts against total loan amounts; and portfolio at risk rates which measures the outstanding balance of loans that are not being paid on time against the unpaid balance of total loans (Addae-Korankye, 2014).

Microfinance institutions worldwide, including Ghana, are faced with the challenge of loan default/delinquency. High default rates in MSMEs lending should be of significant concern to policymakers in developing countries because of its unintended negative impacts on MSMEs financing (Addae-Korankye, 2014). Practical and sound credit risk is critical to the stability of microfinance Banks. Credit institutions owe it a duty to secure depositors' funds. Hence, credit agencies attempt to prevent loan delinquency and default because if the loan is not paid, the lender's capital is lost, and the institution will no longer be sustainable. In all, the institution should be held accountable because any default is a leghold of a customer losing their investment and a challenge on credit access to others. This situation poses questions about the sustainability of the operations of such MFIs.

2.6 Causes of Loan Default

Microfinance institutions consist of community banks, cooperative banks, rural banks, thrift banks, cooperative credit unions, and NGOs instituted to support the informal sector. However, their primary role in granting credit for capital expansion and boasting to the informal sector faces a significant threat. Their portfolios are at risk due to high default rates. Loans are given to business owners, traders, and salary workers who have reportedly not met their payment requirements. Bank of Ghana (BoG) Financial Stability report covering operations of the banks reveals that Non-Performing Loans (NPLs) has hit 70% (GHC6.1 billion), leading some experts in the industry to worried that it might have collapse some banks (Aidoo and Mensah, 2018). In the case of microfinance, GHAMFIN 2008 reported the total non-performing loan of the microfinance institution was 6% in 2004, it increased to 9% in 2006 and further to 21% in 2007. They add that loans constitute about 50 to 70 of the operating capital of microfinance; therefore, non-performance affects the profitability and standings of the bank.

Balogun and Alimi (1988) also identified the major causes of loan default as loan shortages, delay in the time of loan delivery, small farm size, high-interest rate, age of farmers, poor supervision, non-profitability of farm enterprises, and undue government intervention with the operations of government-sponsored credit programmes. Moreover, Akinwumi and Ajayi (1990) found out that farm size, family size, the scale of operation, family living expenses, and exposure to sound management techniques could influence the repayment capacity of farmers. Findings from Kenya were quite different. The study appreciates that the non-performing loan and loan delinquency concepts are similar. Preliminary financial analysis, according to Sheila (2011), is another cause of loan default. This is when in the loans department, the officers do not take a careful study of the applicants to ensure that they have a sound financial base such that the risk of loss is mitigated in case of default. Sheila (2011) also points out that inadequate loan support is another cause of loan default in Uganda. He says that it is imperative that the loan personnel collectively ascertain the position in which the loanee finds themselves so that if he needs support, it's available to them. Unfortunately, that is not the case; even when the support is given, it is not adequate, leaving the business crumbling and leading to default.

The review also found that illiteracy and inadequate skills were another cause of default. The majority of the clients are engaged in traditional, low-paying businesses and rarely diversify their businesses and skills. This implies they do not know enough about alternative marketable skills to benefit them when their companies do not function properly. Secondly, most of them do not know how to read, write and make simple calculations. As a result, they do not know how to account for their businesses. Even when the lender makes an error, the borrowers are held liable for the loan. Again, the disappearance of loan clients was seen as another cause (Addae-Korankye, 2014).

Most customers often want to find out if these microfinance institutions are serious in collecting the loan payment since most MFIs employ staff who do not have much knowledge in the financial industry (in terms of strategies of managing the loans). In addition to this, most of the clients believe that MFIs are non-profit organizations that foreign donors primarily fund. These clients do not put their best to ensure that they make a profit since there are no shareholders to report to (Aidoo and Mensah, 2018). Customers' survivals are unpredictable because the sickness or death may force some of the clients to borrow from the MFIs to help them since refusal may cause the extended family members to hate the person. This situation led to most of them not paying the loans since the loans were not entered into a profitable business that helped repay the loan.

