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AN EVALUATION OF THE PERFORMANCE OF MICROFINANCE INSTITUTIONS IN GHANA

AN INVESTIGATION INTO THE FACTORS THAT IMPACT ON SUSTAINABILITY AND SUCCESS OF MICROFINANCE INSTITUTIONS IN SUB-SAHARAN AFRICA

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ABSTRACT

Keywords: microfinance, sustainability, success, subsidy, agency costs, moral hazard, adverse selection, outreach, screening and selection and selection.

The thesis examines factors that influence sustainability and success of microfinance institutions in Ghana. The topic is important, particularly in poverty stricken Africa, where microfinance institutions play a significant role in supporting governments' initiatives to reduce/alleviate poverty. The developed model is tested using data collected from 14 face-to-face interviews and 114 questionnaires. The data is analysed using different techniques- descriptive statistics, cross-tabulations and regression analysis. The research design and scale of the study are appropriate to both the problem addressed and doctoral level research. A number of factors in the model developed were found to be influencing the sustainability and success of microfinance institutions.

A model was proposed that seeks to offer an explanation of sustainability and success of Microfinance Institutions in Ghana. The proposed model identified five categories being: institutional characteristics, agency costs, business strategy, environment/governance and success.

Single factor analysis established positive relationships between sustainability and all the five factors but placed more emphasis on three out of the five factors namely; success, business strategy and environment/ governance. Multiple factor analysis established no significant differences in the sustainability with respect to the type of MFI, ownership and source of funding.

Multiple Regression which allows for the testing of theories or models established a significant relationship between the Operational Self Sufficiency (OSS) and the predictors, especially the drop-out rate of clients and average loans. The Subsidy Dependence Index (SDI) was calculated for the various types of MFIs and the result was a high dependency ratio especially among the FNGOs. Though the dependency is on the decline, it is very slow indicating that most MFIs will depend on subsidies for a very long time to come.

Finally it was observed that the relatively high interest rates charged by most of the MFIs tended to defeat the purpose for which the microfinance movement came about. Not only did the study confirm the research model, but it also revealed that most owners did not exhibit a deep sense of involvement and used general knowledge to practice in Ghana.

The study concluded that success factors, business strategy, and environment/governance were the most critical of the sustainability factors in Ghana. It is therefore important that managers develop institutional capacities especially in managing the agency problem effectively if they have to be sustainable and successful.

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Whenever there is a will, there is always a way and therefore despite the numerous challenges I had to go through I was certain in my mind that this journey would have to be completed, and timely too.

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To God be the glory.

DEDICATION

To the memory of my beloved son, “PROF” ELORM KOBLA AVEH- 21st December 1999 to 27th January 2009. For five (5) years you battled with leukemia.

Your courage, tenacity, determination, intelligence and the will to survive in the face of all odds are unsurpassed. Unforgettable, that is what you truly are.

The catholic hymn says:

“Take my life and let it be

Consecrated, Lord to thee;

Take my moments and my days,

Let them flow in ceaseless praise.”

Rest in the Lord.

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CHAPTER ONE

Introduction and Background to the Research

1.1 Introduction

Since the early 1990's a consensus has emerged among governments and donors that microfinance institutions constitute an effective weapon for poverty alleviation. For this purpose, microfinance institutions have been set up in many countries to play the intermediary role between the suppliers of funds and the poor. The key objective of these institutions as required by the donors is poverty eradication by providing financial services to as many poor people as possible. However, considering that donor resources are not unlimited, the need has arisen for the microfinance institutions to be financially independent (sustainable). To do this they must also be profitable. The challenge facing them is how to lend to a significant number of the poor without compromising the need to be viable and sustainable financial institutions. There is thus a conflict between sustainability and profitability (Von Pischke 1996).

Microfinance has gained much importance and acceptance as a tool for economic development, especially in developing countries. Since the pioneering works of McKinnon (1973) and Shaw (1973), microfinance has evolved as an economic approach intended to benefit low income men and women. The spread of microfinance across low income economies helped to stimulate growth by providing small financial services to people who had no access to formal financial institutions either for credit or savings. In Ghana, the financial liberalization policies of the 1980's coupled with a relaxed regulatory environment for microfinance resulted in tremendous growth and spread of microfinance institutions (Steel and Andah, 2003).

Aryeetey and Gockel (1991), show that microfinance institutions are pivotal as far as credit for development is concerned. However, the critical issue which has assumed important dimension in academic and policy circles is the sustainability of microfinance institutions. This is important to the development of financial intermediation at the micro level. The main issue regarding sustainability has to do with how microfinance institutions manage the dynamic situation between lenders and small borrowers and institutional staff productivity in the provision of efficient and productive loans. A well managed lender-borrower relationship translates into the ability of the institution to manage the associated problems of moral hazard and adverse selection. This eventually helps the institution to obtain more yields on loans, generate revenue and reduce reliance on grants or subsidies. The sustainability and success of microfinance therefore hinges on an effective management of the agency issues in microfinance.

Despite the concern for sustainability, the focus in developing economies especially sub-Saharan Africa seems to be only on provision of credit. However the problems emanating from credit provision by microfinance institutions and the attendant problems of high default coupled with the heavy reliance on donor support, give cause to investigate the dynamics of managing the agency problem.

This study provides a focus on how microfinance institutions are dealing with the performance issues of agency, moral hazard, adverse selection and more especially, sustainability It does so by analyzing data on the workings of 14 Executive Directors/Managers in qualitative interviews and 130 Directors/Managers in research questionnaires. The sample was chosen to provide a broad insight into the different types of microfinance institutions. The use of organizational leaders (executive directors and relationship managers) as ''key respondents'' is relatively widespread

in strategy research (Snow and Hrebiniak, 1980; Bowman and Ambrosni, 1997). The executive directors/managers by their positions are expected to give the direction to their various institutions while the activities of the relationship managers as expressed in the questionnaire confirms or conflicts the directives of the executive directors.

This particular chapter is divided into 4 sections. Section 1 provides the introduction to the study by outlining the justification for the research and its intended contribution, the research problem and questions, the scope of the research, as well as the structure of the thesis.

1.1.1 Justification of the Research

This section is dedicated to providing the justification for the research. This is achieved by first providing an overview of the gaps in the current literature (section 1.1.2), which is explored in greater detail in chapter two, and the resulting importance of this research to micro financing.

1.1.2 Gaps in Existing Research

There are two main gaps in the literature that this study aims to address. The first is that most of the empirical works on performance (especially sustainability and success) of microfinance have been in the South American and Asian countries (Khan, 1979; Bell, 1990; Nevajas et al., 2000). Very few studies have tested the sustainability of such institutions in sub-Saharan Africa. In Ghana studies on the performance of microfinance institutions have not empirically tested the sustainability and success of such institutions through the agency theory. Again, most of the studies have been in the area of impact analysis (see Appendix L).

Secondly, these studies have tended to concentrate on the operations and coverage of microfinance institutions and informal money lenders with little focus on their sustainability and success. Thus, there is very little information on how Ghanaian microfinance institutions manage the agency problem. This research therefore examines the management of these performance problems and how they translate into sustainability and success of microfinance institutions in Ghana.

1.1.3 Importance of the Research

As mentioned in section 1.1.2, this research will address the issue of imposition of sustainability of microfinance theories of the Latin American and Eastern European economies where the movement first began. It therefore intends to add to the limited number of research works carried out in Sub-Saharan Africa. Again, this study will help give a new perspective on the factors that affect sustainability and success of microfinance institutions and provide additional evidence that prove or disprove the existing evidences.

The principal issues being raised have to do with sustainability and success and how these translate into the ability of MFIs to operate successfully. It is therefore imperative to investigate the situation of MFIs to determine if they are likely to continue to exist and serve their useful purpose or have their success overcrowded with operational hazards. It is obvious that the set of possible solutions is quite large and complex; hence the need to examine these further especially with respect to the African situation. More so, since microfinance has the objective of advancing development through the empowerment of the poor, it becomes relevant and almost obligatory to examine critically the related issues within the African context.

Secondly, this study will also throw more light on how institutions can overcome market failures. It will be drawing on new developments in the microfinance movement and also point to unanswered questions and ways to reframe old debates. Finally, this study will investigate the factors that impinge on sustainability and success of microfinance institutions in Least Developed Countries (LDCs) especially Ghana. The importance of addressing the issues and the resulting importance of this research can be viewed from the intended LDCs literature and managerial contributions of this research.

1.1.4 Intended Contribution to LDCs Literature

As mentioned in section1.1.2, the current literature containing sustainability of MFIs appears to be relatively small and highly concentrated on impact analysis. This study is important from LDC literature contribution in that it adds to the relatively small number of sustainability studies, but more importantly it combines both quantitative and qualitative methods (see section 6.1.4) to study sustainability and success in the microfinance sector in Sub-Saharan Africa, an area that does not appear to be sufficiently covered at this point.

1.1.5 Intended Managerial Contributions

From a managerial contribution view, this research is important for a number of reasons described in section 1.1.2. Understanding sustainability and success is important to the microfinance sector in that it provides them with greater understanding of the variables that need to be skillfully manipulated in order to establish viable and enduring institutions.

1.1.6 The Research Problem and Issues

Given the justification of the research provided in section 1.1.1, this study examines the sustainability and success of microfinance institutions in developing countries especially countries in sub-Saharan Africa. Specifically, this study investigates the following research question:

What are the significant factors that influence sustainability and success of microfinance institutions in Sub-Saharan Africa with specific reference to Ghana?

An answer to this question requires investigation into factors that are perceived to impact on sustainability and success of microfinance institutions in Sub-Saharan Africa, and the development of sub-research questions. The factors that impact on sustainability are grouped as follows: Institutional Characteristics, Agency costs, Business Strategy, Environment/ Governance and Success. This research problem is investigated by gathering data from 114 relationship managers of microfinance institutions in Ghana regarding their activities and then matched with interview data collected from 14 Executive Directors and Managers on similar issues.

The sub-research questions have been developed under their various sub-headings which are outlined below:

Q.1) Which are the major institutional characteristics that impact on sustainability of microfinance institutions?

Q2) What are the issues of sustainability and agency costs that impact significantly on an MFI?

Q3) Which of the business strategies adopted has a significant influence on sustainability of microfinance institution?

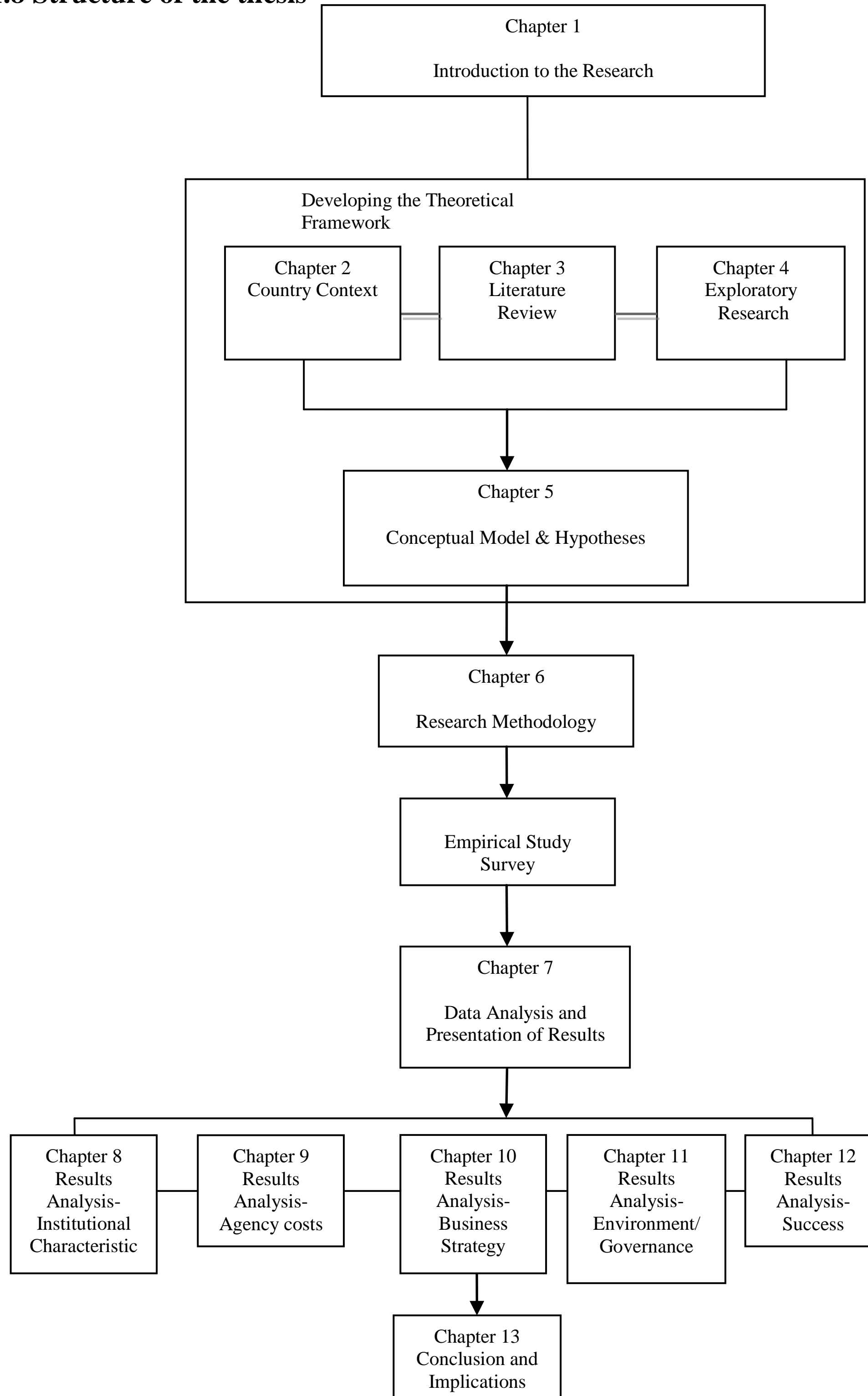
Q4) Which environmental/ governance factors have the most impact on sustainability of an MFI?

Q5) Which success factors have the most impact on MFIs?

1.1.7 The Scope of the Research

This study focuses on the financial services sector, specifically on micro financing in Ghana, with Ghana being used as a proxy for less developed countries south of the Sahara. Based on the recommendations of Churchill and Iacobucci (2002) and Frankfort-Nachmias and Nachmias (1996) in defining the unit of analysis for the study, the individual Chief Executive/Relationship Manager within the microfinance institution or financial services sampling frame represents the unit of analysis.

1.1.8 Structure of the thesis



Chapter 1 provides the introduction to the study and the justification of the research. Chapter 2 looks at the country context with details of the geography, economy, the

financial services sector and patterns and trends of poverty in Ghana. Chapter 3 looks at existing literature on performance of microfinance. Chapter 4 deals with the exploratory qualitative research which together with chapter 3 lead to the development of hypotheses in Chapter five. Chapter 6 discusses the research design and methodology used in the empirical research and the reason for the choice of methods. Chapters 7-12 cover empirical part of the research. The thesis ends with implications and policy recommendations in chapter 13.

1.1.9 Section Summary

This section provided the introduction to the study by outlining the justification for the research and its significance, the research problem and issues, the scope of the research, as well as the structure of the thesis. The following chapter discusses the background to the research by looking at a brief geography of Ghana as well as its economy, financial systems and pattern and trends of poverty in Ghana.

CHAPTER TWO

Country Context

2.1 Introduction

This chapter discusses the history of the Country Ghana by looking at its geography, the economy, the financial systems and the incidence of poverty which microfinance seeks to address.

2.2 Geography[1]

Ghana is located in West Africa with a size of 238,533 square kilometers, roughly the size of Illinois and Indiana in the United States of America. Although the official language is English, Ghana is surrounded by French speaking countries; Cote d'Ivoire on the west, Burkina Faso on the north, Togo on the east and the Gulf of Guinea (Atlantic Ocean) on the south.

The topography of Ghana is a generally low physical relief except in the east. There are five distinct geographical regions: low plains inland from Atlantic coast; northern plateau stretching from western border to Volta River basin averaging 450 metres in height; mountainous uplands along eastern borders, bisected in the south by Volta River Gorge; Volta River Basin in centre; and dissected plateau up to 300 metres high in north. The climate in Ghana is tropical, governed by interaction of dry continental air mass from the northeast and moist southwest equatorial system with an annual mean temperature of between 26^0 C and 29^0 C. Annual rainfall varies from more than 2,100 millimeters in the South to 1,000 millimeters in the North. Vegetation is heaviest in south, thinning to savanna and dry plains in the north. The next section (Section 2.3) gives an overview of the economy of Ghana.

1 Wikipedia.org/wiki/Geography of Ghana

2.3. Economy

At independence in 1957, the economy of Ghana was based on gold and the country was relatively prosperous. At independence Ghana had foreign reserves of not less than UK£500 million and per capita income of about US$300 that was comparable to other middle income countries like South Korea (Leith and Lofehie, 1993). Notwithstanding the lack of industrialization, the economy appeared to be stable and prosperous, as it was the leading producer of cocoa at the time (Aryeetey and Fosu, 2002).

After independence, Ghana embarked on rapid import-substitution industrialization through the establishment of state enterprises as guided by the declaration of the Development Decade (1960-1970) by the United Nations (UN) (Aryeetey and Harrigan, 2000). The political philosophy at the time being socialist inclined, also influenced how the industries were financed and controlled in most cases by the state (Aryeetey and Fosu, 2002; Bhasin and Annim, 2005). Akuoko- Frimpong (1990) reported that by 1960, Kwame Nkrumah the first president of Ghana had completely shifted away from the colonial master (Great Britain), rejected open market economy and had adopted a centrally planned and regulated economy. The state then became the predominant economic agent in Ghana.

After mid-1960s, the economy stagnated, characterized by weak commodity demand, outmoded equipment, overvalued currency, smuggling, foreign debt and mismanagement which left a lot of state enterprises highly unprofitable. In 1983, the government of the day, Provisional National Defence Council, changed its initial political and economic principles and its initial political and economic direction by accepting market economic principles as dictated by the IMF and the World Bank. This led to the government embarking on Economic Recovery Programme (ERP)

which is a structural adjustment program. The objectives of the ERP can be summarized into five main elements:

1) The realignment of relative prices to foster growth in production and export
2) A shift from direct government intervention towards reliance on market forces
3) The restoration of fiscal and monetary discipline and liberalizing trade and payments regime
4) The rehabilitation of social and economic infrastructure and
5) Structural and institutional reforms aimed at increasing efficiency and encouraging growth of savings and investments (Hoefter, 2001; Aryeetey and Harrigan, 2000; Akuoko-Frimpong, 1999).

Describing the initial results of the ERP as generally positive, Aryee et al (1999) noted a reduction in inflation rate from 125 percent in 1983 to 33 percent in 1986 and reaching 10 percent in 1992. The economy then started to enjoy a positive Gross Domestic Product (GDP) growth rate estimated at 5 percent per annum, as a result of an increase in the country's traditional exports of cocoa, gold and timber. On the flip side, however, private investment did not improve much, remaining at about 11 percent to 16 percent which indicated that a major chunk of investment continued to be that of public sector. The increase in GDP is therefore inversely matched with high foreign debt and little improvement in standard of living.

The macroeconomic performance showed a downward turn after 1991. The cumulative effect being that the GDP growth rate slowed down averaging 4.2 percent for the period 1992 to 1998. Export rose from a record low of 9 percent before 1983, to 11 percent for the period 1985-1989, but recorded no growth for the period 1990-1996. Unlike exports, import growth became substantially positive at 5 percent

during the same period (Aryeetey and Fosu, 2002). By the year 2000, the economic conditions had systematically deteriorated. Budgetary imbalances had become entrenched. Adverse terms of trade had worsened, in addition to delays in disbursements. The continued delays in external inflows compelled the government to borrow internally. This raised local interest rate surpassing 50 percent per annum at the end of 1999. Interest on national debt constituted over 40 percent of total recurrent expenditure (CEPA, 2001).

During the period 2000 to 2005 however, the economy appeared to be responding well to the economic measure implemented by the government in an attempt to reverse the decline experienced up to 2000. GDP showed upward trend from 4.2 in 2001, to 4.5 in 2002, and hitting 5.8 by the year 2005. The domestic debt reached its lowest level in several years in 2003, with further fall in 2004. Consequently, interest rate on 91 Day Treasury bill fell to around 11.45 percent by the end of 2005. The annual average inflation rate fell to 14.8 in 2002; however it went up to 26.7 percent in 2003, before slipping back to 14.4 percent in 2005. Inflation at the end of 2007 stood at 18 percent while the 91 Day Treasury bill ended at 10.3 percent. The above stated success notwithstanding, according to Sarpong (2004) the private sector growth continued to be limited by access to finance and high interest rates. There existed a lot more work to be done in the areas of structural and institutional reforms. The privatization of state enterprises had been extremely slow. Institutions continued to be weak. Perceptions about corruption continued to rise (CDD, 2005).

2.3.1 Oil Discovery[2]

In June, and September 2007, a consortium of companies comprising Kosmos Energy Ghana (Kosmos), Tullow Ghana Limited (Tullow), Anadarko Petroleum Corporation, Sabre Oil and Gas Limited, E.O. Group, in conjunction with the Ghana National Petroleum Corporation (GNPC), announced discoveries of significant quantities of oil and gas in offshore deepwater Tano/Cape Three Points Basins.

Since the announcement of these discoveries a great deal of work has been conducted on the discoveries with the view to producing the oil and the gas from the fields by the year 2010. The discoveries which were made in two deepwater blocks of Deepwater; West Cape, Three Points, and Deepwater Tano blocks are under two separate Petroleum Agreements and operated by Kosmos and Tullow respectively.

The discovered oil and gas resources in the two blocks were found to be in pressure communication, and therefore are said to be contained in the same reservoir. Under this circumstance, the Petroleum Law requires that the discovered oil and gas resources in the two blocks be produced as one unit would reduce cost and optimize the recovery of the oil and gas in the field. The two discovered fields to be unitized have been designated as 'Jubilee Field', in commemoration of the country's jubilee year celebration. The appraisal so far indicates that the field contains recoverable reserves at 90% probability of at least 800 million barrels of light crude oil, with an upside potential of about three billion barrels. The current development of the Jubilee Field is based on the 800 million barrels recoverable reserve.

2 Daily Graphic, Thursday, July 17, 2008.

Table 2.0: Ghana Macroeconomic Indicators 2003-2007

INDICATOR	2003	2004	2005	2006	2007
Real GDP Growth Rate (%)	5.2	5.8	5.8	6.2	6.3
Annual Average Inflation	26.7	12.6	14.4	11.68	10.73
91 Day Treasury Bill (%)	18.66	17.06	11.45	10.24	9.91
Prime Rate	21.5	18.5	15.5	14.0	13.5
Current Accounts Balance ($m)	40.8	-151.3	-406.5	3,027	3,878.86

Source: Databank Research and Information Limited

2.3.2 The Financial System in Ghana[3]

Finance is the oil for growth. It is indeed the life-blood of the economic system. The financial system is the vessel that carries this life-blood through the economic system. It is the system of institutions and operations that brings the financial resources into productive use (Sowa, 2003).

In most developing countries, the economies are characterized by dual systems running parallel- monetized and non-monetized; formal and informal systems. On the one hand is the money economy where transactions predominantly take place with money as a medium of exchange and on the other is the non-monetized rudimentary economy where the subsistence economy and the barter dominate. The other kind of dualism refers to the formal financial system with banks and other formal financial intermediaries as distinct from the informal system made up mostly of various shades of rotating credit systems and money-lenders.

3 Center for Policy Analysis 2003

In the 1980s, when most African countries adopted an IMF/World Bank supported Structural Adjustment Programme (SAP), financial sector reforms formed a major part. The financial sector reforms involved institutional restructuring, enhancement of the legal and regulatory framework for banking operations and liberalizing interest rates. Clearly the financial sector reform has more to do with the formal system than with the informal sector activity. In particular, policy reform by way of interest rate liberalization affected the formal sector directly and any impact on the informal financial activity was only secondary.

For most African countries, the financial system was virtually underdeveloped in the period up to independence. After the introduction of money in the colonies, principally for the reason of taxation, not much was done to develop the financial system of the colonies. There were only few expatriate banks, which catered for the needs of the expatriate merchants. These banks failed to advance loans to local peasants and entrepreneurs primarily because they lacked collateral securities. Credit, thus circulated only among the big expatriate commercial houses and therefore could afford to provide 'good' collateral. The collateral demanded included life assurance policies, stocks, shares, bills and other financial instruments, which could not be found in the portfolio holding of the natives. Thus, after independence, most African governments initiated plans to indigenize their banking sectors so as to make credit easily accessible to the indigenes (Sowa, 2003).

After independence, the pressure to develop economically led to fiscal pressures, which put severe strain on the financial sector. With interest rates fixed at ridiculously low levels, most governments borrowed cheap from the financial system and thereby crowded out the private sector. As the economies of African countries

run into more macroeconomic problems, the financial sector became more and more distressed. For instance, the high inflation rates experienced in some countries together with the devaluations that were introduced to correct the imbalances left most banks with negative net worth (Sowa, 2003). The bulk of the banks' resources are absorbed by the public sector. Faced with an ample supply of relatively low-risk, high return government paper, banks and other financial institutions have had little incentive to engage in or develop the capacity for lending and equity finance for the private sector (Acquah, 2003). The governor of the Bank of Ghana has observed that the macroeconomic instability of LDCs has fostered a short-term perspective, among both savers and lending institutions. One-third of all bank deposits are demanded deposits, and terms for bank loans rarely extend beyond one year (Acquah, 2003). For purposes of this research, the following constitute the financial sector of Ghana: banking, insurance, capital market and non-bank financial activities.

2.3.3 Introduction and History of Banking in Ghana[4]

The banking sector is the largest contributor to Ghana's financial sector. Commercial banking in Ghana dates back to 1894 when Bank of British West Africa (now Standard Chartered Bank-Ghana) was established. It was followed by Barclays in 1917 and in 1952, the Bank of Gold Coast, and now Ghana Commercial Bank. After independence in 1957, the government established various commercial and development banks to meet the country's financing needs. Reflecting the general economic trends over several years, most Ghanaian banks had become weak, financially distressed and insolvent by the mid 1980's with significant non-performing loan books.

4 Centre for Economic and Policy Analysis and Bank of Ghana

To address this problem and with the assistance of the World Bank, the Government in the late 1980's launched the Financial Sector Adjustment Program (FINSAP) to restructure distressed banks, clean up non-performing assets, restore banks to profitability, reform legislation and the banking supervisory system, allow the entry of new banks and financial institutions and develop the money and capital markets. These efforts led to the establishment of new private banks. The Governor of the Bank of Ghana in remarks delivered to the Commonwealth Business Council in London, June 25, 2003 on 'Liberalizing Ghana's Financial Services Sector: 'the Role of Overseas Banks' argued that liberalizing entry and encouraging foreign banks and investors in the financial services industry would have advantages that must be balanced against its potential costs and risks. According to the Governor another benefit of a competitive, open system is that it forces all financial firms operating in an economy to offer the highest returns to savers and the lowest cost of capital to investors.

To achieve the desired competition, the Governor was of the view that the entry of foreign banks of international standing surely mitigates the anti-competitive disadvantages inherent in concentration and enhanced market power of domestic banks, giving impetus to dynamic efficiency. The Governor however acknowledges that excessive numbers within the system could dilute the franchise value of banks and increase instability.

2.3.4 Introduction and History of Insurance in Ghana[5]

The early insurance companies in Ghana were all British and subject to the United Kingdom Board of Trade regulations. The reason for this must be obvious as Ghana was still a British colony until 1957. These British insurers were represented by Chief Agents. A Chief Agent is a person who held a power of attorney on behalf of a registered insurer under an Act of British Parliament and might accept proposals and sign and issue insurance cover on behalf of that insurer.

The Royal Exchange Assurance Company which operated in Ghana in the early 1920's through the Barclays Bank was the first to open its own branch office in 1927 in Ghana. In 1955, the first local insurance company-Gold Coast Insurance Company- was formed to transact only life business, and the African life to be precise.Until this company was founded, the then expatriate companies used to insure mainly European lives. The Ghanaian insurance market (like most sub-Saharan African markets), is a very small sub-sector of the national economy. Gross Premiums for 2003 totalled about ¢704 billion.

This was about 1.08% of the country's GDP, compared with 12.7% for South Africa, 5.56% for Zimbabwe, 3.05% for Kenya and 1.38% for Ivory Coast. Like other insurance markets in developing countries, Ghana's insurance market is predominantly Non-Life insurance accounting for only 19% of total gross premiums for 2003.

5 Ghana Insurance Year Book 1995/96

2.3.5 The Capital Market

The Ghana Stock Exchange (GSE), which is at the heart of the Securities Industry in Ghana, is making its mark on the emerging markets in Sub-Saharan Africa. With a mission to be a relevant and significant vehicle in mobilizing and allocating long-term capital for Ghana's economic development and growth, the GSE has in recent times been attracting companies and investors from across the world to list on or invest in its market (Yamoah, 2006).

Under the FINSAP, Ghana's capital market was established in 1989. The GSE began full operations in November 1990 with 12 listed companies and one Government bond. Market capitalization increased from ¢30.46 billion in 1991 to ¢91,857.28 billion in 2005 while the listed companies increased from 12 to 29 (Sowa, 2003). Thus, the GSE established itself as a profitable investment venture for the Ghanaian economy with year-end market capitalization of ¢91,857.28 billion at the end 2005. There is no doubt that the GSE has the potential to attract long-term financing of investment in Ghana (Sowa, 2003). During the 15 years of its existence, the market has raised about ¢2,291.93 billion and US$16.6 million through equities and bonds (Ghana Stock Exchange market statistics, December 2005).

2.3.6 Non-Bank Financial Institutions

The Government of Ghana in the late 1980s launched the FINSAP to restructure distressed banks, clean up non-performing assets, restore banks to profitability; reform legislation and the banking supervisory system to allow the entry of new banks and financial institutions and develop the money and capital markets. The

development of money and capital markets was to encourage competition in the financial services sector (Sowa, 2003).

Some of the new financial institutions that came in the wake of FINSAP are; discount houses, finance houses, acceptance houses, building societies, leasing and hire-purchase companies, venture capital funding companies, mortgage financing companies, savings and loans companies and credit unions.

2.3.7 Patterns and Trends of Poverty in Ghana

According to Andah and Steel (2003), long before the introduction of reforms in the financial sector, African governments have been interested in making credit available to poor households. These ranged from state-run Development Financial Institutions such as Agricultural Development Banks, which provided subsidized credits to farmers and other donor-funded programs, targeted at the poor. There were also government support to some rural banks, cooperatives and credit unions, which were mandated to provide loans at subsidized interest rates to poor small farmers. But these efforts failed to reach the poor due to over-dependence on government funding, pervasive political patronage, political influence in disbursing donor-funds, difficulties in ensuring repayments from subsidy recipients and failure of interest rate subsidies to reach the poor. The failure of these policies prompted the decline of state sponsored development banks and led to the need for financial market reforms.

However, the financial market reforms have concentrated on the formal financial systems without inclusion of services to the rural poor. Market liberalization resulted in the withdrawal of such organizations from direct service provision to

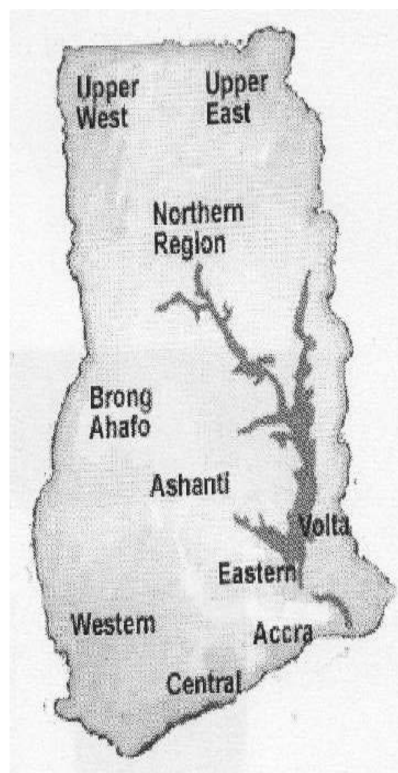
smallholders. These reforms led to the reluctance of most commercially oriented banks to engage in business involving smallholders. This brought to the fore the need to create means of channeling seasonal inputs to smallholder producers on credit against the background of high administrative costs and defaults among small borrowers. To cater for small borrowers a number of microfinance institutions were set up. These microfinance institutions existed before the reforms, but their activities were formalized under the institutional and legal reforms of the financial sector restructuring. These institutions come in all shapes and sizes ranging from Non-Bank Financial Intermediaries (NBFIs) to donor agencies and NGOs.

Poverty in Ghana has remained a disproportionately rural phenomenon up till now. Eighty-six percent of the population living below the poverty line in Ghana, are in the rural areas. The distribution of the population living below the poverty line ranges between one percent in Urban Coastal and about 50 percent in Rural Savannah. The contribution of Rural Savannah to total poverty in Ghana has consistently been increasing. From about 33 percent in 1991/92, the contribution of Rural Savannah to total poverty increased to 37 percent in 1998/99 and has increased further to about 50 percent in 2005/06. In 1998/99, sharp geographic variation in the pattern of poverty were found to be more marked with extreme poverty and remained the same in 2005/06.

2.4.0 Development of MFIs in Ghana[7]

Microfinance is not a recent phenomenon in Ghana. It has been an age-old practice intended to reach out to all those who have not benefitted from the development process. Empirical evidence has established that less than 15% of the population in developing countries including Ghana has access to the mainstream financial services (Aryeetey, 1995). For such groups, investment should be financed through own savings, equity or credit. Some of the current informal sector practices such as money lending, SUSU, Rotating Savings and Credit Associations (ROSCAS) date back to ancient societies in Ghana and elsewhere (Aryeetey and Gockel, 1991).

Fig 2.0: Map of Ghana: Regional distribution



Formal microfinance institutions in Ghana consist of 122 Financial NGOs, 4 Susu operators and associations under Rotating Savings and Credit Associations (ROSCAS) and Regular Savings and Credit Associations (RESCAS), 30 Rural Banks, 5 Credit Union Associations, 30 Apex Bodies, 30 Business Development and Service Providers, 12 Savings and Loans Companies and 1 Social Investment Fund under the Government of Ghana poverty alleviation scheme. The informal sector consists of a host of money lenders.

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7 Ghamfin bulletin 2005

The legal and regulatory frameworks for microfinance activities is covered by a host of legislations, Moneylenders Ordinance (1940 and 1957), Co-operative Decree, 1968, NLCD 252, Banking Law 1989, (PNDCL 225) and Non-Banking Financial Institutions (NBFI Law 1993, (PNDCL 328). With regards to the Susu operators there is very little regulatory instruments covering these since they do not have corporate entities.

All these institutions service small-scale farmers, artisans, fishermen and small-scale traders. The informal finance sector consists of a host of money lenders. The microfinance institutions are scattered all over the regions of Ghana with the Greater Accra Region having the greatest concentration.

2.4.1 Microfinance and Small Loans Centre (MASLOC)

The Microfinance and Small Loans Centre (MASLOC) is a Ghana Government initiative in conjunction with the World Bank which was set up in 2004 with a capital of US$ 50 million. The target of this scheme is the productive poor and marginalized in the society and it seeks among other things to empower these people financially in the short term. Specifically, the beneficiaries include petty traders, farmers and those engaged in the sale of farm produce with added value.

Under the MASLOC scheme, individuals, groups and businesses are eligible to apply for loans between GHC 100,000 and GHC 250,000. Groups need to have a minimum of 25 members to access up to GHC 250,000. Each member of the group can access GHC 10,000 which is refundable within one year with 10% interest. Other categories which can access loans from GHC 20,000 attract the going Bank of Ghana prime

rate. The MASLOC scheme has also signed a Memorandum of Understanding with some selected rural and community banks which are to be directly engaged in the disbursement of small loans to small and medium scale businesses. This according to them will ensure proper disbursement and due diligence on clients by the banks before loans are disbursed to beneficiaries.

Table 2.2 Regional Distribution of MFIs

Regions	FNGOs	Susu	Rural Banks	CUAs	Apex Bodies	BDSP	Savings And Loans	GOG	Total
Greater Accra	29	2	1	1	3	10	6	-	52
Central	8	1	2	1	3	2	-	-	17
Western	8	-	2	-	3	3	2	-	18
Eastern	9	-	4	1	3	1	-	-	18
Volta	14	-	4	-	3	2	1	-	24
Ashanti	9	1	9	1	3	6	3	1	33
Brong Ahafo	7	-	5	1	3	2	-	-	18
Northern	18	-	2	-	3	2	-	-	25
Upper East	11	-	1	-	3	1	-	-	16
Upper West	9	-	-	1	3	1	-	-	14
Total	122	4	30	6	30	30	12	1	234

Source: GHAMFIN 2005.

FNGO-Financial Non-Governmental Organizations, CUAs-Credit Union Associations, BDSP-Business Development and Service Providers, S&L-Savings and Loans Companies, GOG-Government of Ghana

2.5 Conclusion

The chapter has provided the introduction to the country context by describing the geographical location of Ghana, review the economy of Ghana and its financial systems. Patterns and trends of poverty were considered. The chapter finally discussed the development and regional distribution of MFIs in Ghana.

CHAPTER THREE

Literature Review

3.1 Introduction and Structure of the Literature Review

This chapter reviews the significant literature related to the research problem outlined in the earlier chapter. Table 3.1 provides an overview of the seminal literature that has been reviewed in this chapter. The extensive review of literature is necessary for the development of the conceptual framework and hypotheses developed in the next chapter.

Table 3.1 Literature Review Structure

Seminal to the Study
Roots of microfinance. Market intervention and interest rates. Linking Agency theory to moral hazard, adverse selection and subsidy. The paradigm shift-subsidy. Sustainability, success and outreach. Rotating Savings and Credit Associations (ROSCAS) Group Lending

As detailed in Table 3.1, this chapter focuses on the literature surrounding the issues of microfinance and market intervention, agency theory, moral hazard, adverse selection and subsidy as well as the relationship between sustainability, outreach and group lending.

