

DETERMINANTS OF REPAYMENT PERFORMANCE OF GROUP AND  
INDIVIDUAL LENDING IN MICROFINANCE: A CASE STUDY IN THE  
UPPER WEST REGION OF GHANA

BY

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## DECLARATION

I hereby declare that except for the references to other people's work, which have been duly acknowledged, this dissertation is the result of my own research work carried out in the Institute for Statistical, Social and Economic Research (ISSER) under the supervision of Prof. William Steel and co-supervised by Dr. Elizabeth A. Asante.

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## DEDICATIONS

I dedicate this work to my family especially my husband Mr. Joseph A. Apeeliga and my son Joel A. Apeeliga for their unending support and care throughout the course of this study.



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## LIST OF ABBREVIATIONS

NGOs: Non-Governmental Organizations

MFI: Microfinance Organizations

ROSCAs: Rotating Credit and Susu Credit Schemes

WACCU: WA Cooperative Credit Union

SRB: Sonzele Rural Bank.

NIB: National Investment Bank

GCB: Ghana Commercial Bank

BB: Barclays Bank

FIs: Financial Institutions

FGDs: Focus Group Discussions

CUs: Credit Unions

RBs: Rural Banks

## ABSTRACT

*The study was carried out in the Upper West Region of Ghana. The main objective of the study was to compare the repayment performance of group clients and individual clients of microfinance institutions in order to bring to light factors that determine repayment performance in groups and individual credit beneficiaries. Two financial institutions namely WACCU and SRB were involved in the study. Finding showed that individual lending yielded a better repayment performance than group lending. This outcome was attributed to the fact that most individual clients as compared to group clients presented collateral before loans were given out and a large proportion of group members were relatives. Finding also suggests that the mobilization of savings by MFIs improves repayments in both group and individual lending. Client's access to loans from other FIs did not have any effect on repayment. However access to future and bigger loans enhanced repayment. In addition access to future and bigger loans served as the lead motivator for repayment in both lending methodologies. Regular repayment and visits in a form of monitoring enhances repayment. The ability of a group to self-select each other and the rejection of someone from the group as a measure of screening improves repayments. The study also showed that social ties in form of mediation and borrowing to make timely payments did not affect repayment. However a large proportion of relatives in groups lower repayment performance.*

## **CHAPTER ONE**

### **GENERAL INTRODUCTION**

#### **1.0 Introduction**

For the past decade development practitioners and donor agencies have been focusing on the sustainability of microfinance institutions (MFIs) as well as poverty reduction using microfinance. Microfinance is a broad term that includes deposits, loans, payment services as well as insurance and other financial products targeted at low-income clients (Daley-Harris, 2002). The focus is often on microcredit, which is understood as providing poor families with small loans to engage in productive activities or expand their tiny businesses (Josily, 2006). Microfinance uses different methodologies to reach the poor and gives them incentives to pay back loans. The intention for this study is to research into the repayment performance of individual and group-based lending methodologies. The study will also examine factors that influence repayment performance within a group and the effects of social ties and dynamic incentives.

#### **1.2 Research Context and Background**

The idea of microfinance has historic roots in Ghana. Traditionally, people have saved with and taken credit from groups and self-help associations to support businesses or farming ventures. Canadian Catholic Missionaries in 1955 established the first Credit Union in Africa, precisely in Northern Ghana. A recent microfinance methodology

known as Susu is said to have originated from Nigeria and spread to Ghana (Asiama & Osei, 2007). One variation of Susu involves saving with individual Susu collectors, another involves rotating savings and credit associations (ROSCAs). The study and practice of microfinance in Ghana started in the 1970s with people from different backgrounds such as agriculture, banking, commerce, anthropology, economics, public service, religion and social work moving into rural areas to study the dynamics of the local financial market in developing countries and to assess possible operational success of such financial institutions (Aglobitse, 2008).

Since the 1980s, a growing number of financial institutions have developed many alternative lending strategies to demonstrate that lending to poor households can yield good results for the borrowers and institutions. MFIs provide small credit to poor households to engage in productive activities or expand their current economic activities. Many MFIs also offer individual loans but microfinance has been largely associated with joint liability based group lending (Armendariz de Aghion and Murdoch, 2000).

A common characteristic of group lending is that the group obtains a loan under joint liability, so each member is made responsible for repayment of loans of his or her peers. Most schemes give subsequent credit only if the group has fully repaid its previous loan. The joint liability combines with the threat of losing access to future credit, incites members to perform various functions, including screening of loan

applicants, monitoring the individual borrower's efforts, fortunes, and shocks, and enforcing repayment of their peers' loans (Zeller, 1996).

It can also be said that the introduction of group lending in microfinance is an innovation that has enabled poor people to borrow by replacing physical collateral with social collateral. The unavailability of physical collateral resulted in their exclusion from access to more traditional forms of financial institutions such as commercial banks (Conning and Udry, 2005).

According to Daley-Harris (2007 cited by Klaus and Liu, 2009) the past 30 years has experienced an increase in microfinance programmes. The microcredit summit found that a total of 3,316 microfinance institutions were in existence at the end of 2006, reaching more than 133 million clients, with about 92.9 million loans among the poorest. The reason behind this development was believed to be in the ability of such groups to mitigate the challenges of moral hazards and adverse selection by applying peer monitoring and pressure that are less costly than those available to formal institutions (Stiglitz 1990, Banerjee *et al.*, 1994, Besley and Coate, 1995). This study therefore intends to research into factors determining the high repayment performance associated with group-based and individual lending programmes.

Rural and community banks were established in 1976, with the first rural bank in Central Region of Ghana. These banks play a very important role in microfinance in the country. They were established specifically to provide financial services to small enterprises,

farmers, individuals and others within their catchment areas and also provide opportunity for people to save their excess monies. These banks were established with the intention of improving the socio-economic conditions of rural communities (Asiama and Osei, 2007).

### **1.3 Problem Statement**

Group-based lending is one of the methodologies used by many MFIs to improve repayment performance. The methodology is believed to solve the problem of moral hazard and information asymmetry associated with poor repayment performance. High repayment performance is important for MFIs to be sustainable and continue lending to the poor. Group lending has been used as one of the strategies to improve repayment performance. But there continues to be active debate in academic literature both as to whether repayment performance of micro credit groups tends to be higher than for individual borrowers and why.

The problem is whether groups *per se* have higher repayment than individuals. It can be said that most borrowers use local information to form their groups; this therefore makes borrowers have better information on their partners risk than the lending institution does. As a result of this, both theoretical and empirical works have assumed that groups consist of members of equal risk and that they use their information to achieve good group performance. Nevertheless, readings from the literature show that results are mixed.

Some authors found that joint liability increases repayment rates (Sadoulet, 2000; Stiglitz, 1990). Others, however, disagree with the above and argue that group lending can facilitate collusion, which worsens repayment rates (Besley and Coate, 1995; Ghatak, 1999.). The cost of implementing group lending is very high, and coupled with the tendency for borrowers to collude against the bank and undermine the bank's ability to harness social collateral, can negatively affect repayment.

Dynamic incentives affect both groups and individuals. If dynamic incentives dominate, group social capital may not make a statistically significant difference. With the emergence and increase in the number of financial institutions whose services are being patronized by Ghanaians, it is appropriate to assess the effectiveness of microfinance methodologies. Investigating the repayment performance and motivations of groups and individual borrowers of credit schemes in the Upper West Region will provide an opportunity to test the above conclusions and also add to existing literature.

#### **1.4 Research Objectives**

The main objective of the study is to investigate the repayment performance of microfinance among individuals and groups in Wa Municipal in the Upper West Region of Ghana. To this intent the study will seek to achieve the following specific objectives.

- To compare the repayment performance of groups and individual borrowers in the Upper West Region.

- To bring to light factors that determine repayment rates among microfinance groups and individuals in the Upper West Region
- To compare the characteristics and motivations of group and individual borrowers in the Upper West Region.

### **1.5 Research Questions**

The study seeks to answer the following research questions:

- How do repayment rates differ among groups and individual borrowers of microfinance institutions in the Upper West Region?
- What are the determinants of repayment performance among microfinance groups and individuals in the Upper West Region?
- What are the characteristics and motivations of group and individual borrowers in the Upper West Region?

### **1.6 Research Hypothesis**

Group lending when implemented well is believed to enhance repayment performance of microfinance compared to individual lending. Factors such as utilizing local information on the riskiness of potential borrowers, peer monitoring and peer pressure are thought to enhance repayment performance of groups. At the same time monitoring by MFIs, repayment schedules, and incentives such as assurance of future loans and access to

bigger loans are some factors that affect repayment performance of individuals as well as groups. The study, therefore, will test the hypothesis that group-based lending yields better repayment performance than individual lending, against the null hypothesis of no significant difference.

### **Specific Hypothesis**

- Clients in the credit union are more motivated to pay back than clients of rural banks against the null hypothesis of no significant difference
- The key determinants of repayments of groups and individual clients of MFIs are dynamic incentives, savings, monitoring, peer pressure and screening and social ties.
- Group clients are more likely to make timely payment than individual clients
- Access to bigger and future loans is the lead motivator for repayment.
- The higher the monitoring of clients, the better the repayment.

### **1.7 Justification of the Study**

The microfinance industry and research is increasingly focusing on institutional sustainability (Hulme and Arun, 2009). Higher repayment rate is one of the ways of ensuring that financial institutions are sustainable thereby ending their dependence on subsidies and external finance. Group-based lending is a method considered to facilitate higher repayment, but there is limited evidence on the difference in repayment performance between groups and individual borrowers.

**Table 1: Group vs. Individual Repayment Performance Worldwide**

<b>Methodology</b>	<b>Portfolio at risk &gt;30 days</b>	<b>Loan loss rate</b>	<b>Financial self-sufficiency</b>
<b>Individual</b>	3.4%	1.0%	108%
<b>Group solidarity</b>	1.7%	0.8%	85%

**Source: 2008 data; Micro Banking Bulletin #20, Sept. 2010.**

Table 1 above indicates repayment and sustainability performance of groups and individual borrowers worldwide; institutions using group methodology are recorded as having better repayment rates (or lower portfolio at risk and write-off ratios) than those with individual methodology. The portfolio at risk for individual lending is double that of group lending (group solidarity) coupled with higher loan loss rate for individuals compared to groups. However the institutions using group solidarity method have much lower level financial self-sufficiency.( 80% as against 108% for using those using individual methodology), perhaps reflecting in the part the high costs of the group methodology relative to small loan size.