Diversion of funds for personal use by clients, according to Aidoo and Mensah (2018). If Loans given to clients for their business are big, additional funds may be put into their personal use. When such loans are due to be repaid, customers find it challenging to pay back the loans since the amount used for the business is not enough to repay the total loans. For instance, an NGO based in the USA, world vision's Georgia credit fund, argues that the loans for personal uses determine whether a client will pay back a loan or not (Aidoo and Mensah, 2018). Loan default has been looked into and various causes accounting to the problem reviewed. There seems to be a missing link between loan default and gender in the literature. Gender and microfinance are related to women's empowerment and increasing their access to credit to improve their economic standings within society (Jalloh et al., 2019)

2.7 Determinants of Loan Default

Loans granted to business owners, traders, and salary workers have reportedly not met their payment requirements. Bank of Ghana (BoG) Financial Stability report covering operations of the banks reveals that Non-Performing Loans (NPLs) has hit 70% (GHC6.1 billion), leading some experts in the industry to worried that it might have collapse some banks (Aidoo and Mensah, 2018). This section discusses significant determinants of loan default under five main headings – personal characteristics, loan amount, loan frequency, and type of loan.

2.7.1 Personal Characteristics

Borrowers' personal characteristics, such as gender, age, education, marital status, and business experience, are likely to play a role in determining loan repayment performance. Existing research, conducted mainly in the context of microfinance institutions, shows that lending to women does not only lead to their economic empowerment, but it also inculcates in them a sense of hard work and financial discipline, which consequently can lead to better repayment rates (Khandker, Khalily, and Khan, 1995). Collective wisdom has emerged that women's repayment rates are typically far superior to men's (Adusei and Appiah, 2011). Women are considered ideal credit targets because of their proven high loan repayment rates compared to men. Also, it is argued that older borrowers are more responsible than younger borrowers because the former have their reputation to protect (Jalloh et al., 2019). Hence, they are less likely to misappropriate their loans. Therefore, older borrowers are more likely to repay their loans than younger ones. Borrowers with higher education tend to better appreciate the business environment and keep business records, conduct fundamental cash flow analysis, and often make the right business decisions – investment decisions (Sarpong-Danquah et al., 2018). As such, borrowers with a higher level of education may have higher repayment performance (Roslan and Karim, 2009).

The extant literature asserts that illiteracy and inadequate skills were another cause of default. The majority of the clients are engaged in traditional, low-paying businesses and rarely diversify their businesses and skills. This implies that they do not have enough knowledge about alternative marketable skills to benefit them when their companies do not function properly. Secondly, most of them do not know how to read, write and make simple calculations. As a result, they do not know how to account for their businesses; even when the lender makes an error, the borrowers are held liable for the loan. Borrowers who have been in business longer are likely to have better loan repayment rates because they better understand the business environment and have more stable sales and cash flows than new entrants (Roslan and Karim, 2009). Also, Agarwal et al. (2008) also examined the extent to which marital status influences loan repayment and default risk. The findings of their study show that married borrowers are less likely to default than single borrowers.

2.7.2 Loan Type

Type of loans includes agricultural loans, settlement loans, salary and corporate loans, microcredit, car loans, trade and commercial loans, bonanza loans, group loans, and others. The loan type couple with high interest charged by microfinance has been discovered to be the reason behind the alarming default (Okpugie, 2009). A loan is a facility granted by a microfinance bank to an individual or a group of borrowers whose principal source of income is derived from business activities involving the production or sale of goods and services. Jalloh et al. (2019) also confirmed that the type of loan with high-interest rates charged by banks leads to loan default. According to Gorter and Bloem (2002), non-performing loans are mainly caused by the type of loan as well as other decisions made by individuals and plain lousy luck of group or corporate businesses. Mohd and Mohd (2013); and Jalloh et al. (2019) studies in Malaysia and Sierra Leone respectively assert that one of the principal main reasons why borrowers are unable to redeem their loan is a result of the type of loan they and this variable was included in this study test its validity in Ghana.