3.1.1 Roots of Microfinance

Microfinance has been described in various ways. Kimenyi, Wieland and Von-Pischke (1998) have described it as a small-scale financial services for both credit and deposits, that are provided to people who farm or herd; operate small or micro enterprises where goods are produced, recycled, repaired or traded; provide services; work for wages or commissions; gain income from renting out small amounts of land, vehicles, draft animals or machinery and tools and to other individuals and groups in developing countries in both rural and urban areas. Robinson (2001) describes microfinance as a collection of banking practices built around providing small loans, typically without collateral and accepting tiny savings deposits.

According to Otero (1999) microfinance is the provision of financial services to low-income poor and the very poor self-employed people. These financial services according to Ledgerwood (1999) generally include savings and credit but can also include other financial services such as insurance and payment services. Schreiner and Colombet (2001) define microfinance as the attempt to improve access to small deposits and small loans for poor households neglected by banks. Therefore, microfinance involves the provision of financial services such as savings, loans and insurance to poor people living in both urban and rural settings who are unable to obtain such services from the formal financial sector.

The terms microcredit and microfinance are often used interchangeably but they are not the same. According to Sinha (1998) microcredit refers to small loans whereas microfinance is appropriate where NGOs and microfinance institutions (MFIs) supplement the loans with other financial services such as savings and insurance. Therefore, according to him microcredit is a component of microfinance.

According to Robinson (2001) and Otero (1999), microfinance is a relatively new term in the field of development gaining attention in the 1970s. Prior to then, from the 1950s through to the 1970s, the provision of financial services by donors or governments was mainly in the form of subsidized rural credit programmes. These often resulted in high loan defaults, high losses and an inability to reach poor rural households (Robinson, 2001). Robinson states that the 1980s represented turning point in the history of microfinance in that MFIs such as Grameen Bank and BRI began to show that they could provide small loans and savings services profitably on a large scale. They received no continuing subsidies, were commercially funded and fully sustainable, and could attain wide outreach to clients.

The 1990s saw accelerated growth in the number of MFIs and an increased emphasis on depth of outreach (Robinson, 2001). Dichter (1999) refers to the 1990s as the microfinance decade. Microfinance had now turned into an industry according to Robinson (2001). Along with the growth in microcredit institutions, attention changed from just the provision of credit to the poor, to the provision of other financial services such as savings and pensions when it became clear that the poor had a demand for these other services (MIX, 2005). The importance of microfinance in the field of development was reinforced with the launch of poorest families, with credit for the self-employed and other financial and business services by the end of 2015.

3.1.2 The Grameen Bank

The roots of microfinance can be found in many places, but the best known story is that of Muhammad Yunus and the founding of Bangladesh's Grameen Bank

(Armendariz de Aghion and Morduch, 2005). During the 70s Bangladesh started to rebuild its economy after gaining its independence from Pakistan. The challenges were great as widespread famine brought about by flooding killed tens of thousands (Sen, 1981). Government surveys found over 80 percent of the population living in poverty in 1973-1974 (Bangladesh Bureau of Statistics, 1992)

Muhammad Yunus, an economist and a lecturer, started a series of experiments lending to the poor households in the nearby village of Jobra. Even the little money he could get from his own pocket was enough for villagers to run simple business activities like rice husking and bamboo weaving (Armendariz de Aghion and Morduch, 2005). Yunus found that borrowers were not only profiting greatly by access to the loans but they were also repaying reliably, even though the villagers could offer no collateral. Realizing that he could only go so far with his own resources, in 1976 Yunus convinced the Bangladesh Bank, the Central Bank of Bangladesh, to help him set up a special branch. Very soon that was replicated in other places. Assured that the successes were not flukes or region-specific, Grameen Bank went nation-wide. One innovation that enabled Grameen Bank to grow rapidly was group-lending, a mechanism that allows the poor borrowers to act as guarantors for each other. In the early years funding was supplied by the International Fund for Agriculture and Development (IFAD), the Ford Foundation and the governments of Bangladesh, Sweden, Norway and the Netherlands.

3.1.3 Section Summary

This section has provided a working definition and historical perspectives of the microfinance revolution. Section 3.2 focuses on understanding the matrices in

microfinance. This is to complete the background literature discussions and set the tone for investigating the fundamentals of the workings of the microfinance industry.

3.2 Market intervention

Policy makers throughout the world have actively tried to improve financial markets in poor regions, but often with disappointing results mainly due to mismanagement of resources and interest rate restrictions by state-owned development banks. Again the traditional banks and other financial institutions have systematically kept low-income households outside their credit delivery networks, forcing them to resort to informal and non-conventional systems of mobilizing credit. Against this background, microfinance emerged as a promising way to rethink banking for the poor (Armendariz de Aghion and Morduch, 2005).

When markets fail, hardworking entrepreneurs cannot obtain all the capital needed to run their business and as a result they turn to the local moneylenders who charge very high interest rates thereby compounding the poverty levels of the locals. However, Adams (1984) argues that rural credit markets are far more competitive than typically imagined. He cites studies that show that moneylenders are charging rates in line with their transaction costs and risks. This view is supported by Bottomley (1975) and Basu (1997). Reasons for the high interest rates by moneylenders have been explained variously. The basic reason is that money lenders cannot recover anything at all from those who default since there is no collateral, hence the high interest rates compensating for possible defaults. Singh (1968) argues that the high interest rates are mainly due to high opportunity costs, not to monopoly profits. With capital so scarce, he argues, if money lenders invested their money

directly in farm enterprises they would earn more than average returns. Aleem (1990) argues that if markets are truly competitive, then interest rates should be driven down to the marginal cost of lending, which is the cost of lending an extra dollar, which is typically below the average cost. Steel at al. (1997) also provides evidence that average costs are much higher than marginal costs in surveys in Ghana, Malawi, Nigeria and Tanzania.

According to Armendariz de Aghion and Morduch (2005), most of the costs incurred by moneylenders surveyed in Africa involve the pre-screening of clients. Once that is taken care of, administrative costs of handling loans- the largest element of the marginal cost of lending is small. Aleem (1990) describes a situation in which there are too many moneylenders serving few clients. The truth is that moneylenders are unable to cover their fixed costs of lending, and therefore interest rates stay high because returns to scale cannot be reaped. Robinson (2001) concludes that if much of informal money lending can be explained by a form of monopolistic competition, then it can be argued that banks can cost-effectively gain reliable information about borrowers that is far broader in scope than the information which informal lenders have access.

3.2.1 Microfinance and Interest Rates

One issue that has generated much debate in microfinance is the issue of interest rates. Along with the diagnosis of the problem of shortage of investment capital available to poor households, goes the assumption that credit obtainable from local informal sources carries too high an interest rate. Interest rate is the price of money.

As a price it is made up of a number of components as far as the lender is concerned. It is the means through which the lender:

- Pays for the cost of the funds that are being lent (cost of capital). If these are from savers then the savers are likely to expect a return which will at least cover inflation and so maintain the value of their savings;
- Recovers the costs of providing the service (costs of administration): the costs of the staff employed to give and recover loans and the costs of the office, vehicles and stationery that are necessary to provide that service.
- Covers losses as well as result of those who default on their loans (costs of default).

  The interest rate which is charged to borrowers is usually called the nominal interest rate. This may be different from the real interest rate, which is calculated as the nominal interest rate minus the rate of inflation in the country.

The prevalence of high interest rates in informal credit markets is so well documented. There are two main arguments (Von Pischke, 1991; Germidis, Kessler and Merghir, 1991). The first view is that informal credit markets are non-competitive and that monopolistic money lenders charge high interest rates, extracting substantial profits. A variant of the monopolistic moneylender is the lender whose primary aim is not to extract interest payments but to force the borrower to default. There is considerable information in support of the argument that some informal commercial lenders gain monopoly profits collected in financial form, land or labour (Darling, 1978; Indian School of Social Sciences, 1976; Rao, 1977; Sharma, 1978; Vyas, 1980; Marla, 1981; Kamble, 1982; Roth, 1993; Robinson, 1988 and 1994a).

There is also evidence to support the opposing position that most rural lenders are neither exploitative nor malicious (Von Pischke, Adams and Donald, 1983; and Von Pischke, 1991). It is argued that they are providers of important financial services in rural areas. According to Von Pischke, Adams and Donald (1983), operations of moneylenders are frequently more cost- effective and useful to the poor than those of the specialized farm-credit institutions, cooperatives and commercial banks that governments use to supplant moneylenders. The emerging perspective is that informal financial arrangements are generally robust and socially useful. Widespread use of informal finance suggests that it is well suited to most rural conditions. This thesis will seek to find out if the interest rates charged by the MFIs are realistic against the backdrop of the fact that their clients are the so called poor and marginalized in the society.

3.2.2 Agency Problems

Modern economics has made great strides in understanding the agency theory that are ubiquitous in economic life (Armendariz de Aghion and Morduch, 2005). Consider a borrower and a lender. The borrower has a project, but no money to finance it; he must then turn to the lender. Here the agency problem refers to the lender's inability to observe the borrower's characteristics such as the project riskiness, borrower's efforts or profits. These information problems create inefficiencies, and microfinance can be seen as one attempt to overcome them. In this case, the tension involves a "principal" (the lender) trying to do business with an "agent" (the borrower).

According to Armendariz de Aghion and Morduch (2005), the information problems arise at three distinct stages. First, prior to extending a loan, the lender may have

little if any reliable information about the quality of the borrower. Sometimes a bit of quick scouting around by a loan officer can yield the required information, but too often the necessary background check on borrowers is prohibitively costly. Better information can prevent the lender from mistakenly extending a loan to a "low quality" borrower without adequately accounting for the risk involved. Second, once the loan has been granted, the lender does not entirely know how the borrower will use the resources. Will the borrower work hard to ensure that the investments are successful? Or might the borrower work less hard than he or she would if the project was entirely self-financed? Third, once investment returns have been realized, the lender may not be able to verify the magnitude of the returns. It is tempting then for the borrower to claim to have had bad luck and ask for a reprieve in paying the loan, when in fact the investment was highly profitable. Having information about the borrower's true profits would allow the lender to be able to prevent future misconduct by the borrower.

The absence of formal credit institutions in village economies is often attributed to these kinds of agency problems. They are accentuated when individuals cannot offer good collateral, and when legal enforcement mechanisms are weak (Armendariz de Aghion and Morduch, 2005).

3.2.3 Adverse selection

Stiglitz and Weiss (1981) pioneered a family of adverse selection models in which banks lack good information about the riskiness of the borrowers' projects. Banks, the argument goes, are therefore unable to discriminate against risky borrowers and interest rates become exceedingly high. Such rates in turn drive worthy borrowers out of the credit market. This is a market "imperfection" since worthy borrowers do

not participate in the credit market when efficiency would suggest that they should (Armendariz de Aghion and Morduch, 2005). Inefficiencies due to adverse selection arise when banks cannot adequately distinguish safer borrowers from riskier borrowers. When that happens, all borrowers are charged the same interest rates, and safer borrowers end up effectively cross-subsidizing riskier borrowers.

3.2.4 Moral Hazard

Moral hazard is defined as the incentive by someone (agent) who holds an asset belonging to another person (the principal) to endanger the value of that asset because the agent bears less than the full consequence of any loss (Chaves and Gonzalez-Vega, 1994). For example a borrower's effort to repay may be largely unobservable by an MFI; it cannot readily determine what is attributable to the lack of effort by the client as opposed to bad luck or external forces. An MFI that could observe the borrower could relate the terms of the loan contract to the effort put in by the borrower, but because it costs too much to do this, the best the MFI can do is to ensure that the cash flow and debt capacity of the borrower are sufficient to service the debt. MFIs must also set terms of the loan that are acceptable to the borrower and result in behavior that the MFI prefers (Ledgerwood, 2000). This usually means giving the borrower more risk than the MFI would be ready to assume if it had better information (Yaron, Benjamin and Piperk, 1997).

3.2.5 Section Summary

This section has provided a review and an understanding of the microfinance matrices. Section 3.3 focuses on the pillars on which the operation of every microfinance institution stands.

3.3 Subsidy

In the 1950s, governments and international aid donors subsidized credit delivery to small farmers in rural areas of many developing countries because it was thought of as a developmental tool. It was assumed that poor people found great difficulty in obtaining adequate volumes of credit and were charged high interest rates by monopolistic money-lenders. Development finance institutions, such as Agricultural Development Banks, were responsible for the delivery of cheap credit to poor farmers. These institutions attempted to supervise the uses to which loans were put, and repayment schedules were based on the expected income flow from the investment. Returns were often overestimated. For example, calculations would be based on agricultural yields for good years (Adams and Von Pischke, 1992). As a result loans were often not repaid. The credibility and financial viability of these subsidized credit schemes were further weakened by the use of public money to waive outstanding and overdue loans at election time (Adams and Von Pischke, 1992; Lipton, 1996; Wiggins and Rogaly, 1989). A dependence on the fluctuating whims of governments and donors, together with poor investment decisions and low repayment rates made many of these development finance institutions unable to sustain their lending programmes. Credit provision for the poor became transitory and limited.

According to Zeller and Meyer (2002), it is commonly believed that further institutional innovation and microfinance expansion will continue to rely on public intervention and financial support. In fact most of MFIs that reach large numbers of female and male clients below the poverty line require state or donor transfers to subsidize their costs. They further stressed that the most successful MFIs that have

achieved financial sustainability have required investments by the state or donors in the past. Such public investments are justified from a public policy perspective only if the discounted social benefits of public investment in microfinance are expected to outweigh the social costs. These costs include the opportunity costs of forgoing the benefits of other public investments, such as primary education, when scarce government or donor funds are used for microfinance (Zeller et al., 1997). The subsidy dependence index has become a widely accepted operational measure to quantify the amount of social costs involved in supporting the operations of a financial institution.

3.3.1 The Paradigm Shift

There is a shift from subsidized delivery programmes to commercial intermediation internationally (Robinson, 1975). During the 1960s and 1970s, governments and donors promoted large-scale credit since it was subsidized in rural credit programmes in developing countries around the world. Since it was assumed that subsidized credit was required to stimulate agricultural growth, agricultural finance came to be treated essentially as a subsidized crop input. This approach was based on the assumption that poor farmers need credit for productive inputs, that they cannot save enough for the inputs they require, and that they cannot afford to pay the full cost of credit. Therefore, subsidized credit programmes would be required for the adoption of new agricultural technologies, enabling farmers to produce more crops, increase their incomes and repay their loans. It was further assumed that, in general, lower-income people do not save, or prefer to save in non-financial forms. Therefore, savings mobilization would require that people be taught financial discipline. As a result, compulsory saving is often required as a condition for obtaining a subsidized loan.

The assumptions, however, were at variance with reality. By the late 1960s and early 1970s, serious difficulties with subsidized credit programmes had begun to become apparent. By the late 1970s, criticisms of the rationale behind these policies filled development literature (Donald, 1976; Von Pischke, Adams and Donald, 1983; Adams Graham and Von Pischke, 1984). The distortions and failures of the subsidized rural credit programmes included the following:

1. Credit subsidies tend to encourage corruption and were captured by wealthier and more influential households
2. The diffusion of many agricultural innovations in developing countries does not depend on formal credit
3. Subsidized credit programmes frequently have high default rates and large losses
4. Credit subsidies, channeled to local elites, buy political support for governments and once offered are difficult to dislodge
5. In many cases subsidized credit depresses savings mobilization and the development of sustainable financial institutions.

It has become evident that subsidized credit has similar effects on small and microenterprises and leads to the perpetuation of a policy environment in which most lower-income borrowers, both rural and urban, are typically unable to gain access to institutional credit (Costello, Steams and Christen, 1991; Robinson, 1992, 1994a; Rhyne and Rotblatt, 1994). Robinson (1992), concluded by saying, *"even the best of the MFIs that operate with subsidized loan portfolios are effective either in capturing savings or in providing microloans. They cannot afford to be effective in both because they do not have a large enough spread to cover the operating and financial costs that would be required. Sustainable microfinance has occurred only in systems that provide commercial intermediation"*.

3.3.2 Savings

Savings mobilization has long been a controversial issue in microfinance (Ledgerwood, 2000). In recent years there has been increasing awareness among policymakers and practitioners that there are a vast number of informal savings schemes and MFIs around the world have been very successful in mobilizing savings. These developments attest to the fact that low income clients can and do save. The World Bank's Worldwide Inventory of Microfinance Institutions found that many of the largest, most sustainable institutions in microfinance rely heavily on savings mobilization. According to Paxton (1996a), in 1995 over $19 billion was held in the surveyed microfinance institutions in more than 45 million savings accounts compared to nearly $7 billion in 14 million active loan accounts. He further argued that deposits provide a highly valued service to the world's poor who seldom have reliable places to store their money or the possibility to earn a return on savings. The survey also found that the ability to effectively mobilize deposits depends greatly on the macroeconomic and legal environment. Statistical analysis of the surveyed institutions reveals a positive correlation between the amounts of deposits mobilized and the average growth in per capita GNP of the country from 1980 to 1993. Likewise, higher deposit ratios are negatively correlated with high levels of inflation. Finally, the amounts of deposits are positively correlated with high levels of population density. Furthermore, institutions operating with donor funds generally were found to have a high rate of loan portfolio growth, while deposit-based programmes grew more slowly (probably due to lack of funds). Also, institutions that mobilized deposits were found to have higher average loan sizes and were more likely to work in urban areas than institutions providing only credit. This latter finding relates to the fact that most institutions that collect savings must be regulated

(see chapter 11) to do so. Larger urban institutions tend to be regulated more often than the smaller MFIs, and they often reach a clientele at a higher income level.

3.3.3 Market imperfection

Microfinance institutions help augment economic development. However, for this to occur, microfinance institutions must be able to sustain themselves financially and economically. Sustainability of a microfinance institution as defined by Schreiner (2000) is "… *the ability to repeat performance through time"*. Performance here refers to maintaining substantial outreach, ability to generate regular revenue whilst reducing operational costs, and the ability to manage the lender-borrower relationship effectively. Interest rate management and savings mobilization problems have been pointed out as causes of lack of sustainability and eventual failure of such financial schemes (Adams, Graham and Von Pischke, 1984). These factors, have however been seen as being secondary to the main problems facing the sustainability of microfinance schemes; information asymmetry and imperfect markets. These factors breed the twin problems of moral hazard and adverse selection acknowledged as very important by most authors (Khan, 1979; Stiglitz, 1990; Siamwalla et al., 1990; Aleem, 1990; Hoff and Stiglitz, 1990; Besley, 1994; Yaron, 1994; Sharma and Zeller, 1997) as crucial in MFIs' survival and success. Moral hazard (which is mainly problems with repayments and defaults) and adverse selection (which has to do with the issue of screening out those likely to default) can be categorized into three main problems:

1. The problem with screening
2. The incentive problem
3. The enforcement problem

The first deals with the fact that since borrowers differ in default likelihood it becomes difficult and expensive to determine the level of risk for each borrower. In the case of the incentives problem the ability to ensure that borrowers engage in activities that facilitate repayment is the problem. It is noted that probability of default on a credit facility depends on the probability that gross returns on the project for which the credit facility is being sought is less than the principal and the interest on the loan. The third and final problem of enforcement is obvious; how do you enforce repayment? Throughout the literature on microfinance, these issues continue to dominate. Lending institutions may therefore reduce loanable funds or go out of business. Such problems lead to a form of credit rationing and little investment in the economy.

Propositions to help overcome these problems are varied and extensive. Hoff and Stiglitz (1990) outlined two mechanisms: the direct and indirect mechanisms to deal with the issues. With regards to the indirect mechanism they argue that lenders should design their loan contracts such that they can extract enough information covering problems of moral hazard and adverse selection. The design here could be in the form of an interest rate arrangement or loan size. The interest rate then assumes a dual function: as the price and an instrument for regulating the risk compositions. However, charging the interest rate because of default may result in changing the mix of projects undertaken by borrowers especially where they favour expected net return. Hoff and Stiglitz (1990) go forth to add the threat of freezing credit as another alternative in the indirect mechanism. Here borrowers for fear of being denied future access avoid default. For the direct mechanism, resources are employed by lenders to screen applicants and enforce loan repayments. Methods

regarding the use of collateral such as land in the case of developing countries are also far advanced.

Authors (Yaron, 1994; Khandker and Khan, 1995; Morduch, 1999; Schreiner and Yaron, 1999; Schreiner, 2000) have summarized the sustainability and success of MFIs into their ability to exit subsidy dependence and fully cover their operational costs. A measure of subsidy dependence, the Subsidy Dependence Index (SDI) has in this regard been widely used in measuring the sustainability of microfinance institutions. According to Morduch (1999) sustainability of MFIs is at two levels; operational sustainability which deals with the ability of an institution to recover operational costs and financial sustainability which deals with the ability to operate without reliance on donor subsidy. Indeed, Schreiner and Yaron (1999) contend that the Subsidy Dependence Index is a summary of the sustainability of a MFI. Subsidy dependence, a common phenomenon with MFIs could itself undermine their future existence. This is because donor fatigue is a regular problem with reliance on grants from donors. A microfinance institution that is unable to raise enough revenue will collapse quickly after donor withdrawal, (Schreiner, 2000). Even in the midst of permanent subsidy, increased revenue generation by an MFI, will help increase outreach and expand its operations to its advantage. The ability to generate substantial revenue from on-lending and other activities and eventually exit subsidy dependence depends on how the MFI is able to manage the dynamics between lenders and borrowers in the provision of microfinance.

3.3.4 Sustainability

A substantial amount of empirical works on sustainability of microfinance have been in the South American and Asian countries (Khan, 1979; Bell, 1990; Siamwalla et al., 1990; Aleem, 1990; Besley, 1994; Chavez et al., 1996; Navajas et al., 2000). Two important indicators have emerged in examining the sustainability of MFIs. Yaron (1994) in a study of rural finance institutions which engage in microcredit activities in Indonesia and Bangladesh used these two criteria to measure sustainability:

1. Financial Self-Sustainability
2. Substantial Outreach

Financial self-sustainability is attained when return on equity (ROE), net of subsidy received, equals or exceeds the opportunity cost of funds. In this regard a positive on-lending interest rate, which is able to cover administrative costs and maintains the value of equity in real terms, is advocated for. Again, high loan collection rates as well as a high deposit rate to increase voluntary savings and proper management of administrative costs with efficient loan processing are factors outlined under financial self-sustainability. On measures of outreach, Yaron (1994) examined the value of loans and savings extended, the type of financial services offered, the number of branches, percentage of poor served, real annual growth rate and participation of women.

Hulme and Mosley (1996) in their study of 13 MFIs in seven countries used real interest rate charged, six-month arrears rate, frequency of loan collection, availability of voluntary savings facilities and availability of incentives to repay to determine the financial sustainability. Thus, lower arrears rate, high frequency in loan collection, the existence of material incentives to borrowers and staff of the institutions

maximized the repayment rate. In addition, the subsidy dependence ratio was estimated to determine the level of dependence of the institutions, where a low index was indicative of further financial sustainability. The study concluded that financially viable microfinance institutions are able to impact incomes of beneficiaries significantly.

3.3.5 Success

Sharma and Zeller (1997), Navajas et al., (2000) have generally agreed to most or all of these measures outlined under the two criteria as being very effective in determining the success or otherwise of MFIs. In this regard, four microfinance institutions, Bank for Agriculture and Agricultural Cooperative (BAAC) in Thailand, Badan Kredit Kecamatan (BKK) and Bank Rakyat Indonesia Unit Desa (BUD) both in Indonesia and Grameen Bank (BK) in Bangladesh were classified as very successful in the early 1990s. An important phenomenon that characterized these institutions is group lending. In group borrowing, the costly job of screening, monitoring and enforcement of repayment is transferred largely from the MFI to the group members.

There is also varied evidence (Udry, 1990; Besley, 1994; Khandker et al., 1995; Sharma et al., 1997; Navajas et al., 2000) on measures of dealing with the problems of moral hazard and adverse selection to ensure sustainability and success of microfinance operations. Llanto (1990) also argued that since groups internalize the costs of acquiring and generating information, they must be encouraged to tap lenders' resources. This arrangement results in what Stiglitz (1990) refers to as "peer monitoring" where according to him:

"Peer monitoring is largely responsible for the successful financial performance of the Grameen Bank of Bangladesh and of similar group lending programmes elsewhere".

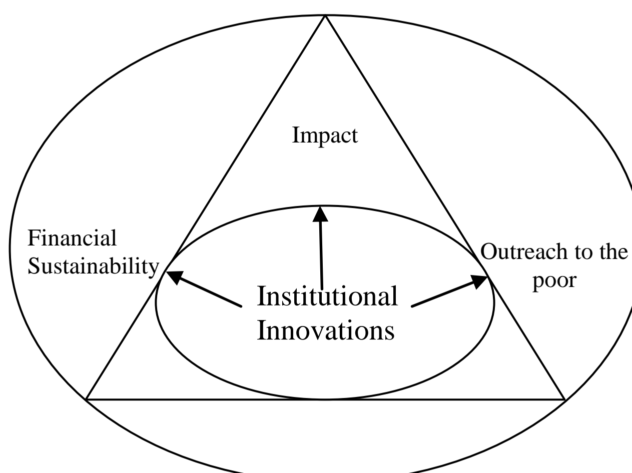
Basu (1997) also argues for group borrowing since it increases access of poor farmers to institutional credit by increasing the size of entitlement set, thereby removing problems of economies of scale. There is a caveat here, however; a member may choose a riskier project because of the knowledge that other members or peers will repay the amount involved in the event of default. Alternatively an individual may decide to default based on the perception or the likelihood of members defaulting.

Institutional development, that is engaging in activities that on the surface are not directly linked to the first duty of credit allocation such as training of clients in entrepreneurial development skills and social development have also been found to make MFIs a success. Groups are also obliged to contribute to an emergency fund to help members in times of emergency. Grameen Bank and other MFIs that were deemed as being successful were seen to have engaged in such activities (Yaron, 1994; Jain, 1996; Sharma et al., 1997). Jain (1996) is of the view that the success of Grameen Bank and of MFIs in general lies in the adoption of such policies which he terms "strategic credit policies". In addition, the motivation of employees as well as policies to forestall the flouting of organizational norms by powerful clients is also important. In all of these, the loan recovery rates were noted to be very impressive, 98% for Grameen and Bangladesh Rural Advancement Committee (BRAC) and 100% for others such as Association for Social Advancement (ASA) (Sharma et al., 1997). Authors such as Yaron (1994), Khandker and Khan (1995), Schreiner and

Yaron (1999) and Schreiner (2000) have further gone ahead to define economic sustainability and institutional viability as means of measuring the success and viability of MFIs. They use subsidy dependence indices to judge the sustainability or otherwise of microfinance institutions. According to Zeller and Meyer (2002), there is a critical triangle of microfinance reflecting the three objectives of financial sustainability, outreach and impact as represented in Figure 3.0

FIGURE 3.0 The critical triangle in achieving economic sustainability of microfinance (Zeller and Meyer, 2002).

Microeconomic and sectoral policy framework and socioeconomic environment



The analytical framework points to the wide set of potential trade-offs and synergies that needs to be understood by policymakers, microfinance practitioners and researchers alike. The triangle in Figure 3.0 is drawn with an inner and an outer circle. The inner circle represents the many types of institutional innovations that contribute to improving financial sustainability (such as employment of cost-reducing information systems), impact (such as designing demand-oriented services for the poor and more effective training of clients), or outreach to the poor (such as

more effective targeting mechanisms or introducing lending technologies that attract a particular group of clients). The outer circle represents the external socio-economic environment as well as the macro-economic and sectoral policies that directly or indirectly affect the performance of financial institutions. Innovations at the institutional (the inner circle) and improvements in the policy environment (the outer circle) contribute to improving the overall performance of financial institutions.

All microfinance institutions attempt to contribute to these objectives, but many stress one particular objective over the other. Some may produce large impacts but achieve limited outreach. Others may have smaller impacts but are highly sustainable. The potential trade-offs between depth of outreach and financial sustainability have been noted, but trade-offs may also exist between impact and financial sustainability. Following the work of Ohio State University and other institutions in the 1980s, the view emerged that the building of lasting financial institutions requires that they become financially sustainable, that is, they cover their costs. Some analysts including Otero and Rhyne (1994); Christen et al. (1995) have argued that increasing the depth of outreach (reaching the poorest of the poor) and sustainability are compatible objectives. However, Hulme and Mosley (1996), along with others argue that there appears to be a trade-off between improving outreach and achieving financial sustainability.

3.3.6 Outreach

Donors and practitioners have increasingly recognized that the sustainable provision of formal or semi-formal financial services to the poor and other sectors of the population is a useful tool in poverty alleviation, enterprise development and financial sector deepening (Paxton and Cuevas, cited in Zeller and Meyer, 2002).

Von Pischke (1991) describes a frontier between the formal and informal financial sectors. Those outside the frontier do not have regular access to formal financial services. They comprise a heterogeneous population, whose degree of exclusion from financial services may vary and whose distance from the poverty line in their respective countries may differ (Hulme and Mosley, 1996). In measuring institutional outreach it is important to distinguish between the *extent* (or breadth) and the *depth* of outreach. The extent or breadth of outreach is represented by the absolute number of households or enterprises (or relative market penetration) in the target population reached by the institution; the depth of outreach indicates how deep into the pool of the underserved the institution or programme has been able to reach.

Despite the urgent need for increased outreach in microfinance there are barriers. A study for USAID (Christen, Rhyne and Vogel, 1994) revealed that only a few highly specialized microfinance institutions developed during the past 15 years, are achieving both outreach and long-term financial sustainability. The first of these barriers is the fact that most developing countries suffer from low level development of their national financial systems. Their financial systems have been impaired by fiscal imbalances, volatile inflation, financial repression and weak legal and regulatory frameworks (Gurgand, Pederson and Yaron, 1994). Effective outreach is inhibited by factors which are specific to agriculture and to rural economies based on agriculture. Many elements of the rural sector are poorly developed. Markets for products, land use and labour are inefficient and strongly localized (Collier, 1989; Hoff, Stiglitz and Braverman, 1993). Credit markets are no exception to this pattern and are negatively affected by the weak economic environment in rural areas.

Low population density adds to the difficulties faced by rural financial institutions in their outreach effort, especially in view of the poor transportation and communication infrastructure. Population density in Sub-Saharan Africa is 21 inhabitants per square kilometer compared with more than 200 in some low and medium income Asian countries.

This section has provided a review of the pillars on which every microfinance institution stands. Additionally, the current thinking in the use of subsidies and the critical issue of market imperfection were discussed. The sections following immediately focus on the vehicles used in microfinance delivery.

3.3.7 Rotating Savings and Credit Associations (ROSCAS)

According to Armendariz de Aghion and Morduch (2005), one way to avoid steep costs charged by moneylenders is to borrow from neighbours and friends, but while interest rate may be low or even zero, social costs and obligations can be considerable. ROSCAs provide an alternative solution, based on pooling resources with a broad group of neighbours and friends.

ROSCAs tend to have simple structures. The basic element is a group of individuals who agree to regularly contribute money to a common ”pot” that is allocated to one member of a group each period. Twenty people, say, may agree to contribute $15 each for twenty months, generating a monthly pot of $300. At monthly intervals the group meets to collect dues and allocate the proceeds, with past recipients excluded from getting the pot again, until every member has had a turn with the $300 pot. ROSCAs thus successfully take the bits of surplus funds that come into households and translate those bits into a large chunk that can be used to fund a major purchase.

The simplicity has advantages. The life of a ROSCA has a clear beginning and end, accounting is straightforward (one has to keep track of who has received the pot already and who is in line to do so), and storage of funds is not required since money goes straight from one person's pocket into another's (Armendariz de Aghion and Morduch 2005). ROSCAs come in a number of variations, and each has implications for what ROSCA offers, how it stays together and who is attracted to join. The main variants involve the way groups determine who gets the pot. The order of receipt may be predetermined and unchanging from cycle to cycle. The order may be chosen randomly at the beginning of each cycle, or in the most current fashion may be allowed to bid for a given pot, rather than simply waiting for their turn.

3.4. Group Lending

Group lending refers specifically to arrangements by individuals without collateral who get together and form groups with the aim of obtaining loans from a lender. The special feature is that the loans are made available individually to group members, but all in the group face consequences if any member runs into serious repayment difficulties (Armendariz de Aghion and Morduch, 2005). In the Grameen Bank case, the groups are made up of five people. In the BancoSol case, groups can be as small as three people while FINCA in Costa Rica groups can range from ten to fifty women. As long as the loans are being repaid, the cycle of lending continues. According to Fugelsang and Chandler (1993), if one member defaults and fellow group members do not pay off the debt, all in the group are denied subsequent loans. This feature gives customers important incentives to repay promptly, to monitor their neighbours and to select responsible partners when forming groups. The mechanisms

rely on informal relationships between neighbours that facilitate borrowing for households lacking collateral. The programme sometimes called "joint liability" combines the scale advantages of a standard bank with mechanisms long used in traditional modes of informal finance (Besley and Coate, 1995; Armendariz de Aghion, 1999a).

3.5 Women Empowerment

Government and non-governmental organizations in recent years have introduced microfinance programmes, especially in developing countries by offering financial services to low income households specifically targeting women. The assumption behind this move is that women in poor households are more likely to be credit constrained and therefore less able to undertake income-earning activities. Accessing credit by women has been boosted in the context of poverty reduction and women's empowerment objectives. In meeting the Millennium Development Goals (MDG) [7], goal three aims at promoting gender equality and empowering women. However, only a few studies have successfully investigated this impact in a rigorous manner (Pitt et. al, 2006).

Though many people agree that women empowerment is an important development objective for microfinance programmes, it is still unclear what women empowerment means.

7 The Millennium Development Goals (MDGs) were agreed at the United Nations Summit in September 2000 by nearly 190 countries.

Kabeer (1999) explains that women empowerment refers to the process by which those who have been denied the ability to make strategic life choices acquire such ability. This ability to exercise choice incorporates three inter-related dimensions: resources which include access to both material and social resources now and the future. It also includes the process of decision-making, negotiation, deception and manipulation and achievements that are the well-being outcomes. The interpretation of women empowerment and its measurement also varies across different studies.

3.6 Summary and Conclusion

As discussed in the introductory section, the focus of this chapter was to review the literature that is germane to understanding the microfinance phenomenon as well as the historical perspectives. The chapter began by discussing the failure of formal financial institutions to serve society's poor hence the emergence of the microfinance movement.

The second phase of this chapter introduced the microfinance matrices that underpin the development and understanding of microfinance as a tool for credit delivery to the majority of poor people. It specifically examined the following: interest rates, agency problems, adverse selection, moral hazard and market intervention.

The third phase discusses the microfinance pillars: subsidy, savings, sustainability, success and outreach. The issue of market imperfection was discussed as well.

The fourth phase of the chapter was dedicated to the vehicles used in the delivery of microfinance. Finally, the chapter discusses the role of microfinance in women empowerment.

Summary Table for the Chapter

1. The evolution of MFIs and its linkage to Grameen Bank.
2. Market intervention policies and why the need for it
3. Information asymmetry and imperfect markets and how they breed the twin problems of moral hazard and adverse selection.
4. The critical role of subsidies and its current thinking.
5. Microfinance lending schemes
6. Sustainability and Success factors
7. Microfinance and Women Empowerment

CHAPTER FOUR

Exploratory Research

4.1: Introduction

This chapter discusses the research method and the results of the exploratory research. Semi-structured interviews with Chief Executives of fourteen microfinance institutions were conducted. The main purpose was to seek their perception of the factors that impact on sustainability and success of microfinance institutions. This qualitative approach was also to assist in confirming the subsidy dependence index (SDI) and the operational self-sufficiency (OSS) model, developed out of existing literature and the development of research hypotheses. The lack of information and theory concerning the performance of microfinance institutions in Sub-Sahara Africa in general and Ghana in particular were the major factors that contributed to the decision to conduct the qualitative interviews.

The exploratory research covered the following areas: the history and institutional characteristics, agency costs, business strategy, environment/ governance and success.

4.2: The Research Method

This consists of the exploratory research process, population, sampling procedure, firm size analysis, profile of sampled institutions and the interview process.

4.2.1: Exploratory Research Process

This exploratory research process involved the following steps. First, a literature review was carried out to identify the factors to consider in the exploratory research

and the interview guide. (See Appendix A). Second, semi-structured interviews were piloted on five Chief Executive Officers (CEOs) covering each of the various segments of microfinance to find out the suitability of the interview guide which was developed from the literature review. A summary of the findings was sent to each respondent for their comments. Changes that emanated from the feedbacks were effected where necessary. Third, full scale semi-structured interviews were conducted with nine Chief Executive Officers to gain an understanding of the performance of these microfinance institutions. Fourth, the individual interviews were transcribed, summarized and pulled together into tables (Appendices… B, C, D, E, F). All these respondents were the main decision makers in their institutions. Data analysis was mainly based on case and cross content analysis. Descriptive statistics were also used.

4.2.2 Population

The sample was based on data from Ghana Microfinance Institutions Network (Ghamfin), which is the oversight body for all the registered microfinance institutions as noted in Chapter Two (see Table 2.2). The data has been cleaned to exclude the Apex bodies and the Business Development and Service Providers because they do not provide microfinance services directly to the poor. The sectors covered were: Financial Non-Governmental Organizations (FNGOs), Savings and Loans companies (S&L), Credit Union Associations (CUAs), Rural/Community Banks and Susu operators.

4.2.3: Sampling Procedure

The data was stratified based on the number of clients and branches as shown in Table 3.1. An institution was selected based on size and from each sector to allow for differences arising from size and geographical spread and peculiar institutional characteristics and modes of handling the lender-borrower relationships.

Table 4.1: Firm Size Analysis

TYPE	Large	Small to Medium
Financial NGOs	3	2
Savings & Loans Companies	2	1
Credit Union Association	1	1
Rural Banks	1	1
Susu companies	1	1
Total	8	6

Other characteristics of the sampled institutions are provided in Table 4.2 as shown below.

4.2.4: Profile of Sampled institutions

FNGO 1-This institution was established in 1996 but its microfinance project started in the year 2000 as an autonomous division. Its roots could be traced to the United States of America but currently receiving funding from other continents. Its Head Office is located in the capital city of Ghana.

FNGO 2-This institution was established in 1978 but was re-launched in 2007. It is the business arm of a Christian organization and is also an affiliate of an international NGO based in Geneva, Switzerland.