Certain researches e.g. (Carpena *et al*, 2010) conducted by microfinance institutions have shown that group lending yields higher repayment performance as compared to individual lending. But these results may be subjective because some of these surveys are being carried out by implementing agencies. An independent investigation, as this study

provides, is needed to seek the determinants of repayment performance and whether group-based lending is an effective way of enhancing repayment performance by microfinance institutions.

Finally outcomes from findings and recommendations from this study can be used by governments, non-governmental organizations (NGOs), donor agencies, credit unions and banks in policy making processes which in the long run would help to effectively improve repayment rates of microfinance institutions for sustainability and poverty reduction. It is also hoped that the result of the study will contribute significantly to further studies on microfinances and lending methodologies.

### **1.8 The Structure of the Study**

The study is organized into five chapters. Chapter one contains the introduction to the study. It provides the context within which the study is examined, the problem statement and questions, which leads to an outline of the research objectives and significance of the study. In addition the chapter discusses the limitation and scope of the study. Chapter two contains a review of literature on the concepts, theories, and debates underpinning the study and appropriate in guiding the study. Chapter three provides the methodology, methods, sampling procedures and tools used for data analysis as well as the background on the sample area. Chapter four contains data presentation and analysis of findings and chapter four provides summary of findings, recommendations and conclusion.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

The literature on group lending is quite substantial and there are a growing number of empirical papers on this topic as well. This chapter gives the review of definitions of terms in the field of microfinance and various methodologies involved in the delivery of microfinance. The objective of this chapter is to present an overview of microfinance and also review relevant literature, concepts, theories and debates surrounding the study.

#### **2.1 Definition and Concept of Microfinance and Microcredit**

Microfinance and microcredit are often used interchangeably and often connected to the state of rural finance and poverty reduction. Microcredit is often used to describe institutions like the Grameen Bank which focuses on getting loans to the rural poor for poverty eradication and social change with most key players being NGOs. Microfinance came into being with the view that more people can get not only credit but other financial services from MFIs to help improve their micro enterprises. The change from microcredit to microfinance means a change in focus towards giving poor people and communities'

access to wide range of financial services and towards the commercial sustainability of MFIs (Beatriz Armendariz and Morduch, 2010).

According to Daley-Harris (2002), microfinance is defined as the provision of loans, savings, insurance, transfer services and other financial products targeted at low-income people. Micro-credit on the other hand is the extension of small loans to very poor people that allows them to care for themselves and their households. In conclusion microcredit is a component of microfinance, in that it involves the provision of credit to the poor, whilst microfinance add on non-credit financial services such as savings, insurance, pensions and payment services.

## **2.2 Methodologies to Credit Delivery**

According to Robinson (2001) there are two main approaches to making financial services available to the poor. These are the financial systems approach and poverty lending approach. The poverty lending approach focuses on reducing poverty through credit and other services provided by institutions that are funded by donor and government subsidies and other concessionary funds. Savings is not a significant part of poverty lending but some mandatory savings are usually required before accessing loans. Poverty lending approach affects sustainability since they charge very low interest rates, which are not able to cover cost.

In the financial system approach, the main focus is on commercial financial intermediation among poor borrowers and savers. The main objective of this approach is to serve the poor as well as achieve institutional self-sustainability; that is, being able to operate on their own to make profit without being dependent on subsidies. Poverty lending approach is associated with group lending, while financial system approach is associated with individual lending (Robinson, 2001).

### **2.3 Group Lending**

Group-based lending is an innovative and promising mechanism for delivering credit to the poor. Group lending persuades members in a group to undertake the responsibility of screening, monitoring and ensuring that loans were paid back which will otherwise have fallen on the lender (Ghate and Guinane, 1999). According to Beinpuo (2004) group lending in Ghana serves as a way of allowing banks to mobilise savings from a numerous number of clients. Households or people interested in obtaining loans self-select themselves into groups with an average membership between five to ten people. Credit secured could either be given to the individuals within the group or the group as a whole to share among themselves. This system of joint responsibility encourages group members to screen and monitor one another to ensure that loans are repaid on time. Group-based lending provides credit with other non-financial services known as social intermediation services. Some non-financial interventions given out include training on

business development, vocational training, organisational help, and improved health, literacy and leadership skills

.

### **2.3.1 Advantages of Group Lending**

In group-based lending programs monitoring, screening and the enforcement of repayment are transferred from credit agents to members of a group. The financial intermediary reduces recurrent lending transaction costs by replacing a multiple of small loans to individuals with a larger group loan (Bhatt 1988; Adams 1988). Stiglitz (1990) and Varian (1990) argue that the involvement of clients in the screening of loan applicants and monitoring of borrowers enables group members to utilize, at a lower cost, their information regarding the reputation, indebtedness, and wealth of the loan applicant and about his or her efforts to ensure the repayment of the loan than when it is been done solely by MFIs.

Zeller (1994) revealed that the indebtedness of peers in the informal market serves as a major determinant of credit rationing for members of formal groups and informal lenders. This therefore makes group members stress sensitive information the same as informal lenders. Furthermore, groups may also have a comparative advantage in enforcement of loan repayment. In addition most rural communities in developing countries have limited legal systems in rural areas. This therefore gives formal lenders limited options to ensure

that borrowers failing to pay repay back loans. MFIs agents that do not live within the same vicinity with borrowers have little leverage and perhaps also little incentive in actually going to a village and seizing collateral.

Group members can easily employ social sanctions or seize physical collateral from the defaulters (Besley and Coate, 1995). Group members also appear to be in a much better position to assess the reasons for members default, and to offer insurance services and assistance to members who are experiencing shocks beyond their control.

A research conducted by Ghatak (1999) and Van Tassel (1999) showed how group lending can take advantage of the “inside” information that only borrowers have about each other to draw in relatively safer borrowers and thus mitigate the problem of adverse selection. A study by Varian (1990) revealed that borrowers in groups mutually monitor each other’s projects to ensure the success of financed projects, while Stiglitz (1990) showed that monitoring in group lending helps alleviate the moral hazard issues involved in lending to clients with no collateral.

A study conducted by Banerjee, Besley, and Guinnane (1994) revealed that in group-based lending members are held responsible for repaying the defaulting member’s loan.

This therefore makes the burden of moral hazard problem between borrowers and the lender falls on members. The study also showed that with an increasing cost of monitoring, a group monitored can impose higher penalties on the borrowing member creating stronger incentives for choosing a safer project.

### **2.3.2 Disadvantages in Group Lending**

Group lending in practice has some problems associated with its implementation. One major issue is that attending group meetings and monitoring group members can be too costly, especially when houses are far apart or not together. A second demerit is that loan terms are limited by what the group feels that it can jointly guarantee. Clients with growing businesses or those who get well ahead of their peers in their business may find that the group contract stuck everyone down (Madajewicz, 1999). Besley and Coate, (1995) found that under some conditions, borrowers may collude against the bank and undermine the bank's ability to harness social capital.

Another factor affecting the success of group lending is the high cost of implementation. Studies of the Grameen Bank, the bulk of Chinese programs, and poverty-focused programs of Eastern Europe, found that they are not fully covering costs (Morduch, 1999). In 1998, the Opportunity International programs in Eastern Europe covered only 56% of full financial costs, with the hope of covering all costs by 2005 (Microcredit

Summit, 1998). Several of the Latin American affiliates of ACCION International are covering their full costs, but they tend not to serve the poor client base and are rather moving away from group lending.

Another set of theoretical papers focuses on strategic default by group members. Besley and Coate (1995) focused on group lending under limited contract enforcement and the threat of seizure of assets and social sanctions. This strand of the literature argues that without the threat of social sanction, group lending may add little if any superiority over individual lending. According to Armendariz and Morduch (2006) group-based lending can induce moral hazard or more risk-taking behavior instead of reducing it. Moreover, improving the information flows between members can make matters even worse. Giné et al. (2011) examined two periods of mass defaults in southern India and conclude that strict adherence to joint liability led to strategic default.

#### **2.4 Determinants of Repayment Performance of Groups**

A research conducted by Wydick (1999), analyzed the effects of peer monitoring, group pressure and social ties on the provision of intra-group insurance, mitigation of moral hazard within borrowing groups, and group repayment performance. The study revealed that neither social ties nor group pressure have an effect on repayment rates but on the other hand he finds that peer monitoring plays a positive role. However, Godquin (2004),

using power of social ties, group homogeneity, social intermediation, dynamic incentives and loan characteristics (loan size and loan duration) on group's repayment performance, revealed otherwise. She largely found mixed results for these variables depending on whether she uses a pooled or a split sample.

According to a study carried out by Sharma and Zeller (1997) endogenously formed groups and a high degree of credit rationing improve repayment performance. However social ties, measured as the proportion of relative members in the group, had a negative impact on repayment. An investigation was carried out by Zeller (1998), on the impact of intragroup risk pooling and social cohesion on repayment rates. His results show that the repayment rate increases with more diversification in the group's joint asset portfolio up to a point. Social cohesion, measured as the number of common characteristics among group members like social class, ethnicity, neighborhood, friendship and kinship, was found to improve the repayment rate.

A survey conducted by Paxton, Graham and Thraen (2000), using one hundred and forty groups in Burkina Faso, revealed that the domino effect was a significant determinant of repayment problems. This effect means that as more members of a group experience repayment problems, the ability and willingness of the other group members to cover the full repayment diminishes.

The domino effect was attributed to the methodology used in the disbursement of loans. Loans were administered to individuals in a group but repayment was made by joint liability as well as sectorial liability (the entire village is blocked from future loans upon default by a single group)

A study conducted by Wenner (1995) using 25 Costa Rican credit groups examined the determinants of performance of these groups. He found evidence that the use of 'inside' information on character attributes, such as credit worthiness, in credit groups reduces the incidence of default by individuals. Repayment performance was better in groups engaged in active screening of their members. According to Wenner the above conclusion should be interpreted with caution. Of the two measures of screening used, only one; the existence of a written code of conduct supported this conclusion. The other proxy, informal screening, according to reputation, surprisingly and unexpectedly affected delinquency in a highly significant, positive way. The explanation could lie in the fact that this proxy captures some aspects of social ties. Wenner's analysis also suggests that savings mobilization, which acts as a kind of intra-group insurance, and more isolated communities are linked with better performance.