2.7.3 Frequency of Loan

The frequency of loans is the number of times clients receive a loan facility from a financial institution. Jalloh et al. (2019) stipulate that financial institutions grant loans to individuals several times to decrease the risk of loan default. Field and Pande (2008) uses data from a field experiment on repayment schedules conducted in urban India to investigate whether the frequency of repayment would impact the repayment rate of loans. They found out that changing from weekly to monthly installments did not lead to any changes in the repayment ability of the loan clients. This finding could have more enormous implications for the efficiency of MFIs. A weekly collection of repayment has been believed to help reduce default risk in the absence of collateral, but as the authors pointed out, this leads to higher costs for the MFIs. They also remark that repayment frequency may be more important for the discipline if loan clients advance to larger loans.

2.7.4 Amount of Loan

The loan amount is the amount of credit received from the microfinance institutions in Ghana Cedi for customers or clients. It is argued that businesses with larger loans are monitored closely by the top management of financial institutions. Therefore, they are less likely to default in repayment because they can use the funds, ex-post, for their intended purpose. Put differently, as the absolute amount of the loan increases, the authority to delegate responsibility for it is more limited. A smaller amount of loans may be insufficient, resulting in cash flow problems (Awunyo-Vitor, 2012). Conversely, a smaller amount of loans to businesses may not be sufficient for the successful implementation of the project, creating added uncertainties to its future cash flows. Therefore, the larger the loan size, the higher the repayment performance. In the context of MFIs, Derban et al. (2005) find that lending small amounts to businesses leads to higher loan default. Njoku and Odii (1991) and Mohd and Mohd (2013) find that loans received increased loan repayment.

2.8 Conceptual Framework

The study has accessed the development of microfinancing in Ghana and loan default in perspective. The study proposes a concept that stems from the policies and regulation of MFIs and granting of credit. Their primary responsibility faces a challenge of the most common topic in the field, loan default which is a significant threat to the sustenance of MFIs. The study proposes a concept that stems from the policies and regulations of microfinance and determinants of loan default. Following recent studies by Jalloh et al. (2019), the study uses the following diagram to show the dependent variable (loan default) and independent variables (gender, loan type, loan frequency, and loan amount). Figure 2.1 shows the conceptual framework.

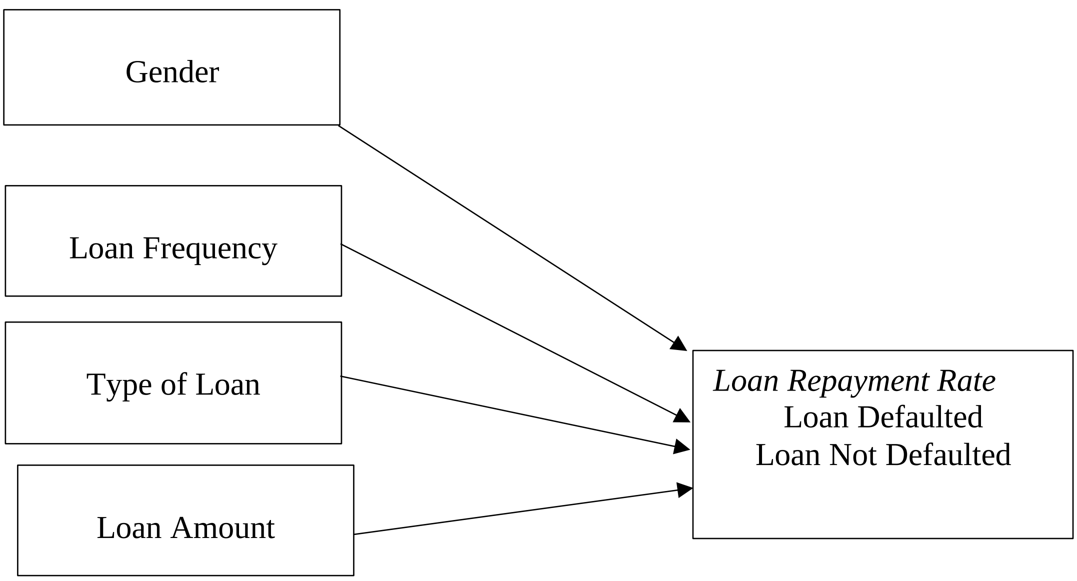

Figure 2.1: Model of the study

Source: Author's Construct (2021)

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter details the research design, population, sample size, and sampling technique adopted for the study. It also explains the source of data and data collection technique, how data collected will be analyzed, validity and reliability of collected data.