FNGO 3-This institution was established in 1994 but later was split into two with the new unit engaging in Savings and Loans. Its capital is foreign and has its Head Office located in the capital city of Ghana. It has the highest number of branches in terms of FNGOs.

FNGO 4-It started as the country office of an American NGO. The plan was that when the country office acquires some capacity they will start soliciting for funds from other sources that an American NGO cannot go and solicit for funds. Its Head Office is located in Accra, the capital city of Ghana.

FNGO 5- This was established in 1998 and is into urban microfinance. It migrated from a neighbouring West African country where they were helping Ghanaians resident in that country to grow their businesses through micro credit.

S & L 1- This institution was carved out of a FNGO. It was established in 2004 with foreign capital. Its Head Office is located in Accra, the capital city of Ghana.

S & L 2- It was established in 2002 under a different name. It is part of an international group on three continents of Africa, Latin America and Eastern Europe. They currently have over 130,000 clients. They are located in 22 countries worldwide, with two main foreign shareholders.

S & L 3- Was established in 2007 and was established as a service provider to one of the leading commercial banks in the country. They have both local and foreign capital.

CUA 1- The first CUA was established in 1955 and is regionally dispersed in almost all institutions in Ghana. Head Office is located in Accra and now 90% self-sustaining.

CUA 2- It was established in 1971 and is located on the campus of one of the major Universities in the capital city of Accra.

RB 1- Located in one of the densely populated communities of the capital. It was set up to provide specific service to the community by the Government in 1987.

RB 2- It was established in 1985 by the Government to provide specific service to the community.

SUSU 1- Was established in 2006 by a young University Graduate who was once a Banker and was also a Consultant to the Government on poverty alleviation strategies. They are operating with a family capital with husband and wife as the sole shareholders.

SUSU 2- It was established in 1996 as a sole proprietorship. He operates from his house and it is located in the harbour city of Ghana, Tema. They only serve one large market with about 2,000 clients.

Table 4.2: Profile of Sampled Institutions

No.	Name of Institution	Ownership	Geographical spread	Methodology	Sector	Services
1	**FNGO**	Foreign	ER,NR,UE,UW,BA	Group, Individual	Trading, Agric.	Credit, Savings Training
2	**FNGO**	Foreign&Local Ecumenical	GA,ER,BA	Group, individual	Trading	Credit, Business Dev. Services
3	**FNGO**	Foreign&Local	GA,AR,BA,WR,ER, UE,UW,VR,NR,CR	Group, Individual	Trading	Credit
4	**FNGO**	Foreign	GA,BA,WR,ER,UE UW,CR,NR	Group	Trading, Agric.	Credit , Training
5	**FNGO**	Foreign	GA	Group	Trading	Credit
6	**SAVINGS & LOAN CO.**	Foreign	GA,AR,BA,WR	Group, Individual	Trading	Credit, Savings
7	**SAVINGS & LOANS CO.**	Foreign	GA,AR,WR,BA	Individual	Trading, Agric Personal	Credit, Savings
8	**SAVINGS & LOANS CO.**	Foreign&Local	GA,AR,BA,ER	Group, Individual	Trading	Credit, Savings
9	**CREDIT UNION**	Local members	GA,CR,VR,WR,NR ER,UE,UW,BA,AR	Individual workers	Mixed	Credit, Savings, training
10	**CREDIT UNION**	Local members	GA	Individual workers	Mixed	Credit, Savings
11	**RURAL BANK**	Government	GA	Group, Individual	Mixed	Credit, Savings
12 13 14	**RURAL BANK** **SUSU.** **SUSU**	Government Sole proprietor Sole proprietor	GA GA,CR GA	Group, Individual Group, Individual Individuals	Mixed Mixed Trading	Credit, Savings Credit, Savings Credit, Savings

S&L-Savings and Loans Companies, CUA- Credit Union Associations, RB- Rural Banks, SUSU- Local version of ROSCAS

4.2.5: The Interview Process

An interview guide was used (see Appendix A). Each interview lasted between 26 to 63 minutes. Respondents were allowed to freely discuss the performance of their institutions. In all 14 institutions were contacted.

4.3: Cross Institutional Analysis

This section analyzes the major factors that impacted on performance of microfinance of the sampled officials. The section is structured under the following main themes: institutional characteristics, agency costs, business strategy, and environment/ governance and success.

This section aims at enhancing generalizability of the findings as well as to deepen the understanding and explanation of sustainability and success of microfinance as discussed with the 14 Executives.

4.3.1 Institutional Characteristics

The following imperatives have been used to scan the characteristics of the institutions: ownership, geographical spread, motivation, clientele, funding and information gathering (See Appendix B).

4.3.2 FNGO Characteristics

Most of the Financial Non-Governmental Organizations (60%) were foreign owned, and the remaining two were a partnership between foreign and local entrepreneur. Four had local Chief Executives with one having a foreigner.

Four out of the five Executives interviewed were of the view that there was the need to expand beyond their current geographical spread. One however was emphatic in

saying that they did not have any immediate plans of expanding beyond the capital city since they were into urban micro financing. Apart from one, all the FNGOs had good regional penetration with one present in all the ten regions of the country.

All the FNGOs interviewed emphasized that their primary concern was the eradication of poverty by empowering the poor through the provision of finance for micro enterprises. All the five Executives indicated that they were in the trading sector with two extending their services to cover agriculture which they agree was a high risk area. One Chief Executive indicated that 90% of their clientele were farmers.

One FNGO relied solely on foreign grants and subsidies to finance their operations; another had a revolving foreign capital, with another having a combination of foreign capital and local debt financing. The remaining two borrow from the commercial market to finance their operations. Information gathering on clients was seen as essential to all the Executives before disbursement of funds. They all relied on the community itself for the supply of critical information which then becomes the basis of all contractual agreements.

4.3.3 Savings and Loans Characteristics

Two of the Savings and Loans institutions were 100% foreign investment with the third being a partnership between a local bank and an international finance company. All the companies had the same geographical spread with their head offices located in the capital city. The Executives held the view that it was advantageous to locate near markets especially, to facilitate easy collection of cash from clients and also savings which was central to their operations. Two of the Executives indicated that

they dealt with only traders whilst the third had a mix of traders, farmers and individual office workers who want loans for home improvement.

Their motivation according to all the interviewees was to empower or transform the economically active but poor people who have been neglected by the traditional banks. One Executive declared "*once you are poor, and we believe a small loan can turn you around, we consider you a client. We want to transform the economically active into sustainable livelihood. We have Christian mission alongside, but that does not override business assessment and thinking".*

All the savings and loans companies interviewed do not rely on grants and subsidies for their operations but had foreign start-up capital. Information on their clients, they all agree is central to their operations. They do this through their field officers who are trained in this area. They also use the community to gather information about their potential clients which is then scrutinized alongside the application forms submitted by the clients.

4.3.4 Credit Union Characteristics

Credit Unions (CUs) are registered by the Department of Cooperatives as cooperative thrift societies that accept deposits from their members and give loans as well. The first credit union in Ghana was established at Jirapa in the Upper West region in 1955 by Canadian Catholic mission (World Bank, 1994). This then grew to 141 largely parish-based unions in the northern part of the country in 1960. By 1968, when they were brought under the legislation and the Ghana Cooperative Credit Unions Association (GCCUA) was formed as an apex body, there were 254 CUs with a membership of 60,000 (Quainoo, 1997).

CUs are grassroots financial co-operatives offering savings and loan facilities exclusively to their members at favorable interest rates. They are generally small, both in terms of membership and volume of funds. They pay interest on deposits and charge interest on loans to members. Loans tend to be short or medium-term and largely for consumption purposes as well as the purchase of essential household items. In many cases, they provide members with access to credit which would not be available from the formal banking system (Offei, 2001; GCCUA, 2002).

Individual members make predetermined periodic deposits into their accounts and may borrow up to two times their savings balance. Most CUs require borrowers to provide security, in addition to being in good standing with their deposits. Ideally, this can be in the form of a guarantee from another member of the credit union who has an adequate uncommitted savings balance. Some CUs use the *susu* method of calling on members daily to collect their daily savings and loan repayments. CUs are innovative in providing both credit insurance (which pays off outstanding loan balance in case of the death of the borrower) and a contractual savings programme (which matches savings, up to a limit, if held at death or to maturity) Department of Cooperatives, 2001; Steel and Andah, 2003,2004).

The Credit Unions are owned by the clients collectively through their savings which is their main source of funds. They are in all the ten regions of the country with the apex body located in the capital. According to one chief Executive, the philosophy behind the establishment of the unions was for community development and to help people to cultivate the habit of savings. He contended that you cannot make someone spiritually strong if the person is hungry. Therefore they tried to find a balance between the social, economic and spiritual needs of human beings to make them a

complete whole. Their source of information on the clients is from the community and you can only qualify for a loan after saving for a period of time.

4.3.5 Rural Banks Characteristics

Both Executives indicated that they were set up purposely by government to bring banking to the door step of the rural community. They are located in the rural settings of the capital city. Their clientele was a mixture of traders, farmers, artisans and government salaried workers. Their source of funding was initially from government but now it is the deposits they receive from clients .The Executives interviewed were of the opinion that they were playing important roles in their communities by the provision of small credits to the locals. They did not differ on information gathering on clients to form the basis for qualification for a loan. They also agreed it was the work of their loan officers who are trained specially for this purpose.

4.3.6: Susu Companies Characteristics

Both Executives were sole proprietors but one had friends investing substantially in the business. However, he and his wife remain the only shareholders. They differed in terms of market spread. Whilst the older company was content with serving one market in the capital, the relatively younger company had two regional presences with five branches in these regions. They did not differ in terms of clientele who were mentioned as traders, artisans and hawkers. Their motivation was to mobilize small savings from clients thereby inculcating in them the habit of savings and also to extend credit to them. They agreed that since it was a community-based project, gathering information on their clients was relatively easy.

4.3.7: Section Summary

Financial Non-Governmental Organizations were mostly owned by foreign interests and they had the highest regional presence. All the institutions were motivated by the desire to bring banking to the poor and the marginalized in society, with savings as the pivot of their operations. Traders form the core of all the institutions interviewed except the credit unions that operated from within organizations and as such had their clientele as the workers from within. There was no marked difference in terms of information gathering on clients for the purpose of loan disbursements. Most of the FNGOs tended to have foreign capital, while the rural banks were funded by governments. The credit unions and the savings and loans companies depended on members' savings, while the 'Susu' companies were personally funded by the owners.

4.4. Agency Costs

Sustainability of a microfinance institution is defined by Schreiner (2000) as "the ability to repeat performance through time". Efficiency in the allocation of public resources to microfinance compared with alternative policy interventions requires that performance be evaluated by comparing the social benefits generated by the financial system with its social costs. In theory, a financial institution is financially sustainable if its social benefits outweigh its social costs (Zeller et al., 1997). The following would be used to analyze financial sustainability and agency costs: sources of income, subsidy dependence/exiting, number of branches, contractual agreements and relationship with clients. These findings have been tabulated as Appendix C.

4.4.1: FNGO Agency Costs

All the Chief Executives of the Financial NGOs interviewed agreed that their main source of income came from the interest charged on loans advanced to clients. Three (60%) however indicated they invested some of their idle funds in treasury bills which also earned them income for their operations. Four (80%) of the Chief Executives indicated that they relied on subsidies and grants and two (40%) did not have any immediate plans of exiting. The remaining two (40%) however indicated that they were looking for other sources or about exiting subsidy dependence. Only one of the five FNGOs did not depend on subsidies.

Three (60%) of the FNGOs had ten and above branches in line with their geographical spread indicating the breadth of their outreach. Though one is an urban institution with its branches only in the capital city, their outreach was good considering the rapid growth over relatively short period of time. The basis of the contractual agreements for all the FNGOs were the application forms filled in by the clients. Again, all the Chief Executives agreed that their relationship with their clients were cordial with one describing the clients as partners to signify how important they perceive them in their scheme of things.

4.4.2: Savings & Loans Agency Costs

All the savings and loans companies earn on-lending interest just like the FNGOs. They also invested in treasury bills to boost their income base. One of the companies is a service provider to one of the leading commercial banks in the country and

unlike the other two, earn fees and commissions in addition to their traditional on-lending interest.

None of the savings and loans companies depended on subsidies and grants for their existence. One actually had exited the subsidy dependence and was now operationally self-sufficient, funding its operations from funds generated internally. All the companies sited their branches in almost the same cities and towns, indicating a strong preference for urban micro financing. The Executives of savings and loans companies also needed to protect their investments by entering into contractual agreements with their clients which was done through the filling and signing of loan agreement forms. These agreements were legal in nature which clearly spells out the obligations of both parties and the consequences of a default.

The Executives of the savings and loans companies interviewed were unanimous in indicating that the success or otherwise of micro financing depended on an atmosphere of cordiality between the provider of the credit and the beneficiaries. One Chief Executive declared *"microfinance is based on trust, quality of service and professionalism. You are dealing with people from different backgrounds and therefore you need to be tactful, diplomatic and above all firm. Without these qualities your investment would go up in flames".*[9]

4.4.3: Credit Union Agency Costs

The main source of income for all the credit unions came from interest on lending. They all agreed that they invested their idle funds in treasury bills thereby earning interest to finance their operations. Other sources of income were income from fixed deposits and dividends on shares.

The large credit union association used to be subsidy and grant dependent for their operations but are currently 90% self-sufficient. The smaller of the two started off with deposits and savings by clients to build up their capital and have never been dependent on subsidies or grants whether foreign or local.

Credit Union Associations are normally work-based or community associations of people with a common interest. There are over four hundred and fifty (450) credit union associations in Ghana with the apex body located in the capital city and they have oversight responsibility for all the unions. All the credit unions used specially designed loan forms as the basis of contractual agreement. All the Chief Executives interviewed indicated that they had very good relationships with their clients.

4.4.4: Rural Banks Agency Costs

All the Chief Executives of rural banks interviewed said the main source of their income was the interest they earn on lending to clients. They also invest their idle funds in treasury bills to augment their income base.

Due to their localized nature, they did not have many branches. They also agreed that filling of loan agreement forms, formed the basis of all the contractual agreements with their clients. They all described their relationship with their clients as very friendly or good.

4.4.5: Susu Companies Agency Costs

The two Chief Executives of the Susu companies interviewed all stated that their main source of income as interest on loans they advance to their clients. The Chief Executive of the large company indicated that they also earn commission on certain

unspecified transactions. They also look out for profitable short- term ventures that would bring them more income.

None of the Susu companies had ever operated on subsidies or grants. The Chief Executive of the large Susu Company is a young university graduate who once worked in one of the big banks as an Information Technology Specialist. His ambition is to grow his company with many branches to eventually become a savings and loans company. As a result he has been able to open five branches which is very uncharacteristic of Susu companies. The use of loan agreement form was very common to the two companies. They both described their relationship with their clients as very cordial.

4.4.6: Section Summary

Interest on loans as a source of income is common to all the institutions interviewed. This is followed by investment in treasury bills. Two institutions earn commissions and one is an extension of one of the commercial banks to whom they provide services. The other is an ambitious young graduate who was once a banker. Credit Unions are the only institutions that invest in shares thereby earning dividends.

Subsidy dependence or grants were a feature of the FNGOs. The savings and loans companies borrowed from the market to finance their operations. The credit unions used the compulsory deposits and savings of their clients as the capital for operations. The rural banks were set up by the Government with a clear mandate to provide credit and savings to the rural community. Their initial capital was by government but had to operate to be self-sufficient. The Susu companies were sole proprietors with personal or family capital.

The FNGOs had more branches but tended to be urban centred. The Savings and loans companies were also to a large extent urban in nature, tended to be located near large markets. This they intimated was to facilitate easy lodgments of loan repayments and savings by the traders. All the institutions used a form of loan agreement documents as the basis for loan disbursements to clients. The fortunes of all the institutions depended on the kind of relationship that existed between them and their clients. Cordiality with clients is the word that runs through all the institutions interviewed.

4.5: Business Strategy

To be successful in microfinance, it is important to adopt strategies and innovations that will ensure longevity and profitability. Microfinance presents a series of exciting possibilities for extending markets, reducing poverty and fostering social change. Many of the insights from the microfinance experience can be examined fruitfully through factors such as screening mechanism, group collateral, default rates, peer monitoring, meetings, enforcement of repayments and financial product innovations (See Appendix D).

4.5.1: FNGO Business Strategy

All the Chief Executives of the FNGOs interviewed employed various screening mechanisms to select good clients for loan disbursements. They perceived this assignment as very critical since their inability to weed out ‘bad’ clients would result in increased loan portfolio at risk. While most of them relied on the investigative work of the field officers, others went further to involve the community who supplied them with information on their kith and kin. Again, they all agreed that the

field work must be compared with information supplied on the various application forms submitted by the clients

All the FNGOs interviewed advanced loans to groups and used the group as collateral, so that in the event of a default by one client the group would collectively share and pay. This in essence put a measure of responsibility on every group member to ensure effective peer monitoring. All the Chief Executives stated that peer monitoring was effective because the groups were community based and as such they know each other, coupled with the regular meetings and interactions

Regular meetings of the clients with the service providers in attendance, was seen as an integral part of the whole business strategy. Three (60%) of those interviewed said they had weekly meetings with the remaining meeting once and twice a month.

To ensure that default rates are kept to the barest minimum, one Chief Executive indicated that they use education and training. Two (40%) said they used the groups to exert pressure on defaulters till they pay up. One adopted the strategy of regular follow-ups, with another saying that they insist on clients adhering to the terms of the agreement. In the event that a default occurs, three (60%) indicated that the onus lies on the group to make good the amount. One would resort to a legal means as the last attempt. One also stated that the group as a whole would lose the chance of getting a future loan.

Almost all the financial products of the FNGOs were branded in local names which readily convey a message of what that product does. According to one Chief Executive it was a business strategy to identify themselves with the local folks who were mostly illiterates or semi illiterates.

4.5.2: Savings & Loans Business Strategy

Two (67%) of the Savings and loans companies screened their prospective clients through their loan officers who are trained to do so. In addition to this screening, the clients' application forms are subjected to a further scrutiny to ensure that only 'good' clients are considered. The third Chief Executive stated that even before they come to screening, the client must have saved money with them for at least six months. Thereafter, the credit officers would visit the client's home and workplace to cross-check other relevant information earlier provided on the application forms.

Two (67%) of the savings and loans companies perceived the group liability concept as the most effective means of ensuring repayments by groups. The third, which is the largest in terms of branches and clients, however differed on this subject. They indicated that they did not believe in sharing responsibility of a loan among several people.

Regular meetings with clients was seen as very crucial and this was a way to constantly remind clients of their loan repayment obligations. All the Chief Executives of these companies had meetings ranging from weekly to bi-weekly.

4.5.3: Credit Unions Business Strategy

The Chief Executive officer of one of the Credit Unions declared that they do not have a screening mechanism but instead they use education to change the mind-set of members to behave responsibly. Screening mechanism was not an issue for the other Chief Executive as the clients were known members of staff and therefore did not need any screening.

All the Credit Union Associations were not into group lending and their meetings were monthly and yearly. As a method of minimizing default rates, one Chief Executive indicated that they try to enforce the rules to the letter. This may include phone calls and demand letters. The other Chief Executive emphasized that because they are staff members of the university they withhold any benefit due the defaulter which is done with the assistance of the Registry.

Peer pressure was not applicable in both cases for CUA. Financial products were mainly savings and loans for their clients.

4.5.4: Rural Banks Business Strategy

As a measure of screening, the rural banks require a new client to be introduced by an existing old client. This was a form of guarantee by the old client to the extent that the new client can be trusted to behave like him. Again due to the community-based nature of rural banks, one bank preferred to use the community and people to identify the good and the bad clients.

The two banks had divergent views on using the group as collateral. They also differed on meetings as one indicated that meetings could be held as often as possible, the other indicated that they hold meetings every quarter. Regular visits and monitoring were means of minimizing default rates. As a last resort both Chief Executives would hand over a defaulter to the law enforcement agencies. However, one stated that they would have issued three demand notices before. Peer monitoring was a method they did not consider. They all had the same financial products as loans, savings and overdraft facility

4.5.5: Susu Companies Business Strategy

The Susu companies check the background of a client, family standing and even where they live as a screening measure. There are no group loans and therefore no group collateral. Meetings are held weekly for the bigger of the two while the other employs regular visits. The use of guarantors is common to both companies. One company would use the police to enforce compliance by a defaulter while the other would prefer to use persuasion. Peer monitoring was irrelevant in their case. One distinguishing feature is that the bigger of the two Susu companies was involved in micro leasing, which was an innovative concept.

4.5.6: Section Summary

Screening of clients is crucial in microfinance and this was evident in all the interviews with the Chief Executives as an effective tool in safeguarding the liquid assets of the companies. For all the institutions who were engaged in group lending, they used the group itself as collateral, and as a result enforced peer monitoring leading to low default rates. Those who were not into group lending, demanded guarantors as a surety.

Meetings and regularly visiting clients were seen as a critical business strategy and these were employed by most of the institutions. At the risk of complete default, the rural banks, Susu companies and the savings and loans companies would resort to legal means to retrieve the monies advanced to a client.

Most of the institutions interviewed had branded financial products in local dialects to make it appealing and easier to understand by the many illiterate and semi-illiterates they dealt with.

4.6: Environment/Governance

The following imperatives have been used to scan the environment and governance of microfinance: emergency loans, job creation, competition, Board of Directors, loan recovery and regulatory framework (See Appendix E).

4.6.1: FNGO Environment/Governance

Four (80%) of the financial non-governmental organizations interviewed were of the opinion that giving emergency loans to clients was necessary. They argued that everyone goes through tough times and emergencies at a point in one's life and therefore meeting that need was necessary. The only one that differed on this issue did not assign any reason. All the FNGOs interviewed did not create jobs directly for their clients, but indirectly through the giving of loans and education.

All (100%) of the FNGOs agreed that they face severe competition especially from the big commercial banks who are now invading the microfinance sector. According to them the threat is due to the fact that the big banks some of which are multinationals have bigger capital base and can afford to charge very low interest rates and still be able to cover their operational costs and be profitable. In view of the foregoing, one institution has decided to target the poorest of the poor where they think the big banks will shun.

All the FNGOs had board of directors and except for one, all had female representations. Regarding personnel constraints (80%) of the Chief Executives interviewed perceived the big banks as a threat as they keep poaching their staff with attractive offers which they cannot match.

Loan recovery was also seen as a big issue for these institutions as (80%) attested to that fact. The difficulty according to one was due to the fact that they dealt with

farmers, which is considered a risky due to the uncertainty about the weather. The state of the economy has a direct bearing on loan recovery, one chief executive noted.

The regulatory framework, according to two (40%) Chief Executives were restrictive because it does not allow them to take saving deposits. Two (40%) indicated that the regulatory framework as it stands now was favourable and one (20%) was indifferent.

4.6.2: Savings & Loans Environment/Governance

Two (67%) of the Chief Executives interviewed do not give emergency loans to clients. They all created jobs indirectly for their client through the provision of loans. Like the FNGOs, all the Chief Executives of the Savings and Loans Companies pointed to the banks as the source of the competition they are facing. They all had Board of Directors with females as well. Again, like the FNGOs the personnel constraints had to do with low remuneration compared with the banks and as such are not able to retain them for long.

All the Chief Executives interviewed did not have a problem with loan recovery. Mixed reasons were given by two Chief Executives in response to the regulatory framework. One saw the increase in the minimum capital requirement for the formation of a bank recently introduced by the Central bank as restrictive because they have planned transforming themselves into a bank. Another saw the universal banking law given to banks as unfair since it allows them to venture into areas such as microfinance which had been the preserve of microfinance institutions.

4.6.3: Credit Unions Environment/Governance

Emergency loans were seen as normal loans given to clients by Credit Union Associations. They agreed to create jobs indirectly through the provision of loans.

Like all the other Chief Executives interviewed, the source of their competition is the big banks coming into microfinance. They all had Board of Directors with women represented. While did not seem to have personnel constraints, the other had a difficulty in attracting high calibre staff.

Loan recovery was relatively easy for the credit unions due to the fact that the clients were members of staff employed by the organization. They were also unanimous in pointing to the regulatory framework covering CUAs as outmoded and needed a review to move in line with current trends.

4.6.4: Rural Banks Environment/Governance

Rural Banks were not averse to granting emergency loans to clients and also stated that they have created jobs indirectly. The presence of the big multinational banks operating in the microfinance sector was seen as a threat to the existence of credit union associations, all the Chief Executives perceived. Their Board of Directors had a low female representation. Their personnel constraints had to do with how to train and retain qualified personnel. All the rural banks did not have difficulty with loan recovery and the regulatory framework governing their operations.

4.6.5: Susu Companies Environment/Governance

Both Susu companies saw the emergency loans as normal and did not think they had created jobs directly or indirectly. Whilst one had Board of Directors with one female representation the other did not have a board of directors at all. Again all the

Susu companies did not have personnel constraints and so also was their loan recovery mechanism.

One Chief Executive perceived the absence of code of ethics for all participants in the microfinance sector as a big challenge. The other was concerned about the quantum of tax they pay since they are based on assessment, which to him was arbitrary.

4.7: Success

Yaron (1994) in a study of rural finance institutions which engage in microcredit activities in Indonesia and Bangladesh used financial self-sustainability and substantial outreach to measure success (see 3.3.5)

Sharma and Zeller (1997), Navajas et al. (2000) have generally agreed to the above criteria as being very effective in determining the success or otherwise of MFIs (see 3.3.5). Institutional development, that is engaging in activities that on the surface are not directly linked to the first duty of credit allocation such as training of clients in entrepreneurial development skills and social development have also been found to make MFIs a success. Variables to be discussed include; new clients, loan processing, record keeping, savings/discounts, internal/external audits, staff remuneration and staff turnover (See Appendix F).

4.7.1: FNGO Success

During the exploratory research most of the respondents were unwilling to disclose numbers of new clients with most giving approximations. The reason according to most of them is due to dropouts of clients. Two (20%) indicated that a maximum of

one week was enough for processing a client's loan request. Two (20%) also indicated that they needed two weeks to process a loan request with one indicating that they use eight weeks for orientation during which they assess their clients in various ways

The use of computer software for record keeping was common as they all agreed that this was a critical issue which is at the centre of their operations. Savings is one of the pillars of microfinance but all the FNGOs were not into it but some granted discounts on early repayment.

All the FNGOs had both internal and external audit functions. On the issue of staff remuneration, all the respondents indicated that it was good. Two (60%) of the respondents indicated that their staff turnover was low and performance was also good. While one stated that turnover was average the other also indicated it was mixed.

4.7.2: Savings and Loans Success

Two (67%) of the respondents were categorical in saying that they did not have figures available while the other indicated that they have a target of twelve new clients per officer per month. Loan processing was quicker with the Savings and Loans companies with two (67%) indicating that an average of three days was needed to process an applicant's loan request.

The use of computer software was employed by all the respondents. Savings was central to the operations of all the respondents here. They also had both internal and external audit functions. With regards to staff remunerations they stated that it was good at least within the industry. Two (67%) of the respondents agreed that staff

turnover was relatively stable but high in the other who disclosed that their loan officers are easily poached by other competitors.

4.7.3: Credit Union Association Success

Credit Unions are worked-based organizations and therefore the number of new clients who join in is based on how many new employees come in. Since they are work-based, loan processing becomes easier and quicker since employees are already known staff members and no time is spent on investigating their background. Record keeping is very important and savings is very key to their operations. Indeed members qualify for loans only after saving for a period of time.

Both internal and external audit are utilized. Staff remuneration is good. With regards to staff remuneration one Chief Executive had this to say "*Our staff turnover is low among the older staff but high among the youth. You see, the young ones are very ambitious and are eager to get money quickly, so they move if some company come dangling a few more cedis in front of them".*

4.7.4: Rural Bank Success

Again the Rural Banks could not be specific with figures on new clients. While one Executive said they would need two weeks to process a loan request, the other gave a three day processing period. Record keeping was by the use of computer software. They use savings as a basis for advancing loans to clients. Internal and external audit was used to ensure smooth operation. Staff remuneration was perceived to be average by both Executives. While turnover was low in one, it was high in the other. However performance was perceived to be good in both instances.

4.7.5: Susu Success

The Executives here also were not specific with numbers of clients. One Susu Company would take about two hours to three days to process loan requests. The other would take one month to process loan request. The use of computer software to keep record of clients was common to both. Clients were encouraged to save with the company before qualifying for loans. While one had both internal and external audit functions the other said he does both the internal and external audit functions himself through monitoring. According to both Chief Executives, staff remuneration was good which translated into good performance and low staff turnover.

4.7.6 Section Summary

Twelve (86%) of the fourteen microfinance institutions interviewed granted emergency loans to clients and they all believed they had created jobs indirectly. All the Chief Executives interviewed perceived the entry of the big multinational banks as their biggest threat in terms of competition. Thirteen (93%) of all the institutions interviewed had Board of Directors with fair female representation. Threat of losing their high caliber staff to the multinational banks was the main concern of ten (71%) of the Chief Executives interviewed. Nine (64%) of all the Chief Executives interviewed did not have much problem with their loan recovery. To a large extent the difficulty in loan recovery was peculiar to the FNGOs.

Six (43%) of the microfinance institutions interviewed indicated that they did not have any difficulty with the regulatory framework as it stands now. Concerns were rather mixed.

4.8: Section Summary and Conclusion

FNGOs were mostly foreign owned with foreign capital. Their motivation is the eradication of poverty especially in the rural areas. However, most of the FNGOs were located in the urban centres. They tended to deal more with traders as against farmers whose activity is considered very risky. This has helped the FNGOs to maintain substantial outreach and generated regular revenue whilst reducing operational costs.

Interest rate management and savings mobilization problems which have been pointed out as causes of lack of sustainability and eventual failure of such financial schemes appear to have been well managed by almost all the institutions interviewed. The lender-borrower relationship also appears to have been handled well with all the institutions indicating that they have cordial relationship with the clients. Using the group as collateral was seen as a very effective means of ensuring repayments. However, some of the FNGOs and the S&L companies would use legal means as a last resort to demand repayment.

Moral hazard which is mainly problems of repayment and default and adverse selection which has to do with the issue of screening out those likely to default still appear problematic. Since borrowers will differ in default likelihood it becomes difficult and expensive to determine the level of risk for each borrower. Again it must be acknowledged that ensuring that borrowers engaged in activities that facilitate repayment was a problem. The findings from the exploratory research were very insightful and useful. This played a critical role in constructing the research model as well as the development of the hypotheses.

CHAPTER FIVE

Conceptual Model and Hypotheses

5.1: Introduction

This chapter aims at providing an understanding of how the research framework is to be investigated. The chapter begins by further expanding the research problem and issues, and linking them to their corresponding hypotheses. Following that, the conceptual model of microfinance is introduced with the operational definition of each variable addressed in Appendix G. Finally, the relevant research questions are restated and hypotheses developed.

5.1.1: The Research Model

The main objective of the research is to develop an explanatory framework that will lead to a better understanding of the performance of microfinance institutions with emphasis on sustainability and success by examining the influence of factors internal and external in Less Developed Countries (LDCs), especially Sub-Sahara Africa by using data from Ghana.

The main research question is: What are the significant factors that affect the sustainability and success of microfinance institutions in Sub-Sahara Africa? An answer to this question requires an investigation into factors that are perceived to impact on the performance of microfinance institutions and the development of sub-research questions. The factors that impact on sustainability and success of microfinance institutions are grouped as follows: Institutional Characteristics, Agency costs, Business strategy, Environment/Governance and Success. The sub-research questions have been developed under their various sub-headings which are

outlined below with their corresponding hypotheses. These hypotheses were further explored and justified in section 5. 2 to 5.6 with the concept model.

Q.1) Which are the major institutional characteristics that impact on sustainability of microfinance institutions?

This specific question investigates how major characteristics of the microfinance institution such as ownership, geographical spread, motivation, clientele type, funding and methods of gathering information impact on an institution's drive to become sustainable. This question is investigated through the hypotheses 1a, 1b, 1c, 1d, 1e, and1f.

Q2) What are the issues of sustainability and agency costs that impact significantly on an MFI?

Question two, which relates to hypotheses 2a, 2b, 2c, 2d, and 2e examines which of the various factors has the most impact on sustainability of MFI.

Q3) Which of the business strategies adopted has a significant influence on sustainability of microfinance institution?

Question 3 examines which of the various business strategies has the most impact on sustainability of an MFI. This is examined through hypotheses 3a, 3b, 3c, 3d, 3e and 3f.

Q4) Which environmental/ governance factors have the most impact on sustainability of an MFI?

Question 4 considers the impact of environmental and governance issues on sustainability and an MFI. This is examined in hypotheses 4a, 4b, 4c, 4d, 4e, 4f and 4g.

Q5) Which success factors have the most impact on MFIs?

Question 5 examines the impact of success factors on MFIs. This is examined in hypotheses 5a, 5b, 5c, 5d, 5e, 5f, 5g,

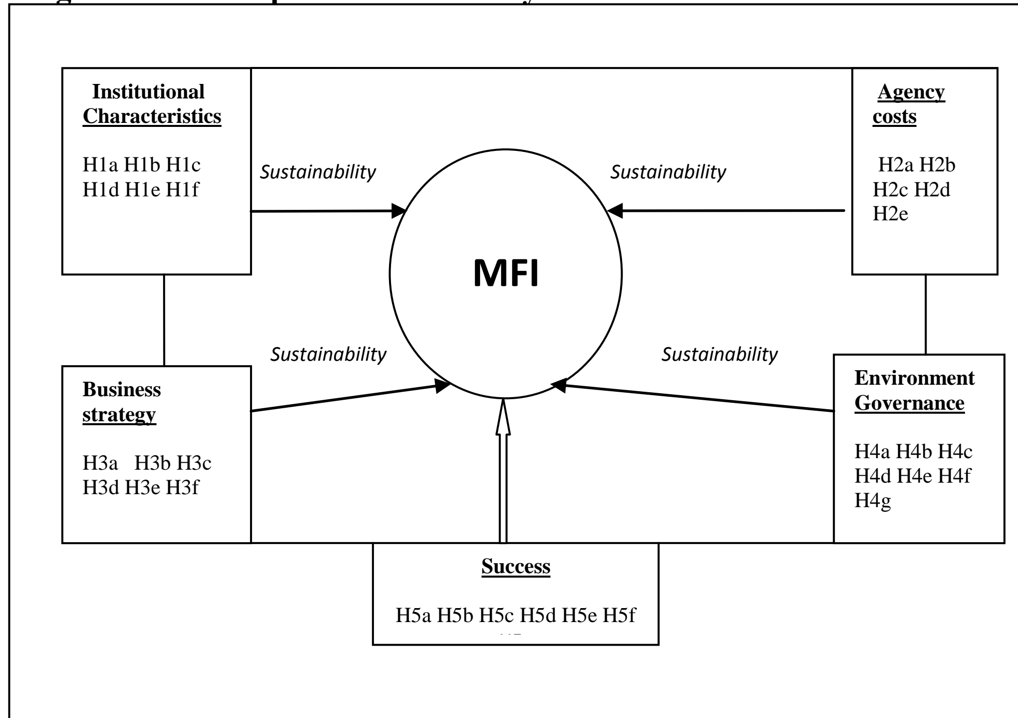
5.1.2: Defining the Conceptual Model and Hypotheses

This section introduces and defines the conceptual model, which has been developed based on the literature review and in-depth interviews with the Chief Executives/ Relationship Managers of microfinance institutions. This model will be tested, examined and discussed in subsequent chapters.

Prior to developing the model, it was essential to develop the underlying theory based on both the extant literature and the qualitative data that was gathered through the interviews with the Chief Executives. This approach provides for a more robust and rigorous approach to research (Gilmore and Carson 1996; Perry, Riege and Brown 1998).

Figure 5.0 below details the conceptual sustainability model of an MFI. The remainder of this section provides the variables within the conceptual model and their respective hypotheses as developed through the combination of both the qualitative data and the literature.

Figure 5.0: Conceptual Sustainability and Success Model



The importance of the institutional characteristics of microfinance is generally documented (Armandariz de Aghion and Morduch 2005, Zeller and Meyer 2002). It is, however, important to know the impact that each of the varied characteristics has on sustainability and success of microfinance in Sub-Saharan Africa. Perhaps which of these characteristics have significant impact on microfinance and whether this impact is positive or negative? This therefore leads to the first sub-research question:

Which are the major institutional characteristics that impact on sustainability?

To answer this sub-question effectively, and making reference to the exploratory research, the institutional characteristics have been divided into six main themes: ownership, geographical spread, motivation, clientele, funding and information gathering.

5.2: Institutional Characteristics

5.2.1: Ownership

Owners of businesses are highly geared to market opportunities and they tend to give priority to profit maximization. Again, they pride in their ownership of efficient and sometimes quite complex organizational structures.

The exploratory research revealed five broad categories of ownership; foreign, local, foreign and local partnership, government and single ownership. Whilst some of these institutions are owner-managed, others have professional (non-owner) managers. What remains unknown is whether the type of ownership in a microfinance institution influences sustainability and success. This therefore leads to the hypothesis that;

H 1a: If the ownership of a microfinance institution in Ghana is foreign, then sustainability will significantly increase.

5.2.2: Geographical Spread.

From the exploratory research, the sampled microfinance institutions can be categorized into two groups; large and small. Because microfinance institutions are not properly regulated and there are problems associated with defining firm size, the categorization was based on the number of regional presence. Geographical spread, proposed as an important characteristic to gain performance effects in sustainability and success can be regarded as a proxy for resources where larger firms usually possess more product lines and higher lending capacity together with institutional resources. From this therefore it is hypothesised that;

H 1b: If microfinance institutions commit more funds to lending then sustainability will significantly increase.

5.2.3: Executives' Motivation

The founders of microfinance shared a vision. Their vision was to supply formal financial services to poor people shunned by banks because their savings were tiny, their loan demand was small and they lacked loan collateral. When asked about his motivation for setting up a microfinance institution, one Chief Executive Officer like all the others had this to say;

"I was once a consultant for the Government Poverty Reduction Strategy (GPRS 1 and 2) and during our research we realized that microfinance really goes a long way in alleviating poverty. We realized that the banked population of Ghana is 20% and the non-banked 80%. And we also realized that if the non-banked is 80% and microfinance is something that can reach out to them on the field and not wait for them to come, we took advantage of that to go to the field to the people who really need savings and loans."[10]

The exploratory research showed that almost all the Chief Executives were motivated by the fundamental principle underlying the microfinance movement, which is poverty alleviation and empowerment through the provision of tiny loans especially among the rural poor.