A study conducted by Sharma and Zeller (1997), using a sample of 128 groups in Bangladesh, also observed the positive impact of relatively remote communities. It was

realized that even communities with higher than average rates of poverty had a positive impact on repayment rates. It was therefore concluded that the more remote a village, the less buoyant the local economy and the less alternative sources of credit available. Observations revealed that informal mutual self-help networks and insurance groups create a greater negative impact on repayment performance of the groups examined. The repayment rates are especially high in groups which were initiated by the group members and consist of risk adverse women with marginal land holdings. On the other hand, a high proportion of relatives within a group and high loan amounts have a negative impact on group performance. Sharma and Zeller (1997) added that the success of group lending cannot just be attributed to innovations that reduce the cost of screening, monitoring and enforcing loan contracts, but also to the perception of the long-lasting nature of the program by the intended borrowers in small rural communities.

Zeller (1998), using 146 groups in Madagascar, emphasized the importance of risk pooling and informal intra-group insurance in driving the success of a group. He also concluded that gains in the repayment rates due to risk diversification diminish at the margin. This was as a result of increased costs of coordination, monitoring, and moral hazard that come with greater heterogeneity in groups. The social cohesion index used Zeller which counts the number of common demographic and social characteristics among group members is found to be significantly linked with the repayment rate. The analysis however confirms that clear internal rules of conduct, group size, communities

characterized by a relatively high degree of monetization, the presence of several agricultural input retailers and a lower exposure to covariate risks significantly improve repayment performance. This is because the latter characteristics mentioned are more likely to prevail in less remote villages.

Wydick (1999), using 137 groups in Guatemala, analysed the effect of social ties, peer monitoring and group pressure on the provision of intra-group insurance. In addition, the mitigation of moral hazard and the overall group repayment performance was also studied. According to the study the success of group lending appears to be driven by peer monitoring and intra-group insurance. Findings from the study reveal that the potential of social sanctions plays a secondary and supporting role. Because in rural groups, the group's willingness to exert peer pressure on defaulting members nonetheless seems to be of primary importance in deterring moral hazard behavior. Additional findings from the study showed that borrowing groups appear to function both as miniature insurance networks and as juries thus helping those with verifiable claims of hardship to repay loans, while threatening lazy and risky borrowers with expulsion from the group. The institution's ability to harness previously existing social ties has virtually no effect on borrowing group performance. Groups characterized before their inception by strong friendship bonds seem more compassionate towards defaulting members. Wydick concludes that in order to reduce problems related to asymmetric information in credit markets, group lending may be less effective in areas where social ties are strong.

Mknelly and Kevane's (2003) study of a microfinance intervention in Burkina Faso underscored the importance of achieving homogeneity in socio-economic status. Their study found that loan sizes were positively correlated with socio-economic class. Unequal sizes of loans affected repayment performance. Members who had taken smaller loans were reluctant to be jointly liable for much larger loans taken by their peers. Socio-economic homogeneity among groups is expected to enhance intimacy, cooperation and consensual decision-making. However it has been argued that heterogeneous groups are not without merit. They mitigate covariant risks and also improve group performance when better-off service users assist poorer service users with loan repayment.

One of the earliest empirical papers by Wenner (1995) studied group lending as a means of transmitting information on borrower creditworthiness. He finds that groups using a written internal code of regulations for screening and limited access to alternative credit options have a better repayment performance. From the above reviews it can be summarized that the major determinants of repayment performance could be summarized as monitoring from group members and financial institutions, group savings, social ties, dynamic incentives and peer pressure. The degree or impact of the above mentioned characteristic can either positively or negatively affect repayment rates.

## **2.5 Individual Lending**

Individual lending is described as the provision of credit to individuals on their own merit rather than as members of a group which is not jointly responsible for the repayment of a loan. These loans are given to individuals based on their ability to provide the financial institutions with an assurance of repayment and some level of security which may include personal guarantees (Ledgerwood, 1990).

### **2.5.1 Advantages of Individual Lending**

On the side of borrowers individual lending is mostly seen as more attractive, because it means less reliance on other group members. The methodology also offers the potential to take larger loans, faster application and processing and fast and easy repayment procedures. Individual loans are seen as less costly for clients when compared to group lending. However from the financial institution perspective introducing individual lending helps MFIs reduce loan risk through a diversified portfolio. The institution also has the potential to attract a wider range of borrowers and this can help grow and strengthen their financial stand in the market. Individual lending gives MFIs the ability to capture economic information from clients, thus providing a better sense of the clients' needs. This translates into improvements in the quality of services rendered. Finally it can help MFIs meet its mission, vision and strategic objectives (Dellien and Leland, 2006).

### **2.5.2 Disadvantage of Individual Lending**

In individual lending, borrowers are more likely to divert a loan, at least partly to urgent consumption needs (Gine *et al*, 2006). In order to deter borrowers from doing this, Champagne *et al* (2007) advised that there is the need for MFIs to make regular visits to clients. This therefore makes monitoring a central role for MFIs.

According to Adams (1998) the burden of monitoring, screening and enforcements of repayment mostly lies on group members in group lending, but this is not so in individual lending where individuals are solely responsible for the credit they obtain and are therefore free from this burden. Besley and Coate (1995) confirmed the possibility of strategic default where group members collude against the bank by refusing to pay back loans. Individual lending prevents borrowers from colluding against MFIs.

### **2.5.3 Determinants of Individual Repayment Performance**

For centuries now individual loans have been provided to borrowers. As a result of this there are clearly defined numbers of factors which directly impact the provision of individual liability and also the performance of the repayment of the loans. The credibility of an individual requesting for a loan is mostly measured using the person's performance in previous loans. The income level of an individual borrower also

determines ones eligibility and loan size. In addition the type of income, which can either be a business income or consistent income level, also impacts the eligibility of individual liability loan and performance (Kumar 2010).

According to the above author (Kumar, 2010), the wealth of an individual also acts as a major factor in individual lending which in-directly reflects ones financial position. Collateral security which can be defined as the value of assets which has been provided as the collateral for the obtaining of the loan also defines the eligibility and size of the loan. All these above factors serve as important factors for the individual lending loan schemes and also play a vital role in the default rate in the loan repayment.

Repayment performance is also enhanced when individual clients are directly monitored by the lender. The MFI undertakes the job of evaluation of credibility of the client, monitors the repayments made by the client all through the tenure of the loan. Regular repayment schedule for individual borrowers provides the basis for fixed payment schedule which involves the repayment in the installments periodically, this is also said to improve repayment performances. Other factors includes Non-refinancing threats, which

is the situation where individual borrowers are threatened for non-provision of the further loans on partial or full default of the present loan given (Kumar 2010). Most MFIs require that individual borrowers save at least half of the amount required to serve as collateral before loans are disbursed. These arrangements in individual lending in most cases improve repayment performance

## **2.6 Group Verses Individual Lending**

A study conducted by Giné and Karlan (2006) revealed that individual liability compared to group liability leads to no change in repayment. The study concluded that both lending did not add up in an economically meaningful way to higher or lower repayment. But there was statistically significant evidence of screening, monitoring and other strategies.

A similar study was carried out by the above authors in 2010. The result was in three-folds. First, the result revealed that individual lending compared to group lending did not have any effect on repayment performance in both short run and long run loan contracts. But rather changing groups to individual liability led to the resurrection larger lending groups meaning further outreach. Average loan sizes were however smaller, leading to no change in total disbursement and ultimate profitability. Secondly, it was revealed that loan officers were not willing to create new groups despite no increase in default. Lastly, the study found out some statistically significant evidence of some mechanisms raised in

the group liability, such as screening and monitoring. However, the study also did not find that it adds up in an economically meaningful way to higher default looking at the period and timing of study (Gine and Karlan, 2010).

However a study conducted by Carpena *et al* 2010, found otherwise. A field experiment was carried out using an Indian MFI. Clients were switched from individual to group liability contract and the result was the reverse of that of Gine and Karlan (2010). The study found out that joint liability significantly improves loan repayments.

In another development, it is said that the wrath of other group members on defaulting members can be used as a powerful tool under group lending and the researchers concludes that if social penalties are sufficiently severe, group lending will necessarily yield higher repayment than individual lending. They concluded by saying that without pressure or sanctions against defaulting members, a group loan repayment may either be higher or lower than individual lending.

## **2.7 Background of Rural Banks**

Rural banks (RBs) operate as commercial banks under the banking law of Ghana. However, they cannot undertake foreign exchange transactions and their operations are

limited to specific geographical areas. RBs were first established in 1976 to mobilize savings in rural areas not served by commercial and development banks. RBs, which operate as unit banks, are owned by members of the community through purchase of shares (Gallardo, 2002).

Majority of rural banks in Ghana implement microfinance activities, usually with the assistance from donors and the government. It can also be said that in recent times many RBs have established Susu schemes which have been quite successful (Andah, 2005).

## **2.8 Background of Credit Unions**

Credit unions (CUs) are registered by the Department of Cooperatives as thrift societies that can accept deposits from and give credit to their members (Jean et al., 2004). CUs were initially established as institution-based organizations or aimed towards people on regular incomes. However, in recent times CUs have opened up to a wider variety of clients in the community where they are based (Andah, 2005).

The apex body of the CUs, the Ghana Cooperative Credit Union Association (CUA) regulates the interest rates that CUs have to pay on members' savings and charge on loans, perhaps reflecting the initial welfare nature of credit unions). CU operates a Central Finance Facility into which member CUs contribute and source funds to lend to their members (Andah, 2005).