3.1 Research Design

Research purposes may be categorized into explanatory, exploratory, or descriptive designs (Saunders and Lewis, 2012). The explanatory design seeks to establish a relationship between study variables. For this study, both descriptive and explanatory strategies are employed. The descriptive analysis as used in this research will accurately describe the loan repayment issue in the selected microfinance institution. The explanatory design will help the researcher to find the relationship between gender and loan repayment. In addition, the relationship between other demographic variables and loan repayment will also be examined.

The research approach determines the techniques adopted in the execution of the study (Awinbugri and Prince, 2019). Research methods can be broadly subjected to qualitative and quantitative research methods (Myers, 1997). In quantitative research, data in the form of numbers or quantities are collected and analyzed. On the other hand, qualitative research focuses on using text and other non-numeric data to explain concepts. This study adopted a quantitative research approach. In quantitative research, statistical techniques such as correlation, regression, and analysis of variance are used.

Data is often analyzed and presented using statistical software. One of the main aims of employing a quantitative technique is to establish relationships among variables and determine patterns among concepts.

3.2 Population

A research population can be defined as the totality of a well-defined collection of individuals or objects with common, binding characteristics or traits. Burns et al. (1990) added that a population is defined as all elements (individuals, objects, and events) that meet the sample criteria for inclusion in a study. The population of this study is loan clients of registered deposit-taking Microfinance Institutions in Ghana. According to the Bank of Ghana website, there are 134 deposit-taking microfinance institutions in Ghana.

3.3 Sampling Size and Sample Techniques

Sampling is a process of selecting a portion of the population to represent the total population, and the findings from the sample represent the rest of the group (Burns et al., 1990). The study adopted the purposive sampling technique due to the available dataset of microfinance institutions. The study uses a dataset of 1358 clients of five microfinance institutions from the archives of BOG.

3.4 Sources of Data

With the choice of research approach, data requirements are sourced from different avenues with varying techniques. For this study, both primary and secondary data were employed. The methods adopted include the retrieval of archives and research documents in the topic area of this study. With the choice of research approach, data requirements will be sourced from different avenues with varying techniques. As far as this study is concerned, secondary data is the primary data source for the analysis. The secondary data in the form of loan repayment records were obtained from the selected financial institution.

3.5 Data Collection Instructions

Data collection techniques are the methods used in collecting data. For the study to answer the research questions, there was the need to get adequate data from the various sources. The study contains financial datasets of the microfinance institutions from the archives and other materials provided by the loans officer.

3.6 Data Analysis

An overall analysis of these variables was conducted by performing various descriptive and inferential statistics. The descriptive and inferential statistics cover the sample's descriptive statistics; mean and standard deviation, Pearson correlations, other reliability tests, and logistic regression. Statistical Package for Social Sciences (SPSS, version 22) is used to conduct the analysis, and the results are present in Tables for discussion.

3.7 Model of the Study

The econometric model is specified as:

$$\text{Loan Default} = \beta_0 + \beta_1\text{Gender} + \beta_2\text{Marital Status} + \beta_3\text{Education} + \beta_4\text{Loan Frequency} + \beta_5\text{Loan Type} + \beta_6\text{Loan Amount} + \acute{\varepsilon} \qquad (1)$$

Where

Loan default is the default repayment rate is operationalized using Portfolio-at-risk 30, which indicates that the loans are overdue at least 30 days. Thus, loan default is a dichotomous variable, where clients' loan default (1), non-default (0).

Gender is a dummy variable categorized as (1) if the borrower is a female, (0) otherwise.

Loan Frequency is the number of times clients receive a loan facility.

Loan Type is an individual loan (1), otherwise (0). The individual loan includes salary, agricultural, social, and personal business loans other than group loans.