The hypothesis lays emphasis on the level of commitment to grow the poor and alleviate poverty. It is therefore hypothesized that:

H 1c: If Executives' motivation to grow and empower the poor is high then sustainability will significantly increase.

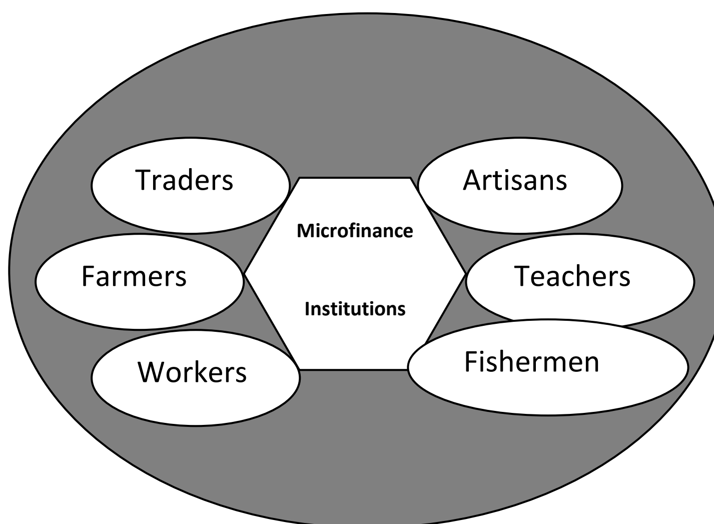
10 Remarks of one Chief Executive

5.2.4: Clientele Type

For many observers, microfinance is a collection of banking practices built around providing small loans to the rural poor who are mostly farmers, fishermen, traders and artisans. According to Von Pischke (1991) cited in Zeller and Meyer (2002), small farmers were the primary concern in the 1960s and 1970s; the poor emerged as the focus in the 1980s and 1990s. Matching access to or supply of financial services with demand has been a consistent challenge for financial institutions attempting to serve clientele groups outside the frontier of formal finance. What is important for this research is to identify which clientele type impact significantly on sustainability of MFIs and whether this is positive or negative. From the foregoing the hypothesis to be tested is:

H1d: If there is increased relationship between MFIs and traders then their sustainability will increase significantly.

Figure 5.1 Clientele type



From the exploratory research we identified the clientele type as traders (43%), artisans (17%), farmers (17%), workers (13%), fishermen (4%) and teachers (4%). From these statistics, it appears most Chief Executives preferred urban traders as

clients whose businesses were less risky compared to poor rural farmers and fishermen who depended mostly on unpredictable weather patterns.

5.2.5: Funding

From the exploratory research, it was discovered that the start-up capital for the MFIs were; foreign capital, local capital borrowings, family capital, members savings and government. To a large extent MFIs with large capital base are able to provide loans with long-term maturities. The lack of access to long-term credit for capital investments by the MFIs hampered their outreach and depth of their outreach. From this therefore the hypothesis to be tested is:

H 1e: If funding for MFIs increase, then their sustainability will significantly increase.

5.2.6: Information Gathering

Information on clients is very essential in microfinance if agency problems are to be avoided or minimized. According to Armendariz de Aghion and Morduch (2005) agency problem refers to the lender's inability to observe the borrower's characteristics such as project riskiness, borrower's efforts or to observe her profits. These information problems create inefficiencies in the market.

The information problem arises at three distinct stages. First prior to extending a loan, the lender may have little or no reliable information about the quality of the borrower. Sometimes a bit of scouting around by a loan officer may yield the required information, but too often the necessary background research on borrowers is prohibitively costly. Better information can prevent the lender from mistakenly extending a loan to a "low quality" borrower without adequately accounting for the

risk involved. Secondly, once the loan has been granted, the lender does not entirely know how the borrower will use the resources. Will the borrower work hard to ensure that the investments are successful? Or will the borrower work less hard than he or she would if the project was entirely self-financed? Third, once investment returns have been realized, the lender may not be able to verify the magnitude of the returns. It will then be tempting for the borrower to claim to have had bad luck and ask for a reprieve in paying back the loan when in fact the investment was highly profitable.

From the above it is hypothesised that:

H 1f: If Executives obtain good quality information on clients, then sustainability of MFIs will increase.

5.3.0: Agency Costs

A substantial proportion of the problems faced by MFIs emanate largely from poor management of clients. Examples of such problems include the monitoring of clients, client relationships, and the increased reliance on subsidized loans in the provision of microfinance. Ultimately, the sustainability and success of MFIs hinges on the management of agency issues both at the borrowers and institutional level. The process of delivering small credit is fraught with difficulties. It is therefore important to examine how MFIs are managing agency costs, their clients and staff to sustain credit extension. The following factors were examined during the exploratory research; sources of income, subsidy dependence, number of branches, contractual agreements and relationship with clients. What is important for this research is to identify which of these factors impact significantly on sustainability and whether this

impact is positive or negative? This therefore leads to the second sub-research question:

Which agency cost factors impact significantly and positively on sustainability of MFIs?

5.3.1: Sources of Income

Hoff and Stiglitz (1990) argue that lenders should design their loan contracts such that they extract enough information covering problems of moral hazard and adverse selection. The design here could be in the form of an interest rate arrangement or loan size. The interest rate then assumes a dual function: as the price and an instrument for regulating the risk compositions.

According to Schreiner (2000), an MFI that is unable to raise enough revenue will collapse quickly after donor withdrawal. Even in the midst of permanent subsidy, increased revenue generation by an MFI will help increase outreach and expand its operation to its advantage. The exploratory research revealed sources of income as on-lending interest, interest on treasury bills, commissions and fees. What remains unknown is the extent to which they impact on sustainability and success of MFIs.

From the above the hypothesis is:

H 2a: If sources of income for MFIs increase, then sustainability will also increase.

5.3.2: Subsidy Dependence

According to Zeller and Meyer (2002), it is commonly believed that institutional innovation and microfinance expansion will continue to rely on public intervention and financial support. In fact, most, if not all, MFIs that reach large numbers of

female and male clients below the poverty line require state or donor transfers to subsidize their costs. At least, the most successful ones that have achieved financial sustainability have required investment by the state or donors in the past.

Zeller and Meyer (2002) again argue that although financial self-sufficiency should be the objective of MFIs, public subsidization may be justified if it is determined that this is the most cost-efficient method to reduce poverty. Again Armendariz de Aghion and Morduch (2005) state that much of the microfinance movement continues to take advantage of subsidies some from donors, some from governments and some from charities and concerned individuals. It is argued that a programme without subsidies must pass along all costs to clients in one way or other. There is a school of thought in microfinance which says that subsidies must go to the institution and not the borrower. The exploratory research revealed a mix bag. Our interest in this area is the extent to which subsidies impact on the performance of MFIs.

The hypothesis therefore is:

H 2b: If subsidy dependence among MFIs is high then sustainability will also increase.

5.3.3*:* Number of Branches

Microfinance is about extending financial services to the large unbanked poor population who mostly are located in the rural areas and the urban poor. How microfinance providers are able to reach and extend their services to the poor is seen as critical by many authors in this field of study. Our exploratory research revealed that FNGOs had the highest number of branches followed by the Savings and Loans, Credit Union Associations, the Rural Banks and the Susu companies in that order.

What is not certain is whether the number of branches will automatically translate into better performance.

The hypothesis therefore is:

H 2c: If MFIs increase their branches, then their sustainability will increase.

5.3.4: Contractual Agreements

All the Chief Executives interviewed during the exploratory research, indicated that clients were made to fill, sign or thumb-print prepared legal documents which then become a contractual agreement forming the basis for lending. This document spells out the duties and responsibilities of both parties with consequent implication upon the client if he or she violates the terms of the agreement. What is important in this regard is whether rigid enforcement of contractual agreements would necessarily lead to better performance.

It is therefore hypothesised as follows:

H 2d: Enforcement of contractual agreement rigidly would lead to increased sustainability of MFI's.

5.3.5: Relationship with Clients

It is said that microfinance is based to a large extent on trust and tact. In other words, the lender-borrower relationship is critical for the growth of the institution and must be handled with the utmost professionalism.

One Chief Executive remarked during the interview;

'' I would say our relations with our clients are based on trust and on the quality of service. What is important for us is to treat ordinary people very well . After all they give us the business''. [11]

What needs to be known is the extent to which the lender borrower relationship impacts on the performance of MFIs. It is therefore hypothesized that:

H 2e: If lender-borrower relationship improves then sustainability of MFI's will increase.

5.4: Business Strategy

In assessing the impact of strategy on MFIs, the main focus will be centred on management actions taken once the institution is in operation in order to influence its environment. This is what Smallbone et al (1993) referred to as 'managed for growth.' According to Smallbone et al., there is no single type of strategy which is associated with growth.

The third sub-research question being asked is:

Which business strategies adopted have a significant influence on sustainability of MFIs?

5.4.1: Screening

One of the very effective checking mechanisms in microfinance is the issue of screening clients before loan disbursements are made. The rationale behind this method is to weed out people who are likely to default in repayment of loans disbursed. Literature in microfinance is replete with issues of screening out "good" clients (adverse selection) as put forward by Stiglitz and Weiss (1981) and many other authors.

According to Gosh and Ray (1997), progressive lending also enables the lender to "test" borrowers with small loans at the start in order to screen out worst prospects

before expanding the loan scale. To what extent is this screening mechanism effective in ensuring that microfinance institutions achieve their stated objectives? This is the question that must be answered within the context of performance of MFIs.

It is hypothesised:

H 3a: If screening mechanisms are made more effective, it will lead to a significant increase in sustainability of MFIs.

5.4.2: Group Collateral

Group lending refers specifically to arrangements by individuals without collateral who get together and form groups with the aim of obtaining loans from a lender. The special feature is that the loan are made individually to group members, but all in the group face consequences if any member runs into serious repayment difficulties. In other words, the group becomes the collateral. It is sometimes called group responsibility or joint liability. To what extent does group collateral impact on the performance of MFIs.

The hypothesis put forward is:

H 3b: If group collateral is highly enforced, then sustainability of MFIs is increased.

5.4.3: Meetings

Regular client meetings especially where members are within the same locality is a critical factor in the delivery of microfinance to the poor. Non-attendance at meetings is seen as a coming default except for verifiable excuses such as ill-health and the like. Again, by meeting regularly credit officers get to know their clients well by

seeing them face-to-face on a regular basis. This can provide loan officers with early warnings about emerging problems so they can clamp down more quickly when needed. Personalized relationships and regular opportunities for monitoring are thus established.

It is hypothesised as follows:

H 3c: If clients' meetings are highly enforced, then sustainability of MFIs will significantly increase.

5.4.4: Handling Defaulters

Various methods were put forward for handling defaulters by the Chief Executives. As a last resort most Chief Executives would resort to legal means to ensure repayments from clients.

We test the hypothesis:

H 3d: If Executives intensify their handling of defaulters then sustainability will increase.

5.4.5: Peer Monitoring

Peer monitoring is related to group lending where all members of the group collectively become responsible for any act of default by a member. Peer monitoring becomes a natural consequence since no member would like to be responsible for any member's act of omission. However, for peer monitoring to succeed, group members must be within distance of one another, which is better in a rural setting. How does peer monitoring affect operations of MFIs?

It is hypothesised that:

H 3e: If Executives ensure that peer monitoring is intensified, then sustainability will also increase.

5.4.6: Financial Products

According to Zeller and Meyer (2002), striving for financial sustainability forces MFIs to be sensitive to client demand and induces them to improve products, operations and outreach. Better financial products in turn, generate greater economic benefits for clients and thus greater impact.

During the exploratory research interview, it became apparent that all the financial products were branded in local dialects to bring forcefully to the fore the intention of what it is supposed to deliver. These financial products were also developed in apparent response to the needs of the locals. What is important with regard to the above is the extent to which innovations in financial products significantly impact on performance of MFIs.

It is hypothesised as follows:

H 3f: If innovations in financial products increase, then sustainability of MFIs will increase.

5.5.: Environment and Governance

Governance issues refers to the regulatory framework governing the operations of MFIs and the Environmental issues relate to the wider community in which they operate and how they impact on their operations. Issues to be considered here are; emergency loans, job creation, competition, Board of Directors, personnel constraints, loan recovery and the regulatory framework.

As noted by Staschen (2003) regulatory frameworks can be stipulated on different levels of regulation. Broadly, Staschen groups these levels under primary and secondary legislation. He defined the primary legislation as laws or acts of Parliament that defines the general standards and principles that financial institutions must meet. Secondary legislation or statutory regulations are promulgated under such laws and acts typically by prescribing specific benchmarks and procedures that need to be adapted more often.

The fourth sub-research question being asked is:

Which Environmental and Governance issues adopted have significant impact on sustainability of MFIs?

5.5.1: Emergency Loans

During the exploratory research interview with the Chief Executives, Credit Unions and Susu companies were the group that did not hesitate to give emergency loans. The argument was that they were only demanding part of their accumulated savings and to them it was still a normal loan. Many authors in microfinance contend that one of the failures of the traditional banks that MFIs came to correct is closeness to the community who are mostly poor and illiterate. In other words bringing financial services or banking to the doorstep of ordinary people was seen as responding to their numerous needs such as emergency loans was seen as one.

The hypothesis posed is:

H 4a: If Executives increase their response to emergency loans, then sustainability of MFIs will increase.

5.5.2: Job Creation

One of the contentious issues in microfinance is the direct creation of jobs by providers of microfinance. The debate seem to suggest that microfinance institutions must move away from only the provision of funds and create jobs directly, employ people who are incapable of self-employment and thereby empowering them. From the exploratory research interview conducted, all the respondents indicated that they have created jobs indirectly through the provision of loans to clients who in turn created jobs.

Would direct job creation increase sustainability and success of MFIs? This therefore leads to the hypothesis that:

H 4b: If MFIs create jobs directly, then sustainability will increase.

5.5.3: Competition

Economists usually view competition as a good thing, and most theoretical models assume that there is perfect competition. Some authors especially in microfinance argue that strong competition can undermine dynamic incentives. Dynamic incentives may weaken when alternative lenders enter the market (assuming that the defaulter has a chance to borrow from them instead).

Problems with competition have emerged everywhere but most notably in two countries where microfinance was first to take hold: Bolivia and Bangladesh. McIntosh and Wydick (2002), report on problems of competition in Uganda, Kenya, Guatemala, El-Salvador and Nicaragua. The Bolivian crisis took root when aggressive providers of consumer credit entered the market. In Ghana, it appears the big financial institutions see microfinance as the answer to the future and are all entering, some with big foreign partners such as ACCION. What it means to the

small microfinance institutions is that they cannot match the lower interest rates charged by the big institutions. Again, the average loan sizes offered by the big banks cannot be matched by the smaller ones. One Chief Executive remarked during the exploratory research interview;

"We face competition from many MFIs and especially the Commercial Banks and because of that some of the clients are doing multiple borrowing"[12] Another remarked;

"The emergence of the big banks is a source of worry. You see because they have strong capital base their risk could be lower and therefore some of our clients are moving there".[13]

Is competition desirable in Microfinance? This leads to the hypothesis that:

H 4c: Increased competition in microfinance will lead to increased sustainability.

5.5.4: Board of Directors

The importance of every Board of Directors is seen in the broad policy objectives they give to their institutions. It is said that a strong and effective Board translates into both efficiency and effectiveness of organizational objectives. Except for one Susu company (sole proprietor) all the 13 other MFIs had Board of Directors.

Does the presence of Board of Directors ensure good performance of MFIs? This leads to the hypothesis that:

H 4d: If Board of Directors are present in MFIs, then sustainability will increase.

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12 A remark by one Chief Executive during the exploratory research

13 An observation of one Chief Executive during the exploratory research

5.5.5: Personnel Constraints

During the exploratory research interview most of the Chief Executives expressed concern about their inability to retain or attract qualified personnel due to the presence of the big financial institutions who could afford better remuneration. The focus in this regard had to do with their field officers who were seen as the pivots on which microfinance delivery revolves. The hypothesis posed is:

H 4e: If MFIs employ and retain highly qualified staff, then their sustainability will increase.

5.5.6: Loan Recovery

The survival of MFIs depends on how they are able to increase their outreach, recover loans and cover their operational costs. However, loan recovery is the difficulty faced by most MFIs. What bearing has loan recovery on the performance of MFIs?

It is hypothesised as follows:

H 4f: If loan recovery increases for MFIs, then sustainability will increase.

5.5.7: Regulatory Framework

Ledgerwood (2000) categorizes the levels of regulation as financial and prudential. Financial regulation refers to the body of principles, rules, standards and compliance procedures that apply to financial institutions. Financial supervision involves the examination and monitoring of organizations for compliance with financial regulation.

Prudential regulation and supervision according to Chavez and Gonzalez-Vega (1995) are designed to; avoid a banking crisis and maintain the integrity of the

payments system, protect depositors and encourage financial sector competition and efficiency.

During the exploratory research interview, one Chief Executive had this to say *"We are governed by the Cooperative Decree; that is NLCD 252 of 1968. It is outdated and restricts you to 5% dividend payment and the going interest rate on treasury bills is 35%.We cannot charge above 12% interest on loans and if the banks are charging 54%, how can we generate reasonable income and pay competitive interest"?*[14]

From the foregoing, the critical issue is the extent to which the Regulatory Framework impacts on MFIs.

The hypothesis posed is:

H 4g: If the Regulatory Framework is improved, it will increase sustainability of MFIs significantly.

5.6 Success

Success in microfinance refers to measures which, when adopted will significantly improve the life and operations of the institution. Many authors have different opinions on what constitutes success. Yaron (1994), Jain (1996), and Sharma et al (1997) are of the view that the success of Grameen Bank and MFIs in general lies in the adoption of strategic credit policies. Some authors see institutional development, that is engaging in activities that on the surface are not directly linked to the first duty of credit allocation such as training of clients in entrepreneurial development skills and social development have also been found to make MFIs a success.

14 A remark by one Chief Executive during the exploratory research

Issues to be considered here are; loan processing, record keeping, savings/ discounts, internal/external audit, staff remuneration, staff turnover and performance.

The fifth sub-research question being asked is:

Which success factors significantly impact on operations of MFIs?

5.6.1 More Clients

According to Zeller and Meyer (2002), when the microfinance movement started, the focus was on improving the outreach of microfinance institutions to the poor, that is on serving more of the poor (breadth of outreach) and more of the poorest of the poor (depth of outreach). It is believed that the more clients that an MFI has the more sustainable it will be, since they will take more loans which will translate into more on-lending interest to be earned by the MFI.

The hypothesis to be tested is:

H5a: If the MFI's acquire more new clients, then success will significantly increase.

5.6.2 Loan Processing

How long an MFI takes to process loans for its clients is very important and has a bearing on efficiency and effectiveness and confidence that clients ultimately will have in the institution. Again, the number of officers who would be involved in the operation from the beginning to the time of the loan disbursement affects the success of the institution, but to what extent?

The hypothesis is:

H 5b: If loan processing is efficiently and effectively managed, then success of MFIs will increase.

5.6.3 Record Keeping

Keeping records of clients, which enables the MFIs to monitor them effectively is clearly very important and central to the achievement of success. What is not known is the degree to which record keeping affects the operations of MFIs.

The hypothesis is:

H 5c: If record keeping is effective, then success of MFIs increases.

5.6.4 Savings/Discounts

According to Zeller and Meyer (2002), some microfinance institutions require their clients to show good faith by accumulating savings before seeking a loan, whereas others entirely neglect the importance of savings for the poor. The famous Grameen Bank created savings accounts for all its customers with a fixed fraction of the loan disbursed and funds in those accounts could only be withdrawn upon leaving the programme. In principle, the compulsory savings programme was meant to help clients build up assets over time and develop the discipline of savings (Armendariz de Aghion and Morduch 2005). However, many authors see these involuntary savings accounts as a way for the banks and the institutions to acquire relatively cheap capital and to secure a form of collateral from borrowers. Some MFIs give discounts to clients for early repayments and some do not. From the foregoing the question to ask is:

To what extent is savings/discounts critical to the operations of MFIs?

The hypothesis posed is:

H 5d: If savings increase in MFIs, then success will also increase significantly.

5.6.5 Internal/External Audits

The institution of internal and external audits ensure that the laid down rules of the organization are adhered to with the ultimate result that the organization becomes profitable. In microfinance, sustainability and success can be linked to how effective and efficient the internal and external audit function is. What is unknown is the extent to which this function impacts on MFIs.

The hypothesis is:

H 5e: If the internal and external audit divisions function properly, then success will increase.

5.6.6: Staff Remuneration

During the exploratory research, one Chief Executive remarked "*In terms of salaries, I can say that we are not the best within the industry, nor are the worst. We complement the remunerations with good training for our staff but this also adversely affects us ultimately. Our staff members are constantly being poached by other big firms with very attractive offers. You know our operations to a large extent depends on our staff"*

The hypothesis is:

H 5f: If staff remuneration is high, then success will increase.

5.6.7: Staff Turnover/Performance

A high staff turnover may be indicative of staff dissatisfaction with their conditions of service and the contrary would hold true for low turnover. How does this impact on success of MFIs?

The hypothesis is:

H 5g: If staff turnover is low, then success will also increase.

5.7: Summary and Conclusion

The chapter seeks to offer an explanation of sustainability and success of MFIs in Sub-Saharan Africa. The proposed model grouped factors into five categories as: institutional characteristics, agency costs, business strategy and governance/environment and success. Various research hypotheses have been developed based on the existing literature and findings from the exploratory research. These hypotheses are expected to assist in answering the main research question and sub-research questions. The combination of the above factors, it is expected, would help identify key issues relating to success of MFIs in Sub-Saharan Africa.

Summary Table for the Chapter
1. The research problem will be investigated through five specific research question. 2. The literature review and Executives interview were used to develop the conceptual model, operational definitions of each construct and the research hypotheses. 3. The five research questions will be carried forward along with the conceptual sustainability and success model to investigate the research problem.

CHAPTER SIX

Research Methodology, Design and Procedures

6.1 Introduction

In the previous chapters the theoretical background underpinning the performance of microfinance institutions was developed through a review of existing literature (see Chapter 4). Qualitative interviews were also conducted, which aimed at providing further understanding of issues relating to the performance of microfinance institutions with reference to the financial sector in Ghana (see Chapter 5). The two procedures together led to the development of the research hypotheses (see Chapter 5). In this chapter, the research methodology, process and approach that will allow for the testing of the research hypotheses is presented. In particular the research paradigm applied was discussed as well as the discussion of problems of research design in LDCs (Sub- Saharan Africa), data source, sampling procedures and non-response analysis, questionnaire development and the statistical methods used to analyze the survey data obtained.

6.1.1. Research Paradigms

Research is conducted in the spirit of enquiry, which relies on facts, experiences, data, concepts and constructs, hypotheses, principles and laws. Philosophers of science and methodologists have been engaged in a long-standing epistemological debate about how best to conduct research, with two fundamentally different and competing schools of thought or inquiry (Amaratunga et al., 2000). Logical positivism uses quantitative and experimental methods to test hypothetical-deductive generalizations. Positivism searches for causal explanations and fundamental laws and generally reduces the whole debate to the simplest possible form in order to

facilitate analysis (Easterby-Smith, 1991; Remenyi et al., 1998). Phenomenological (interpretive science) inquiry uses qualitative and naturalistic approaches to inductively and holistically understand human experience in context-specific settings. This approach tries to understand and explain a phenomenon, rather than search for external causes or fundamental laws (Easterby-Smith, 1991, Remenyi et al., 1998).

Despite the above epistemological debate, Amaratunga et al., (2002) argued that in research design, the issue is not whether one has uniformly adhered to prescribed canons of either logical positivism or phenomenology but whether one has made sensible method decisions, given the purpose of the study, the questions being investigated and the resources available. The paradigm of choices recognize that different methods are appropriate for different situations (Amaratunga et al., 2002).

Table 6.1: Two Research Paradigms

Approach	Concepts	Methods
Positivism	Social structure / Social facts	Quantitative/Hypothesis &Theory testing
Phenomenology	Social construction, Meanings	Qualitative, Hypothesis/ Theory generation

Source: Silverman (1998), page 123.

Table 6.1 sets out an overview of the two main paradigms. Data is interpreted differently by those working in different paradigms (Hill and McGowan, 1999). Gummeson, (1991) defines paradigm as a world view representing people's value judgments, norms, standards, frames of reference, perspectives, ideologies, myths, and theories.

Table 6.2 Qualitative and Quantitative paradigms

Theme	Strength	Weaknesses
Positivist (Quantitative paradigm)	They can provide wide coverage of the range of situations. They can be fast and economical where statistics are aggregated from large samples, they may be of considerable relevance to policy decisions.	The methods used tend to be rather inflexible and artificial. They are not very effective in understanding processes or significance that people attach to actions. They are not very helpful in generating theories because they focus on what is, or what has been. They make it hard for policy makers to infer what changes and actions should take place in the future.
Phenomenological (Qualitative paradigm)	Data-gathering methods seen more as natural than artificial Ability to look at change processes over time. Ability to understand people's meaning. Ability to adjust to new issues and ideas as they emerge. They contribute to theory generation.	Data collection can be tedious and require more resources. Analysis and interpretation of data may be more difficult. Harder to control the pace, progress and end-points of research process. Policy makers may give low credibility to results from qualitative approach.

Amaratunga et al (2002).

6.1.2. Positivism

Positivism uses quantitative and experimental methods to test hypothetical-deductive generalizations and advocates for independence of the observer from the subject being observed (Amaratunga et al., 2002; Smith 2002; Gill and Johnson, 1991). It

assumes that science quantitatively measures independent facts about a single apprehensible reality; data and its analysis are seen to be value-free (Healy and Perry, 2000; Guba and Lincoln, 1994). Positivist epistemology tries to explain and predict what happens in the social world by searching for regularities and causal relationships between its constituent elements and has its roots from natural science (Burrell and Morgan, 1979).

6.1.3 Phenomenology

Phenomenological or interpretative approaches, in rejecting the positivist's over-deterministic orientation towards an understanding of human action and behavior, argue that, unlike animals or physical objects, human beings are able to attach meaning to the events and phenomena that surround them. From these they are able to make interpretations and perceptions, select courses of meaningful action which they are able to reflect upon and monitor (Gill and Johnson, 1991). Phenomenological inquiry therefore uses qualitative and naturalistic approaches to inductively and holistically understand human experience in context-specific settings, aimed at understanding and explaining a phenomenon, rather than search for external causes or fundamental laws (Amaratunga et al., 2002).

Strauss and Corbin (1990) argue for the use of qualitative methodology in situations where little is known about a phenomenon or to gain more in-depth understanding of an issue which is difficult to convey in quantitative terms. Researchers are therefore advised to adopt qualitative approach that reduces the distance between them and the researched subjects but not the positivist approach that seeks value free research (Gill and Johnson 1991; Shaw, 1999; Hill and McGowan, 1999). Amaratunga et al.,

(2002) argue that qualitative data which places emphasis on people's 'lived experience' are fundamentally well suited for locating the meanings people place on the events, processes and structures of their lives: perceptions, assumptions, pre-judgments, presumptions, presuppositions and for connecting meanings to social world around them. Eisner (1985) suggests that researchers should recognize the individuality, personality and attributes of the individual involved in the research process and argue strongly for recognition of the value and role of people to research.

6.1.4 Combining Quantitative and Qualitative Approaches

The two research approaches of qualitative and quantitative have certain independent weaknesses. In order to overcome these separate weaknesses, many researchers advocate for the use of combined (qualitative and quantitative) research methods (Rossman and Wilson, 1984, Gummesson, 2001; Gill and Johnson, 1991).

Gibb (1992) and Kirby (1995) suggest the use of stepwise 'stage' approach that involves an initial exploratory qualitative research aimed at developing initial insight or understanding into a subject's activities to be followed by quantitative research intended to identify the specific practices of the firm. Kirby (1995) suggests that each research stage builds upon what has been learned in previous stages, in making an incremental contribution to the established knowledge base, thus allowing researchers to provide an in-depth and focused analysis of firm activities.

Kirby (1995) concludes that the debate is not about either a qualitative or quantitative approach, but developing a research design which is appropriate for the issue under investigation. It is agreed that with a combined methodology the weaknesses of each methodology can be overcome while maintaining the strength of each paradigm

(Curran and Blackburn, 2001; Rossman and Wilson, 1984; Amaratunga et al., 2002). The researchers who argue in favour of methodological pluralism contend that the debate between these paradigms does not necessarily reflect a fundamental conflict, but a reflection of different interests that are reconcilable (Gill and Johnson, 1991).

Siu and Kirby (1999), however, are of the opinion that the major limitation with the stage approach is that, the research error in one stage may be transmitted or even multiplied in the subsequent stages. They therefore recommend a rigorous application of the stage approach to eliminate the above problem. Curran and Blackburn (2001) and Burrell and Morgan (1979) on the other hand argue that on both epistemological and methodological levels, combining different methodologies does not completely eliminate weaknesses associated with a single methodological approach. They further argue that philosophically the two paradigms remain fundamentally different and cannot be simply combined.

6.1.5 Problems of Research Design in LDCs

The discussions of problems of research design in Less Developed Countries and for that matter Sub-Saharan Africa is pertinent because this research was carried out in Ghana which is in Sub-Sahara Africa. The problems of research design in LDCs are manifested in several areas, such as the research approach, the degree to which the problem is crystallized, the breadth and depth of the study (qualitative versus quantitative), the time frame, identification of concepts and their measurement, the researcher's control of variables, sampling and data collection.

According to Samir et al (1997), researchers in LDCs tend to concentrate on normative approach. They are usually not concerned with the descriptive approach and virtually ignore the exploratory studies even though what is really needed in developing countries is an understanding of the factors that shape effectiveness and efficiency.

Samir et al., (1997) acknowledge the extreme difficulty in bringing about change in the complex research environment of LDCs and therefore made relevant suggestions which are examined below:

- Decision-driven research should be the aim of research that is the value of the research conducted in LDCs should be based on the extent to which it can help managers/policy makers make decisions.
- The approaches used for grounded theory could be appropriate, for grounded theory aims at discovery of relevant theory from systematically obtained data. This approach could provide relevant information for prediction, explanations, interpretations and applications in particular settings. Grounded theory is based on qualitative research, comparative analysis, systematic choices and case studies.
- Comparative analysis is also needed. There has been a call for an understanding of management practices in different LDCs as they are, in other words describing what is going on before prescribing anything. After all, the normal process of theory building is to describe, to generalize and then to prescribe.
- There is also a need for longitudinal studies in addition to cross-sectional ones so as to avoid normative prescriptions. Therefore, exploratory and descriptive studies which have been limited in LDCs need to receive much more attention.
- Concepts definitions and measurement need to be geared to local conditions. A concept, that is a group of characteristics and meanings that are often associated with

certain events, conditions and situations differ greatly from culture to culture and from situation to situation. Therefore researchers need to identify the important categories and concepts and the operational definitions that fit the particular concept. The grounded-theory approach can be extremely useful in this endeavour. With respect to the availability of data and funds, policy makers can play a very important role. Priority needs to be placed on relaxing the rules and regulations governing accessibility to information. Moreover, an information system that enables researchers to identify prior research is needed. This understanding will be greatly facilitated by computer technology. Moreover, bureaucrats need to be educated about the importance of accurate, consistent and up-to-date information.

6.1.6 The Selected Research Methodology

The research was based on both the qualitative and quantitative approaches. A two stage approach was used. First, an exploratory qualitative interview was conducted by interviewing 14 executives of sampled microfinance institutions with focus on how they are handling the performance issues of agency, moral hazard and adverse selection. This was followed by a self-administered survey involving 130 microfinance institutions.

The decision to conduct the exploratory interviews was based on the following reasons:

- Sustainability, of microfinance institutions though widely studied in the developed countries, Asia and Latin American countries; the same cannot be said of sub-Saharan Africa in general and Ghana in particular. Therefore there are less comprehensive theories on microfinance institutions in Ghana.

- It is the considered view that theories and findings built and obtained in the developed countries and elsewhere may not be applicable in Ghana. The exploratory study was therefore aimed at understanding the operations of microfinance institutions from the perspective of executives.
- The exploratory study is to deepen the understanding of factors that lead to sustainability and success. Issues that came up at the exploratory interviews were incorporated into the research hypotheses, the framework and the survey questionnaires. It also assisted in the interpretation of the quantitative results and provided a basis for explaining the findings.

The quantitative survey method was used for the following reasons:

- To allow for the inclusion of a large number of microfinance institutions, so as to increase the generalizability of the research findings.
- The multiplicity of factors that affect the sustainability and success of microfinance institutions and the extent of their interaction can be properly studied through the application of multivariate statistical techniques.

The second application of the agency theory looked at how the management of a microfinance institution as the principal dealt with its staff-agents. In this second instance, following Armendariz de Aghion and Morduch (2005) an examination was made of how managers are able to provide incentives to enable staff to optimize the microfinance institution's objectives.

6.2. Data Source

Data for this study is collected from two sources; the financial reports (secondary) and structured questionnaires and interviews (primary) to elicit institutional characteristics and modes of handling the performance variables. Operating manuals where they were available and useful were used to examine their mode of day to day operations of the selected microfinance institutions. The survey data was complemented with information gathered through the qualitative phase. As such, the basis for the primary data used for the entire study was obtained from an exploratory stage and a qualitative survey stage.

6.2.1 Sampling Frame and Sample Size

The sampling frame included managing directors/ financial managers from microfinance institutions in seven out of the ten regions of Ghana; Greater Accra, Eastern, Central, Western, Ashanti, Northern and Volta regions. A sampling frame consists of all potential elements and respondents that are intended to be sampled (Churchill and Iacobucci, 2002). It is therefore important to create a sampling frame that adequately reflects the desired response rates in order to achieve an adequate sample for analysis. This requires two specific considerations: The first is adequacy of sample size for generalizability and second adequacy of sample size for statistical testing (Hair et al., 1998; Churchill and Iacobucci, 2002).

6.2.2: Sampling Procedure

The method for defining and creating the most appropriate sampling technique is a significant part of the research design (Lehmann, Gupta & Steckel, 1998). As one of

the objectives of this research was to describe the factors that affect sustainability and success of MFIs, it was determined that the most appropriate sampling method to utilize was a ‘two phased’ stratified random sampling technique (Churchill, 2000).

The stratum development began by assessing the regional distribution. From there the microfinance institutions located in the regions were determined. The next stage involved the aggregation of coverage by examining the regions with the high number of MFIs. The selection of Greater Accra, Central, Western, Eastern, Ashanti, Northern and Volta regions gave 130 MFIs, representing 74.4% (see Table 3.0, excluding the BDSP and Apex Bodies). The importance of achieving a high coverage is to ensure that the intensity of activities is captured to allow for the creation of a proportionate representation of the population within the research (Henry 1990; Frankfort-Nachimias & Nachimias, 1996). Limiting the coverage to all except Upper East, Upper West and Brong Ahafo was equally influenced by time and limited financial resources available for this research.

A greater heterogeneity is required to allow for group analysis which also called for bigger sample size. A non-response rate is generally high for researches in LDCs, it was therefore considered prudent to have larger sample size to ensure that adequate number of responses is obtained for effective analysis (see Table 6.2).

Table 6.3 Sample Frame Analysis

Institution	Qualitative interview Number of Executives	Survey	Total
Financial NGO	5	84	89
Savings & Loans Co.	3	9	12
Credit Union Assoc.	2	3	5
Rural Banks	2	18	20
Susu Companies	2	2	4
Total	**14**	**116**	**130**

6.3. Data Collection Method

To obtain a high response rate, it is important that the method to be chosen would be one capable of offering that. Telephone interviews, though less expensive and time consuming was used on few occasions because it is felt that respondents may be more reluctant to provide confidential or sensitive information on telephone.

Self-administered postal questionnaire though considered cheaper, less time consuming and capable of reaching a large geographical area, it was not used for this study. This was because it was not expected to yield a high response rate. The postal system in Ghana is less developed and therefore problems such as non-delivery and late deliveries were likely to have a negative impact on the effectiveness of self-administered postal survey. The use of the courier system is also too expensive.

Face to face interview method was mostly used. Respondents were first called by phone and briefed about the research. Their consent was sought for their participation and the face to face interviews conducted. There were instances where respondents though agreed to complete questionnaires, reneged. The face to face interview was not only expected to yield the highest response rate but also to ensure that the appropriate personnel answered the questionnaires.

Some researchers have advocated for incentives to be given to respondents as a way of increasing response rate (Watson, 2001). In view of tight budgetary constraints and with no external support no such incentives were offered. What were offered were the results of the research, for respondents who expressed interest. After the interviews, calls were made to thank all participants.

6.3.1 Data Analysis

In analyzing the sustainability and success of microfinance institutions in Ghana a number of methodological approaches were adopted. A model of operational sustainability is estimated to determine the factors influencing operational sustainability. Subsidy Dependence Indices (SDI) and Operational Self-Sufficiency (OSS) were also computed and analyzed for each type of MFI over the period under study to ascertain their subsidy dependence and trends in operational sustainability. A two-stage approach was used in analyzing the data for the study. The first stage where sustainability was measured at the nominal level (yes=1, and no=0) which led to the use of the logistic regression and the chi-square test. The second stage was where sustainability was measured by attaching values to the responses of selected variables that related to the five major factors of Institutional characteristics, agency costs, business strategy, environment/governance and success. The scores were then aggregated to produce interval level variable leading to the use of ANOVA and MANOVA.

1. The microfinance institutions were examined by type to reveal their specific approaches to dealing with the agency issues in microfinance. In this light the agency theory was applied at two levels:
2. The first dealt with the traditional lender-borrower dynamics and following Banerjee et. al., (1994) and Armendariz (1999) an examination was made of the incentives, monitoring and enforcement structures of selected lending schemes to ascertain their effectiveness in resolving the agency problem.