## **2.9 Conceptual Framework**

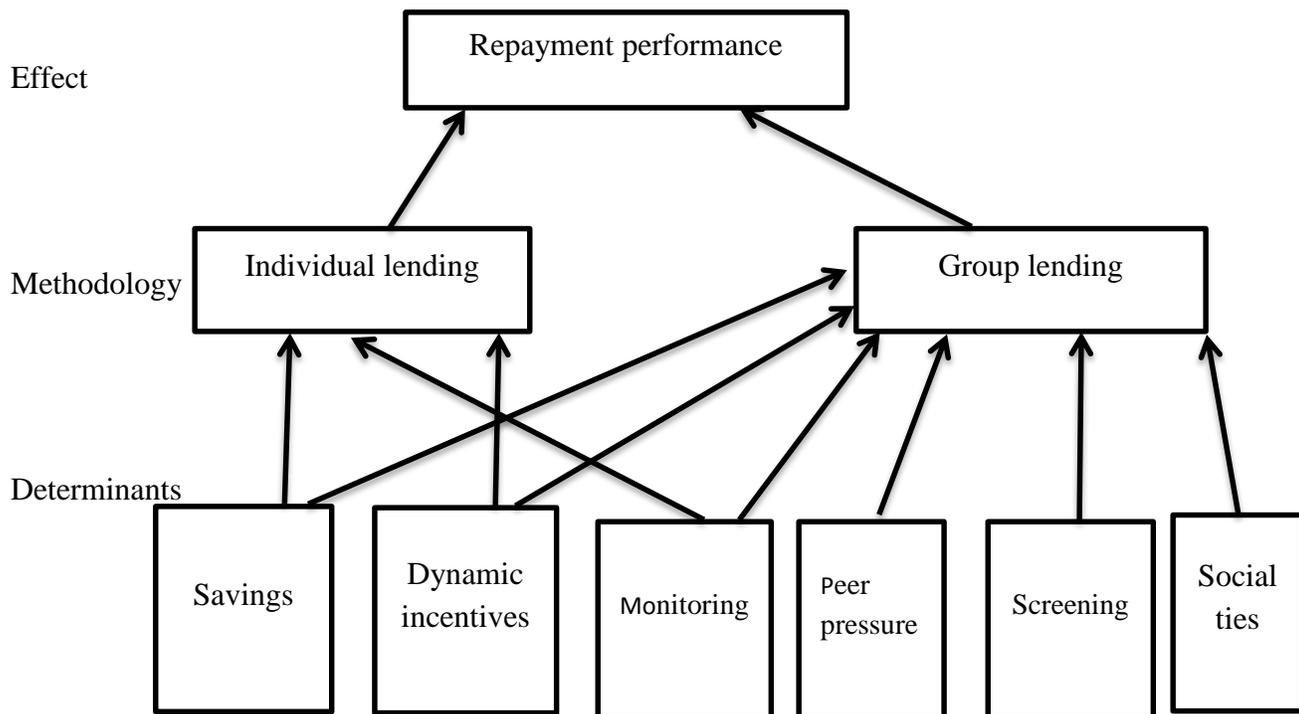
The conceptual framework below is based on literature reviewed surrounding the study. The framework is grouped into three stages; the lowest stage has six determinants of repayments performance. The middle and top most stage consist of the methodologies (individual and group lending) and effects (repayment performance) respectively. For the purpose of this study six factors affect repayment performance in group lending. These factors include savings deposited at banks by groups, dynamic incentives put in place to motivate group members, monitoring by clients and MFIs, peer pressure, screening, and social ties within groups.

However individual lending methodology has three factors affecting repayment performances this includes savings made by individuals, dynamic incentives and monitoring by MFIs. Screening, peer pressure and social ties within groups is said to enhance repayment performance in groups as compared to individual lending. Peer

pressure against defaulting member is believed to substantially reduce moral hazards in group lending (Besley and Coate, 1995). In this study group pressure will be measured using group's willingness to put pressure on members to pay back loan and the presence of an internal code of conducts to punished defaulting members. Dynamic incentives will be measured using repayment periods, promise of bigger and repeated loans. Dynamic incentives are believed to improve repayment performance of groups and individuals.

Studies have also proven that group and individual savings affect repayment performance; i.e. when groups and individuals save with the lender or financial institution, it positively affects repayment rates. Intensive monitoring of groups and individuals by MFIs positively affects repayment and also monitoring within groups reduces the risk of members diverting loans for other purposes. Monitoring therefore compels clients to use credit for its intended purpose. In addition when groups are allowed to self-select members through screening, they are able to select trust-worthy clients, who are more likely to pay back loans.

**Figure: 1 Conceptual Framework**



## **CHAPTER THREE**

### **METHODOLOGICAL FRAMEWORK**

#### **3.0 Introduction**

The chapter is divided into two sections. The first section discusses the approach, data collection methods and analytical tools. The second section provides a general overview of the study area consisting of the area's demographic and physical characteristics, the economic activities and the social infrastructure situation.

#### **SECTION ONE: RESEARCH METHODOLOGY**

##### **3.1 Method**

Both qualitative and quantitative methodologies were used in the research. Qualitative primary data was collected first by organizing 1 focus group discussion each for individuals and groups respectively to help refine questionnaire. For quantitative primary data, closed and opened ended questionnaires were administered to the selected respondents of the survey. Using both methodologies was to help improve the validity and authenticity of results.

### **3.1.1 Methodology of the Study**

Primary data was gathered from the area of survey and secondary data was reviewed from authentic and reliable literature. This was to make sure that varied and reliable data was collected to facilitate accurate and reliable analysis. This section basically looks at the sampling procedure of the study, tools that were used for gathering data and how data obtained from the field was analyzed.

### **3.1.2 Sampling**

The study was carried out in the Upper West region because it is the least densely populated and one of the poorest regions in the country. MFIs are being established all over the country for the purpose of eradicating poverty. The above argument therefore makes it appropriate for carrying out the study in this region. The study purposively selected Wa Cooperative Credit Union and Sonzele Rural bank because these were the only ones that had both group and individual borrowers. The target populations for the study were group borrowers and individual borrowers of the two different microfinance schemes. These henceforth will be referred to as group clients and individual clients. Interviewing these group and individual borrowers from these two different financial institutions provided a platform for comparative conclusions. The study recognizes

though some limitations of institutional administration on observed differences in analysis.

The sampling frame includes all groups and individual commercial loan borrowers that have completed at least one loan cycle. According to data obtained from the MFIs the study purposively selected respondents from the sampling frame and administered questionnaires for the survey. The above sampling was to enabled the researcher get a true representation of repayment performance of various credit groups and individual borrowers of the selected the institutions.

For the sample size, a total of 240 respondents were interviewed, 120 respondents were from the credit union (60 groups and 60 individuals) and the remaining 120 (60 groups and 60 individuals) from the rural bank. The above sample size was arrived upon because statistically it is advisable to have a minimum sample size of 60 for statistical test of difference of means and for regression analysis.

### **3.1.3 Data Collection Tools**

Data for the study was collected from both primary and secondary sources. Primary data was collected using closed ended and semi structured questionnaires and focus group

discussions to generate information. The used of the above data collection tools was to give respondents the opportunity to express diverse opinions, explain and share experiences. Data was collected using tape recorders and field note books. Discussions and interviews focus group discussion were transcribed. Secondary data was obtained through extensive review of documents from microcredit institutions, loan cycle and loan repayment records to help select the target population for the study. In addition Journals, articles, books, published and unpublished documents from government and non-governmental organisations were reviewed. The review of the secondary data was to expose diverse theories and conceptual issues surrounding repayment performance of groups and individuals thus serves as a guide to the study.

#### **3.1.4 Data Analysis and Presentation**

Data from the field was thoroughly checked to ensure that questionnaires were answered correctly and this was immediately computed and analyzed using statistical package for social sciences (SPSS) software. This was to generate descriptive statistics mainly in a form of frequencies and percentages to help in result discussions. For objective 1 the T-test (at a significance level of 95%, thus  $p \text{ value} \leq 0.05$ ) was used to determine how repayment rates differ among groups and individual borrowers of microfinance institutions and the effect of different key variables.

For objective 2 multiple regressions were used to depict the determinants of repayment performances in both group and individual lending. Chi-square test and Cramer's V value was used to determine the strength of the relationship between individual and group lending methodologies.

The third objective was analyzed using the Likert scale to rank motivations for repayment in groups and individual borrowers. Information obtained from focus group discussions were recorded using tape recorders. Information from these discussions aided in drafting questionnaires and obtaining information for the research.

### **3.1.5 Multiple Regression of Determinants of Repayments Performance in Group and Individual Lending**

Repayment on time serves as the dependent variable. Repayment is expected to be influenced by a range of variables. For the purpose of this study let  $Y_g$  represent repayment for groups and  $Y_i$  repayment performance of individuals.

$$Y_g = \beta_0 + \beta_1 X_1 + \dots + \beta_n X_n + \mu$$

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \mu$$

Where

$Y_g$  = Dependent variable (amount of loan paid on time for groups)

$Y_i$  = Dependent Variable (amount of loan paid on time for individuals)

$\beta_0$  =Constant

$\beta_1$ .....  $\beta_n$  are the coefficient of (independent variables)

$X_1$  ..... $X_n$  are the determinants (independent variables)

$\mu$ =error term

$X_1$ =Savings  $X_2$ =Dynamic incentives,  $X_3$ =Monitoring,  $X_4$ =screening,  $X_5$ =Peer Pressure and  $X_6$  as social ties

## **SECTION TWO: PROFILE OF THE STUDY AREA**

### **3.2 Location and Size**

The Upper West Region is located at the North Western corner of Ghana. It is bordered to the South and South East by Northern Region, to the North East by Upper East Region and to the North and North West by the Republic of Burkina Faso. It covers a geographical area of 18,476 Km<sup>2</sup> which represents 12.7% of the total land area of Ghana. By virtue of its location, it has the potential for international and inter-regional trade and other bi-lateral relations. (Government of Ghana, 2012)

### **3.2.1 Demographic Characteristics**

According to the 2010 population and housing census the region has a population of 677,763. In 2009 the population of the region was projected at 676,599. Population growth rate declined from 2.3% in 1984 to 1.7% in 2000. This figure was expected to decline further in coming years. The Population density of the region increased from 31 persons per km<sup>2</sup> in the year 2000 to 36 persons per km<sup>2</sup> in 2009. (Government of Ghana, 2012)

The region has a fairly young population with 53% below 20 years. This implies that there is a huge potential labour force for the future. However the current economically active population is overburdened as there is a high dependency ratio of 0.81. The region also has a consistent female dominance ratio of 92 males to 100 females. Generally over 60% of the population comprises children, women and the aged. However these groups of people are socially and economically vulnerable.

### **3.2.2 Economic Characteristics**

The region has over 80% of the population engaged in agriculture. This is far above the national average of 45%. Minority of the population engages in other economic activities such as small scale industry, trade and commerce, tourism etc.

Major crops cultivated in the region are maize, millet, sorghum, rice, groundnuts, cowpea, yam and cotton. Other minor crops cultivated are as Bambara beans, soybeans, sweet potatoes and vegetables such as okra, pepper, tomatoes and other leafy vegetables. The cash crops farmers rely on are cotton, groundnuts and of late soya beans and sorghum (kapaala). There has been a modest growth rate among cattle, sheep, goats, pigs and poultry as a result of the introduction of improved breeds and good husbandry practices.

The region has a number of traditional small scale manufacturing firms. Tools making, pottery, basket and cloth weaving are widespread. Oil extraction especially from sheanuts and groundnuts is being significant mostly in the urban centers. The region has two medium scale business i.e. Cotton Ginneries at Tumu and Wa.