The loan amount equals the natural logarithm of the loan amount received from the rural bank in Ghana Cedi for each respondent in the sample.

$\beta 0$ represents the regression intercept, $\beta 1$ to $\beta 6$ denote the regression coefficients, and έ is the error term.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, AND DISCUSSION OF RESULTS

4.0 Introduction

This chapter presents the result in three areas; the first section presents the analysis for data description, demographics and sample statistics, and multicollinerity or validity test results. The second section reports the logistic regression results, and the final section presents the discussion of the results.

4.1 Description of Data

This describes the variables used in this data analysis. The variables used are loan default, gender, the number of times a client has received a loan facility from the institution, and the logarithm of the loan amount. These variables were categorized and coded based on binary logistic requirements: the dependent variable (Loan default) and four independent variables (gender, loan amount, loan type, and loan frequency). Details of the coding of descriptive data are presented in Table 4.1.

Table 4.1: Demographic characteristics of study data

Variable	Classification	Frequency	Percentage
Gender	Men	558	41.1
	Women	800	58.9
Default	Defaulters	332	24.4
	Non-Defaulters	1026	75.6

Out of the 1358 loans granted to applicants in the past eight years, 41.1 percent were given to men, while 58.9 percent were given to women. This means that the institution supports the activities of women more than males. Out of the loans granted, 332 people representing 24.4 percent are default whose repayment dates are overdue but have not fully repaid the loan amount. The loan default ratio is high per the findings of this research. The Bank of Ghana's operation rules and guidelines for microfinance institutions directs such institutions not to issue out more than 5 percent of the institution's net worth for unsecured loans and more than 20 percent for secured exposures such as loans (Bank of Ghana, 2011). The value of default recorded by the bank over the past eight years sums up to GHC 206,202.24.

Table 4.2: Frequency of loan

Number of times	Frequency	Percentage
One time	1185	87.3
Two times	138	10.2
Three times	28	2.1
Four times	4	0.3
Five times	1	0.1
Six times	1	0.1
Seven times	1	0.1
Total	**1358**	**100.0**

Table 4.2 shows the number of times loans were disbursed to single clients over the eight-year. Clients who are loyal and do not default are likely to receive a loan from the same financial institutions. A cross-tabulation of the number of times and default rate showed that clients who have taken more than three times loans from financial institutions did not default. The result shows that clients who repay their loan are likely to receive another loan from their financial institutions and are likely to repay on the fourth time.

Table 4.3: Type of loan given

Number of times	Frequency	Percentage
Commercial	1020	75.1
Business	233	17.2
Funeral	12	0.9
Staff	93	6.8
Total	**1358**	**100.0**

From Table 4.3, out of the 1358 loans granted, 75.1 percent went into the commercial sector, while 17.2 percent were given to business entities. Staff/Salary loans made just 6.8 percent of the total loan granted. This means that microfinance institutions prioritize the commercial sector.

4.2 Multicollinearity

Multicollinearity refers to predictors that are correlated with other predictors. It can lead to skewed or misleading results when a researcher or analyst attempts to determine how well each independent variable can be used most effectively to predict or understand the dependent variable in a statistical model (Gyimah et al., 2020; Adeola et al., 2021). It is also possible to eliminate multicollinearity by combining two or more collinear variables into a single variable (Nkukpornu et al., 2020). The test of multicollinearity using variance Inflation Factors (VIF) result is presented in Table 4.4. From Table 4.4, all the variables are above the recommended threshold of tolerance level of 0.5, and thus there is no multicollinearity.

Table 4.4: Variance Inflation Factors (VIF).

Variable	Tolerance	VIF
Gender	0.977	1.024
Type of Loan	0.939	1.065
Frequency of Loan	0.984	1.016
Amount	0.953	1.049

4.3 Logistic Regression Analyses

After ensuring that the assumption sample size and multicollinearity were not violated, the data were tested using the logistic regression model with the help of SPSS. The test results are hereby presented in Tables 4.5 to 4.8.