The risk perceptions faced by the various microfinance institutions were also examined with the view to linking these to the institutional risk management modes and the associated lending costs. In this regard it was determined if measures such as

progressive lending based on prompt repayment, frequent repayment schedules and compulsory savings (Nissanke, 2002) were being utilized. The nature of sanctions, be it legal enforcement or collateral asset for defaulters amongst various institutions were also examined to see how these are reducing the cost of loan default and therefore mitigating the moral hazard and adverse selection problem and helping in screening out likely defaulters.

6.4 Unit of Analysis

The study is aimed at examining the factors that impact on sustainability and success of microfinance institutions. For the purposes of this study and the measurement of sustainability activities therefore, the unit of analysis was the institution. This is supported by the argument that it is the institution which can be seen to start and end, create jobs and bring economic growth (Bridge et al, 2003).

Using the institution as the unit of analysis can be clearly supported in a situation where there is complete separation of ownership from management. However, the difficulty arises in many small institutions as the owners exert a considerable amount of influence on these institutions' operations and therefore the institution has similar characteristics of the owner/manager (Bridge et al, 2003). The study was therefore designed among other things to focus on the characteristics of the institutions.

The survey covered five sub-sectors within the microfinance industry in Ghana namely; the Financial Non-Governmental Organizations (FNGOs), Savings and Loans Companies (S & L), Credit Union Associations (CUAs), Rural Banks (RBs) and the Susu companies.

6.5: The Period of Study

Sustainability denotes time and therefore sustainability of MFIs is highly dependent on time such that the period of study is an important matter to consider when researching. The period chosen for the study i.e. 2003 to 2007 was considered to be the most recent for which data was likely to be available. The period also witnessed a relatively stable macroeconomic environment in Ghana making it an appropriate time to study the factors that affect sustainability of MFIs.

6.6 The Questionnaire and Measures

According to Wiklund (2001) it is prudent to use measurement scales which have been validated by previous research, rather than developing new ones as far as they exist. More importantly using existing variables that have been tested allows direct comparison of research results. In the light of the above, many of the questionnaires and measurements were based on previous studies (Barkham et al., 1996).

Though formal questionnaire is considered as the most appropriate for this second stage of the research, it is not without limitations. It has been argued that executive responses to a survey provide personal perception about the subject matter being studied. The most frequently highlighted problem is that responses can clearly be influenced by individual differences and personal judgment which may be at variance with real situation on the ground (Gill and Johnson, 1991, Baah-Nuakoh, 2003; Brown et al, 2004).

It can also be argued that data collected from multiple respondents within the same firm have more validity than data based on the perception of one person. It was therefore the objective of this research to include branch managers and relationship

executives of microfinance institutions whose chief executives have been interviewed at the exploratory stage in the qualitative research.

The questionnaire which took an average of 45 minutes to complete was divided into five main sections (full version of the questionnaire is attached as Appendix H):

(a) Institutional characteristics

(b) Agency costs

(c) Business strategy

(d) Governance/ environment

(e) Success

The details of how concepts and variables were measured are as follows:

(A) Institutional Background and Characteristics

This section of the questionnaire requested information about the background characteristics of the institution, motivation for setting it up, clientele base, sources of income and how they generally gather information from clients.

(B) Agency Costs

In this section data was collected on MFIs relationship with clients, contractual agreements with clients and the nature of such agreement. Information was also sought on the number of branches across the country, the extent to which they are dependent on subsidies and if so, when they plan to exit.

(C) Business Strategy

This section requested information on screening mechanisms, the use of groups as collateral for loans, the level of interaction between clients and the lending institution. Again questions about how the institution handles defaulters and general enforcement of strategies were posed.

(D) Governance/Environment

This section solicited information on constraints if any on the regulatory framework, innovations in financial products, emergency loans and direct job creation for clients. Critical in this section was the issue of competition and the nature of such competition. Personnel constraints and difficulty of loan recovery was also asked.

(E) Success

This last section requested information on number of new clients, loan processing, record keeping, savings/discounts, internal/external audits, staff remuneration and staff turnover/performance.

6.7 Pre-testing of Questionnaire

The initial survey was piloted on a selected group of fourteen Executive Directors in Accra, five (5) from the Financial Non-Governmental Organization, three (3) from Savings and Loans, two (2) from Credit Union Association, two (2) Rural Bank and two (2) from Susu Companies. This was done to ensure that all the five sectors were fully represented in testing the questionnaire. The initial questionnaire was sent to respondent three days before individual meetings were held with them. This offered the respondents enough time to appropriately review and comment on all aspects of the questionnaire. The separate meetings took an average time of forty five minutes and were all conducted within forty days. Comments were solicited and appropriate changes to the questionnaire were subsequently effected.

6.8: Response Rate

The survey was undertaken within a period of three months. A total of 130 respondents were contacted out of which one hundred and fourteen (114) responded. A respondent rate of 87.7% was achieved. Ten (10) respondents (7.7%) were contacted and followed up with no response. Further six (6) respondents representing 4.6% of the sample respondents were contacted but were not followed up. Though there is no universal acceptance as to what constitutes good response rate, an 87.7% response rate is normally regarded as good for analysis (Aidis, 2003). Menon et al (1999) also report that the average response rate involving higher management survey is between 15 to 20%.

6.9 Sampling and Non-Sampling Errors

This section discusses some of the errors that can potentially affect the results of the survey research under the headings sampling and non-sampling errors.

(a) Sampling Error: Due to small size of the sample frame, a decision was taken to include most institutions within it. Therefore random sampling procedure was not used. Thus random sampling error which occurs when a particular selected sample is not a perfect representation of the population (Slowinski, 1988) was not evident in the survey conducted.

(b) Non-Response Error: Non-response error which may result from inability to collect complete data on all firms in the sample frame can affect this study in two different ways. First, a decrease in the sample size or in the amount of information collected in respect of a particular question may result in a larger standard error. Second it introduces a bias to the extent that non-respondents differ from respondents

within the sample (Slowinski, 1998). The face-to-face interview method used to administer the survey questionnaire ensured that item non-response was reduced. Quick follow ups were made to obtain data that were not readily available at the time of the interview. Questionnaires were fully completed except for some respondents, in the areas where qualitative responses were required. Respondents were not too willing to answer open-ended questions.

Unit non-response which occurs when there is no complete response from a prospective respondent was considered as a major challenge to the quality of data to be obtained for this research. Procedures made to reduce the rate of non-response have been detailed under the caption 'data collection method'.

Table 6.4: Response/Non-Response Analysis

Sector	Sampled	Contacted	Responded	Contacted No Response	Contacted not followed up	Non Response
FNGO	89	89	81	4	4	8
S&L	12	12	10	2	0	2
CUA	5	5	4	1	0	1
RURAL BANK	20	20	15	3	2	5
SUSU Co.	4	4	4	0	0	0
No of Executives	130	130	114	10	6	16
Percentage of Sample		**100**	**87.7**	**7.7**	**4.6**	**12.3**

As shown in Table 6.4 out of the 10 Executives contacted but who did not respond, 4 representing 40% were a total rejection of being part of the survey. In all cases attempts were made to convince refusals to take part, which included making personal appeals by calling on them after refusal and also by sending e-mails. All these did not yield the desired results.

Table 6.5 Analysis of Executives Contacted Without Response

Sector	Refusal	Absent	Call back after 5 -10 Times	Total
FNGO	2	1	1	4
Savings & Loans	1	1	0	2
Credit Union Assoc.	0	0	1	1
Rural Banks	0	2	1	3
SUSU	0	0	0	0
No.of Institutions	**3**	**4**	**3**	**10**
Percentage	**30**	**40**	**30**	**100**

6.10 Analysis of Non-response Error

As stated earlier, the lack of accurate and sufficient data on institutions in Least Developed Countries impacts negatively on the ability to analyze the extent of non-response bias. The nature of non-response is also such that values for non-respondents on all survey measures may not be available (Statistical Policy, 2001). This limits the quality of analysis that can be carried out. Nonetheless, the non-response error analysis was carried out by comparing certain characteristics of respondents and non-respondents. Table 6.5 shows the distribution of respondents and non-respondents by sector. It can be seen that there is a relatively fair percentage distribution of respondents among the sectors.

Table 6.6: Analysis of Respondents/ Non-Respondents by sector

Sector	Responses		Non-Responses		Total	
	No of Executives	%	No of Executives	%	No of Executives	%
FNGOs	81	71.0	8	50	89	68.5
Savings & Loans Co.	10	8.8	2	12.5	12	9.2
Credit Union Assoc.	4	3.5	1	6.3	5	3.8
Rural Banks	15	13.2	5	31.2	20	15.4
SUSU	4	3.5	0	0	4	3.1
No of Executives	114	-	16	-	130	-
Percentage		100		100	-	100

6.11 Characteristics of Respondents

In this section the characteristics of the 114 respondents are examined as a way of testing the rigor of the sampling method used and the robustness of the data collected. In particular basic descriptive statistics on the respondents are provided. The objective to include only independent microfinance institutions in this research was fully achieved.

The ownership structure of respondent Institutions is dominated by foreign investors which form 58.8%, followed by local capital of 25.4% and a blend of both of 15.8% of local capital. This scenario is explained by the fact that typical microfinance involves heavy capital requirements which makes it difficult for many individuals in developing economies to meet.

In this section the data analysis method used to analyze the survey data is discussed. The discussion in particular focuses on the justification of method chosen, the

associated weaknesses and the assumptions underlying the methods. SPSS statistical software package was used for the data analysis.

6.12 The Selection of Statistical Method

The main statistical tools used were the chi-square test of independence and correlations for the hypotheses since the levels of measurement of the variables were mainly nominal and ordinal. The hypotheses tested were carried out at either 95% or 99% significance levels

Various statistical techniques, One-Way ANOVA, correlations and regression and chi-square test of independence cross tabulations. MANOVA were used for the hypothesis testing depending on the levels of measurement of the variables. The hypotheses testing were carried out at 95% significance level. Thus a test result was considered significant when the p-value (significant value) associated with the computed test value was less than 0.05 ($p<0.05$) for 95% significance level.

The results of the study were both univariate and multivariate data analysis. Bivariate methods such as Spearman's correlation coefficient which deals with the analysis of the variables measured on an ordinal scale simultaneously to ascertain their relationship (Bryman, 2001) were also used. Cross-tabulation with X^2*-test* was also used to ascertain and test the relationship between two variables measured on a combination of nominal and ordinal scales. For quantitative analysis of the data, the factors were aggregated to provide interval data for the use of parametric tests such as the ANOVA and regression.

Single factor analysis (One-Way ANOVA) and multiple factor analysis (MANOVA) were used. The One-Way ANOVA was used to test for significant differences in the SDI and OSS if any between the various categories of the independent variables (drop-out rate, cost per borrower, loan size, staff productivity); and the MANOVA was used to ascertain whether the independent variables interact to produce significant levels of sustainability by microfinance institutions. The reason for combining both sophisticated and simple statistical methods is to resolve the problems associated with complex analysis that is difficult to understand by both researchers and non-researchers and simple models that focus on the most important relations and neglect the others (Wiklund, 2001). A review of literature on sustainability of MFIs suggests that many researchers rely on multivariate statistical techniques to understand factors that lead to sustainability (Zeller and Meyer, 2002).

6.13 Reliability and Validity

Reliability and validity of the research results were given a high attention. Reliability is the consistency of a set of measurements of the same instrument, often used to describe a test. This can either be whether the measurements of the same instrument give or are likely to give the same measurement. An experiment is reliable if it yields consistent results of the same measure. It is unreliable if repeated measurements give different results. Reliability is inversely related to random error. Reliability does not imply validity. The most common internal consistency measure is Cronbach's alpha, which is usually interpreted as the mean of all possible split-half coefficients. Cronbach's alpha is a generalization of a form of estimating internal consistency[1]. The Alpha will generally increase when the correlations between the items increase.

For this reason the coefficient is also called the internal consistency or the internal consistency reliability of the test. Alpha is an unbiased estimator of reliability if and only if the components are essentially equivalent (Lord and Novick ,1968).

Internal consistency is usually measured with Cronbach's alpha, a static calculated from the pairwise correlations between items. Internal consistency ranges between zero and one. A commonly accepted rule of thumb is that an alpha of 0.6-0.7 indicates acceptable reliability, and 0.8 or higher indicates good reliability. High reliabilities (0.95 or higher) are not necessarily desirable, as this indicates that the items may be entirely redundant. The goal in designing a reliable instrument is for scores on similar items to be related (internally consistent) but for each to contribute some unique information as well.

In table 6.7 the various forms of reliability and validity and how they have been dealt with in this thesis are shown.

Table 6.7 Elements of Reliability and Validity

Objective	Elements	Activity
Reliability	Data Source	1) Primary data used. 2) Face-to-face interviews with Chief Executives 3) Questionnaire was pre-tested.
Reliability	Measures	1) Measurements were based on previous researches. 2) Assumptions underlying the statistical methods were met. 3) There is no missing value relating to percentage growth in the data. Cronbach's Alpha found to be within acceptable limit of 0 .7 to 0.8 (Cronbach's Alpha within data .721).
Validity	Face Validity: That construct conforms to common understanding.	1) Literature review was carried out to understand concepts and constructs. 2) Measurements, concepts and constructs were developed based on previous researches. 3) Questionnaires were developed and pre-tested with five Executive Directors. 4) Data was collected through face-to-face interview to ensure that as far as possible Executive Directors had the same understanding of concepts, measurements and constructs.
Validity	Content Validity: That construct cover all relevant facets of the concept	1) Literature review provided an understanding of constructs. 2) Constructs were discussed with Executive Directors through qualitative interviews and pre-testing of questionnaire.
Validity	Criterion Validity: Results are in consonance with theory and previous results	Previous validity measures were used to determine the concurrent validity.
Validity	Predictive Validity: That a measure predicts another measure as predicted in theory.	The results largely in conformity with the hypothesis (See Chapter 7)

Adapted from Maula, 2001 page 128

6.14 Operational Sustainability Model

The determinants of operational sustainability are modeled by adopting the model used by Woller (2003). The model is stated as follows:

$$Y_{it} = \beta X_{it} + u_{it}$$

Y_{it} = a measure of operational self sufficiency for MFI i for period t, X_{it} is a vector of explanatory variables including MFI characteristics such as depth of outreach, dropout rate and staff productivity measures for MFI i=1…14 in period t=2003…2007, u_{it} = error.

The operational self-sufficiency index is the ratio of total operational income to interest expense, loan, loan loss provision and administrative expense. This measure shows how the institution is able to cover its operational costs (See Appendix M).

Other variables identified by Morduch (1999), Christen (2000) and Schreiner (2002) as affecting the sustainability of microfinance are administrative expenses, cost per borrower, loan officer productivity, portfolio at risk, average loans, active borrowers and dropout rate of clients.

According to Adjasi and Coleman (2007), administrative expense ratio is the ratio of total administrative expenditure to total loans. It is the expenditure per loan output and measures the amount of resources committed to producing a loan output. There are also some staff productivity variables used in judging MFIs. The cost per borrower is the ratio of total administrative expenses and in-kind donations to the average number of active borrowers. This is a measure of the value of inputs required to produce a given level of output, as measured by loan per borrower. A higher ratio shows that more money and in-kind contributions are needed to produce a given number of loans per borrowers. The loan officer productivity ratio is the ratio of total active borrowers to loan officers and measures the number of loan officers required to produce a given level of output as measured by borrowers. A higher ratio is an indication that fewer loan officers are required to manage a given number of borrowers. The quality of loan portfolio is also captured by the portfolio-at-risk. This

is measured as the ratio of the outstanding balance of loans exceeding 90 days to the total loan portfolio. Outreach variables also include the number of borrowers which is an indicator of both breadth of outreach and scale and the average loan size is defined as the average gross loan portfolio divided by the number of active borrowers. The dropout rate which is the number of clients who have dropped out divided by total clients and it measures the worth of output and the level of client dissatisfaction.

The explanatory variables for the operational self-sufficiency model are defined as administrative expense ratio, the dropout rate, cost per borrower, portfolio yield, loan staff productivity, average loan size, portfolio at risk, and active borrowers. Other variables are also considered by Woller (2003). The theoretical motivation for modeling these variables as determinants of operational self-sufficiency is based on the following hypothesized a-priori expectations between these variables and operational self-sufficiency.

A higher administrative expense ratio indicates that the MFI incurs extra cost in producing an output loan. An increase in this ratio will have negative effects on attainment of operational self sufficiency. Similarly, an increase in the cost per borrower also depicts more financial resources to produce a given number of borrowers. Thus the cost per borrower is hypothesized to be inversely related to operational self-sufficiency. The portfolio-at-risk (PAR) is also a cost indicator and also signifies the quality of loans. A high portfolio at risk signifies a high possibility of the risk of incurring bad loans. It also shows deterioration in the quality of loan service. Thus, increases in this variable, pushes up the cost incurred by the MFI and results in an adverse effect on operational self-sufficiency. Real portfolio yield, the real return on loan portfolio (a proxy for real interest charged) is also expected to be

positively correlated with operational self-sufficiency. Regarding loan officer productivity ratio, a higher ratio implies that fewer loan officers are required to produce a given number of borrowers. The loan officer productivity ratio is therefore positively related to operational self-sufficiency. With respect to the number of active borrowers, it is expected that an increase in this number results economies of scale in spreading fixed costs across a large number of borrowers, thereby reducing operational costs and increasing profitability. Thus the number of borrowers is positively correlated with operational sustainability. Finally it is hypothesized that he smaller the average loan size the greater the depth of outreach, hence average loan size is inversely associated with operational self-sufficiency.

6.15: Subsidy Dependence Index

Following Yaron (1994) and Khandker and Khan (1995) the subsidy dependence index is computed as follows:

$$SDI = \frac{NS}{LPxi}$$

NS = Net Subsidy

SDI = Subsidy Dependence Index

LP = Average loan portfolio

I = Average annual on-lending interest rate paid on that portfolio.

This ratio helps measure the percentage increase in the average on-lending interest rate required to eliminate subsidy in a given year while keeping its return on equity to the approximate non-concessionary borrowing cost. An *SDI* of zero implies full self-sustainability, meaning that profit is equal to the social cost of operation. A positive index would show that economic costs exceed profit; here the on-lending interest must be increased by the amount of SDI to eliminate the amount of net subsidy. All the results are captured below under data analysis (Table 6.8).

An analysis of the data collected on agency costs (see Appendix H, no. 22) would be made to establish the understanding of the Subsidy Dependence index (SDI) and the Operational Self Sufficiency model (OSS) and the borrower-lender dynamics in microfinance.

Table 6.8: SDI, outreach, staff and administrative productivity and loan quality indicators across using the 14 exploratory sampled Microfinance institutions. (Panel means 2003-2007)

Variable	FNGO 1	FNGO 2	FNGO 3	FNGO 4	FNGO 5	S & L 1	S & L 2
Outreach Breadth							
1.Borrowers	14,025	522	1,096	565	1,866	12,000	6,500
2. Active	2,560	452	859	508	910	5,500	8,254
3. Women	12,988	376	566	384	1,447	4,800	5,225
4. Total Loans (GH Cedis)	214,510	315,000	289,000	453,000	153,000	1,233,200	866,000
Outreach depth							
1. Average Loans (GH cedis)	91,831	366.39	530.39	235.65	805.70	143.35	966.30
Outreach worth							
Dropout rate (ratio)	0.191	0.184	0.202	0.157	0.136	0.065	0.072
Screening							
Total Admin expense (GH cedis)	128,706	173,250	147,390	280,861	73,440	604,268	450,320
Enforcement/Risk							
1. Total bad debts cedis)	29,743	17,383	14,961	24,527	8,187	19,350	31,220
2. Portfolio at risk(ratio)	0.053	0.112	0.124	0.064	0.031	0.032	0.031
3. Loan officers	8	2	2	3	8	10	8
Staff productivity							
1. Loan officer Productivity	320	226	429.5	169.33	113.75	550	1031.75
2. Cost per borrower	50.275	383.30	171.58	552.88	80.70	109.87	54.56
Administrative Efficiency							
Administrative expense (ratio)	0.60	0.55	0.51	0.62	0.48	0.49	0.52
Interest charged	%	%	%	%	%	%	%
1. Interest	27.2	22.1	25	22.7	21.6	36.0	36.0
2. Interest premium	13.74	8.64	11.54	9.24	8.14	22.54	22.54
3. Real Portfolio yield	0.649	0.889	0.962	1.583	1.237	0.996	2.356
Sustainability ratios							
1. OSS	0.346	0.350	2.137	1.642	1.755	3.331	2.945
2. SDI	0.1914	0.1102	0.1082	0.0832	0.3348	0.0398	0

Variable	S & L 3	CREDIT UNION 1	CREDIT UNION 2	RURAL BANK 1	RURAL BANK 2	SUSU 1	SUSU 2
Outreach Breadth							
1.Borrowers	16025	3522	1086	2595	1688	325	213
2. Active	11560	3522	1086	508	910	305	170
3. Women	6500	2376	665	384	447	210	150
4. Total Loans (GH cedis)	1,145,100	141,500	558,000	645,300	505,300	90,000	165,350
Outreach depth							
1. Average Loans (GH cedis)	2,500	3,366.39	6,000	2,550	3,000	1000	1,250
Outreach worth							
Dropout rate (ratio)	0.061	0.001	0.002	0.168	0.163	0.361	0.231
Screening							
Total Admin expense (GH of cedis)	824,472	39,620	111,600	225,855	293,071	13,800	29,763
Enforcement/ Risk							
1. Total bad debts (GH cedis)	29,441	383	296.52	7,527	12,187	350	120
2. Portfolio at risk(ratio)	0.064	0.004	0.0021	0.038	0.133	0.035	0.030
3. Loan officers	6	2	2	3	4	2	2
Staff productivity							
1. Loan officer Productivity	1,927	1761	543	169.33	227.5	302.5	85
2. Cost per borrower	71.32	11.25	102.76	444.59	322.06	45.25	175.08
Administrative Efficiency							
Administrative expense (ratio)	0.72	0.28	0.20	0.35	0.58	0.15	0.18
Interest charged	%	%	%	%	%	%	%
1. Interest	48	19.5	19.5	22.7	22.7	24.0	24.0
2. Interest premium	34.54	6.04	6.04	9.24	9.24	10.54	10.54
3. Real Portfolio yield	3.388	1.135	1.564	1.467	1.894	2.232	2.112
Sustainability ratios							
1. OSS	2.581	3.115	4.481	3.138	1.878	2.247	2.754
2. SDI	0.069	0	0	0.058	0.093	0	0

Interest premium=interest charged- Treasury bill rate

6.2 Empirical Results

6.2.1 Institutional Management of borrowers, Staff, Cost and Subsidy Dependence.

This ratio helps measure the percentage increase in the average on-lending interest rate required to eliminate subsidy in a given year while keeping its return on equity to the approximate borrowing cost.

The 14 MFIs used in the exploratory study were examined according to sectors to find their specific approaches to dealing with the agency problem and the extent of their reliance on subsidies for their operations.

6.2.2 Financial Non-Governmental Organizations (FNGOs)

The FNGOs come second in terms of outreach among the MFIs, with FNGO 1 having the highest number of women as clients at 12,988. It has an average total loan of 285,000 Ghana cedis with an average loan size of 300 Ghana cedis. Dropout rate average 19%, but seem to be increasing for the FNGOs a sign that they are unable to retain and sustain clients. Women, however seem to be favoured here as they have the highest number. It is believed that they have shown a good track record of repayment in rural localities.

The SDI estimates for the FNGOs appear high (33.48%) over the period. This means they have to increase their yield on loans to be able to exit subsidy dependency. The FNGOs use group lending method. Screening of clients is done through interviews and the completion of forms. On the average it takes up to one month to process a loan application. Like the others, FNGOs demand collateral as a guarantee before loans are disbursed. By law clients cannot save with FNGOs and this limits their

ability to accumulate funds for depth and breadth of outreach. This may account for the high level of subsidy dependence among FNGOs and also the fact that they normally start as philanthropic organizations and are perceived as such. Consequently loan recovery among FNGOs appears to be low due to this perception. It also appears that most of the FNGOs are unable to get deeply involved in managing its groups and this seem to translate into poor group networks and loose peer monitoring amongst groups. Agency issues appear not to be handled well which is evident in the high level of staff turnover.

6.2.3 Savings and Loans Institutions (S&L)

All the S&L institutions approach their clients in very informal ways, the most common being personal visits by loan officers to elicit as much information as possible. In this way it minimizes the risk of dealing with potential bad clients. They have the highest number of clients and also total loans disbursed to clients. Information gathering however varies from branch to branch and depends on specific needs of clients. Most of them use a combination of interviews, completion of forms during such personal visits as its screening mechanism. They have a unique lending programme where clients who have good track record of repayment are placed in a higher category compared to other groups. The procedure for extending a loan consists mainly of regular cash flow, a guarantor from the locality, attendance of business orientation meetings and training programmes. It takes two to four weeks on average to process a loan.

Most of the Savings and Loans institutions demand collateral in the form of physical assets and they also use collateral substitutes such as compulsory savings, loan

guarantor and referees as prerequisites to benefitting from loan services. This locks in the borrower and makes the borrower responsible.

Regular interaction with borrowers, especially group borrowers is vital for this group of MFIs. Their meetings range from one to four times in a month. The duration of meeting is between twenty minutes and two hours. In such meetings general advisory services are offered with respect to record keeping, capital management and investment advisory. The essence is to help borrowers optimize their use of credit offered so they are in a position to repay quickly and also earn higher loan facilities. Borrowers from certain sectors like agriculture are sometimes dealt with differently. For instance farmers with perishable products are given specific assistance in farm management and in some cases directly get involved in seeking markets for such clients. In dealing with cases of defaults, potential default and long overdue repayments, the savings and loans institutions use threats and legal sanctions mostly. Some go to the extent of seizing assets of defaulters. They also use the group monitoring system where each individual is monitored at each point in time by the group members.

Institutional capacity building is among the principles of success for the savings and loans institutions. In this regard they see the provision of incentives to staff as key to the success of service delivery and institutional success. Their staffs undergo regular training both in Ghana and overseas. Thus, they appear to have a well motivated staff which is committed to efficient service delivery. One of their difficulties in this regard is the threat from the big multinational banks that keep luring their staff with bigger offers by way of remunerations.

Due to the volume of their transactions all the S&L institutions have regular internal and external auditing exercise as a means of checking financial controls. They are

also engaged in other revenue generating activities such as investing in treasury bills. The regulatory framework as observed by the savings and loans institutions is in the area of the minimum capital required before one could transform into a bank.

The data from the exploratory study indicates that all the savings and loans institutions appear to be doing very well as their on-lending interest rate appear to be higher than others in the industry thereby generating increased revenue and covering their costs. Not surprisingly subsidy dependence is either non-existent (zero) or very low (0.069). What this implies is that all other things constant the savings and loans institute has to increase actual yield by 6.9% to eliminate subsidy dependency if its portfolio size does not change. Operational self-sufficiency was very high (3.331) implying a sustained ability to cover more than 100% of operation cost. Clearly, the savings and loans institutions stand out as successful and sustained MFIs based on these indicators.

6.2.4 Credit Union Associations (CUAs)

The Credit Union Associations are mostly a part of an organization with the workers as the clients, and therefore one qualifies to be client and to be able to access loans on the basis of being a staff of the organization. What this means is that there are no strict and formal interviews or screening of clients since they are known members of the organization. Consequently all the borrowers are active members of the microfinance scheme with a record of low dropout rates averaging 1.5%. This situation translates into low levels of bad debts and portfolio at risk. No collaterals are demanded.

One feature of CUAs is the emphasis placed on savings for a period of time before one can qualify for a loan which is two and half times the savings. Loan repayments are done concurrently with the regular savings. Due to the centralized nature of operations, total cost per borrower is very low thereby impacting on administrative expenses as well. It appears the CUAs charge a uniform interest rate of 19.5% per annum.

The CUAs do not depend on subsidies and are operationally self sufficient. For example CUA1 and CUA 2 have OSS index of 3.115 and 4.481 respectively, implying that they are able to recover their costs three times and four times over. Clearly this picture depicts MFIs which are sustainable and successful.

6.2.5 Rural Banks

These are institutions that were set up with a focus of bringing banking to the doorsteps of the rural poor and those marginalized by the traditional banking system. Therefore, micro financing was largely part of their mandate. Their clientele cut across all forms of businesses. Due to the localized nature of their operations they give relatively small loans to avoid difficulties with repayments. Loans are disbursed to clients who are introduced by an already existing customer who guarantees for the client. Sometimes some background checks are conducted from within the community where the client resides. This approach however does not seem to impact on loan recovery as the Rural Banks experience relatively high bad debts and portfolio at risk. Interest charged is uniform at 22.7% per annum. The rural banks receive subsidies from the Central Government though their operational self sufficiency index is good.

6.2.6: Susu

The Susu operators do not appear to be regulated and are also able to attract borrowers through less costly procedures. Indeed the regulatory environment seems to favour Susu operators to the disadvantage of other MFIs. For example, they do not have any formal laws regulating their operations and therefore cannot tell where their mandate ends. This situation has caused most clients to lose their savings as the collectors vanish with their savings. They normally demand collateral in the form of physical movable property, or you need to be introduced by a known client who will be your guarantor.

Their clients are mostly market women who borrow small loans to enable them buy and sell wares in the market. Because there is competition by other operators in the same market, their client base average 300 with a high dropout rate of about 30% on the average. However, their portfolio at risk is low with negligible bad debts due to the small loans disbursed. There appears to be uniformity in the interest rates charged due to the fact that they are all operating in the same market and an action by one competitor will be counteracted by all the others. There is perfect competition in the market place. The Susu operators do not operate on subsidies and from Table (6.7) it is clear that the Susu institutions are operationally self sufficient.

6.3 Conclusion

This chapter has provided the details of the research methodology process that was relevant for the research work. The epistemological debate on the fundamentally different and competing schools of thought or inquiry paradigms, i.e. positivism which uses quantitative method for causal explanations and phenomenology method

which uses qualitative and naturalistic approaches to understand human experiences were discussed. The reason for selecting the research method of combining positivism and phenomenology was also highlighted.

The reason for favouring face–to–face interview as against other data collection methods has been stated. Sampling and non-sampling errors and the decision to include institutions both young and old within the sample frame for the purpose of the survey have been discussed. Models of Operational Self Sustainability (OSS) and Subsidy Dependence Index (SDI) were used to explain sustainability or otherwise of MFI's.

The subsequent chapters will discuss the research findings along with our interpretations and comparison with existing findings.

CHAPTER SEVEN

DATA ANALYSIS AND PRESENTATION OF RESULTS

7.1 Introduction

The next six chapters focus on the analysis of the data which was gathered from the field with the research instrument–questionnaire as well was the interviews held with the Chief Executive Officers of selected MFI’s. This chapter deals with the general background of the MFI’s followed by detailed analysis of the institutional characteristics, business strategy, agency cost, and environmental factors and their impact on the sustainability and success of the MFI’s in the subsequent chapters. The results have been presented in tables showing frequencies and percentages of the responses given by the MFI’s.

The main statistical tools used were the chi-square test of independence and correlations for the hypotheses since the levels of measurement of the variables were mainly nominal and or ordinal. For the secondary data, trend analysis was carried out and the regression model was used to establish a relationship between operational self-sufficiency (OSS) of the predictors namely administrative expenses (AE), dropout rate (DOR), cost per borrower (CPB), real portfolio yield (RPY), loan officer productivity (LOP), average loan (AL), portfolio at risk (PAR) and active borrowers (AB). In addition, One-Way ANOVA was used to ascertain if there were differences in the operational self sufficiency and subsidy dependence index of the MFI’s. The hypotheses tested were carried out at 95% significance levels (0.05). The chapters include the discussion of the findings of the study in the light of the literature reviewed as well as the empirical evidence from the interviews held with some Chief Executive Officers of the MFI’s.

7.2: Background of the MFI's

A total of 114 MFI's responded to the questionnaires. Whilst some were established over three decades ago that is as far back as 1982, the recently established one was two years ago - in the year 2006. About a third (38.0%) were established within the last decade (1999-2009), 40.0% were established within the last two decades whilst 22.0% have been in existence for the past three decades. In effect most of the FNGO's were established within the last decade. The MFIs covered were from 7 out of the 10 regions of Ghana – namely Greater Accra, Central, Western, Eastern, Ashanti, Northern, and Volta. In all 130 MFIs were sampled out of which 114 responded.

7.3 Types of Microfinance

The respondents to our questionnaires were mostly Chief Executives and 81 (71.05%) were Financial Non-Governmental Organizations (FNGOs), while the least number 4 (3.51%) were in the Susu and Credit Union Institutions. Respondents were also categorized into urban and rural with 55 (48.25%) representing typical rural institutions and the remaining 59 (51.75%) being urban. The above statistics lend credence to the fact that even though microfinance is about alleviating poverty especially in the rural settings, there are equally poor people in the urban areas who are mostly migrants in search of jobs. Again it also confirms the fact that most MFIs try to seek a balance between poverty alleviation of the poor who are mostly in the rural areas and how to make their operations sustainable especially by looking at quick returns on their investment (see Table 7.1).

Table 7.1: Microfinance Institutions by Type

Regions	FNGOs	Savings & Loans	Credit Unions	Rural Banks	Susu Companies	Total
Greater Accra	25	4	1	1	2	33
Central	6	-	1	2	1	10
Western	6	2	-	2	-	10
Eastern	8	-	1	3	-	12
Ashanti	7	3	1	3	1	15
Northern	17	-	-	2	-	19
Volta	12	1	-	2	-	15
Total	81(71.05%)	10(8.77%)	4(3.51%)	15(13.16%)	4(3.51%)	114

The type of ownership of the MFIs were made of 67 (58.8%) foreign owned, 29 (25.4%) locally owned and a few that is 18 (15.8%) that were owned by both foreign and local investors as shown in Table 7.2.

7.2: Ownership of the MFI's

Ownership	Frequency	Percentage
Foreign	67	58.8
Local	29	25.4
Both foreign and local	18	15.8
Total	114	100.0

Table 7.3: Source of funding by type of MFI

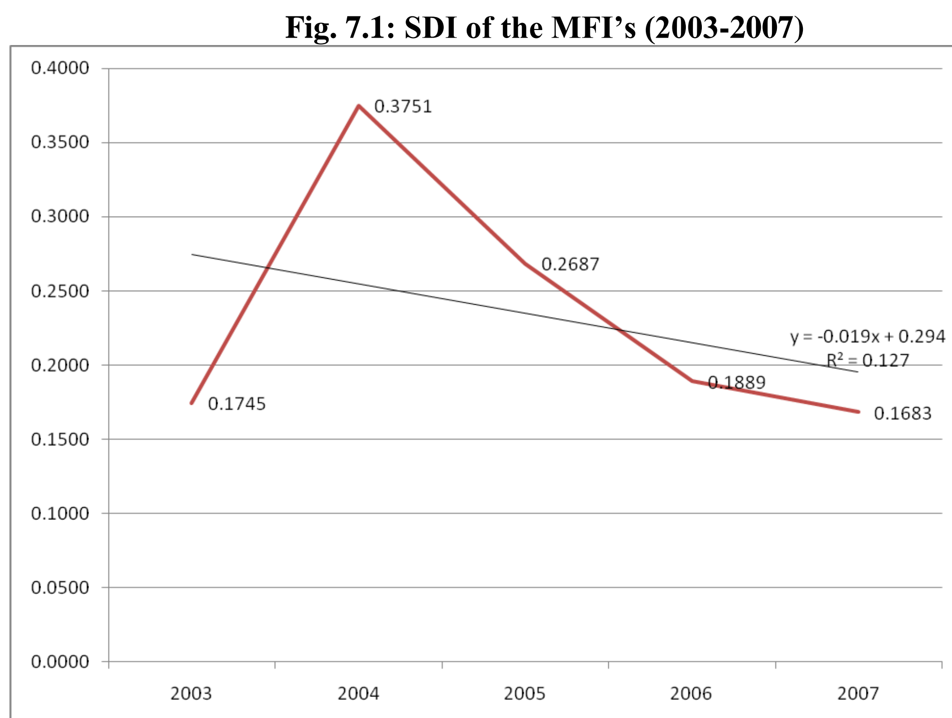
MFI'S	Source of Funds				Total
	Donors	Donor and Personal (Government)	Personal/ Members Contributions	Members Contribution/ Market Borrowing	
FNGOs	81 (71%)	-	-	-	81 (71%)
Savings & Loans	6 (5.3%)	1 (0.8%)	-	3 (2.7%)	10 (8.8%)
Credit unions	1 (0.8%)	-	3 (2.7%)	-	4 (3.5%)
Rural Banks	-	9 (7.9%)	-	6 (5.3%)	15 (13.2%)
Susu companies	-	-	1 (0.8%)	3 (2.7%)	4 (3.5%)
Total	88(77.1%)	10(8.7%)	4(3.5%)	12(10.7%)	114 (100%)

It can be observed that the majority (71%) of the FNGOs were donor supported, savings and loans MFI's were also mainly donor supported, credit unions were mainly funded by personal/member contributions, rural banks were mainly donor and government supported whilst Susu companies main source of funding were member contribution/market borrowing.

7.4 Subsidy Dependence Index and Operational Self Sufficiency of the MFI's

The data for the study revealed that generally the average SDI of the MFI's increased sharply from 0.1745 in the year 2003 to about 0.3751 in 2004. It decreased steadily thereafter to 0.2687 in 2005 and then to 0.1683 in the year 2007 (Fig. 7.1).