### **2.3 Social Services**

It is estimated that 70% of the people of the region have access to health facilities. The region can boast of four (4) health training institutions. These include General Nursing, Community Health Nursing, Midwifery and Health Assistance Training Schools

There has been a steady increase in the number of schools over the years, from pre-school to the senior secondary school level. Institutions above Senior Secondary School level, Special Schools as well as Technical/Vocational Schools continue to stagnate in number over the years. The concentration of second cycle schools in general tends to be in the regional and district capitals, and other major settlements.

Enrolment into basic schools has shown a progressive increase from 2004 to 2009. The proportion of males and females going to school increased from 0.98:1 in 2005 to 1:0.99 in 2007 in favour of the girl child. Primary school completion rate also increased steady in favour of girls and this could also be attributed to the incentives in favour of the girl-child by NGOs. Currently fewer boys are now completing school as compared to girls at the basic level.

## **CHAPTER FOUR**

### **PRESENTATION AND ANALYSIS OF FINDINGS**

#### **4.0 Introduction**

This chapter presents and analyzes the empirical findings of the study. This section is divided into two parts. The first part present a report on data gathered from interviews which are arranged along the main objectives of the study. The second part of this section seeks to answer the research questions of the study by thematically analyzing and discussing data gathered from primary and secondary sources.

#### **PART I: PRESENTATION OF FINDINGS**

Presentation of findings of the study begins with the comparison of the background of individuals and group clients of SRB and WACCU in Wa municipality. To enable effective analysis of both clients the study chose a total of 240 group respondents (120 from WACCU and 120 from SRB). To increase validity and reliability of data 60 groups and 60 individual clients each were selected from the two financial institutions under the study.

## **4.1 Demographic Characteristics**

This section gives a brief overview of the demographic characteristics of 240 (120 individual clients and 120 group clients) respondents including data on age, marital status, businesses, educational level and ownership of assets. Demographic characteristics of the two groups of respondents are also compared to determine whether they have similar characteristics.

### **4.1.1 Age of Respondents**

Table 2 below indicates the mean age of both group clients and individual clients from the two financial institutions. Clients from both institutions had the same mean age of 41 and did not differ anyway, meaning both institutions targets clients within the same age range.

**Table 2 Mean Age of Respondents**

<b>Credit Methodology</b>	<b>Mean Age</b>
<b>Groups</b>	41
<b>Individuals</b>	41

**Source: Field survey, 2013**

### 4.1.2 Marital Status

Table 3 below indicates the marital status of individual clients and group clients in the two financial institutions. With the individual clients 73% of them were married, 4.2% single, 6% separated, 11.7% divorced and 5% of them been widows/widowers. While for group clients 81.7% respondents were married, 1% single, 5% separated, 3% divorced and 9.2% were widows/widowers. Majority of clients from both methodologies were married meaning that majority of targeted clients in the region were married.

**Table 3: Marital Status of Respondents**

<b>Marital Statues</b>	<b>Individual Clients</b>	<b>Group Clients</b>
<b>Married</b>	73	81.7
<b>Single</b>	4.2	1
<b>Separated</b>	6	5
<b>Divorced</b>	11.7	3
<b>Widow/widower</b>	5	9.2
<b>Total</b>	<b>100</b>	<b>100</b>

**Source: Field survey, 2013**

### 4.1.3 Educational Status

Table 4 below indicates that a larger share of group clients (60.8%) as compared to individual clients (40%) interviewed has never been to school. Also comparing primary, JHS/SHS education individual clients seems to have better education than group clients. Thus one can conclude that individual clients as compared to group clients had more education. Others represents individuals and group members who have been to form four and Arabic school.

**Table 4 Educational Status of Respondents**

<b>Educational Status</b>	<b>Individual Clients</b>	<b>Group Clients</b>
<b>None</b>	40	60.8
<b>Primary</b>	24	20
<b>JHS/SHS</b>	22.5	12.5
<b>Tertiary</b>	7.5	1.7
<b>Others</b>	6	5
<b>Total</b>	<b>100</b>	<b>120</b>

**Source: Field survey, 2013**

#### 4.1.4 Businesses of Respondents

The result in Table 5 above shows that majority of respondents were engaged in petty trading. This was followed by food processing and food vending respectively. Out of the 240 respondents interviewed 41.2% of them are into petty trading, 19.6% are into food processing such as rice processing, pito brewing and groundnut oil extraction, 13% were into food vending, and 6.7% are into dress making and other occupations such as electricians, auto mechanics, small scale fuel business and contractors. The result also revealed that 4.9% of respondents were engaged in farming, 4.2% were into repairs and other services and 3.7% were into hair-dressing.

**Table 5 Business of Respondents**

<b>Primary business</b>	<b>Individuals</b>	<b>Groups</b>	<b>Total</b>
<b>Petty trading</b>	42.5	40	41.2
<b>Food processing</b>	12.5	26.6	19.6
<b>Food vending</b>	14.2	12	13
<b>Dressmaking/tailoring</b>	6.7	6.6	6.7
<b>Others</b>	13.3	0	6.7
<b>Farming</b>	0.8	9	4.9
<b>Repair and other services</b>	8.4	0	4.2
<b>Hair dressing</b>	1.6	5.8	3.7
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Source: Field survey, 2013**

#### 4.1.5 Asset Ownership

Analysis shows that 80% of group clients and 85.8% of individual clients owned assets while 20% and 14.2% of groups and individual clients did not own any assets respectively. The Table 6 below gives detail analysis of the types of assets owned by respondents. Groups were more likely to own livestock (50%) as compared to individuals (14%). On the other hand a much greater proportion of individuals (50%) as compared to groups (2%) owned land and buildings which are more likely to be accepted as collateral. In addition 5% of individual clients owned vehicles with no group member owning vehicles. Group respondents were more likely (28%) to owned other assets such as household chattels, fridges, shops, cloths, sewing machines and hair dryers compared to individuals (17%).

**Table 6: Asset Owned by Respondents**

<b>Asset Owned</b>	<b>Individual</b>	<b>Group</b>
<b>Land</b>	21	1
<b>A building</b>	29	1
<b>Vehicle</b>	5	0
<b>Cattle/Livestock</b>	14	50
<b>Others</b>	17	28
<b>No assets</b>	14	20
<b>Total</b>	<b>100</b>	<b>100</b>

**Note: Most important asset owned. Source: Field survey, 2013**

#### 4.1.6 Access to Financial Institutions

Analysis from the Table 7 below shows that more of individual clients (69%) as compared to group clients (15%) made savings or accessed credit from commercial banks such as National Investment Bank (NIB), Barclays Bank (BB), First national, Ghana Commercial Bank etc. However, more of groups made financial transactions with savings and credit groups (9%), money lenders (5%) and relatives and friends (3%) as compared to individual.

**Table 7: Respondents Access to Financial Institutions**

Credit Method	commercial bank	Rural Bank	Savings & Loans	Microfinance & NGOs	Credit Union	Susu	Savings & Credit Groups	Money lenders	Relatives & friends
<b>Individual</b>	69	53	1	0	54	3	4	0	0
<b>Groups</b>	15	50	3	3	53	2	9	5	3

**Source: Field survey, 2013**

#### 4.1.7 Collateral

Table 8 gives a detailed description of types of collateral given to MFIs before loans were issued out. Majority of individual clients (53%) use guarantors before they were given loans, while some used buildings (28%) and land documents (16%). On the other hand no group member presented collateral before loans were disbursed.

**Table 8: Types of Collateral**

<b>Methodology</b>	<b>Types of Collateral %</b>					<b>Total</b>
	<b>No collateral</b>	<b>Building</b>	<b>land</b>	<b>Guarantors</b>	<b>Others</b>	
<b>Individuals</b>	1	28	16	53	2	100
<b>Groups</b>	100	0	0	0	0	100

**Source: Field survey, 2013**

#### **4.2 Objective 1: Comparing the Repayment Performance of Groups and Individual Borrowers in the Upper West Region.**

This section analyzes the repayment performance of groups and individual clients of the two financial institutions under study. The study compares the performance of the two categories of respondents within the two different institutions. The specific indicators used are; groups and individual clients that made timely and late repayments in their previous loan cycle, and the arrears rate, which is the percentage amount of loan paid late in client's previous loan cycle.

##### **4.2.1 Payment on Time**

The result in Table 9 below shows that 82.5% of groups clients as a whole made all payments on time, with only 17.7% not making payments on time. Whiles for individual clients almost all, 97.5% of them made payment on time, and only 2.5% did not make

payment on time. A larger share of individual clients paid on time as compared to group clients.

This difference had a chi-square statistic of 15.000, with a df of 1 which has a significant value of 0.00. This is statistically significant at 5%. In other words there is a significant relationship between credit method and timely payments ( $\chi^2=15.000$ ; df 1;  $p < 0.05$ ).

In addition the strength of the relationship is measured using Cramer's V. Cramer's V value is 0.250 and is also significant at 5%, making the relationship significant although not strong. According to this test the more the value is closer to 1 the stronger the relationship.

**Table 9: Respondents that Made Payment on Time**

Method	Payment on Time		
	Yes	No	Total
Groups	82.5	17.5	100
Individuals	97.5	2.5	100

**Note: Payment on time for groups is as repayment together as a group to the Institution. Source: Field survey, 2013**

#### 4.2.2 Number of Late Payments

The result in Table 10 below shows the number of times individual and groups made late payments.

**Table 10: Number of Late Payments**

Method	Late Payments							Total	$\chi^2$
	0	1	2	3	4	5	6		
<b>No of times</b>	0	1	2	3	4	5	6		
<b>Groups</b>	82.5	2.5	4.2	1.7	4.2	2.5	2.5	<b>100</b>	18.664
<b>Individuals</b>	98.3	0	0.8	0.8	0	0	0	<b>100</b>	

**Source: Field survey, 2013**

More of group clients (18%) compared to individual clients (2%) made late payments. Ninety-Eight percent of individual clients as compared to groups (83%) did not make any late payment. More individual clients made payment on time than group clients

Result for late repayment in Table 10 revealed a chi-square statistics of 18.664 with a difference of 6 and has a significant value of 0.05 which is significant at 5%. This means that there is a relationship between credit methods and number of late payments made by clients ( $\chi^2$  18.664; df 6;  $p < 0.05$ ). The analysis revealed a Cramer's value of 0.279 and

is said to be significant (0.05). However even though there is a significant relationship, the relationship is not strong because the Cramer's value is not close 1.