4.3.1 Validation of the Logistic Regression Model

The test in the logistic models provides different results upon which analysis is made. Although data may be fit for logistic regression analysis, it may not be valid. For it to be valid, the performance of the model should be established. Two tests were used to determine that, thus, the Omnibus Tests of Model Coefficients and Hosmer-Lemeshow Goodness of Fit Test. The Omnibus Tests of Model Coefficients determined the "goodness of test" fit. This result shows how the model performs (Pallant, 2011). For this set of results, a highly significant value ($p<0.0005$) is required. The chi-square value per the Omnibus Test of Coefficients is 27.576 with 4 degrees of freedom. Therefore, the null hypothesis is rejected, which proposes no difference between the models with and without the independent variables. Hence, there is a relationship between the independent variables and the dependent variable.

Table 4.5: Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	27.576	4	.000
	Block	27.576	4	.000
	Model	27.576	4	.000

Hosmer-Lemeshow Goodness of Fit Test is used to obtain the summary measure of the test statistic for the validation sample. A good fit is indicated by a significant value greater than 0.05 ($p>0.0005$). From the analysis, the chi-square value for the Hosmer-Lemeshow Test is 30.859, with a significant level of 0.000. This shows a good fit and indicates support for the test.

Table 4.6: Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	30.859	8	.000

4.3.2 The Predictive Power of the Model

In a multiple regression analysis, the predictive power of the model is usually tested using R-square statistics. In binary logistic regression analysis, a pseudo R square is used. In this particular study, the model's predictive power was tested using pseudo-Cox and Snell R Square and Negelkerke R Square. According to Cox and Snell R Square test, the results indicate that the independent variables explain only 62% of the variations in the dependent variable according to Cox and Snell R Square test. The Negelkerke R Square test shows that 71% of the variations in the dependent variable are explained by the combined effect of the independent variables. R^2 value can be used for prediction when it exceeds 0.3. In this study, the R^2 values are both above 0.3, and therefore, it is sufficient to predict the recorded change in value. The results are presented in Table 4.7 below.

Table 4.7 Model Summary

Step	-2 Log likelihood	Cox and Snell R Square	Nagelkerke R Square
1	1479.653[a]	0.62	0.71

4.3.3 Logistic Regression

This section represents the role each independent variable played on the dependent variable, loan default. Wald test was employed to assist us in defining the specific functions of each independent variable.

Table 4.8: Logistic regression results

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
Gender	-0.286	.134	4.588	1	.032	0.751
Type of loan	0.351	.102	11.868	1	.000	1.421
Frequency of Loan	0.282	.164	2.940	1	.086	1.326
Amount	-0.163	.161	1.033	1	.309	0.849
Constant	1.292	.623	4.303	1	.038	3.639

***variable (s) entered on step 1: Amount, Gender, and Frequency of Loan*

4.4 Discussion of the Test Results

From the test results, the gender and type of loan are statistically significant, with a p-value less than 0.05. This means an increase in loans granted in a specific sector may increase the likelihood of default (β=0.315; p-value=0.000). Also, the frequency of loans issued to clients does not affect the default rate. Loan frequency is not statistically significant and does not affect the likelihood of default (β=-0.282; p-value=0.086). Although most loan clients have taken it only one time, the few that have taken it on more than two times do not affect their likelihood of default.

The amount of loans issued is negative and has no significant impact on the default rate. Gender of loan client is significant statistically on the likelihood of default of Microfinance (β=-0.286; p-value=0.032). Although not yet proven, earlier reviews show that there is a defense that females are more likely to repay their loan facilities than men. This study, however, adds to the number of already established research that has agreed to the argument that females are better at settling their credit facilities than men.

The loan type was statistically proven by this research to significantly impact the default rate at microfinance. This finding is in line with Bardhan and Mukherjee (2013), who concluded that increasing level loans affect the rate of default. Their study revealed that the higher the loan capacity of the bank, the higher the incidence of willful default as more clients will take advantage of the system either than purposely for loans. Also, the gender of loan clients was statistically significant in default rate in disagreement with Adusei and Appiah (2011) but agreed with Jalloh et al. (2019). Jalloh et al. (2019) find that females are better at loan repayment and that gender influences loan repayment.