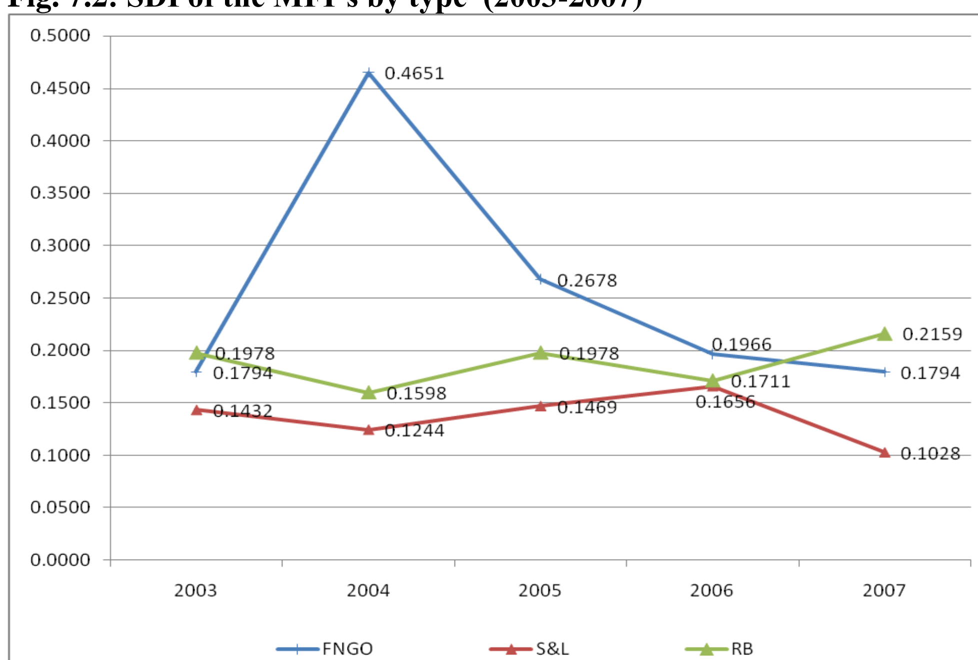
Fig. 7.1: SDI of the MFI's (2003-2007)



The average annual rate of decrease was just about 0.019. This indicates that the net subsidy of the MFI's has been decreasing at a rate of about 1.9%. This situation is

worrying and does not augur well for the long term sustainability of the micro finance industry in Ghana as the MFIs would depend on subsidies for a long time to come. Only about 12.7% of the changes in the SDI could be attributed (explained) to the change in the economy. Indications are that much of the changes in the SDI could not be attributed or explained by the changes in the economic years.

Fig. 7.2: SDI of the MFI's by type (2003-2007)



The results in Fig. 7.2 revealed that the SDI of the FNGO's increased drastically from 0.1794 in 2003 to an all time high of 0.4651 for the period under review. The SDI of the FNGO's, however, decreased sharply thereafter to 0.2678 in 2005, decreasing further but steadily to 0.1794 by the year 2007. The average annual increase in the SDI of the FNGO's was only 0.026 (2.6%). This was followed by the RB, which recorded marginal increase in SDI from 0.1978 in 2003, to 0.2159 in 2007, giving an average annual increase of 0.004 (0.40%) . The SDI for the S&L decreased from 0.1432 in 2003 to 0.1028 in 2007. The average annual rate of

decrease was 0.004 (0.04%). Further analysis of the mean SDI by type of MFI revealed significant differences in the SDI of the FNGO's, S&L and RB. The mean SDI's of 0.2577, 0.1366, and 0.1885 were recorded by the FNGO's, S&L and the RB respectively (Table 7.4).

Table 7.4: Descriptive statistics of SDI by type of MFI

Type of MFI	Mean	Standard deviation	Standard Error
FNGO	0.2577	0.0153	0.0009
S&L	0.1366	0.0477	0.0075
RB	0.1885	0.0660	0.0076

The One-Way ANOVA test results yielded F=527.303, df = 2,352 and $p<0.05$ (Table 7.5). This shows that the differences in the mean SDI of the MFI's were significant at the 0.05 level.

Table 7.5: One-Way ANOVA for mean differences in SDI by type of MFI's

Source of variation	Sum of squares	df	Mean Square	F	Sig. (p-value)
Between groups	1.399	2	0.699	527.30	0.000
Within groups	0.467	352	0.001		
Total	1.865	354			

n.s. = not significant , $p<0.05$ = difference is significant at the 0.05 level

The post-hoc test for pairwise comparisons confirmed that the mean SDI of the FNGO's (0.2577) was significantly higher than that of the RB (0.1885) and S&L (0.1366). Also, the SDI of the RB (0.1885) was significantly higher than that of the S&L (0.1366).

Table 7.6: Post-hoc test for pairwise comparisons of mean differences in SDI

Type of MFI	FNGO's	S&L	RB
FNGO's	-	$p<0.05$	$p<0.05$
S&L	-	-	$p<0.05$
RB	-	-	-

n.s. = not significant , $p<0.05$ = difference is significant at the 0.05 level

7.5 Multivariate Regression Model

Multiple regression is a statistical technique that allows for the prediction of a dependent variable on the basis of its scores on several independent variables. Multiple regression also allows for the testing of theories (or models) about precisely which of the independent variables significantly influences the dependent variable. R is a measure of the correlation between the observed value and the predicted value of the criterion variable. R Square (R2) is the square of this measure of correlation and indicates the amount of variation in the dependent variable which is accounted for by the model. This Adjusted R Square value gives the most useful measure of the model, the higher the R-square the better the model. The regression model can be expressed as

$$y= K + ax_1 + bx_2 + cx_3 + \dots\dots$$

where, y= dependent variable, K = constant, x_1, x_2, x_3, … are the independent variables, and the a, b, c, …. are the regression coefficient (beta) of the independent variables

The beta value is a measure of how strongly each predictor variable influences the criterion variable. It is the regression coefficient of the independent variables. Thus, the higher the beta value the greater the impact of the predictor variable on the criterion variable.

On the operational self-sufficiency (OSS) of the MFI's, the regression model was significant in establishing a relationship between the OSS and the predictors ($F=5.661$, $df=8, 97$ and $p<0.05$). A regression co-efficient of 0.321 and an R-square of 0.103 (10.3%) were obtained. This means that only 10.3% of the variation in the OSS can be explained by changes in the predictors namely administrative expenses (AE), dropout rate (DOR), cost per borrower(CPB), loan officer productivity (LOP), average loans (AL), portfolio at risk (PAR), average loans (AL) and active borrowers (AB).

Table 7.7: Regression coefficients of the predictors of OSS

Model Variables	Coefficients	Standard Error	t	Sig.
Constant	0.892	0.044	20.118	0.000
Admin Expenses (AE)	0.103	0.059	1.746	0.082
Dropout rate (DOR)	0.287	0.145	1.976	0.049
Cost per borrower (CPB)	- 0.0000000000311	0.000	0.122	0.903
Loan Officer Productivity (LOP)	0.000000857	0.000	0.298	0.766
Average Loans (AL)	0.0000022	0.000	3.672	0.000
Portfolio at risk (PAR)	-0.049	0.080	0.620	0.535
Active borrowers (AB)	0.000000760	0.000	0.695	0.488

Dependent variable :OSS

** Other variables which are considered as possible determinants of OSS have been dropped due to multicollinearity problems.

The test results in Table 7.7 show that only dropout rate (DOR) and average loans (AL) were significantly ($p<0.05$) predictive of OSS. The relationship between OSS and cost per borrower (CPB); and portfolio at risk (PAR) were found to be negative. Thus increasing CPB and PAR lowers the OSS of the MFI's by 3.110010 (3.11E8%) and 4.9% respectively. Though there were positive relationships between OSS and

LOP; DOR; AB and AE; the relationships were not significant at the 0.05 level ($p>0.05$).

The results in Table 7.7 further show a negative relationship between OSS and CPB, and PAR, however, these were not significant at the 0.05 level ($p>0.05$). Contrary to expectation, the DOR recorded a positive, even though not significant, relationship with OSS. In other words, the DOR may not necessarily be indicative of borrower dissatisfaction, but rather rigid enforcement of repayments schedules, high interest rates or ineffective monitoring of clients.

Table 7.8: Descriptive statistics of OSS by type of MFI

Type of MFI	Mean	Standard deviation	Standard Error
FNGO	1.0367	0.0755	0.0049
S&L	1.2094	0.0047	0.0008
RB	0.9846	0.2722	0.0314

The result in Table 7.8 shows that the S&L recorded the highest OSS of 1.2094, followed by the FNGO's (1.0367) and the RB (0.9846).

Table 7.9: One-Way ANOVA for mean differences in OSS by type of MFI's

Source of variation	Sum of squares	df	Mean Square	F	Sig. (p-value)
Between groups	1.372	2	0.686	35.29	0.000
Within groups	6.843	352	0.019		
Total	8.215	354			

n.s. = not significant , $p<0.05$ = difference is significant at the 0.05 level

The One-Way ANOVA results (Table 7.9) for the test of mean differences revealed that there were significant differences in the mean OSS of the MFI's ($F=35.29$, $df=2, 352$ and $p<0.05$). Thus, the OSS of at least two of the groups of the MFI's differed significantly. Further to this, the post-hoc test for multiple comparisons (using the

Least Square Deviation–LSD) was used to ascertain which sets of two groups of MFI's differed significantly in their OSS (Table 7.10).

Table 7.10: Post-hoc test for pairwise comparisons of mean difference in the OSS

Type of MFI	FNGO's	S&L	RB
FNGO's	-	$p<0.05$	$p<0.05$
S&L	-	-	$p<0.05$
RB	-	-	-

n.s. = not significant , $p<0.05$ = difference is significant at the 0.05 level

It can be observed (Table 7.8) that the mean differences for the pair of groups were all significant at the 0.05 level. Thus, the OSS of the S&L (1.209) was significantly higher than that of the FNGO's (1.037) and the RB (0.985). Also, the difference in the OSS of the FNGO's (1.037) and the RB (0.985) was found to be significant at the 0.05 level. Therefore the hypothesis that there will be significant differences in the OSS of the MFI's in Ghana was supported.

7.5.1 Regression Analysis of sustainability and performance of MFI's and the five factors.

A regression analysis was used to establish and test the significance of the relationships between sustainability, and performance of the MFI's; and the five factors of sustainability/success namely institutional characteristics (IC), agency cost (AC), business strategy (BS), environment and governance (EG) and level of success (S). The regression model also helped to ascertain which of the factors significantly predicted sustainability and success of the MFI's.

7.5.2 Logistic Regression for Sustainability

A Wald chi^2=49.668, Prob> chi^2=0.000 $p<0.05$ was recorded for the relationship between the sustainability of the MFI's and the factors of sustainability.

Table 7.11: Test results of regression model for sustainability/factors

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	38.770[a]	.155	.388

a. Estimation terminated at iteration number 8 because parameter estimates changed by less than .001.

Also, an R^2 =0.388 (38.8%) was recorded and this corresponds with a high regression coefficient of r=0.622 (62%) (Table 7.11). In effect 38.8% of the changes in the sustainability of the MFI's can be explained by and attributed to the factors of sustainability namely institutional characteristics (IC), agency cost (AC), business strategy (BS), environment and governance (EG) and level of success (S).

The test of significance for the regression model yielded chi^2 (5) =19.163, Prob>chi^2=0.002 (Table 7.12). This means that at the 0.05 level, the regression model was significant in establishing a formal relationship between the sustainability of the MFI's and the factors of sustainability.

Table 7.12: Test results of regression model for relationship between sustainability and its factors

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	19.163	5	.002
	Block	19.163	5	.002
	Model	19.163	5	.002

From the results in Table 7.13, the regression model for the sustainability of the MFI's can be derived as:

Sustainability =1.692-1.651(IC)-0.570(AC)+0.916(BS)+1.027(EG)+1.179(Success)

Table 7.13: Regression Coefficients between sustainability and its factors

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	IC	-1.651	.769	4.609	1	.032	.192
	AC	-.570	.628	.824	1	.364	.565
	BS	.916	.478	3.670	1	.055	2.498
	Eg	1.027	.575	3.187	1	.074	2.794
	Success	1.179	.492	5.747	1	.017	3.250
	Constant	1.692	3.158	.287	1	.592	5.429

a. Variable(s) entered on step 1: IC, AC, BS, EG, Success.

The results further indicate that two out of the five sustainability factors namely Institutional Characteristics (IC) and Success were significantly predictive of the sustainability of the MFI's in Ghana since their t-statistics were significant at the 0.05% level.

7.5.3 Logistic Regression for Performance of the MFI's

The data for the study also revealed a significant relationship between the performance of the MFI's and the five factors (Wald chi^2=46.53, Prob> chi^2=0.000 $p<0.05$).

Table 7.14: Test results of regression model for relationship between performance and its factors

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	111.505[a]	.335	.447

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Also, an R^2 (Nagelkerke) =0.447 (44.70%) was recorded and this corresponds with a high regression coefficient of r=0.6685 (66.85%) (Table 7.14). Thus, 66.85% of the changes in the performance of the MFI's can be explained by all or some of the five factors namely institutional characteristics (IC), agency cost (AC), business strategy (BS), environment and governance (EG) and level of success (S).

The test of significance for the regression model yielded chi^2 (8) = 22.42, $Prob>chi^2=0.004$. This means that at the 0.05 level, the regression model was significant in establishing a formal relationship between the performance of the MFI's and the five factors. The regression model for the performance of the MFI's from the results in Table 7.15 can be derived as:

$$Performance = -6.218 + 0.069(IC) + 1.782(AC) + 0.044(BS) + 0.646(EG) - 0.361(Success)$$

Table 7.15: Regression Coefficients between performance and its factors

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	IC	.069	.238	.084	1	.772	1.072
	AC	1.782	.385	21.470	1	.000	5.940
	BS	.044	.255	.029	1	.864	1.045
	EG	.646	.279	5.359	1	.021	1.909
	Success	-.361	.195	3.408	1	.065	.697
	Constant	-6.218	2.002	9.646	1	.002	.002

a. Variable(s) entered on step 1: IC, AC, BS, EG and Success

The results further indicate that two out of the five factors namely agency cost (AC) and environment and governance (EG) were significantly ($p<0.05$) predictive of the performance of the MFI's in Ghana since their t-statistics were significant at the 0.05% level.

7.5.4 Regression Model without Institutional characteristics

When institutional characteristics was dropped, the regression model yielded, $sustainability = 0.715 + 1.216(AC) + 0.906(BS) + 1.328(EG) + 0.940(Success)$. The t-statistic was significant at the 0.05 level. This means even without the institutional characteristic (IC) factor, all the other factors namely AC, BS, EG and Success combined to significantly predict the sustainability of the MFI's (see Model 1 in Table 7.16).

Table 7.16: Summary of Regression Coefficients for sustainability and its factors (Multiple factor analysis)

Model	Constant/ Varaibles	Unstandardised coefficeint		Standardised coefficeint	t	Sig.
		B	Std Error	Beta		
1 (IC excluded)	Constant	0.715	0.296		2.414	0.017
	AC	1.216	0.058	0.318	20.832	0.000
	BS	0.906	0.032	0.431	27.935	0.000
	EG	1.328	0.057	0.314	23.352	0.000
	Success	0.940	0.040	0.330	23.799	0.000
2 (AC excluded)	Constant	0.843	0.464		1.818	0.072
	IC	1.516	0.140	0.232	10.852	0.000
	BS	1.282	0.045	0.610	28.818	0.000
	EG	0.745	0.098	0.176	7.640	0.000
	Success	1.202	0.059	0.422	20.502	0.000
3 (BS excluded)	Constant	1.017	0.860		1.183	0.239
	IC	0.236	0.263	0.036	0.898	0.371
	AC	1.955	0.151	0.512	12.990	0.000
	EG	1.717	0.172	0.406	10.000	0.000
	Success	1.036	0.114	0.364	9.123	0.000
4 (EG excluded)	Constant	1.840	0.412		4.463	0.000
	IC	1.713	0.124	0.263	13.859	0.000
	AC	0.769	0.089	0.201	8.683	0.000
	BS	1.192	0.046	0.567	25.882	0.000
	Success	1.150	0.057	0.404	20.152	0.000
5 (Success excluded)	Constant	2.431	0.692		3.515	0.001
	IC	0.655	0.227	0.100	2.881	0.005
	AC	1.487	0.141	0.389	10.540	0.000
	BS	1.026	0.081	0.488	12.710	0.000
	EG	1.397	0.151	0.331	9.242	0.000

**** Dependent variable:Sustainability**

7.5.5 Regression Model without the agency cost factor

The data for the study produced a regression model; sustainability = *0.843 +1.516(IC) + 1.282(BS) + 0.745(EG) + 1.202(Success)* when agency cost was dropped. The t-statistic was significant at the 0.05 level. This means that when agency cost was effectively controlled, the combined effect of IC, BS, EG and Success was significant in predicting the sustainability of the MFI's (see Model 2 in Table 7.16).

7.5.6 Regression Model without the business strategy factor

When business strategy was dropped, the other four factors namely IC, AC, EG and Success combined to significantly predict the sustainability of the MFI's at the 0.05

level. The regression model derived from the coefficients is, *sustainability = 1.017 + 0.236(IC) + 1.955(AC) + 1.717(EG) and 1.036(Success). (*See Model 3 in Table 7.16) The t-statistics were all significant at the 0.05 level.

7.5.7 Regression Model without the environment and governance factor

The environmental/govenance factor was also dropped, and the regression model yielded, *Sustainability = 1.840 + 1.713(IC) + 0.769(AC) + 1.192(BS) + 1.150(Success).* The t-statistics for all four factors were significant at the 0.05 level. Thus, at the 95% signficance level, even without environmental/governance factor, the IC, AC, BS and Success factors combined to significantly predict the sustainability of the MFI's. (see Model 4 in Table 7.16).

7.5.8 Regression Model without the success factor

When the success factor was dropped, the regression model obtained was, *sustainability = 2.431 + 0.655(IC) + 1.487(AC) + 1.026(BS) + 1.397(EG).* The t-statistics were all significant at the 0.05 level (see Model 5 in Table 6.16). Thus, even without the success factor, the other four factors namely IC, AC, BS and EG combined to significantly predict the sustainability of the MFI's.

7.6 Single Factor Analysis

The Pearson's Correlation Coefficients was used to show the strength of the relationship between the factors of sustainability and the sustainability of the MFI's and also between pairs of the factors.

The results in Table 7.17, revealed positive relationships between sustainability and four out of the five factors of sustainability used for the study. The relationship was strongest between sustainability and success (0.246), followed by sustainability and agency cost (0.224), then sustainability and business strategy (0.179), and sustainability and environment/governance (0.117), (see Table 7.17). However, there was a negative relationship between sustainability and institutional characteristics (-0.171). All these relationships were significant at the 0.05 level. The results further show the relationship between pairs of the independent factors. Though some of the correlations amongst the independent factor variables were significant, multicollinearity (or collinearity) was not an issue since the correlations were not extremely high and did not in any way affect the relative contribution of each predictor variable to the success of the model.

Table 7.17: Correlation Coefficients for sustainability factors

	IC	AC	BS	EG	Success	Sustainability
IC Pearson Correlation Sig. (p-value) N		-0.141 0.135 114	0.202 0.032 114	0.069 0.468 114	-0.031 0.747 114	-0.171 0.009 114
AC Pearson Correlation Sig. (p-value) N			0.274 0.003 114	0.077 0.413 114	0.384 0.000 114	0.224 0.067 114
BS Pearson Correlation Sig. (p-value) N				0.222 0.018 114	0.025 0.794 114	0.179 0.057 114
EG Pearson Correlation Sig. (p-value) N					-0.139 0.140 114	0.117 0.214 114
Success Pearson Correlation Sig. (p-value) N						0.246 0.008 114

In addition to the correlation, a regression analysis was carried out to establish a model or a formal relationship between each individual factor of sustainability and the sustainability of the MFI's and also determine the significance of the relationship.

Table 7.18: Summary of Regression Coefficients for sustainability and its factors (single factor analysis)

Model	Constant/ Varaibles	Unstandardised coefficeint		Standardised coefficeint	t	Sig.
		B	Std Error	Beta		
1	Constant	17.417	1.266		13.753	0.000
	IC	2.250	0.579	0.345	3.888	0.000
2	Constant	12.008	0.975		12.312	0.000
	AC	2.741	0.251	0.718	10.907	0.000
3	Constant	11.227	0.796		14.102	0.000
	BS	1.697	0.117	0.807	14.475	0.000
4	Constant	10.792	1.498		7.205	0.000
	EG	2.498	0.322	0.591	7.756	0.000
5	Constant	11.604	1.143		10.148	0.000
	Success	1.912	0.200	0.671	9.574	0.000

**** Dependent variable:Sustainability**

7.6.1 Regression Coefficients for sustainability and institutional characteristic only

For institutional characteristic, the regression model yielded, *sustainability =17.417+2.250(IC);* and the t-statistic of 3.888 was significant at the 0.05 level. This means that institutional characteristic (IC) factor alone was significantly predictive of the sustainability of the MFI's. Thus, the more the MFI's lived by the tenets of microfinance that is reaching out to the pro-poor, the more sustainable they were (Table 7.18).

7.6.2 Regression Coefficients for sustainability and agency cost only

The model for agency cost is, *sustainability = 12.008 + 2.741(AC);* and the t-statistic was 10.907 and $p<0.05$. This means that at the 0.05 level, agency cost (AC) alone was significantly predictive of the sustainability of the MFI's. Thus, the more the

MFI's took measures to minimize the effects of agency cost, the more sustainable they were (see Model 2 in Table 7.18).

7.6.3 Regression Coefficients for sustainability and business strategy factor only

For business strategy, the regression model is, *sustainability =11.227 + 1.697(BS).* The test of significance yielded a t-statistic of 14.475 and $p<0.05$ level (see Model 3 in Table 7.18). This means that business strategy as a single factor was significantly predictive of the sustainability of the MFI's. Thus, the more the MFI's adopted effective and standard or widely accepted microfinance strategies, the more sustainable they are.

7.6.4 Regression Coefficients for sustainability and environment/governance factor

The model for environment/governance is, sustainability = *10.792 + 2.498(EG);* and the t-statistic was significant at the 0.05 level ($t=7.756$, $p<0.05$). This means that environment/governance factor alone was equally significant in predicting the sustainability of the MFI's (see Model 4 in Table 7.18). Thus, the more the regulatory and environmental conditions promoted microfinance operations in Ghana, the more sustainable the MFI's were.

7.6.5 Regression Coefficients for sustainability and success factor only

The regression model for sustainability based of the success factor alone was also established as, *sustainability = 11.604 +1.912(Success).* The t-statistic observed was

9.574 and p<0.05. This means that at the 0.05 level, the success factor alone was significantly predictive of the sustainability of the MFI's (see Model 5 in Table 7.18). Thus, the more successful the MFI's were, the more sustainable they were.

7.7.0 Analysis of Variance (ANOVA) for sustainability of MFI's

One-Way ANOVA was used to test for differences in the sustainability of the MFI's by type of MFI, ownership of the MFI and source of funds for the MFI.

7.7.1 Analysis of Variance (ANOVA) for sustainability of MFI by type

The result in Table 7.19 shows that the S&L companies obtained the highest score of 25.30 on sustainability, followed by RB's with a score of 21.87, then Susu companies with 21.75, and FNGO's with 21.73. CU was the least sustainable with a score of 21.00.

Table 7.19: Statistics of sustainability by type of MFI

Type of MFI	N	Mean	Std. Deviation	Std. Error
FNGO	81	21.73	4.78	0.53
S&L	10	25.30	4.24	1.34
RB	15	21.87	5.92	1.53
Susu	4	21.75	5.32	2.66
CU	4	21.00	6.06	3.03
Total	114	22.04	4.97	0.47

The differences in the mean scores were, however, not significant at the 0.05 level since the One-Way ANOVA test for mean differences yielded F=1.214, df=4, 109, and p>0.05 (Table 7.20). This means that there were no differences in the sustainability of the MFI's. In other words the differences in the sustainability of the MFI's were due to chance.

Table 7.20: One-Way ANOVA for sustainability by type of MFI

Source of variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	119.25	4	29.81	1.214	0.309
Within Groups	2676.61	109	21.56		
Total	2795.86	113			

7.7.2 Analysis of Variance (ANOVA) for sustainability of MFI by source of funds

It was also observed that the MFI's that were funded by personal and member contributions obtained the highest score of 24.75 on sustainability. This was followed by those that were funded by donors (22.24), member contributions and market borrowing (21.00), and then donor and personal contributions (20.40) as shown in Table 7.21.

Table 7.21: Statistics of sustainability of MFI's by source of funding

Source of funding	N	Mean	Std. Deviation	Std. Error
Donor	88	22.24	4.90	0.52
Donor & personal	10	20.40	5.44	1.72
Personal & Member contribution	4	24.75	4.27	2.14
Member contribution & Market borrowing	12	21.00	5.33	1.54
Total	114	22.04	4.97	0.47

The results of the test for mean differences yielded $F=0.979$, $df=3,110$ and $p>0.05$ (Table 7.22). This means that at the 0.05 level, the sustainability of the MFI's was not significantly different for the MFI's with respect to source of funding.

Table 7.22: One-Way ANOVA for sustainability by type of Ownership

Source of variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	72.72	3	24.24	0.979	0.405
Within Groups	2723.14	110	24.76		
Total	2795.86	113			

7.7.3 Analysis of Variance (ANOVA) for sustainability of MFI by type of Ownership

The results in Table 7.23 show that MFI's that were owned both local and foreign (23.28) investors obtained higher scores on sustainability. Contrary to expectations, even the wholly locally-owned MFI's (23.14) scored higher on sustainability than the wholly foreign owned MFI's (21.22).

Table 7.23: Statistics of sustainability by type of Ownership

Type of MFI ownership	N	Mean	Std. Deviation	Std. Error
Local	29	23.14	4.62	0.86
Foreign	67	21.22	5.26	0.64
Both	18	23.28	3.95	0.93
Total	114	22.04	4.97	0.47

The test for mean differences, was, however, not significant ($F=2.12$, $df=2, 111$, and $p>0.05$) as shown in Table 7.24. Thus at the 0.05 level, the sustainability of the MFI's with respect to type of ownership was not significant.

Table 7.24: One-Way ANOVA for sustainability by type of Ownership

Source of variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	107.16	2	53.58	2.212	0.114
Within Groups	2688.70	111	24.22		
Total	2795.86	113			

7.8 Multivariate analysis (MANOVA) of sustainability of MFI's by factors of sustainability

Using the multivariate test for mean differences (MANOVA), differences within groups (independent groups) as well as the interactive effects of more than a group in producing significant variations in the sustainability of the MFI's were carried out at the 0.05 level (Table 7.25).

Table 7.25: MANOVA summary table for sustainability of MFI's by type, source of funding and ownership

Source of variation	Sum of Squares	df	Mean Square	F	Sig.
Within type of MFI	146.19	4	36.55	1.50	0.2070
Within source of funding	34.21	3	11.40	0.47	0.7043
Within type of ownership	93.87	2	46.93	1.93	0.1505
Type of MFI versus source of funding	70.94	2	35.47	1.46	0.2373
Type of MFI versus ownership	53.91	4	13.48	0.55	0.6960
Source of funding versus ownership	0.64	1	0.64	0.03	0.8718
Type of MFI versus source of funding versus ownership	0.00	0	*	*	*
Error (Sustainability)	2307.68	95	24.29		
Total (Sustainability)	2795.86	113			

* Not enough groups

7.8.1 MANOVA of Type of MFI

The main effect of type of MFI was not significant at the 0.05 level (F=1.50, df = 4,113, and p>0.05) as shown in Table 7.25. Thus even though the S&L companies

obtained a higher score on sustainability than the FNGO's, RB, CU and the Susu companies, the differences in the mean scores were due to chance (see Table 7.16). Therefore at the 95% significance level, there were no differences in the sustainability of the MFI's with respect to type of MFI.

7.8.2 MANOVA of Source of Funding

Also the main effect of source of funding was not significant at the 0.05 level (F=0.47, df = 3,113, and p>0.05) (Table 7.25). Thus although the MFI's that were funded by personal and member contributions obtained a higher score on sustainability than those funded by donor; personal and donor; member contributions and market borrowings; the differences in the mean scores were not significant (see Table 7.21). Therefore at the 95% significance level, there were no differences in the sustainability of the MFI's with respect to source of funding.

7.8.3 MANOVA of Type of Ownership

The main effect of type of ownership did not show any significant differences at the 0.05 level (F=1.93, df=2,113, and p>0.05) as shown Table 7.25. It was observed that contrary to expectations, the wholly locally-owned MFI's scored higher on sustainability than the wholly foreign-owned MFI's and those owned by both local and foreign investors but the differences were due to chance (see Table 7.25). Therefore at the 95% significance level, there were no differences in the sustainability of the MFI's with respect to type of ownership.

7.8.4 MANOVA of Type of MFI and source of funding

The interactive effect of type of MFI and source of funding did not produce any significant differences in the sustainability of the MFI (F=1.46, df=2,113, and p>0.05) as shown in Table 7.25.

7.8.5 MANOVA of Type of MFI and type of ownership

Also, the interactive effect of type of MFI and type of ownership did not produce any significant differences in the sustainability of the MFI (F=0.55, df=4,113, and p>0.05) as shown in Table 7.25.

7.8.6 MANOVA of source of funding and ownership

The result in Table 7.25 also shows that the interactive effect of source of funding and ownership did not produce any significant differences in the sustainability of the MFI (F=0.03, df = 1,113, and p>0.05).

7.8.7 MANOVA of type of MFI, source of funding and type of ownership

It was not possible to ascertain the interactive effect of all three independent variables namely type of MFI, source of funding and type of ownership at the same time (Table 7.25). This was because there were not enough data for computations of means, standard deviations, sum of squares and ultimately the F-statistics for some of the levels of groupings of these variables. This would have been possible if the sample had enough representations of the types of MFI's (such as credit unions, savings and loans, and rural banks), and source of funding.

7.9: Confirmation of Research Model

A regression analysis was used to establish and test the significance of the relationships between sustainability, and performance of the MFI's; and the five factors of sustainability/success namely institutional characteristics (IC), agency cost (AC), business strategy (BS), environment and governance (EG) and level of success (S). The regression model also helped to ascertain which of the factors significantly predicted sustainability and success of the MFI's.

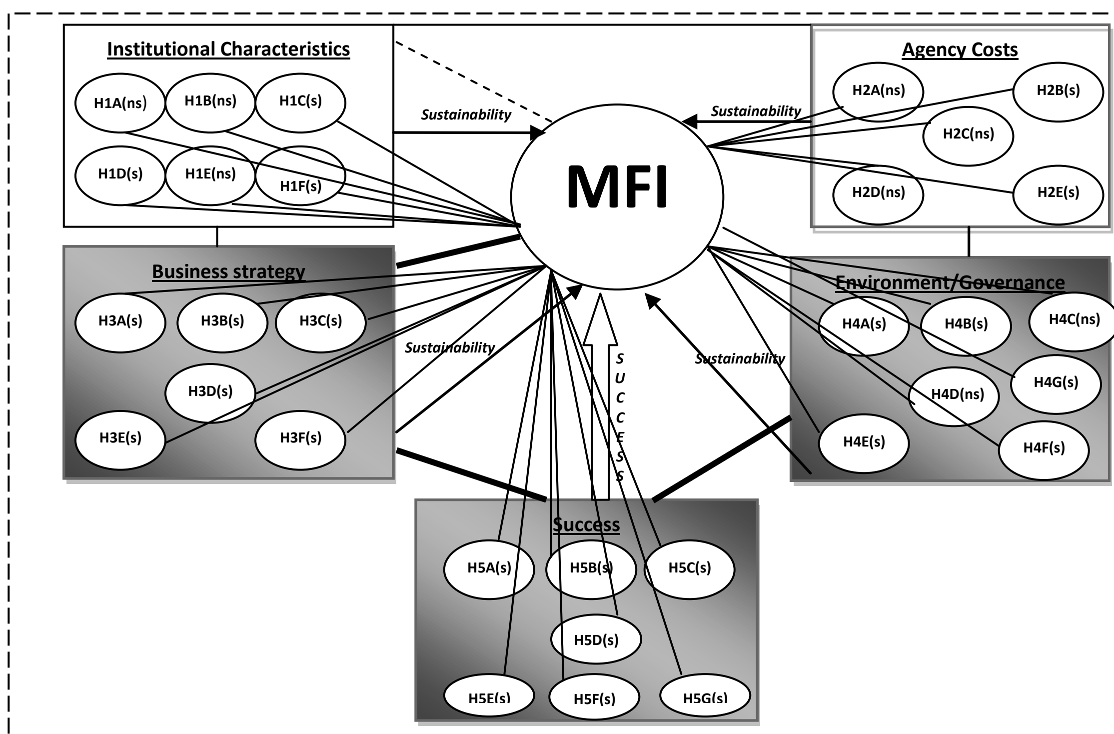
The data for the study revealed a significant relationship between the performance of the MFI's and the five factors (Wald chi^2=46.53, Prob> chi^2=0.000 $p<0.05$). Also, an R^2 (Nagelkerke) =0.447 (44.70%) was recorded and this corresponds with a high regression coefficient of r=0.6685 (66.85%) (Table 7.14). Thus, 66.85% of the changes in the performance of the MFI's can be explained by all or some of the five factors namely institutional characteristics (IC), agency cost (AC), business strategy (BS), environment and governance (EG) and level of success (S). The test of significance for the regression model yielded chi^2 (8) = 22.42, Prob>chi^2=0.004. This means that at the 0.05 level, the regression model was significant in establishing a formal relationship between the performance of the MFI's and the five factors. Without institutional characteristics and agency costs variable, the t-statistics was significant at the 0.05 level. This means that even without institutional characteristics and agency costs the other factors combined to significantly predict sustainability of MFIs. It is significant to note that when the remaining variables kept dropping one after the other, the three other variables combined significantly to predict sustainability (see section 7.5.5, 7.5.6, 7.5.7, 7.5.8).

The results in Table 7.17, revealed positive relationships between sustainability and three out of the five factors of sustainability used for the study. All these

relationships were significant at the 0.05 level. The results further show the relationship between pairs of the independent factors. Though some of the correlations amongst the independent factor variables were significant, multicollinearity (or collinearity) was not an issue since the regressions were not extremely high and did not in any way affect the relative contribution of each predictor variable to the success of the model.

Fig 7.3 shows the research model which details the inter-relationship observed between the dependent variable (sustainability) and independent variables (institutional characteristics, agency costs, business strategy, environment/governance and success). The positive relationship between the independent and the dependent variables and the positive inter-relationships between the dependent variables is a proof of the research model. The nature of the line indicates the strength of the relationship between the variables. The study therefore confirms the research model to a considerable extent.

Fig 7.3: The research model as observed from the findings



LEGEND	
(ns) means hypothesis not supported	(s) means hypothesis was supported
▬▬▬ Relationship was significant	- - - - - - - - - Relationship was not significant
——— Shows the path of the hypotheses	

7.10 Summary

The chapter discussed findings of the study in the light of the literature reviewed as well as the empirical evidence and the facts gathered through our qualitative interviews conducted. The Subsidy Dependence Index showed a decreasing trend, though at a slow rate. This is an indication that most of the MFIs will continue to rely on subsidies for a long time to come. The Multiple factor analysis established that the regression model was significant in establishing a relationship between the dependent variable, Operational Self Sufficiency (OSS) and the predictors. Using single factor analysis, the regression model was used to establish a formal relationship between each independent variable and the dependent variable.

The use of ANOVA revealed that there were not significant differences in the sustainability of the type of MFI. Regarding the source of funds and type of ownership, it revealed that even though there were differences in the level of sustainability of MFIs, they were not significant. The use of MANOVA confirmed that at the 95% significance level, sustainability of the Savings and Loans institutions was higher than the rest, they were not significant. MANOVA of source of funding and ownership also revealed no significant differences. The research model was to a large extent confirmed.

CHAPTER EIGHT

INSTITUTIONAL CHARACTERISTICS AND SUSTAINABILITY OF MFI'S

8.1 Introduction

This chapter focused on the institutional characteristics of the MFI's. The chapter has been organized into two. The first section deals with the characteristics of the institutions; ownership, more funding, motivation for setting up, clientele base, sources of income and information gathering. The second section looks at the results of the hypotheses and the impact of the institutional characteristics on the sustainability of the MFI's.

8.2 Descriptive Analysis of Institutional Characteristics of the MFI's

The descriptive analysis covers the various institutional characteristics of the MFI's, namely ownership, increased funding, executives' motivation, clientele type, and information gathering; and how these impact on micro financing by the MFI's.

8.2.1 Ownership of MFI's

The type of ownership of the MFI's were made of 67 (58.8%) foreign owned, 29 (25.4%) locally owned, and few, that is 18 (15.8%) that were owned by both foreign and local investors as shown in Table 8.1.

Out of the 81 FNGOs sampled, 66 (81.48%) were foreign owned, 3 (3.70%) were local entrepreneurs and 12 representing 14.83% were both foreign and locally owned. There were 10 sampled Savings and Loans Institutions and only 1(10%) was

totally foreign owned, with 3 (30%) locally owned and the remaining 6 (60%) had both local and foreign ownership.

The Credit Unions, the Rural Banks and the Susu companies were all locally owned emphasizing the regulatory limitation of foreigners entering the sector of micro financing.

Table 8.1: Ownership of the MFI's

Ownership	Frequency	Percentage
Foreign	67	58.8
Local	29	25.4
Both foreign and local	18	15.8
Total	114	100.0

8.2.2 Geographical spread

Geographical spread was based on the number of regional presence and a proxy for resources in terms of number of financial products and lending capacity where larger firms usually possess more products and higher lending capacity together with institutional resources.

On regional presence, when the MFI's were asked whether they had branches across the country, 22 (91.7%) answered in the affirmative as against only 2 (8.3%) who stated otherwise. Thus the majority of the MFI's had branches or other outlets across the country.

The results in Table 8.2 shows the geographical spread or the regional presence of the MFIs sampled.

Table 8.2: Geographical Spread of the MFI's

Regions	Number of MFIs	Percentage
Greater Accra	33	28.9
Central	10	8.8
Western	10	8.8
Eastern	12	10.5
Ashanti	15	13.2
Northern	19	16.7
Volta	15	13.2
Total	114	100.0

The most representation of the MFIs was from the Greater Accra region (28.9%) while the least representations were from Central and Western regions with 8.8% each. Generally, the MFI's covered towns and cities in 7 out of the 10 regions of Ghana – namely Greater Accra, Eastern, Volta, Ashanti, Northern, Brong Ahafo, and Western regions and the majority had branches across the country. This was confirmed in our qualitative interview by the Chief Executive Officer of one of the FNGOs as stated below:

'' We (referring to the MFI) are currently operating in 10 districts of Ghana but in 5 regions to be specific, but we have a fund springing up in the whole of the Eastern region which will become operational very soon.''