#### **4.2.3 Arrears Rate by Lending Methodology**

Table 11a and 11b show the percentage of loan amount paid late to MFIs by credit methodology and by institutions. Group clients had a higher arrears rate (of 2.1%) compared to individual clients (0.1%). This difference according to the T-test has a significant value of 0.00, which is significant at 95% confidence level. This, therefore, means that individual clients had fewer arrears as compared group clients.

**Table 11a: Arrears Rate**

<b>Lending Method</b>	<b>Rate of Arrears (%)</b>
<b>Individual</b>	0.10
<b>Group</b>	2.10
<b>P-value</b>	0.00

**Source: Field survey, 2013**

**Table 11b Arrears Rate by Institutions**

Arrears	SRB			WACCU		
	Group	Individual	Prob>F	Group	Individual	Prob>F
<b>Arrears (rate)</b>	3%	0	0.00	1.3%	0.20%	0.05

**Source: Field survey, 2013**

However, comparing arrears within institutions in Table 11b revealed that SRB had more arrears (3%) as compared to the WACCU (1.5%), i.e. almost twice of the value.

#### **4.3 Comparing the Characteristics and Motivations of Group and Individual Borrowers in the Upper West Region**

Table 12 outlines and ranks five categories of motivations for repayment in both groups and individuals clients of WACCU and SRB the Upper West Region. These categories were savings, access to future and bigger loans, visits by MFIs, pressure from group members and bad reputation in the community. Client's access to bigger and future loans was the number one motivator for the repayment of loans for all clients in Upper West, followed by clients not willing to lose their savings to their respective FIs. Groups putting pressure on each other for timely repayment was the lowest motivator for repayment.

**Table 12: Motivations for Repayment**

<b>Motivations</b>	<b>Ranking</b>		
	All clients	Groups only	Individual only
<b>I want to get access to bigger or future</b>	1	4	1
<b>I don't want to lose my savings</b>	2	2	2
<b>I don't want to destroy my reputation in the community</b>	3	3	3
<b>MFI pays me regular visits</b>	4	1	4
<b>Group pressure</b>	5	5	5

**Source: Field survey, 2013**

Motivations for individuals remain the same as for all clients; however, the lead motivator for repayment in group clients was regular visits by MFIs, followed by savings, with the lowest motivator being group pressure.

#### **4.4 Determinants of Repayments**

##### **4.4.1 Savings**

All 240 respondents (120 groups and 120 individual clients) made savings in their respective financial institutions before loans were given out. Savings made by clients are held as security against loans disbursed. Financial institutions use these savings to cover

unpaid loans. In SRB clients are asked to save 10% of the loans given out. However in WACCU clients are not given specific amounts to save but rather given a period of 6 months to make some savings before loans are disbursed.

Table 13 shows the mean savings of groups and individuals. The values below indicate that individual clients save more than group clients and the difference is significant at 1%. This therefore means that the probability of an individual client to save more is higher than in group clients.

**Table 13: Mean Savings**

<b>Methodology</b>	<b>Mean Savings</b>
<b>Group</b>	56.06
<b>Individual</b>	687.94
<b>Prob&gt;F</b>	0.00

**Source: field survey, 2013.**

#### **4.2 Monitoring**

The extent of monitoring was measured using frequency of repayment and number of visits made by credit officers after the disbursement of loans. Table 14 below indicates

the frequency of repayment made by both group clients and individual clients. The frequency of repayment for Group clients was 25%, 50%, and 25% for weekly, every two weeks and monthly repayments respectively. However for individual clients 0.8% made weekly repayment, another 0.8 every two weeks and majority of them 98.3% made monthly repayments. Majority of individual clients (98.3%) made monthly repayment while a majority of group clients (50%) made repayments in every two weeks. This comparison reveals that monitoring is more intense for groups than individual clients.

The frequency of repayments revealed a chi-square statistic of 136.519 with a difference of 2 and a significant value of 0.00. This is significant at 0.05 level. The above statistics indicate that there is a relationship between credit methods and frequency of repayment ( $\chi^2$ ; 136.519; df 2;  $p < 0.05$ ). The extent of the relation is measured using the Cramer's V value of 0.754. Using this value one can say the relationship is strong because the value is close to 1.

**Table 14: Frequency of Repayment**

Frequency of Payment	Method		
	Group	Individuals	Total
Weekly	25	0.8	12.9
Every two weeks	50	0.8	25.4
Monthly	25	98.4	61.7
<b>Total</b>	100	100	100

**Source: Field survey 2013.**

Table 15 below shows the frequency of visits made by loan officers to groups and individual clients. The frequency of visits made to group indicates that 24.2%, 50% and 25.8% respondents said they were paid weekly, every two weeks and monthly visits respectively by loan officers, with the majority of them being visited every two weeks. However for individual clients 0.8% said they paid weekly visits, nobody was visited every two weeks and majority of them (90%) said the loan officers just passed by once in a while to see how their businesses were doing, meaning that group clients were more frequently visited compared to individual clients.

The chi-square test carried out for the frequency of visits by loan officers revealed a chi-square statistics of 203.657 with a difference of 3 and a significant value of 0.00. This statistic indicates that there is a relationship between credit method and frequency of

visits made by credit officers. ( $\chi^2$  203.675; df 3;  $p < 0.05$ ). The value measuring the extent of the relationship is 0.921. Comparing this value to the scale of 1 is very strong because it is very close to 1.

**Table 15 Visit by Loan Officer**

<b>Method</b>		
<b>Frequency of Visits</b>	<b>Group</b>	<b>Individuals</b>
<b>Weekly</b>	24.2	0.8
<b>Every two weeks</b>	50	0
<b>Monthly</b>	25.8	9.2
<b>Once in a While</b>	0	90
<b>Total</b>	<b>100</b>	<b>100</b>

**Source: Field survey 2013**

#### **4.4.3 Dynamic Incentives**

The study used client's access to future and bigger loans and access to loan from other financial institutions (loan from elsewhere). All 240 respondents said they were promised future and bigger loans after a successful repayment. Table 16 shows that the majority of group clients (64%) said they did not stand the chance of getting access to credit from other financial institutions, while 36% of group clients said they stand the chance of getting access to credit. On the other hand, for individual clients, 62% of them said they did not stand the chance of accessing credit from elsewhere, while 38% said they did not. Even though there was a difference, this difference was not significant.

The result from the chi-square test revealed a chi-square statistic of 0.161 with a df of 1 and has a significant value of 0.688 which is not significant at 5%. This means that there is no significant relationship between credit methodology and getting access to credit elsewhere ( $\chi^2$  0.161; df1;  $p < 0.688$ ).

**Table 16: Loan from Elsewhere**

Methodology	Loan from Elsewhere			$\chi^2$
	Yes	No	Total	
Individual	38	62	100	0.161
Group	36	64	100	

**Source: Field survey 2013**

#### 4.4.4 Screening

Screening was measured using three variables; i.e. is how the group was formed, the number of relatives in the group, and whether the group has ever rejected any interested candidate. Table 17 indicate that majority of respondents (53%) said groups were formed through self-selection, 47% said groups already existed before the emergence of the MFI, and 0.8% said the group was formed by the credit officer.

**Table 17: Screening**

<b>1. Group Formation</b>			
<b>Already Existed</b>	<b>Self-Selection</b>	<b>Formed by Credit Officer</b>	<b>Total</b>
<b>47</b>	53	0.8	100
<b>2. Rejection</b>			
<b>Yes</b>	<b>No</b>	<b>Total</b>	-
<b>87</b>	13	100	

**Source: Field survey 2013**

#### **4.4.5 Group Pressure**

Group pressure was also measured using three variables; that is the ability of the group to force defaulting members to pay, having a code of conduct for the group, and whether members pay to be in good terms with one another.

**Table 18: Group Pressure**

<b>Group Pressure</b>	<b>Yes</b>	<b>No</b>	<b>Total</b>
<b>1. Pressure from Members</b>	99.2	0.8	100
<b>2. Code of Conduct</b>	90.8	9.2	100
<b>3. Good Terms</b>	92	8	100

**Source: Field survey 2013**

From the analysis majority said (90.2%) they put pressure on defaulting members while a few (9.8%) said they did not. Majority of the groups (90.8%) had codes of conduct for punishing members that do not adhere to them, while 9.2% did not. In addition majority of the group members said (91.7%) they made paid payment in order to be in good terms with group members while 8.3% said they did not.

#### **4.4.6 Social Ties**

This variable was measured using member's ability to seek help from one another, solving of disputes among themselves, the ability of members to help each other in times of repayment difficulties and the number of relatives in the group. All members (100%) sought help from each other in times of difficulties, while 96.7% borrowed from members during difficult times to pay back loans while 3.3% did not. In times of disputes 99.2% sought mediation within group while 0.8% did not.

In addition a large share of groups said that a majority of members (44.2%) were relatives, 27.5% said about half of group members were relatives, and 28.3% said just a few were relatives. When members were asked whether the group has ever rejected someone who wanted to join the group, 86.7% said yes and 13.3% said they have never rejected someone who wanted to join the group.

**Table 19: Social Ties**

<b>Social Ties</b>	<b>Yes</b>	<b>No</b>	<b>Total</b>
<b>Seeking Help</b>	100	0	100
<b>Mediation</b>	99.2	0.8	100
<b>Borrowing</b>	97	3	100
<b>Number of Relatives</b>			
Majority of Members	About Half	Just a Few	Total
44	28	<b>28</b>	100

**Source: Field survey 2013**

#### **4.4.7 Multiple Regressions on Determinants of Repayment Performance**

The Table 20 provides a multiple regression analysis on the determinants of repayment performance among groups and individual lending. The data shows that the amount of savings made by groups and individual affect repayment performance. Thus as savings increases, the payment rate also increases and this is true for both lending methodologies. This is statistically significant at 1% for individual and 5% for groups. There is also a significant relationship between the possibilities of being rejected from the group and repayment performance. The fear of being rejected tends to influence people's repayment performance, and this is statistically significant at 5%. Also the repayment performance is higher with groups that already existed than those that were formed by the loan officers, and this is statistically significant at 5%. Even groups which self-select their members tend to have better repayment than those that were formed by credit officers, and this is significant at 10%.

The groups which have a majority of their members being relatives had a lower repayment performance than those with few members being relatives, and this is statistically significant at 5%. In the same way, even groups with half their members being relatives also had a lower repayment rate than those that had a few members being relatives, and this is statistically significant at 10%.