CHAPTER FIVE

SUMMARY OF FINDINGS, RECOMMENDATIONS, AND CONCLUSION

5.0 Introduction

This chapter seeks to summarise the key findings of this research, conclude and make appropriate recommendations to the relevant stakeholders.

5.1 Summary of Findings

The study results indicate that gender and the type of loan are the main determinants of loan default of microfinance institutions in Ghana. However, the loan amount and loan frequency are not preditors of loan default of microfinance institutions in Ghana. The study found that the gender of loan clients records negative and is statistically significant on the likelihood of default of Microfinance in Ghana (β=-0.286; p-value=0.032). The type of loan is statistically significant, with a p-value less than 0.05. This means an increase in commercial loans increases the likelihood of default (β=0.315; p-value=0.000). Also, the frequency of loans issued to clients does not affect the default rate. Loan frequency is not statistically significant and does not affect the likelihood of default (β=-0.282; p-value=0.086). The results show that the determinants of loan default are gender and the type of loan. Here, gender decreases loan default, whereas the type of loan increases loan default. From the study's coding and operationalization of the variables, the study results imply that loans given to females reduce the loan default rate than the males. Put differently; females are likely to pay the loan given to them than males. Also, the type loan other than individual loan increases the loan default rate of microfinance in Ghana. It means here that salary, agricultural, social, and business loans given to clients of microfinance institutions reduce loan default than that of individual loans that are of high risk.

5.2 Conclusion

Due to the vital role of loan repayment on financial institutions' health, this research examines the determinants of loan default of microfinance institutions in Ghana. The study uses a logit regression model to analyze 1358 clients of selected microfinance institutions in Ghana. The study focuses on key determinants such as gender, loan type, loan amount, and loan frequency, predominantly in existing literature, to ascertain the effect of loan default of microfinance institutions in Ghanaian settings.

The study shows that gender and the type of loan are the significant determinants of loan default of microfinance institutions in Ghana; however, the loan amount and loan frequency are not predictors of loan default in Ghana.

5.3 Recommendations

The study, therefore, makes the following recommendations.

There should be policy changes to reflect the current borrowing priorities. The study found that loan type and gender are statistically significant on the default rate on microfinance. To control the increasing number of defaulters, microfinance institutions in Ghana should focus on salary, salary, agricultural, social, and personal business loans to decrease loan default. Thus, microfinance institutions should not pay too much attention to individual characteristics but rather to the business and loan characteristics when assessing the creditworthiness of potential borrowers. Also, since gender was also significant, priority should be given to female clients than males when given loans. Moreover, the institution should have clear and effective credit policies and procedures and must be regularly reviewed. In addition, the government and hence the Bank of Ghana should periodically monitor and supervise the MFIs to ensure the safety of clients' deposits and customers' confidence. To avoid multiple borrowing, the Central bank should try as much as possible to enforce a law that can compel all microfinance institutions in Ghana to have a shared database that can aid in checking for multiple borrowing to decrease loans default. This can function as an internal control measure for sustainable microfinance and inclusive growth in Ghana. Furthermore, microfinance institutions should thoroughly check the business operated by a borrower regarding the king of goods sold and how these goods are affected by the various seasons of the year before granting the loan to borrowers. microfinance institutions should analyze the relationship between the business, amount, and the season of the year.

It was observed that much importance was placed on loan repayment by clients instead of equipping them with needed skills in basic calculations in terms of simple interest on loans taken, the total amount to be paid at the end of the loan term, reconciliation, and bookkeeping. Instead, representatives of microfinance institutions make clients aware of the consequences they may face in the event of default in payments. Even though microfinance institutions are known to be profit-making organizations, it is suggested that policymakers like a central bank should compel MFIs to provide financial literacy sessions to their borrowers. Sessions that reinforce basic profit or interest calculation, bookkeeping, and reconciliation skills should be held throughout the loan repayment period. This would serve as a means of checking if women are implementing their newly learned skills. Finally, microfinance institutions should adopt, among others, models that can quickly assist in ascertaining the risk level of a borrower since it's relatively cost-effective and efficient.

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