8.2.3 MFI's motivation for setting up

The data on whether or not the MFI's executives motivation for setting up was to grow and empower the poor, revealed that whilst 76% of the MFIS's executives were indeed motivated to establish the institution because of the desire to grow and empower the poor, 14.0% were not and the remaining 10% cited business and training as the major motivating factor for establishing the institutions. Thus, the

level of motivation to grow and empower the poor among the MFI"s sampled was somewhat average. One Chief Executive stated that:

'' We were set up to transform the economically active into sustainable livelihood. That is the key objective but we have Christian mission alongside. However the Christian consideration does not override business assessment and thinking''

Another Chief Executive stated that:

''We want to encourage the habit of savings among the poor so they can accumulate funds and get out of poverty. So savings is the key objective and secondly to give out loans, credit out of the savings they have accumulated. So we give out loans for all purposes, business, education, housing, health and you would not believe it; people think Africans need money to establish businesses, no. 30% of the loans we give go into education, 25% into business, 20% into housing and 15% into agriculture and the balance go into death, burial and other social functions. So people just decide to think for the poor people, that they are looking for money to establish businesses, but the poor needs more than just establishing businesses. They do not need loanable funds, they need financial services.''

Table 8.3: Reasons for establishing MFI's

Reason for establishment	Frequency	Percentage
Business development	16	14.0
Economic empowerment of rural dwellers	54	48
To help women	32	28
Provide training in SME	12	10
Total	114	100

8.2.4 Clientele type

The results in Table 8.4 show that close to half of the MFI's had traders and farmers as their clients.

Table 8.4: Type of Clients of the MFI's

Type of Clients	Rural	Urban	Total
Farmers	9 (15.3%)	-	9 (7.9%
Farmers and traders	22 (37.3%)	13 (23.6%)	35 (30.7%)
Farmers, traders & artisans	8 (13.6%)	-	8 (7.0%)
All types of clients	10 (16.9%)	-	10 (8.8%)
Traders	1 (1.7%)	28 (50.9%)	29 (25.4%)
Traders and artisans	-	10 (18.2%)	10 (8.8%)
School youth savings clubs	-	2 (3.6%)	2 (1.8%)
Government Employees/other salaried workers	9 (15.3%)	2 (3.6%)	11 (9.6%)
Total	59 (100%)	55 (100%)	114 (100%)

The clients of the MFI's were made up of a high representation of urban traders (50.9%) with the least representation being rural traders (1.7%). It can also be observed that generally the MFI's had more rural clients (59) than urban clients (55) and the dominant clientele were traders who alone accounted for about a quarter (25.4%).

One of the pillars of microfinance is poverty alleviation among the rural poor. According to Schreiner and Colombet (2001) microfinance is an attempt to improve access to small deposits and small loans for poor households neglected by banks. Therefore, microfinance involves the provision of financial services such as savings, loans and insurance to poor people living in both urban and rural settings who are unable to obtain such services from the formal sector. The apparent preference of traders by MFIs and also their visible presence in the urban areas (48.25%) as opposed to the rural areas (51.75%) could be due to their sensitivity of risk and

repayments difficulties. The urban clients are perceived to be of high risk. This was echoed by one of the Chief Executives during the qualitative interview stage when he said:

''You see over the years we have come to realize that the rural terrain is difficult to manage in terms of cash mobilization and repayments due to the extreme poverty prevailing there. Again in the rural areas their main business is farming which also depends on the weather which cannot be predicted with certainty. So we try to balance this risk with other ventures we consider less risky''

8.2.5 Access to alternative sources of funding of MFI's

Funding is critical to the activities of micro finance; and it is therefore necessary that MFIs have access to other sources of finance well after their startup for sustainability. The researchers therefore asked the MFI's whether they had access to alternative sources of funds. In response whilst 85 (74.6%) affirmed that they had other sources of funds, 29 (25.4%) stated that they had no alternate sources of funding. Thus the majority of the MFIs had access to alternative sources of finance apart from their startup capital. Apart from the Savings and Loans, the Susu institutions and a few FNGOs all responded that they do benefit from overseas grants and sometimes from government sources.

8.2.6 MFI's Information Gathering

Table 8.5: Volume of information on clients

Volume of information	Frequency	Percent
Just Enough	25	21.9
Enough	67	58.8
A lot	22	19.3
Total	114	100.0

It appears the MFIs had adequate information about their clients. In response to the question as to how much information the MFIs had about their clients, 58.8% indicated enough, 19.3% intimated that they had a lot of information whilst 21.9% stated they had enough information about their clients. Thus, the majority of the MFIs had adequate information about their clients.

Table 8.6: Source of information on clients

Source of information	Frequency	Percent
Personal volunteering	5	4.0
Visit to clients and group members	100	88.0
Other sources (opinion leaders, etc)	9	8.0
Total	114	100

On how they obtained information about their clients, 100 (88.0%) of the MFI's indicated that they do so through visit and from the group members which the clients belong. Only 5 (4.0%) stated that they obtained information on their clients through personal volunteering by the clients (Table 8.7).Thus the use of group collaterals guaranteed the MFI's access to adequate information about their clients. This is how one Chief Executive Officer responded to the question of how they obtain information about their clients:

> '' As part of the feasibility studies, we sometimes go to market queens, chiefs, opinion leaders and the clients themselves. When we talk to them they are able to come up with some few tips or they may even direct you to somebody who will have certain information about certain people.''

8.3 Hypotheses testing on impact of institutional characteristics on Sustainability of MFI

In order to ascertain the importance of institutional characteristics as reported by Meyer (2002) and Armandariz de Aghion and Morduch (2005), the research question posed was, what were the major characteristics of the firm that impact on sustainability and success of MFIs? For the purpose of detailed analysis, institutional characteristics were decomposed into six major factors namely ownership, geographical spread, motivation of the MFI, clientele type, alternative funding and quality of information gathering. As a result of this, six hypotheses were postulated and tested on institutional characteristics and the sustainability of the MFI's.

8.3.1 Type of ownership and Sustainability of MFI's

The type of ownership of MFI's may impact on their sustainability in diverse ways, but more positively especially where the ownership is foreign and from a developed rather than from a developing country. The foreign owned MFI's may bring to bear the benefits of highly skilled personnel, access to and regular inflow of large capital, technology, among others compared to a wholly owned local MFI. It was therefore hypothesized that:

H (1a) If the ownership of a microfinance institution in sub-Saharan Africa is foreign, then sustainability factors will significantly increase.

Table 8.7: Type of MFI ownership and sustainability of MFI

Type of MFI ownership	Sustainability of MFI		Total
	Yes	No	
Local	26 (24.5%)	3 (37.5%)	29 (25.4%)
Foreign	63 (59.4%)	4 (50.0%)	67 (58.8%)
Both	17 (16.0%)	1 (12.5%)	18 (15.8%)
Total	106 (100%)	8 (100%)	114(100%)

X^2=0.664 , df=2, p=0.718

The results in Table 8.8 shows no significant (X^2=0.664, df=2, p>0.05) relationship between type of MFI ownership and sustainability. It was observed that more MFI's that were foreign owned (59.4%) were more likely to remain in business than their counterparts that were locally owned (24.5%). In contrast, among the MFIs that were not likely to remain in business, 50.0% were foreign owned whilst 37.5% were locally owned. In effect, sustainability of the MFIs was not significantly dependent on the type of ownership. Therefore at the 0.05 level, *the hypothesis that if the ownership of a microfinance institution in sub-Saharan Africa is foreign, then sustainability factors will significantly increase was not supported.*

8.3.2 Increased lending by MFI's and sustainability

The impact of increased lending by the MFI on the sustainability and success was also investigated. Increased lending was used as a measure of the MFIs ability to boost their income. In line with this it was hypothesized that:

H(1b): If microfinance institutions commit more funds to lending then sustainability factors will significantly increase.

Table 8.8: Propensity to commit more funds to lending and sustainability of MFI

Propensity to commit more funds to lending	Sustainability of MFI		Total
	Yes	No	
Yes	88 (83.0%)	8 (100%)	95 (84.1%)
No	18 (17.0%)	-	18 (15.9%)
Total	106 (100%)	8 (100%)	114 (100%)

X^2=1.631, df=1, p=0.202

The results in Table 8.8 show the propensity of MFI's to commit more funds to lending and their possible sustainability. It can be observed that the majority (83.0%) of the MFI's with propensity to commit more funds to lending were more likely to remain in business. Contrary to expectation, all the MFIs who were perceived as not sustainable (8) were ready to commit more funds to lending; probably due to the increasing bad debts. The tests result revealed no significant relationship between the propensity to commit more funds to lending and the sustainability of the MFI (X^2 = 1.631, df = 1, p> 0.05). Therefore at 95% significance level, *the hypothesis that if microfinance institutions commit more funds to lending then sustainability factors will significantly increase was not supported.*

8.3.3 Motivation of the MFI's and sustainability

The fundamental principle underlying the establishment of microfinance is poverty alleviation and economic empowerment through the provision of small loans especially among rural dwellers. The study therefore investigated the reason for establishing the MFI's and it was hypothesized that:

H (1c): If the motivation of the MFI is to grow and empower the poor is high then sustainability activities will significantly increase.

The results in Table 8.9 show the relationship between the motivation of the MFI to grow and empower the poor and the sustainability of the MFI.

Table 8.9: Motivation to grow and empower the poor and sustainability of MFI

Motivation for setting up MFI	Sustainability of MFI		Total
	Yes	No	
Business development	16 (15.1%)	-	16 (14.0%)
Poverty alleviation	54 (50.9%)	-	54 (47.4%)
To help women	24 (22.6%)	8 (100%)	32 (28.1%)
Provide training in SME	12 (11.3%)	-	12 (10.5%)
Total	106 (100%)	8 (100%)	114 (100%)

X^2=22.05, df=3, p=0.05

It can be observed that whilst the majority (50.9%) of the MFI's who were motivated to grow and empower the poor were perceived as sustainable, and those MFI's who were not motivated to grow and empower the poor were perceived as not sustainable. Eight (8) MFIs were perceived as not sustainable but were motivated to grow and empower women. The chi-square test yielded X^2 =22.05, df=3, $p<0.05$. This means that there was a significant relationship between the motivation of the MFI to grow and empower the poor and the sustainability of the MFI. Thus, those MFI's who were motivated to grow and empower the poor were not likely to collapse. Therefore at the 0.05 level, *the hypothesis that if the motivation of the MFI is to grow and empower the poor is high then sustainability activities will significantly increase was supported.*

8.3.4 Clientele type and Sustainability of MFI's

The sustainability and success of MFI's to some extent depends on the ability of the clients to pay back their loans. As a result MFI's prefer clients whose economic activities were less risky and predictable. It is therefore not surprising that the majority of MFI's is pro-urban rather than pro-rural; and also prefer urban traders

to clients (such as farmers) whose economic activities are unpredictable and depended on natural environmental or weather conditions. It was therefore hypothesized that:

H (1d): If MFI's lending to traders is high then sustainability factors will significantly increase.

Table 8.10: Clientele type and sustainability of MFI

Type of clients	Sustainability of MFI		Total
	Yes	No	
Farmers	9 (8.5%)		9 (7.9%)
Farmers and traders	28 (26.4%)	8 (100%)	36 (31.6%)
Farmers, traders & artisans	8 (7.5%)	-	8 (7.0%)
All	10 (9.4%)	-	10 (8.8%)
Traders	29 (27.4%)	-	29 (25.4%)
Traders and artisans	10 (9.4%)	-	10 (8.8%)
School youth savings clubs	2 (1.9%)	-	2 (1.8%)
Government Employees/other salaried workers	10 (9.4 %.)	-	10 (8.8%)
Total	106 (100%)	8 (100%)	114 (100%)

X^2=21.12, df=7, p=0.012

Lending to traders alone accounted for over a quarter (25.4%) of the responses on the clientele type of the MFIs. The results in Table 8.10 further show that a little over half of the MFIs who were perceived as sustainable were those who lend to traders (27.4%). There were eight (8) MFIs who were perceived as not sustainable and who had farmers and traders as their clientele. A cursory look at the results also shows that traders were the dominant clientele of the MFIs. The test results revealed that sustainability was significantly (X^2=21.12, df=7, p=0.012) tied to the clientele type (specifically traders). Therefore at the 95% significance level, *the hypothesis that if MFI's lending to urban traders is high then sustainability factors will significantly increase was supported.*

8.3.5 Alternative source of finance and Sustainability of MFIs

In developing countries, access to capital and funding for business operation has long remained a crucial factor to the performance and sustainability of businesses. And for an MFI, access to large capital base, will obviously impact positively on the level and depth of outreach. In line with this it was hypothesized that:

H (1e): If MFI's have access to alternative source of finance, then their sustainability will significantly increase.

Table 8.11: Access to alternative source of finance and sustainability of MFI

Access to alternative source of finance	Sustainability of MFI		Total
	Yes	No	
Yes	77 (72.6%)	8 (100%)	85 (74.6%)
No	29 (27.4%)	-	29 (25.4%)
Total	106 (100%)	8 (100%)	114 (100%)

X^2=2.94, df=1, p=0.087

The results in Table 8.11 show that 72.6% of the MFIs who had access to alternative source of finance were perceived as sustainable. Also, all the MFIs who had alternative sources of funds and yet believed that they were not sustainable (8); was probably due to uncertainty about their continuous donor funding. The test results revealed that sustainability of MFI was not significantly dependent on access to alternative sources of finance (X^2=2.94, df=1, p=0.087). Thus, at the 95% significant level*, the hypothesis that if funding of MFI's increase, then their sustainability will significantly increase was not supported.*

8.3.6 Information Gathering and Sustainability of MFI's

The quality of information gathered by MFI's on their clientele help in determining borrower characteristics, risk projection, loan monitoring and verification of the level of returns on credit facilities granted to the clients. The information gathering processes and verification procedures of MFI's are therefore very crucial since it is the first and main source of contact between the MFI's and their clients. Though it behoves on the client to provide very detailed information about themselves when accessing credit facilities, it is equally important that the MFI's have very robust procedures or mechanisms for verifying the information provided by their clients. In line with this, it was hypothesized that:

H (1f) If MFI's obtain enough information about their clients, then sustainability factors will increase.

Table 8.12: Adequacy of clients' information and sustainability of MFI

Adequacy of clients' information	Sustainability of MFI		Total
	Yes	No	
Just enough	17 (16.0%)	8 (100%)	25 (21.9%)
Enough	67 (63.2%)	-	67 (58.8%)
A lot	22 (20.8%)	-	22 (19.3%)
Total	106 (100%)	8 (100%)	114 (100%)

X^2=30.63, df=2, p=0.000

Clearly, the majority (63.2%) of the MFIs who obtained enough information about their clients were perceived as sustainable. Also the entire MFIs (8,100%) who obtained just enough information about their clients were perceived as not sustainable (Table 8.12). The test results revealed that sustainability was significantly dependent on adequacy of client's information (X^2 =30.63, df=2, p=0.000). Therefore at the 95% significance level, *the hypothesis that if MFI's obtain enough information about their clients, then sustainability factors will increase was supported.*

8.4 : Summary for Hypotheses on Institutional Characteristics

Hypotheses	Impact on sustainability of MFI	Test Results
H (1a) If the ownership of a micro financial institution in sub-Saharan Africa is foreign, then sustainability factors will significantly increase.	Positive	Not significant
H (1b) If microfinance institutions commit more funds to lending then sustainability factors will significantly increase.	Positive	Not significant
H (1c) If the motivation of the MFI is to grow and empower the poor is high than sustainability activities will significantly increase.	Positive	significant
H (1d): If MFI's lending to traders is high then sustainability factors will significantly increase.	Positive	significant
H (1e): If MFI's have access to alternative sources of funds, then their sustainability will significantly increase.	Positive	Not significant
H (1f) If MFI's obtain enough information on clients, then sustainability factors will increase.	Positive	significant

8.5 CONCLUSION

This chapter covered descriptive analysis of the following characteristics of institutions engaged in microfinance: ownership, more funding, motivation for setting up, lending, alternative funding and information gathering. The various hypotheses relating to institutional characteristics were also tested and a summary of the result tabulated under section 8.4.

On ownership of MFIs, it became evident that ownership type was not extremely important in the sustainability of MFIs. On whether committing more funds will ensure sustainability while 88 (83.0%) agreed that it will lead to sustainability, 18 (17.0%) said it will not necessary lead to sustainability. Most of the Executives considered poverty alleviation as their primary motive and also affirmed that they were sustainable.

The single most dominant clientele were traders (27.4%) and even though all the MFIs agreed it was a more favoured area and critical for sustainability. On alternate sources of finance, though critical to the operations of MFIs, was considered as not too critical to the sustainability of MFIs, so also was information on clients.

CHAPTER NINE

AGENCY COSTS AND SUSTAINABILITY OF MFI'S

9.1 Introduction

This chapter focused on the analysis of data on agency cost of the MFIs. This covers the MFI's contractual agreements with clients and the nature of the agreement, and the number of branches across the country. It also looks at the results of the hypotheses on the impact of agency cost on the sustainability of the MFI's.

9.2 Descriptive Analysis of Agency Costs of the MFI'S

The descriptive analysis covers the various sources of income or financing relied upon by the MFI's, subsidy dependence, depth and breadth of operations in terms of number of branches, contractual agreements, screening and the twin issues of screening and selection (that is dealing with moral hazard and adverse selection), and enforcement (that is dealing with repayment and default rates).

9.2.1 Other Sources of Income

When asked whether they engaged in other income generating activity such as investments, apart from their core activity, 85 (74.6%) answered in the affirmative (Table 9.1). They explained that due to the need to meet statutory liquidity requirements, and the need to pay competitive interests on members' savings and shares, they engage in other income investment activities to increase their income. On the other hand 29 (25.4%) of the MFI's indicated that they do not engage in other income generating activities, because they want to concentrate on their core business

and focus on what they do better as organizations whose mission is to help to reduce poverty.

Quizzed as to whether engaging in other income generating activities and creating job opportunities were strategies to reduce risks, 90.9% as against 9.1% answered in the affirmative. Thus, the majority of the MFI's who engage in other income generating activities do so as a measure reduce risk.

Table 9.1: Alternative sources of Income

Other Sources of income	Frequency	Percentage
Yes	85	74.6
No	29	25.4
Sometimes	-	-
Total	114	100.0

The confirmation of generating more income apart from the on-lending rate are, captured in two quotes below by two Chief Executives during the exploratory research:

''Yes apart from on-lending interest we also get commissions and fees. We earn interest from the deposits we mobilize from our clients and the public for our bank. You see apart from the fact that they are sponsoring us we earn commission on the funds we mobilize for them''.

'' Sometimes we also look at business ventures that are very lucrative. When the people come to us to take money to do business, in course of interviewing and interacting with them , we get to know areas that are good for business and we either go in also or we collaborate with them to invest more''

Quizzed as to whether engaging in other income generating activities and creating job opportunities were strategies to reduce risks, 90.9% as against 9.1% answered in the affirmative. Thus, the majority of the MFI's who engage in other income generating activities do so as a measure to reduce risk.

9.2.2 Investments in Financial Securities

Responding to a question on the investments in financial securities, only 43 (37.7%) of the MFIs indicated that they engaged in investments such as treasury bills. The data on the rate of investments (Table 9.2) indicated that the majority (68.3%) of those MFIs who invested in treasury bills did so very often (every 3 months on the average).

Table 9.2: Investment in Financial Securities

Response	Frequency	Percentage
Yes	28	68.3
No	8	19.5
Sometimes	5	12.2
Total	43	100.0

On the other hand, the majority of the MFIs that is 71 (62.3%) stated that they did not invest in financial activities. Thus, investment in financial securities were not a priority of the majority of the MFI's as a means of raising extra income to support their micro financing activities. Those MFIs who invested in financing activities advanced reasons such as the need to meet some of their operational costs. Some of the MFIs (Rural banks) are required by regulation to invest a certain percentage of their mobilizations in treasury bills. This is what one Chief Executive said during the exploratory research:

'We invest in treasury bills and term deposits as a backup for us to fall on in any emergency situation. We however ensure that we always have enough funds to meet the demands of our clients''.

9.2.3 Level of Subsidy Dependence

When the respondents were asked to rate their institutions' dependence on subsidies from donors, 36.8% stated highly and 19.3% described it as average. (Table 9.3).

Table 9.3: Level of Subsidy Dependence

Level of Subsidy	Frequency	Percentage
Never	21	18.4
Rarely	6	5.3
Low	19	16.7
Average	22	19.3
Highly	46	40.4
Total	114	100.0

The results in Table 9.3, thus show that the majority of the respondents rated their institution's dependence on subsidies from donors between average and high. This confirms an earlier observation that donor funds were the major source of funds for the majority of the MFIs. (Chapter 7 SDI). This is one of the comments on level of subsidy by one Chief Executive:

''There are no subsidies for the individual credit unions. But the apex body yes. I will say from 1970 to 1983 we were supported by so many agencies, especially Konrad Foundation. But in 1983 they pulled out because they thought we were self-sufficient, which was not the case, so it failed. It almost went into liquidation. In 1988 the Canadians came in, I mean the Canadian Cooperative Association. They became our major donors and in 1994 they went into bilateral programme with the Government of Ghana to revive credit unions in Ghana. At this point in time credit union started growing in Ghana. They also ended the project in 2001 at which time CUA was about 60% self-sufficient and the other 40% we had to struggle for it. But now I can say we are about 90% self-sufficient.''

Further analysis revealed that the sustainability of the MFIs was tied to subsidy from donors. (X^2=19.08, df=8 and $p<0.05$).

Table 9.4: Level of Subsidy dependence and level of sustainability of MFI

Level of Subsidy dependence	Level of Sustainability of MFI			Total
	Successful	Moderately successful	Fairly successful	
Never	15 (26.3%)	6 (11.8%)	-	21 (18.4%)
Rarely	6 (10.6%)		-	6 (5.3%)
Low	6 (10.6%)	11 (21.6%)	2 (33.3%)	19 (16.7%)
Average	7 (12.3%)	12 (23.5%)	3 (50.0%)	22 (19.3%)
Highly	23 (40.4%)	22 (43.1%)	1 (16.7%)	46(40.4%)
Total	57 (100%)	51(100%)	6 (100%)	114 (100%)

It must be noted that the successes in terms of achievements made so far by the MFIs relate more to the provision of startup capital for the MFIs to begin operations. Beyond this, one would expect that the MFIs would operate profitably and be self financing for sustenance instead of continuing to rely on subsidy from donors for sustaining their operations.

It was felt that the reasons why the MFIs were highly dependent on subsidy from donors were because most of the MFIs were foreign owned or partnered by foreign micro financing agencies or investors; and as a result their main source of finance was subsidy from donors. It was not clear how long the MFIs would be dependent on subsidies from donors and governments.

9.2.4 Subsidy Exit Plans

It was expected that the MFIs will rely on subsidies from donors for success for a while and enhance their services to become profitable and exit subsidy, but this was not the case with the MFIs studied. The data for the study revealed that only 39 (34.2%) of the MFIs had plans of exiting the subsidy dependence from donors. The measures to exit subsidy included expanding the clientele base (20.5%), rely on on-lending funds (41.0%), motivating staff to increase productivity (23.1%), formation

of credit union and investing in central finance facility for liquidity support (Table 9.5).

Table 9.5: Measures to exit subsidy dependence

Exit plans	Frequency	Percentage
Expanding the clientele base	8	20.5
Better monitoring and screening	4	10.3
Investing in central finance facility	2	5.1
Investing idle funds in securities	9	23.1
Motivating staff to increase productivity	16	41.0
Total	39	100.0

On the other hand, 48 (42.1%) of the MFIs who were dependent on subsidies from donors indicated that they had no plans to break the chain of the subsidy dependence, whilst the remaining 27 (23.7%) MFIs were those who did not or rarely depended on subsidy. The question that comes to mind is whether indeed the majority of the MFIs would survive if donor funds cease.

One of the Chief Executives interviewed had this to say:

‘*’We have almost exited. We have a way of sustaining ourselves. We have an insurance product which insures all members’ savings and loans and the premiums also support our operations. We have central finance facility and every CUA is required to deposit 5% of their collections with us so we can invest it to support the national association. We also have training departments which provides training at a fee. We also have audit department who provide services to Government for a fee. The major income is from the central finance facility and the insurance products. We charge them dues of one (1) Ghana cedi per member which is now accounting for 7% of our total income.’’*

9.2.5 Nature of Relationship with Clients

On their relationship with clients, the respondents made positive remarks. The entire respondents either described their institutions relationship with their clients as cordial, very good or normal. This indicates that there was a positive relationship between the MFI's and their clients. One Chief Executive had this to say during our exploratory research:

''We have a very good relationship with our clients. Our members are our priority that is why we always seek to satisfy them. When they apply for loans we grant it in less than 48 hours. It is not only loans, some people want good interest rates on their savings so we try to match the treasury bill rate or slightly below it.''

9.2.6: Depth of Information about Clients

It appears the MFIs had adequate information about their clients. In response to the question as to how much information they had about their clients, 54.4% indicated a lot and 37.70% stated they had enough information about their clients whilst 7.9% indicated that they had just enough information about their clients.

Table 9.6: Depth of Information about Clients

Depth of information	Frequency	Percentage
Little	-	-
Just Enough	9	7.9
Enough	43	37.7
A lot	62	54.40
Total	114	100.0

Thus, the majority of the MFIs had adequate information about their clients.

9.2.7 Methods of sourcing clients' information

On how they obtained information about their clients 88.0% of the MFI's indicated that they do so through visits and from the group members which the clients belong. Only 8.0% stated that they obtained information on their clients through tour of their catchment areas (Table 9.7).

Table 9.7: Depth of Information about Clients-Methods of sourcing

Methods of sourcing information	Frequency	Percent
Initial interviews	5	4.0
Tours	9	8.0
Visits from Group members	100	88.0
Total	114	100.0

Thus the use of group collaterals guaranteed the MFI's access to adequate information about their clients.

9.2.8 Contractual Agreement with Clients

When the MFIs were asked if they enter into contractual agreements with their clients, all the MFIs said they had one form of contract or another with the clients. The nature of these contracts is shown in Table 9.8.

Table 9.8: Nature of Contractual agreement with clients

Nature of Contractual agreement	Frequency	Percentage
Group collateral	19	19.2
Loan contract	15	15.2
Legal contracts	39	39.4
Loan repayments contracts	17	17.2
Clients savings contract	9	9.1
Total	99	100.0

Thus the majority of the MFIs enter into diversified contracts with their clients all aimed at enforcing repayments and reducing default rates.

9.3 Hypotheses testing on impact of Agency Cost on Sustainability of MFI

In an attempt to understand accurately how agency cost influence the sustainability of the MFI's, the question posed was; which agency cost factors impact significantly on the sustainability of MFI's. In an attempt to answer this question five hypotheses (H2a, H2b, H2c, H2d and H2e) were postulated and tested. The construct for agency cost were alternative sources of income, subsidy dependence, number of branches, contractual agreements and lender-borrower relationship.

9.3.1 Alternative Sources of Income and Sustainability of MFIs

Critical to the sustainability of any organization is its ability to raise enough revenue to support its activities. According to Schreiner (2000) an MFI that is unable to generate enough revenue will collapse quickly after donor withdrawal. Even in the midst of permanent subsidy, increased revenue generation by an MFI will help increase outreach and expand its operations, enhance its sustainability and to provide for its target clients and ultimately reduce poverty. It was therefore hypothesized that: "*If sources of income for MFI's increase, then their sustainability will also increase*".

The results in Table 9.9 show the relationship between availability of alternative sources of income and the sustainability of the MFI's. It can be observed that for those MFI's that increased their sources of income, their sustainability was enhanced.

Table 9.9: Alternative source of finance and sustainability of MFI

Alternative source of finance	Sustainability of MFI		Total
	Yes	No	
Yes	77 (72.6%)	8 (100%)	85 (74.6%)
No	29 (27.4%)	-	29 (25.4%)
Total	106 (100%)	8 (100%)	114 (100%)

The majority (72.6%) of the MFIs who did not have access to alternative sources of income were perceived as sustainable compared to those who had access to alternative sources of finance (27.4%). Though the sustainability of the MFIs was found to be significantly dependent on the availability of alternative sources of finance apart from on-lending interest (X^2=2.94, df=1 and p>0.05) this result was contrary to what was expected. Thus, sustainability was not necessarily dependent on access to alternative sources of income by engaging in other income activities. Therefore, at the 95% significance level, *the hypothesis that if the sources of income for MFIs increase then their sustainability will also increase was not supported.*

9.3.2 Subsidy Dependence and Sustainability of MFIs

Even though Zeller and Meyer (2002) argued that financial self-sufficiency should be the objective of MFIs, they further stated that financial support and public subsidization may be justified if it is determined that it is the most cost-efficient method to reduce poverty. And Armendariz de Aghion and Morduch (2005) also state that much of the microfinance movement continues to take advantage of subsidies from donors and governments; meaning MFIs are largely dependent on subsidy. In line with this it was hypothesized that "*If subsidy dependence among MFI's is high then their sustainability will also increase*".

In an attempt to ascertain the implications of subsidy dependence on the sustainability of the MFIs, the results in Table 9.10 were obtained. It can be observed that about 2 out of 5 MFIs (42.5%) who were highly dependent on subsidy were perceived as sustainable.

Table 9.10: Level of Subsidy dependence and sustainability of MFI

Level of Subsidy dependence	Sustainability of MFI		Total
	Yes	No	
Never	21 (19.8%)	-	21 (18.4%)
Rarely	6 (5.7%)	-	6 (5.3%)
Low	12 (11.3%)	7 (87.5%)	19 (16.7%)
Average	22 (20.8%)	-	22 (19.3%)
Highly	45 (42.5)%	1 (12.5%)	46 (40.4%)
Total	106 (100%)	8 (100%)	114 (100%)

Clearly, the majority of the MFIs were highly or averagely dependent on subsidy were perceived as sustainable. The results thus show a significant relationship between sustainability of the MFIs and level of subsidy dependence (X^2=31.25, df=4, $p<0.05$). Thus, MFIs who were highly dependent on subsidy from donors and governments were sustainable. Therefore at 95% significant level, *the hypothesis that if subsidy dependence among MFI's is high then their sustainability will also increase was supported.*

9.3.3 Number of branches and Sustainability of MFIs

Business expansion is considered a measure of growth and sustenance on the basis of increased number of clientele and hence more businesses. Therefore in an attempt to ascertain whether the number of branches impact on sustainability, it was hypothesized that: "*If MFI's increase their branches, then their sustainability will increase*".

The results in Table 9.11 show the relationship between number of branches nationwide and sustainability of the MFIs. It can be observed that most 62 (58.5%) of the MFIs did not have branches nationwide they were still perceived as sustainable. (Refer Appendix K).

Table 9.11: Availability of branches nationwide and sustainability of MFI

Availability of branches nationwide	Sustainability of MFI		Total
	Yes	No	
Yes	44 (41.5%)	8 (100%)	52 (41.5%)
No	62 (58.5%)	0	62 (58.5%)
Total	106 100%)	8 (100%)	114 (100%)

The data clearly revealed no significant relationship between availability of branches nationwide and sustainability (X^2=0.827, df=1 and p>0.05). Thus, the sustainability of an MFI was not dependent on the number of branches it has nationwide. Therefore, at the 95% significance level, *the hypothesis that if MFI's increase their branches, then their sustainability will increase was not supported.*

9.3.4 Contractual Agreements and Sustainability of MFIs

Typical of the lending-borrowing activities is the issue of contract agreement which form the basis of the lending. The contract agreement usually spells out all the terms and conditions or duties and responsibilities of both parties and the implications in case of violation of the agreement. Critical to the lender-borrower agreement on the part of the MFIs is the rigid enforcement of contract agreements which is expected to impact on the performance of the MFI. In line with this it was hypothesized that: "e*nforcement of rigid contractual agreements would lead to increased sustainability of MFI's".*

The assertion that enforcement of rigid contractual agreements would lead to increased sustainability was found to be true. From Table 9.12, it is obvious that those MFI's who enforced rigid contractual agreements were more likely to remain in operation for the next few years as opposed to those who did not rigidly enforce contractual agreements.

Table 9.12: Enforcement of rigid contract agreements and sustainability of MFI

Enforcement of rigid contract agreements	Sustainability of MFI		Total
	Yes	No	
Yes	89 (84.0%)	8 (100%)	97 (85.1%)
No	17 (16.0%)	-	17 (14.9)
Total	106 (100%)	8 (100%)	114 (100%)

Thus the sustainability of the MFIs was not necessarily and significantly dependent on the enforcement of rigid contractual agreements (X^2=1.51 df=1 and p>0.05). Therefore at the 95% significance level, *the hypothesis that enforcement of rigid contractual agreements would lead to increased sustainability of MFI's was not supported.*

9.3.5 MFIs-Clients Relationship and Sustainability

It is believed that customer relationships are critical for the success of organizations; and especially in micro financing, trust and tact are key drivers. Indications are that if clients are handled with utmost professionalism their level of assurance increases and sense of recognition is enhanced. Therefore in an attempt to understand how lender-borrower relationship impacts on the performance of the MFIs, it was hypothesized that: "*Improved lender-borrower relationship will increase sustainability of MFI's".*

The results in Table 9.13 show the relationship between the data on lender-borrower relationship and sustainability of the MFIs. It can be observed that the majority (57.5 %) of the MFIs who had very good relationship with their clients were perceived as sustainable.

Table 9.13: Nature of MFIs-Clients Relationship and sustainability of MFI

Nature of MFIs-Clients Relationship	Sustainability of MFI		Total
	Yes	No	
Normal	61 (57.5%)	-	61 (53%)
Good	13 (12.3%)	8(100%)	21 (18.4%)
Cordial	6 (5.7%)	-	6 (5.3%)
Very cordial	26 (24.5%)	-	26 (22.8%)
Total	106 (100%)	8(100%)	114(100%)

The results revealed a very significant relationship between lender-borrower and sustainability of MFI (X^2=38.1 df=3 and p<0.05). Thus the sustainability of the MFIs was significantly dependent on improved relationship with their clients. This means that the better the relationship between the MFIs and their clients, the better their sustainability through repeat borrowing and referrals of prospective clients. Therefore, at the 95% significant level, *the hypothesis that improved lender-borrower relationship will increase sustainability of MFI's was supported.*

9.4: Summary Table for Hypotheses on Agency Cost on Sustainability

Hypotheses	Impact on sustainability of MFI	Test Results
H (2a): If sources of income for MFI's increase, then their sustainability will also increase.	Positive	Not significant
H (2b) If subsidy dependence among MFI's is high then their sustainability will also increase.	Positive	significant
H (2c) If MFI's increase their branches, then their sustainability will increase.	Positive	not significant
H (2d) Enforcement of rigid contractual agreements would lead to increased sustainability of MFI's	Positive	not significant
H (2e) Improved lender-borrower relationship will increase sustainability of MFI's	Positive	significant

9.5 Conclusion

This chapter covered descriptive analysis and discussions of findings of agency costs and sustainability of MFIs. The summary of the results is tabulated under section 9.4.

A number of Executives especially from the FNGOs and the Rural Banks rated subsidy as important in sustainability of MFIs. Almost all Executives did not consider rigid enforcement of contractual agreements but considered cordial lender-borrower relationship as critical in the delivery of microfinance.

CHAPTER TEN

BUSINESS STRATEGY AND SUSTAINABILITY OF MFI'S

10.1 Introduction

This chapter looks at the analysis of data on the business strategies adopted by the MFIs and how it impacts on their success and sustainability. Although Smallbone (1993) posits that there is no single type of strategy which is associated with business growth, this study focused on certain management actions taken to influence its environments. The first part of the chapter thus looks at the descriptive analysis of business strategies of the MFI whilst the second part looks at the results of the hypotheses and how the business strategies impact on the sustainability of the MFIs.

10.2 Descriptive Analysis of business strategy

The descriptive analysis covers the business strategies of the MFIs namely screening, use of group collateral, meetings with clients, measures for handling defaulters, peer monitoring and innovations in financial products.

10.2.1 Screening of Clients

In response to the question as to whether the MFIs have any screening mechanisms in place, 92.1% answered in the positive whilst 9 (7.9%) answered in the negative. Those who did not have any structured or formal screening mechanisms in place were mostly the Susu operators, the credit unions and a few FNGOs. They gave various reasons. Regarding the Susu operators they contended that the clients were mostly market women who were known by their peers and they also reside within the same community and therefore there was no need for any form of rigid screening. The credit unions gave reasons to the effect that the clients were mostly members of

staff in a particular organization and were known. Again, in the event of default or the client disappearing, they can fall on their end of service benefits. The results in Table 10.1 show the various screening mechanisms used by the majority of the MFIs.

Table 10.1: Screening Mechanism used by MFIs

Type of Screening Mechanism	Frequency	Percent
Background check	68	60.0
Business inspection	23	20.0
Interview/Verification	23	20.0
Total	114	100.0

It can be observed that a background check (60.0%) was the main screening mechanisms used by the MFIs. When asked whether the screening mechanism differed from sector to sector, 91.7% answered in the affirmative as against 8.3% who stated otherwise. Those who had sector-specific screening mechanisms explained that it was so because their activities vary from sector to sector. During the exploratory research, one Chief Executive had this to say;

''We have a stringent form of screening. We use our epicenters and the loan committees to weed out those we perceive as not credit worthy. And because we deal with all kinds of people who do different kinds of work, we are careful how we apply the screening mechanism. But generally it is about the same with slight modifications depending on the person, the work he or she does and the peculiar circumstance.''

Another Chief Executive had this to say;

We check your (client) family background, where you live and what you do for a living before we disburse loan''

10.2.2 Annual loan disbursements to clients

The results in Table 10.2 show the statistics of the loan disbursed by the MFI to the various clientele.

Table 10.2: Statistics of annual loan disbursement to clients (GH C)

Type of Clients	Min	Max	Mode	Average
Farmers	100	14,600	200	4,220
Traders	100	32,600	1,500	11,306
Artisans	100	68,300	3,000	8,911
Fisherman	500	17,200	500	5,550
Others (salaried workers)	500	17,200	500	2,000

It can be observed that loans disbursed to farmers ranged between GH¢100 - GH¢ 14,600 per annum with an annual average of GHC 4,220. According to the MFI's the amount disbursed was informed by the fact that farming activities were annual and dependent on sale of farm produce. Above all, farmers sometimes had problems acquiring land for farming. These made it difficult and risky to grant bigger loans to farmers.