The groups that met every two weeks had better repayment rate than groups which met monthly, and this is statistically significant at 1%. Similarly those who made payment every two weeks had better repayment amount than those who made payments monthly. This is statistically significant at 5%. Even those who made weekly payment had higher repayment rate than those who made monthly payment, and this is statistically significant at 10%.

For those in the groups, there was no relationship between payment to be on good terms with other members and the repayment performance. Also there was no relationship between code of conduct, borrowing from other members to pay for loan or obtaining loan elsewhere and repayment performance. Similarly mediation (solving dispute within the group) and the rate of visits had no significant relation with the repayment performance of those in the groups.

For those who receive loans individually, those who made weekly payment had better repayment rate than those who made monthly repayment, and this is statistically significant at 10%. There was no statistically significant relationship between the repayment performances of those who stood the chance of receiving loans from elsewhere in case of default; likewise the rate of visits by loan officers.

**Table 20: Determinants of Repayment Performance of Groups and Individual**

<b>Regressors</b>	<b>Group methodology</b>	<b>Individual methodology</b>
<b>Saving</b>	29.08**	8.643***
<b>Good terms</b>	-5.709	
<b>Rejection</b>	1.492**	
<b>Punishment</b>	2.433	
<b>Already exist</b>	2.795**	
<b>Self-selection</b>	1.210*	
<b>Majority of relatives</b>	-5.621**	
<b>About half relatives</b>	-1.245*	
<b>Loan else where</b>	-280.4	-1.975
<b>Borrowing</b>	4.524	
<b>Mediation</b>	-14.147	
<b>Weekly meeting</b>	-8.453	
<b>Every two weeks meeting</b>	14.374***	
<b>Weekly payment</b>	16.580*	1.811*
<b>Every two weeks payment</b>	12.657**	-1.023*
<b>Weekly visit</b>	4.922	2.610
<b>Every two weeks visit</b>	-2.122	-1.342
<b>Constant</b>	25.426*	2.837*
<b>R-squared</b>	0.206	

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## **PART II: ANALYSIS OF FINDINGS**

### **4.5 Introduction**

Part II of chapter four involves the analysis of findings from the field and backing them up with secondary data from similar studies.

#### **4.5.1 Repayment Performance**

The result for timely repayment in Table 9 showed that a larger share of individual clients (98%) as compared to group clients (83%) made timely repayments. The analysis revealed that the relationship between credit methodology and timely repayment was statistically significant ( $\chi^2=15.000$ ; df 1;  $p < 0.05$ ). In conclusion individual borrowers are more likely to repay on time than group borrowers.

Data from Table 10 revealed that more group clients (18%) compared to individual clients (2%) made late payments. This difference was statistically significant at 5% ( $\chi^2 18.664$ ; df 6;  $p < 0.05$ ). The study can therefore conclude that group clients made more late payments compared to individual clients. The T-test used in comparing the mean arrears rate had significant value of 0.00 which is significant at 95% confidence level.

Furthermore individuals had significantly lower arrears as compared to group clients. Comparing the arrears SRB and WACCU revealed that WACCU had a better repayment as compared to SRB, and this was also statistically significant ( $p < 0.00$ ). The study therefore accepts the alternative hypothesis that clients in the credit union are more motivated to payback than clients of rural banks against the null hypothesis of no significance. But however rejects the alternative hypothesis that group clients are more likely to make repayment on time than individual clients.

The analysis from the above three variables revealed that individual clients had a significantly better repayment performances as compared to group clients. The study therefore rejects alternative hypothesis of the research, which said that group-based lending yields better repayment performance than individual lending. This can be attributed to the fact that majority of individuals used guarantors and other properties such as land as collateral to access loans. Also a majority of groups had more than half their members related to each other, which was shown to be significantly related to lower repayment performance. In addition majority of groups from SRB had a poor performance and therefore had a significant impact on the results.

From analysis Individual clients seemed to be more wealthier as they owned more valuable assets such as land and buildings as compared to group clients, with a larger share of their assets being livestock ( sheep, pigs and goats). The evidence of the study

indicates that having to pledge asset as collateral provided a strong incentive for individuals to repay; whereas group never had to pledge collateral.

The study also observed that while WACCU targeted group clients from rural communities and villages SRB had most of their clients within towns. So there is the possibility that those within town had access to other financial service, thus the refusal to make repayment on time. The study can also attribute the poor repayment performance to the fact that majority of group members were relatives. A regression analysis from this study revealed that groups with majority of their members being relatives had a lower repayment performance as compared to those with just a few members being relatives. Even groups with about half of their members being relatives confirmed the same result. Literature revealed that when a majority of group members are relatives there is a high possibility of members not being able to put pressure on each other to make repayment. The study also observed that a major contributing factor for the poor performances of groups was that, even though a larger share of groups had code of conducts they were not able to enforce the implementation of these by-laws. The poor implementation of these by-laws can also be attributed to larger share relatives in the formation of groups.

Frequent monitoring by MFIs in the study was not sufficient to overcome their low repayment performance. Although the group methodology of the MFIs studied involved

more frequent monitoring than the individual methodology, the findings revealed that monitoring was not sufficient to offset the lower performance of the groups.

#### **4.5.2 Motivations for Repayments**

Sharma and Zeller (1997) in their study revealed that the success of group lending cannot just be attributed to innovations that reduce the cost of screening, monitoring and enforcing loan contracts, but also to the perception of the long-lasting nature of the programme by the intended borrower's communities. Their study conforms to the findings of this research which concludes that access to future and bigger loans was the number one motivator for repayment among group clients and individual clients. The study therefore accepts the alternative hypothesis that access to bigger and future loans is the lead motivator for repayment loans. This was closely followed by clients not losing savings to their respective banks. Protecting one's reputation within their respective communities also played a very vital role by placing 3<sup>rd</sup>. Regular visits by MFIs and group pressure placed 4<sup>th</sup> and 5<sup>th</sup> respectively. The study therefore concludes that while getting access to future and bigger loans serves as the lead motivator, group pressure serves as the least effective motivator for repayment of loans in the Upper West Region, at least when groups have a higher proportion of relatives

#### **4.5.3 Determinants of Repayment Performance**

The study used 3 determinants of repayment performance for both groups and individuals namely: the amount of savings, monitoring and dynamic incentives. Whiles pressure from groups, screening and social ties were used as determinants for group repayment performance. The dependent variable used was total loan amount plus interest paid on time.

### **Savings**

The study used the current savings by both group clients and individual clients as a measure of savings. The mean savings of individuals is higher than groups with difference being significant ( $p < 0.01$ ). This therefore means that individual clients make more savings than group clients. A regression analysis revealed that a large amount of savings leads to better repayment. Thus, as savings of both group and individuals increase, repayment performance also increases. This can also mean that clients from both methodologies make repayments to avoid losing their savings to their respective financial institutions.

This finding is in line with that of Wenner's analysis which suggests that savings mobilization, which acts as a kind of intra-group insurance, is linked with better performance. This study also conforms to that of Kumar (2010), which revealed that most MFIs requires that individual borrowers save at least half of the amount required to serve

as collateral before loans are disbursed. He concluded by saying that these arrangements in individual lending in most cases improve repayment performance.

### **Monitoring**

The results from the chi-square test (Table 14 and 15) shows that groups made more regular payment and were visited more by the loan officers compared to individuals. This difference was significant ( $\chi^2$ ; 136.519; df 2;  $p < 0.05$ ) meaning that high monitoring under this study was associated with low repayments of loans since group clients had higher arrears compared to individual clients. However a regression analysis revealed otherwise, the result showed that groups and individuals who made weekly repayments had better repayments as compared to those who made monthly repayments. Even those who made repayment in every two weeks compared to monthly repayment made better repayment.

Therefore although the study cannot accept the alternative hypothesis that the frequency of monitoring (visit by loan officers) improves repayment, it does find that frequency of payment is associated with better repayment. The rate of visits made by a loan officer did not affect repayment in both groups and individuals. Regular payment enables loan officers and group members to monitor activities of group clients and individual clients and repayment progress. Finally it helps to identify all short comings and put in place measures to ensure loans are paid on time.

### **Dynamic Incentives**

All 240 respondents were promised access to future and bigger loans after a successful repayment. This means that clients have the perception that once repayment is done successfully and on time, they stand the chance of getting access to future credit and bigger loans. This observation confirms that of Sharma and Zeller (1997) which revealed that the success of group lending cannot just be attributed to innovations that reduce the cost of screening, monitoring and enforcing loan contracts, but also to the perception of the long-lasting nature of the credit program by the intended borrower's communities.

There was no significant relationship ( $\chi^2$  0.161; df1;  $p < 0.688$ ) between access to credit elsewhere and repayment performance for both group clients and individual clients. Meaning that client's access to credit from other financial institutions for both groups and individual clients did not influence repayment performance in any way.

A regression analysis confirms this result because it revealed that there was no significant relationship between access to credit from other financial institutions and repayment performance in both groups and individuals. The result of this study is contrary to that of Wenner (1995) and Zeller (1998), which found out that limited access to alternative credit options by groups, had a better repayment performance.

## **Screening**

The study used the ability of group members to reject someone from joining the group and the process by which groups were formed for measuring screening. There was a significant relationship between the possibility of rejecting someone from a group and repayment performance of groups. The fear of being rejected by a group influenced repayment performance positively. Also, repayment performance is higher with groups that already existed than those that were formed by the credit officer. Furthermore groups with self-selected members had better repayment than those formed by the credit officer.

This result confirms that of Sharma and Zeller (1997), who revealed that repayment rates were higher in groups which were initiated by group members. The use of already existing groups and giving members the freedom to self-select themselves give members the opportunity to screen and select credit worthy members thus enhancing repayment. The study therefore accepts the alternative hypothesis that screening in group lending enhances repayment against the null hypothesis of no significant difference. This argument is in line with Stieglitz (1990) and Varian (1990) who concluded that involvement of clients in the screening of loan applicants improves repayment performance. In addition Wenner's (1995) found out that the use of 'inside' information on character attributes, such as credit worthiness, in credit groups reduces the incidence

of default by groups and concluded that repayment performance was better in groups engaged in active screening of its members.

### **Group Pressure**

The study measured group pressure using frequency of group meetings, payment in order to be in good terms with other members, and the use of code of conduct by groups. Groups that met every two weeks had better repayment than groups that met monthly. This means that groups that made payment in every two weeks were able to monitor and also put pressure on defaulting members to make repayment on time than those who made monthly payment.

However there was no relationship between repayment and desire to be in good terms with group members. Also there was no relationship between repayments and the use of code of conduct by group members. Meaning the use of code of conduct by groups and paying to stay in good terms with one another does not affect repayment in any way. The study observed that even though a larger share of groups had code of conducts, members did not ensure these rules were followed.

The result of this study is contrary to that of Wenner (1995) and Zeller (1998). They found that group using a written internal code of conduct significantly improves

repayment. Similarly Wydick (1999) found that the potential of social sanctions plays a secondary and supporting role in improving repayment performance. There is the possibility that even though groups had codes of conduct they were not implemented and adhered to effectively. Majority of group members were relatives, hence group clients did not see the need to pay in order to be in good terms with one another. Majority of group members being relatives can lead to collusion by some members not to pay back loans.

### **Social Ties**

The study used mediation as an indicator that is, how groups help in solving disputes within the group, borrowing from other members of the group to make payments on time, and the number of relatives within a group. There was no significant relationship between both mediation and borrowing and repayment performance. Social ties in the form of mediation and borrowing among groups do not influence repayment performance of groups in the Upper West region. This finding supports the study of Godquin (2004) which concluded that an institution's ability to harness previously existing social ties has no effect on borrowing group's performance. But if however disagrees with the findings of Zeller (1998), which revealed that social cohesion, which was measured as the number of common characteristics among group members like social class, ethnicity, neighborhood, friendship and kinship, was found to improve the repayment rate. This result is contrary to that of Zellers because of the high proportion of relatives in the group, which could lead to collusion

There was a negative and significant relationship between the number of relatives in a group and repayment performance. Groups with majority of member being relatives had poorer repayment performance than those with few members. Even groups with about half of their members being relatives had poor repayment as compare to those with just few members as relatives. This finding is in line with that of Sharma and Zeller (1997) which concluded that high proportion of relatives within a group had negative impact on group performance.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATION**

#### **5.0 Introduction**

This chapter gives a summary of findings of the study, conclusion and some policy advice base on the outcome of the study.

#### **5.1 Summary**

The research was carried out in the Upper West region of Ghana. The main objective of the study was to compare the repayment performance of groups and individuals and to also bring to light factors that determine repayment performance in both groups and individuals. Two financial institutions located in Wa Municipal Assembly namely SRB and WACCU, were used for the study. A total of 240 respondents comprising of 120 groups and 120 individuals were used for the survey.

Findings revealed that repayment performance of individual as compared to groups seems to be better. This finding was linked to the fact that majority of individual presented guarantors and collateral before loans were given. The result also indicate that

clients perception of getting access to future and bigger loans was the lead motivator for repayment, and was closely followed by clients not wanting to lose their savings.

The study used six determinants of repayment namely savings, monitoring, dynamic incentives, screening, peer pressure and social ties. Savings had a positive impact on repayment because findings revealed that as people savings increases their repayment performance is also enhanced. Regular repayment schedules and regular visits used as a measure of monitoring also enhanced repayment in both groups and individuals. The used of client's access to credit from other financial institutions as a measure of dynamic incentive did not yield any positive result and therefore did not have any impact on repayment. However the use of access to future and bigger loans as a determinant yielded positive as all 240 respondents made payments as a result of that.

The ability of group members to reject someone from the group and how groups were formed were used as a measure of screening. There was a significant relationship between repayment and these two measures. The study indicates that the fear of being rejected by a group enhances repayment. Already existing groups and groups formed through self-selection had better repayment as compared to groups formed by credit officers. Frequency of repayment and payment to be in good terms with one another as a measure of group pressure revealed that weekly repayment compared to monthly

repayment of groups, yielded a better repayment. However payment in order to be on good terms with one another did not affect repayment performance.

The study measured social ties using mediation, borrowing from other members to make timely repayments and the proportion of relatives in the group. Mediation and borrowing from group members did not affect repayment. However the proportion of relatives within the group had a negative impact on the result. The study indicate that the larger the proportion of relatives in a group the lower the repayment performance.

## **5.2 Conclusions**

In conclusion individuals are doing better than groups in terms of repayments, motivated by dynamic incentives and to the threat of losing savings and collateral. However group performance could be improved if groups are allowed to self-select themselves, trained appropriately, and do not involve many relatives in groups.

## **5.3 Recommendations**

Based on the outcome of these research findings, the study recommends that for financial sustainability of MFIs they should encourage individual lending by focusing more on individual clients. Financial institutions should encourage group self-selection, but

discourage relatives from forming groups. Saving mobilization could also be used as tool to expand the financial base of MFI as well as enhance repayments.

In addition the study will recommend that the government should create an enabling environment by lowering central banks interest rate and by supporting CUs with credit to lend to it members. Public private partnership should be encouraged by the creation of more CUs and involving them in policy making for national development.

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## APPENDIX ONE: QUESTIONNAIRE

*Topic: Determinants of Repayment Performance of Groups and Individual Lending: A Case Study in the Upper West Region of Ghana.*

### *Section A for both Groups and Individuals*

#### *(i) General Characteristics of respondents*

1. Age of respondent .....

2. Marital status of respondent?

(1) Married (2) Single (3) Separated (4) Divorced (99) don't know or no answer

3. Educational level of respondent?

(1) None (2) Primary (3) JHS/SHS (4) Tertiary (5) others..... (99) I don't know/no answer

4. What is your Primary business?.....

(1)Petty Trading (2) Food vending (3) dressmaking/tailoring (4) food processing and manufacturing (5) hair dressing (6) Repair and other services (7) others..... (99) I don't know/no answer

5. For how long have you been doing this primary business.....years

6. What is your secondary business?

(1)Petty Trading (2) Food vending (3) dressmaking/tailoring (4) food processing and manufacturing (5) hair dressing (6) Repair and other services (7) others..... (99) I don't know/no answer

7. How long have you been in your secondary business? .....years

8. Do you own any assets?

(1) Yes (2) No (99) I don't know/no answer

9. If yes what assets do you own?

(1) Land (2) A building (3) vehicle (4) Cattle/livestock (5) Others ..... (99)

I don't know/no answer

**(ii)SECTION B: LOAN CHARACTERISTICS**

10. Have you had a loan in the last 2 years?

(1) Yes (2) No (99) I don't know/no answer

11. Which institution do you get your loan from?

(1)Sonzele (2) Wa Credit union (3) other ..... (99) I don't know/no answer

12. Have you done savings or credit from any of these? Circle as many as apply

(1) Commercial bank (2) Rural bank (3) savings and loans (4) Microfinance NGO (5) Microfinance company (6) Credit union (7) Susu Collector (8) savings and credit group (9) Money lenders (10) Relative or friends (11)Others..... (99) I don't know/ no answer

13. Do you present any form of collateral before been given credit?

(1) Yes (2) No (99) I don't know/no answer

14. If yes please name the above collateral.....

15. How much was your previous loan? GHS (new).....

16. How many months were you given to repay?

(1) 4 months (2) 6 months (3) 8 Months (4) 10 Months (12) Months

17. How much is the interest rate? .....

18. How is the interest rate charged?

(1) Monthly (2) Per loan cycle (3) Per Annum (4) Others..... (99) I don't know/no answer

19. How many loan cycles have you completed .....

**(iii)SECTION C: MOTIVATIONS FOR REPAYMENT**

20. Why do you repay your loan? Please tick as it apply

No	Motivations for repayment: I repay because	1	2	3	4	5
1	I don't want to lose my savings					
2	I want to get access to bigger or future loans					
3	The MFI pays me regular visits					
4	Group members ensure I use the loan for it purpose					
5	I don't want to destroy my reputation in the community					

Where 1=strongly agree 2=Agree 3=Neither agree or disagree 4=disagree 5=strongly disagree

**(v)SECTION D: SAVINGS**

21. Do you or your group save with your institution?

(1) Yes (2) No (99) I don't know/ no answer

22. Are savings required before obtaining loans?

(1) Yes (2) No (99) I don't know/no answer

23. Are your savings held as security against loans?

(1) Yes (2) No (99) I don't know/no answer

**(vi)SECTION E: REPAYMENTS**

24. How many repayments were due in the last loan cycle.....

25. Did you make all the repayment on time?

(1) Yes (2) No (99) I don't know/no answer

26. If no how many late repayments did you make .....

27. Do you or your group stand the chance of accessing credit from elsewhere e.g. from Individuals or different banks?

(1) Yes (2) No (99) I don't know/no answer

28. How many months were you given to pay back the last loan? .....

29. How many months did you actually take to pay back the last loan? .....

30. Are you promised bigger or repeated loans after a successful loan cycle?

(1) Yes (2) No (99) I don't know/no answer

31. How frequently do you make repayments of loans?

(1) Weekly (2) Every two weeks (3) Monthly (99) I don't know/no answer

32. How frequently are you visited by the loan officer?

(1) Weekly (2) Every two weeks (3) Monthly (99) I don't know/no answer

## 33. Arrears rate

Name /Individual+ MFI	Group	Total loan+ interest GHS (new)	Amount paid on time GHS (new)	Amount paid late GHS (new)	Arrears rate= $\frac{\text{paid late}}{\text{total loan+interest}} \times 100$ %

**SECTION B TO BE ADMINISTERED TO GROUPS ONLY GROUP PRESSURE**

34. Are group members willing to put pressure on a member who is late in paying?

(1) Yes (2) No (99) I don't know/no answer

35. Do group members pay to stay in good terms with each other?

(1) Yes (2) No (99) I don't know/no answer

36. Does the group have internal code of conduct to punish a defaulting group member?

(1) Yes (2) No (99) I don't know/no answer

37. How often does the group hold meetings?

(1) Weekly (2) Every two weeks (3) Monthly (99) I don't know/no answer

38. How was the group formed?

(1) Already existed for non-financial services (2) Self-selection (3) Formed by the credit officer (99) I don't know/no answer

39. Have the group ever rejected someone who wanted to join?

(1) Yes (2) No (99) I don't know/no answer

40. How many group members have relatives in the group?

(1) Majority of members (2) about half of members (3) Just a few (99) I don't know/no answer

41. If you cannot make a loan payment can you borrow temporarily from a member to make it?

(1) Yes (2) No (99) I don't know/no answer

42. Does the group seek help from one other to make a decisions?

(1) Yes (2) No (99) I don't know/no answer

43. Do members seek mediation from others to solve a dispute within the group?

(1) Yes (2) No (99) I don't know/no answer

44. How many times was some Individual member of the group late (even if the group made up for it and paid on time)? .....