Trading activities however attracted the highest annual loans disbursed of 32,600. This was because the loans were of short term, of up to six months durations, payments were prompt among traders and the risk of default was low particularly because the loans are usually for expansion or to take advantage of a coming festivity where buying and selling is likely to boom rather than as startup capital as in the case of farming.

Annual total loans disbursed to artisans was among the second highest, ranging between GH ¢100 - GH ¢ 68,300. This was because few women were artisans, payments were prompt since loans were of short duration and the facilities were mainly for buying inputs. For fishermen, annual total loans disbursed ranged

between GH ¢500 - GH ¢17,200 with an annual average of GH ¢5,550. This was because duration of the loans was short - up to 9 months and payments were made from sales made after each fishing expedition or fishing season.

The group of clients that receive the least annual total loan of only GH ¢5,000 were salaried workers. This was because their loans were of short duration; maximum nine (9) months and the loans were usually for emergencies such as payment of school fees, rent advance or payment of utility bills when faced with disconnection by utility service providers such as water and electricity. Generally, the highest total annual loan was disbursed to traders whilst the least amount of loans were disbursed to salaried workers.

10.2.3 Collateral

In response to the question whether the MFI's use group guarantee for lending, 83(73.2%) answered in the affirmative (see Table 10. 3 for the nature of collateral).

Table 10.3: Nature of collateral

Nature of collateral	Frequency	Percent
Cash balance in account	16	13.2
Compulsory savings/deposit mobilization	11	10.1
Physical asset	4	3.5
Group guarantee	83	73.2
Total	114	100.0

On the other hand, the few (26.8%) who indicated that they did not use group as collateral stated that property and staff recognition rather than group membership was used as collateral for lending. The FNGOs mostly used group guarantee as collateral, so that in the event that a member of a group defaults the remaining group members will be asked to pay the defaulted amount on behalf of the member. They

sometimes demand a guarantor. One Chief Executive had this to say during the exploratory research:

‘’We use the group liability concept mostly in the farming areas. But for the individual we also ask for someone to guarantee for you. Someone known to us already’’

The Savings and Loans institutions use compulsory savings and deposits while the rural banks used the cash balance in the account of the client as a guarantee. The Susu organizations sometimes demand physical assets as collateral before loans are disbursed to clients.

10.2.4 Meetings with clients

The entire MFI’s described their level of interaction with the group clients as frequent and also affirmed that they were very much involved in group activities. The entire MFI’s also, affirmed that they had regular meetings with their clients. When the respondents were asked how often they had meetings with their clients; the results in Table 10.4 were obtained.

Table 10.4: Meeting with clients

Frequency of meeting with clients	Frequency	Percent
1 month	9	8.0
2 Week (fortnightly)	14	12.0
1 Week (weekly)	91	80.0
Total	114	100.0

It can be observed that 80% of the MFI’s met their clients weekly, 12.0% met them fortnightly whilst a further 8.0% also met monthly. Thus, the majority of the MFI’s met with their clients frequently. The MFI’s indicated that they spent between 10 minutes to 30 minutes or average of 20 minutes during their meetings with clients.

Most of them explained that they did not take much of the time of the clients so as to allow them to go back to their places of work especially the traders and the farmers. Even with the salaried office workers, the MFIs stated that they did not spend too much time with them so as not to take their office hours.

This is what one Chief Executive said during the exploratory survey:

'' Our clients are mostly traders and farmers who have very little at their disposal. You see they also not too interested in long speeches as they see that waste of precious hours when they could be doing something productive to be able to pay back the loan they have taken. I will tell you of an experience we had at one of our centres. When we started there the attendance at our regular meetings was almost always 100%. With the passage of time the attendance started dropping. Some will not come but will send their regular cash repayments through the few who will come. When we investigated the gradual reduction in meeting attendances, they did not hesitate to tell us the meetings took too much of their time. When we agreed to limit the regular meetings to 20 minutes every two weeks the numbers increased again. You see they are not interested in long speeches''

10.2.5 Purposeful use of loan and monitoring

On how the MFI's ensure that clients use credit facilities for the purposes for which the loans were acquired the respondents mentioned that through discussions and report on activities, they were able to ensure adherence to the purposeful use of credit facilities by clients. Also by providing training for the client and regular field monitoring, the MFI's were able to ensure that borrowers used credit for purposes for which the loans were granted.

When the respondents were asked whether they were personally involved in monitoring clients, 40% answered in the affirmative and explained that the purpose of the personal monitoring of clients was to ensure repayment. Thus, 60% of the

respondents were not directly involved in monitoring of clients; this was perhaps because the majority were top Executives of the MFIs sampled.

10.2.6 Dealing with loan repayment and defaulters

Responding to the question on how the MFI's ensure that default rates were kept to the barest minimum, the respondents stated among others, constant monitoring of payments, encouraging clients to save and through constant reminders. Also, some MFI's conduct market research, undertake frequent client appraisals, group trainings and monitoring of clients, use group collateral, enforcement of loan repayment schedules and prosecution of willful defaulters in an attempt to reduce default rates to the barest. Thus, the MFI's use diverse and multi-faceted techniques in ensuring low default rates.

When asked whether their approaches to ensuring low default rates differed from sector to sector, only 21.4% answered in the affirmative. Thus, the majority (78.6%) of the MFI's indicated that they adopted the same strategies in minimizing default rates across sectors. Also, 84.6% as against 15.4% of the MFI's indicated that they employed the same strategies in minimizing default rates across sectors. Also, 84.6% as against 15.4% of the MFI's indicated that they employed the same default rates minimization strategies in all other communities in which they operated. This was so because, the communities were culturally the same, had similar economic activities, situations were similar and operating rules were standardized and aimed towards the same purpose. In effect, these required that the MFI's employed the same default rate minimization strategies across sectors and also across communities.

When asked whether their default minimization strategies were informed by past experiences, 90.9% answered in the affirmative whilst 9.1% stated otherwise. Thus, the majority of the MFI's affirmed that their choice of default rates minimization strategies which is employed across sectors and communities were significantly influenced by their past experiences.

The respondents explained that from past experiences such as the belief by loan beneficiaries that the loans were from Government, delays in court actions with its attendant expenses as well as the intelligence gathered from the pilot programs they undertook, all informed their decisions to adopt the above strategies in order to minimize default rates.

The respondents were quick to add that the default minimization strategies have so far been somewhat effective in improving loan repayments. According to them, what has worked most is the increased interaction with clients through group meetings where the clients are given the opportunity to enumerate their challenges so that appropriate repayment methods are fashioned out for them. This presupposes that micro financing requires very high individualized attention to clients in order to enhance the purposeful utilization, management and repayment of the loans.

To ascertain the effectiveness of group collateral in enhancing loan repayments, the MFI's were asked how much role do groups play in enforcing repayments. In response, 62.5% stated average, whilst 37.5% stated very high. Thus, the MFI's opined that the use of groups was highly effective in enforcing loan repayments.

Service providers adopt various strategies to enhance repeat-purchase by clients. All the world over, financial institutions always use level of risk and creditworthiness. In micro-financing, one strategy that is often used to increase loan disbursement is good

repayment record. In line with this the MFI's were asked whether they do increase loan amount disbursed to a client who has a good repayment record. In response, the majority (78.9%) of the MFI's affirmed that increases in loans disbursed to client over time depended on good repayment track record. On the other hand, only 21.1% of the MFI's stated that increases in loan disbursements were not tied to good repayment track record.

The results in Table 10.5 show the mechanisms by which the MFI's deal with loan defaulters in case there is one.

Table 10.5 Dealing with defaulters

Mechanisms for handling defaulters	Frequency	Percent
By legal means	8	7.0
Report to law enforcement agencies	20	17.6
Group pays on behalf of defaulter	73	64.0
Persistent warning letter/notices	3	2.6
Group compels defaulter to pay	10	8.8
Report defaulters to chiefs	-	-
Total	114	100.0

It can be observed that for group collaterals, either the group compels the defaulter to pay (8.8%) or the group pays on behalf of the defaulter (64.0%). Aside group enforcement, legal actions (7.0%), or persistent warning letters/notices (2.6%) were also a means of handling defaulters. Thus, generally, the MFI's employed diverse methods in handling default cases but the major means of handling defaulters is by group enforcements. This indicates that the MFI's mostly dealt with group clients rather than individuals in order to safeguard the loans or enhance repayments.

When the MFI's were asked whether the mechanism for handling defaulters was group/sector/or borrower specific, only 25% answered in the affirmative. They explained that usually clients that engage in the same activity form a group and this helps in managing the clients and their economic activities in terms of accessibility to clients by location. In worst cases, group members contribute to pay and replace

clients. On the other hand, the majority (75.0%) of the MFI's indicated that the mechanism for handling defaulters was not group sector or borrower specific. This was so because the environments differ in terms of business operations and members of various activities can belong to one group. But in all cases, the mechanism for handling defaulters depended largely on the amount of money involved or requested for by the client. Thus, the mechanism for dealing with defaulters was more dependent on the amount than the group, sector or the borrower. One Chief Executive had this to say;

''Depending on the amount, we chase them and keep modifying our collection strategy till we retrieve the amount.''

On the difficulties the MFI's face in ensuring repayment, varied responses were obtained. These included lack of proper education, irregular checks of defaulters on the part of the MFI's. On the part of the clients the difficulties cited include death of client, migration/travelling outside, multiple loan, sickness, failure of clients to adhere to repayment schedules, misuse of loan on non-income generating activities, total disregard to loan contract details by clients and communication difficulties in ensuring repayment. Some also cited failure of crops due to bad weather or glut on the market thereby forcing them to sell their produce at far cheaper prices.

Responding to the question as to whether the groups were involved in dealing with defaulters who were members, an overwhelming 90.9% of the MFI's answered in the affirmative. They explained that the groups assisted loan officers to trace defaulters, and even undertake follow-ups to threaten the member or appeal and prevail on defaulters to repay their loans. In the worst scenarios, since the group acts as collateral, group members contribute and pay the outstanding balances of their member who defaults in repayment. Sometimes the group uses threats of arrest of defaulters as a means of enforcing repayments. On the other hand only few (9.1%) of

the MFI's indicated that groups were not involved in dealing with defaulters who were members because it was normal if an individual defaults. Perhaps, because some clients perceive the facility as a solidarity loan, it was difficult in some cases to hold the group responsible. Legal action becomes the only option to compel the individual and not the group to pay outstanding balances.

On how groups ensure that peer monitoring succeeds, the MFI's explain that the effectiveness of groups in client monitoring included constant reminders, regular meetings/interaction, monitoring by group executives and at worst dismissal from the group, all of which enhances the success of peer monitoring of clients.

10.2.7 Financial Products

Table 10.6: Number of financial products of the MFI's

Number of products	Frequency	Percent
1 product	2	1.8
2 products	88	77.2
3 products	8	7.0
4 products	11	9.6
5 products	2	1.8
7 products	3	2.6
Total	114	100.0

From Table 10.6, it can be observed that the MFI's had between 1-7 financial products an average of 2 products but the majority (77.2%) of the MFI's had two (2) financial products and only 2.6% had as many as seven (7) products. These products included trading loans, agro processing loan, current account savings and loans, workers credit, business input credit insurance, among others. The product duration range between 1 month, 3 months, 6 months, 12 months, 24 months, and 36 months.

Thus, the MFI’s had diversified financial products of varying durations, with some specifically tailored for men and women. During our exploratory research, one Chief Executive stated:

‘’ we have two (2) products. We have the SPIA (Strategic Planning in Action) for men. We also have AWFI (African Woman Food Farmer Initiative) for women farmers.’’

The products with longer credit period were designed for mostly farmers depending on how long the crop takes to grow and harvested. The product for the traders were mostly of shorter durations due to the buy and sell nature of their activity. A feature of the traders’ credit was the insistence on regular short payment intervals such as daily or weekly or monthly repayments.

10.3 Hypotheses testing on impact of business strategy on sustainability of MFIs

This section looks at the test results of the hypotheses that assess the impact of business strategy on the sustainability of the MFIs. This section provides answers to the research question as to what kind of business strategies adopted has a significant impact on sustainability of MFIs. The main hypotheses are:

H (3a): If screening mechanisms are made more effective, it will lead to a significant increase in sustainability of MFIs.

H (3b): If group collateral is highly enforced, then sustainability of MFI is increased.

H (3c): If clients’ meetings are highly enforced, then sustainability of MFIs will significantly increase.

H (3d): If Executives intensify their handling of defaulters then sustainability will increase.

H (3e): If Executives ensure that peer monitoring is intensified, then sustainability will also increase.

H (3f): If innovations in financial products increase, then sustainability of MFIs will increase.

10.3.1 Screening mechanisms and sustainability of MFI

Stiglitz and Weiss (1981) advocate the screening out of "bad" clients before loans are disbursed so that people who are likely to default in repayment of loans are weeded out. Although the majority of the MFIs had screening mechanisms, the question is to what extent is their screening mechanism effective in ensuing that microfinance institutions achieve their stated objectives. In line with this, it was hypothesized that: "if screening mechanisms is made more effective, it will lead to a significant increase in sustainability of MFIs".

The results in Table 10.7 show the relationship between the availability of an effective screening mechanism and sustainability of MFIs. It can be observed that the majority (93.0 %) of the MFIs who had an effective screening mechanism were perceived to be sustainable. Only few (7.0 %) MFIs did not have an effective screening mechanism and were perceived as not sustainable.

Table 10.7: Screening mechanisms

Availability of screening mechanism	Sustainability of MFI		Total
	Yes	No	
Yes	106(100%)	-	106 (93.0%)
No	-	8(100%)	8 (7.0%)
Total	106(100%)	8(100%)	114 (100%)

The test results yielded X^2=21.13, df=1, p<0.015; which show a significant relationship between availability of an effective screening mechanism and

sustainability of MFIs. Therefore, at the 95% significance level, *the hypothesis that if screening mechanisms are made more effective, it will lead to a significant increase in sustainability of MFIs was supported*.

10.3.2 Group collateral and sustainability of MFI

One way by which MFIs avoid high default rates is the use of group collateral where loans are made available to individuals in a group but the group faces the consequences if any member defaults in repayment. This has been found to be effective in minimizing default rates. The question therefore is, to what extent does group collateral impact on the performance of MFIs. In line with this it was hypothesized that "if group collateral is highly enforced, then sustainability of MFI is increased".

Table 10.8: Use of group collateral and sustainability of MFI

Use of group collateral	Sustainability of MFI		Total
	Yes	No	
Yes	83 (100%)	-	83(72.8%)
No	-	31(100%)	31(27.2%)
Total	83(100%)	31(100%)	114(100%)

From Table 10.8 show it can be observed that the majority 83 (72.8%) of the MFIs who used group collateral were perceived as sustainable whilst among those who did not use group collateral, 27.2 % were perceived as not sustainable. The test results revealed a significant (X^2= 29.33 , df=1, p<0.010) relationship between use of group collateral and sustainability. This means sustainability was dependent on use of group collateral. Therefore at 95% significant level, *the hypothesis that if group collateral is highly enforced, then sustainability of MFI is increased was supported.*

10.3.3 Clients' meetings and sustainability of MFI

Regular meetings between MFIs and their clients, helps the credit officers of the MFIs to know their clients very well through the regular face-to-face interactions. This platform provides loan officers with cues about emerging problems from the attitudes and behaviour of the clients. Frequent meeting with clients in effect provides avenue for personalized relationships for the credit officers for effective monitoring. In line with this it was hypothesized that: "if clients' meetings are highly enforced, then sustainability of MFIs will significantly increase".

Table 10.9: Clients meetings

Frequent meeting with clients'	Sustainability of MFI		Total
	Yes	No	
Yes	114(100%)	-	114(100%)
No	-	-	-
Total	114(100%)	-	114(100%)

The results on the relationship between clients meeting and sustainability of MFIs revealed that, sustainability was significantly dependent on a highly enforced clients meetings (X^2=21.33 , df= 1 and p<0.013). Thus, all the MFIs who met frequently with clients were perceived as more sustainable than those MFIs who did not enforce high clients meetings. Therefore at the 95% significance level, *the hypothesis that if clients' meetings are highly enforced, then sustainability of MFIs will significantly increase was supported.*

10.3.4 Intensive handling of defaulters and sustainability of MFI

In case clients default, the MFIs adopt various measures to handle the defaulters such as holding the group responsible for the payment, persistent reminders and

persuasions and even court actions. The question that remains is whether an intensive pursuit of the defaulters impact on the sustainability of the MFIs. In line with this it was hypothesized that: “if MFIs intensify their handling of defaulters then sustainability will increase”.

Table 10.10: Handling defaulters

Intensive handling of defaulters	Sustainability of MFI		Total
	Yes	No	
Yes	111(100%)	-	111 (97.4%)
No	-	3(100%)	3 (2.6%)
Total	111(100%)	3(100%)	114 (100%)

The results in Table 10.10 show the relationship between MFIs intensive handling of defaulters and sustainability. It can be observed that whilst the majority (97.4%) of the MFIs who intensify their handling of defaulters were perceived to be sustainable, among those who did not vigorously pursue their defaulters, 2.6% were perceived as not sustainable. In other words, sustainability was found to be significantly dependent on intensive pursuit of defaulters (X^2=21.12, df=1 and p>0.013). Therefore at the 95% significance level, *the hypothesis if MFIs intensify their handling of defaulters then sustainability will increase was supported.*

10.3.5 Peer monitoring is intensified and sustainability of MFI

With group collateral at the bargain front of the lending business of MFIs, peer monitoring becomes unavoidable since no member would like to be responsible for any members’ act of omission. And since group members usually share common characteristics; or are engaged in similar activities; or stay within a distance of one another, one may posit that an intensive peer monitoring will enhance the sustenance

of MFIs. Consequently, it was hypothesized that: "if MFIs pursue an intensive peer monitoring system, then sustainability will increase".

Table 10.11 : Intensifying Peer monitoring

Peer monitoring	Sustainability of MFI		Total
	Yes	No	
Yes	83 (100%)	-	83(100%)
No	-	-	-
Total	83(100%)	83 (100%)	83 (100%)

The assertion that if MFIs pursue an intensive peer monitoring system, then sustainability will increase was found to be true. From the data in Table 10.11, a significant relationship was recorded between intensive peer monitoring by the MFIs and sustainability. Thus the majority (100%) of the MFIs who pursued an intensive peer monitoring were perceived as sustainable (X^2=20.12 , df=1 and p>0.015). Therefore at the 95% significance level, *the hypothesis that if MFIs pursue an intensive peer monitoring system, then sustainability will increase was supported.*

10.3.6 Innovations in financial products and sustainability of MFI

The results in Table 10.12 revealed that those MFIs who were innovative in their financial products were considered sustainable (86.8%). Conversely, those MFIs who were not innovative in their financial product developments were not considered sustainable (13.2%). The relationship between innovations in financial product development and sustainability was found to be significant (X^2=24.05 , df=1 and p<0.001).

Table 10.12: Product innovations

Innovations in financial products	Sustainability of MFI		Total
	Yes	No	
Yes	99(100%)	-	99(86.8%)
No	-	15(100%)	15(13.2%)
Total	99(100%)	15(100%)	114(100%)

Thus, there was enough evidence at the 95% significance level to suggest that the sustainability of the MFIs was dependent on increased financial products innovations. Hence *the hypothesis that, if innovations in financial products increase then sustainability of MFIs will also increase was supported.*

10.4: Summary Table for Hypotheses on Impact of Business Strategy on Sustainability

Hypotheses	Impact on Sustainability of MFI	Test Results
H (3a): If screening mechanisms is made more effective, it will lead to a significant increase in sustainability of MFIs.	Positive	Strong and significant
H (3b): If group collateral is highly enforced, then sustainability of MFI is increased.	Positive	Positive and significant
H (3c): If clients' meetings are highly enforced, then sustainability of MFIs will significantly increase.	Positive	Positive and significant
H (3d): If MFIs intensify their handling of defaulters then sustainability will increase.	Positive	Positive and significant
H (3e): If MFIs ensure that peer monitoring is intensified, then sustainability will also increase.	Positive	Positive and significant
H (3f): If innovations in financial products increase, then sustainability of MFIs will increase.	Positive	Positive and significant

10.5 Conclusion

This chapter covered descriptive analysis and discussions of findings of the following business strategies in MFIs: screening, use of group collateral, meetings with clients, handling defaulters, peer monitoring and innovations. The various hypotheses relating to business strategy were also tested and a summary of the result tabulated under section 10.4.

Most of MFIs (60.0%) used screening as a method of weeding out 'bad customers'. Loans disbursed to clients were not across board as it varied from sector to sector.

Group guarantee was used by almost all the MFIs (73.2%) and most interacted on the average, weekly with their clients. In enforcing repayments and thereby reducing default rates, (64.0%) used the group guarantee system where members are held liable for group member who defaults. One other method the MFIs used was to report to the law enforcement agencies (17.5%).

To conclude, the major business strategy of MFIs that impacted on sustainability were screening mechanisms, group collateral and peer monitoring, though they were all significant.

CHAPTER ELEVEN

ENVIRONMENT, GOVERNANCE AND SUSTAINABILITY OF MFI'S

11.1 Introduction

This chapter focused on the analysis of data on financing and agency cost of the MFIs. This covers granting of emergency loans, job creation, competition, Board of Directors, personnel, loan recovery and the regulatory framework. It also looks at the results of the hypotheses on the impact of environment and governance on the sustainability of the MFI's.

11.1.1 Descriptive Analysis of Environment and Governance issues

The MFI's responded to questions bordering on the environment as well as issues of governance. These include loan disbursement, job creation, personnel, loan recovery and the regulatory framework.

11.1.2 Loans for Emergency situations

When the MFI's were asked whether they provided loans for emergency situations, 60% answered in the affirmative. They explained that the rationale for emergency loans was to help serve the immediate needs of clients in critical situations such as ill-health, funeral, and for addressing other social needs and also to ensure clients who have already accessed a facility not to default. However, such facilities were extended only to deprived women mostly engaged in petty trading or farming. On the other hand, 40% of the MFIs indicated that they did not grant emergency loans because clients do not have collaterals, and also as a measure to protect their money and curb risk. But generally, most of the MFI's sampled grant emergency loans.

11.1.3 Job creation for Clients

Responding to a question on job creation opportunity for clients, whilst 47.8% of the MFI's stated that they have not created any job for clients, 52.2% stated that they have created jobs for their clients by offering them loans in many ventures that demanded labour force. It appears as though the jobs created by these institutions were indirect jobs. One Chief Executive had this to say:

''By extension yes, we have created jobs. This is confirmed by our baseline studies.''

11.1.4 Competition in the industry

On competition in the micro financing business, with the exception of 6.3% of the MFI's who indicated that they did not face any competition, 93.7% of the MFI's affirmed that they face a lot of competition in the industry. The main competitors were other microfinance institutions and the commercial banks.

11.1.5 Availability and Composition of Board of Directors

The MFI's also responded to questions on various issues bordering on governance. When asked whether they have board of directors in place, with the exception of 12.5% of the MFI's, the majority (87.5%) affirmed that they had board of directors. The commitment of the board of directors was described as either high or excellent. Thus, all the MFI's who had board of directors stated that they were very impressed with the commitment of the board of directors.

On the structure of the board, only few (26.7%) had the CEO as chairman. For the majority (73.3%) of the MFI's, they have a separate chairman from the CEO.

The members of the boards range between 4 and 12, with an average number of 6 board members, but 35.9% of the boards, were however, composed of 7 members.

The MFI's also responded to question on the constitution/composition of the boards. Interestingly, the least group represented on the board of the MFI's were other professional bodies with an average of 3 members whilst women representation was highest averaging 4 women board of directors. This emphasizes that micro financing activities were pro-women which was reflective in terms of client composition, management staff and even board of directors. Perhaps, an indication that women were the most economically marginalized group hence poverty reduction programmes like micro financing should begin and end with women at the forefront.

On the responsibility of the board, the respondents stated that the board serves as the policy formulation grounds with the managers as implementers of the policies of the institutions. Thus, the respondents were highly aware of the existence and responsibilities of the board of directors of their respective institutions.

11.1.6 Personnel Constraints

Problems and challenges faced by the MFI's with regard to personnel included poor or low quality of personnel who lack professionalism, as a result of inadequate in-house training. Also, the MFI's cited lack of capacity building for staff coupled with difficulty in getting the right calibre of personnel. Inadequate staff therefore remains a major human resource challenge of the MFI's. The most critical issue in this regard cited by the MFIs was the fact that the big commercial banks use the power of the purse to attract their staff after they have trained them.

11.1.7 Management Constraints

The resultant effect of personnel constraints of the MFIs was that middle or supervisory levels were weak, lack of human resource management, lack of capacity building and a restrictive environment which ultimately affect the management of the operations of the MFI's.

11.1.8 Loan Recovery Constraints

The challenges faced by the MFI's with regard to loan recovery, included low salaries of clients, low yields for farmers, all of which affect clients ability to meet repayment schedules. Other loan recovery challenges enumerated by the MFI's include; few loan officers to enhance monitoring, lack of insurance for loans and sometimes non-purposeful utilization of the loans by the clients which result in high default rates.

11.1.9: Financial Constraints

On financial challenges, the MFI's stated that they are hindered by inadequate funds to meet their growing customer base, low savings by clients especially during Christmas, inadequate lending facilities, high interest rates from funding agents, and sometimes single donor support. The MFI's described their financial status as good, except for the Susu operators

11.1.10: Environmental and regulatory framework

On environmental and regulatory framework, 61.5% of the MFI's affirmed the existence of environmental and regulatory framework which was perceived as more

restrictive (69.2%) than favourable. Thus, the majority of the MFI's had negative perception about the environmental and regulatory framework. This is what one Chief Executive said in response to the regulatory environment:

''The regulatory environment is restrictive in that we as FNGOs are by law not allowed to collect client's money for savings. Savings you and I know is the foundation for building a strong capital base which would have helped us to expand our outreach programme. What we are doing now is to direct our clients to a certain bank to deposit their monies there.''

Another Chief Executive in the savings and loans institution reflected as thus:

''Our ultimate goal is to transform this operation into a commercial bank, but the increase in the minimum capital requirement by the government is a big blow to us. It has somewhat derailed our plans but we are going back to the drawing board to see how we can strategize to achieve our goals. We are talking to our partners abroad.''

Again, another Chief Executive who operated a Susu company was rather concerned about tax payments:

''You see all Susu companies are not the same in terms of size and even where they operate significantly affect their revenue generation. We pay assessed tax which is across board and I think it is arbitrary and discriminatory. We operate mostly in the markets and the market women only do repayments on these market days when they have come to sell their wares. Some parts of the country have large markets and again some have more market days in a week. We only have one market day in a week while others have two or three market days in a week.''

11.1.11 Future Sustainability of MFI

The opinions of the MFI's were sought on the future and sustainability of micro financing in Ghana. With the exception of few (11.90%) of the MFI's who doubted the sustainability of micro financing in Ghana, describing it as highly constrained and short-lived, the majority (88.10%) were optimistic. They expressed the hope of a

bright future for micro financing in Ghana, but only if the operational framework is based on sound business principles and measures.

11.2.0 Hypotheses testing on environment and governance and MFI Sustainability

In order to understand both the micro and macro factors that impact on the sustainability of the MFIs, issues relating to governance and environment were considered in the study. Governance issues related to the regulatory framework governing the operations of the MFIs which Staschen (2003) categorizes as primary (laws and acts of parliament) and secondary (benchmarks and procedures) that need to be adopted by the MFIs. The main issues considered were emergency loans, job creation, competition, Board of Directors, personnel constraints, loan recovery and the regulatory framework.

The research question therefore was which environmental and governance issues adopted has significant impact on the sustainability of the MFIs? In an attempt to find answers to this, seven hypotheses were postulated as follows:

H 4a: If executives increase their response to emergency loans, then sustainability of MFI's will increase

H 4b: If MFIs create jobs directly, then sustainability will increase

H 4c: Increased competition in microfinance will lead to increased sustainability

H 4d: If Board of Directors are formed in MFIs, then sustainability will increase

H 4e: If MFIs employ and retain highly qualified staff, then their sustainability will increase

H 4f: If loan recovery increases for MFIs, then sustainability will increase

H 4g: If the regulatory framework is improved, it will increase sustainability of MFIs significantly.

The test results for these hypotheses provided insight into those macro level factors that impacted on the sustainability of the MFI in Ghana.

11.2.1 Emergency Loan and Sustainability of MFIs

It is argued that one of the failures of the traditional banks that MFIs came to correct was closeness to the community who are mostly poor by responding to their emergency needs. Granting of emergency loans was therefore considered a bait to attract and retain clients and enhance the sustainability of the MFIs. In line with this it was hypothesized that: *If executives increase their response to emergency loans, then sustainability of MFI's will increase.*

The results in Table 11.1 show the relationship between granting of emergency loans and the sustainability of the MFIs.

Table 11.1: Emergency Loans and Sustainability of MFIs

Granting of emergency loan	Sustainability of MFI		Total
	Yes	No	
Yes	76 (71.7%)	8 (100%)	84(73.7%)
No	30(28.3%)	-	30(26.3%)
Total	106(100%)	8(100%)	114(100%)

It can be observed that the majority (71.7 %) of the MFIs who granted emergency loans to clients were perceived as sustainable compared to those who did not (28.3%) and yet were perceived as sustainable. There were others who did not grant emergency loans (7.0%) and were not perceived as sustainable. Thus sustainability of the MFIs was significantly (X^2=21.15, df=1, p< 0.012) dependent on the granting of emergency loans to clients. Therefore, *the hypothesis that if MFIs increase their response to emergency loans, then sustainability will increase was supported.*

11.2.2 MFIs Job Creation and Sustainability

It has been argued that MFIs must move away from only the provision of loans to direct job creation by way employment through the setting of businesses with the indigenes as the workforce. The premise is that if MFI create jobs they will help employ people who are incapable of self-employment and managing the loans or funds made available to them, empower them in so doing thereby helping to alleviate poverty which is the main aim of micro financing. The direct job creation by the MFIs will also enhance their sustainability. In line with this it was hypothesized that: *If MFIs create jobs directly, then sustainability will increase.*

The data for the study as shown in Table 11.2 revealed that those MFIs (55.7 %) that created jobs for their clients were perceived as sustainable as those who did not (44.3%). Thus there was a significant relationship between direct job creation by the MFIs and their sustainability (X^2 = 6.04 , df =1 and $p< 0.05$).

Table 11.2 Creation of Jobs for Clients by MFIs and Sustainability

Creation of jobs by MFIs	Sustainability of MFI		Total
	Yes	No	
Yes	59 (55.7%)	8 (100%)	67 (58.8%)
No	47 (44.3%)	-	47 (41.2%)
Total	106 (100%)	8 (100%)	114 (100%)

In effect, there was enough evidence at the 95% significance level to suggest that MFIs sustainability was dependent on their direct creation of jobs for their clients. *Therefore the hypothesis that if MFIs create jobs directly, then sustainability will increase was supported.*

11.2.3 Competition and sustainability of MFIs

Healthy competition is good for all economic activities and for that matter a vibrant micro financing industry. Evidence point to increased engagement in micro financing activities by commercial banks and even foreign owned institutions who have higher capital and can afford to charge lower rates just to attract clients. In effect competition for the clients in the industry has direct implications for sustainability. In line with this, it was hypothesized that "*Increased competition in microfinance will lead to increased sustainability*".

The result (X^2=1.612 , df=1 and p<0.201), was obtained for the relationship between competition in microfinance delivery and sustainability. In effect sustainability of MFIs was not significantly dependent on competition. Thus very low levels of competition by the MFIs correspond with their low levels of sustainability. The result was not significant at 0.05 level. Therefore, at 95% significance level, *the hypothesis that if there is increased competition in microfinance then sustainability will significantly increase was not supported.*

11.2.4 Availability of Board of Directors and Sustainability of MFIs

The existence of Board of Directors is the first step towards effective and efficient institutional management since they give strategic directions for the attainment of organizational objectives, vision and mission. It is said that a strong and effective Board translates into both efficiency and effectiveness of organizational objectives. To answer the question as to whether the presence of Board of Directors ensures good performance of MFIs, it was hypothesized that "*If Board of Directors are existent in MFIs, then sustainability will increase*".

The result (X^2=0.612 , df=1 and p<0.601), was obtained. The relationship was however not significant (p>0.05). Therefore at 95% significant level, *the hypothesis that if Board of Directors are existent in MFIs, then their sustainability will increase was not supported*

11.2.5 Personnel Constraints and Sustainability of MFIs

An institution's ability to attract and retain high quality staff, may enhance their sustainability in that these high calibre staff then become the pivot on which the micro finance delivery revolves. Evidence from the exploratory study point to difficulty on the part of most MFIs to retain or attract qualified personnel due to the presence of the big financial institutions who could afford better remuneration. To ascertain the impact of personnel constraints on the sustainability of MFIs, it was hypothesized that "*if MFIs employ and retain high qualified staff, then, their sustainability will significantly increase"*

From the data, a strong and positive result (X^2=22.05 , df=1 and p<0.001), (see appendix E) was recorded for the relationship between quality of personnel and sustainability of MFIs. This means that a very high calibre staff corresponds with sustainability of MFIs. Therefore at 95% significance level, *the hypothesis that if MFIs employ and retain qualified staff, then their sustainability will significantly increase was supported.*

11.2.6 Loan Recovery and Sustainability of MFIs

The ability of the MFIs to embark on outreach programmes, recover loans and cover their operational costs enhances their survival or sustenance. Considering the difficulty in recovery of loans by MFIs due to unplanned movement and relocation of clients, among others, the study set out to understand the bearing that loan recovery

has on the sustenance of the MFIs. The hypothesis was that "*If there are difficulties with loan recovery, then the sustainability of the MFIs will decrease".*

There was a positive and strong relationship between loan recovery and sustainability of MFIs. A very high and significant (X^2=25.05 , df=1 and p<0.000) result was recorded (see appendix E). This confirms the findings that progressive lending based on prompt repayments, frequent repayment schedules and compulsory savings (Nissanke, 2002), are most essential in ensuring sustainability of MFIs. Therefore, at the 95% significant level, *the hypothesis th*at *if there are difficulties with loan recovery, then the sustainability of the MFIs will decrease was supported.*

11.2.7 Regulatory Framework and Sustainability of MFIs

Regulatory framework could be financial (principles, rules, standards and compliance procedures) as defined by Ledgerwood (2000) or prudential (designed to avoid banking crisis and maintain integrity) as stated by Chavez and Gonzalez-Vega (1995). Where the regulatory framework is outdated or perceived as not favourable, it is likely to affect the sustainability of the MFIs. The regulation that governs the MFIs in Ghana is the Cooperative Decree (NLDC 252 of 1968). The question therefore is to what extent does the nature of the regulatory framework impacts on the sustainability of the MFIs? In line with this it was hypothesized that "if the regulatory framework is favourable, it will increase the sustainability of MFIs significantly"

The results in Table 11.3 revealed that where the regulatory framework was considered favourable the MFIs were sustainable (78.1%). Conversely where regulatory framework was perceived as restrictive the MFIs were not considered sustainable (21.93%). Thus, there was a significant relationship between

sustainability of the MFIs and the nature of the regulatory framework (X^2=28.20 , df=1 and p<0.000).

Table 11.3 : Regulatory Framework and Sustainability

Nature of regulatory framework	Sustainability of MFI		Total
	Yes	No	
Favourable	89 (78.1%)	-	89 (78.1%)
Restrictive	-	25 (21.93%)	25 (21.9%)
Total	89 (78.1%)	25 (21.93%)	114 (100.0%)

There was therefore enough evidence at the 95% significance level to suggest that MFIs sustainability was dependent on the nature of the regulatory framework. Hence *the hypothesis that if the regulatory framework is favourable, it will increase the sustainability of MFIs significantly was supported.*

11.3: Summary Table for Hypotheses on Environment and Governance; and Sustainability

Hypotheses	Impact on sustainability of MFI	Test Results
H 4a: If executives increase their response to emergency loans, then sustainability of MFI's will increase	Positive	not significant
H 4b: If MFIs create jobs directly, then sustainability will increase	Positive	Positive and significant
H 4c: Increased competition in microfinance will lead to increased sustainability	Positive	Weak and not significant
H 4d : If Board of Directors are formed in MFIs, then sustainability will increase	Positive	Weak and not significant
H 4e: If MFIs employ and retain highly qualified staff, then their sustainability will increase	Positive	Positive and significant
H 4f: If there are difficulties with loan recovery for MFIs, then sustainability will decrease	Positive	Positive and significant
H 4g: If the regulatory framework is favourable, it will increase sustainability of MFIs significantly	Positive	Positive and significant

11.4 Conclusion

This chapter covered descriptive analysis of the following governance and environmental issues in MFIs; emergency loans, job creation, competition, Board of Directors, Personnel constraints, loan recovery and regulatory framework. The various hypotheses relating to governance and environment were also tested and a summary of the results tabulated in Table 11.3.

Emergency loans given to clients, was seen as critical to the operations of the MFIs as indicated by 60.0% of the sampled institutions. Job creation by the MFIs was high (52.2%), even though it appeared to be indirect. Competition from the bigger financial institutions was stated as a difficulty for most of the MFIs. There was no evidence to support the fact that the existence of the Board of Directors impacts on sustainability of MFIs, however there was enough evidence to support the fact that employing and retaining high caliber staff impacts on sustainability of MFIs.

Loan recovery was perceived as critical to the sustainability of MFIs, and so was the regulatory framework and environment.

CHAPTER TWELVE

SUCCESS OF MICROFINANCE INSTITUTIONS

12.1 Introduction

This chapter focused on the success factors of the MFI's. It covers results of the data obtained on the various success measures of the MFI's and also looks at the results on the impact of these successes on MFI's.

12.2 Descriptive Analysis of the Successes of the MFI's

The descriptive analysis of the data on measures of success covers growth of clients, loan processing periods, clients record tracking and tracing mechanisms, discount for prompt repayment, saving schemes, internal and external audit systems, staff remuneration and turnover, and the level of success.

12.2.1 Growth of Clients

The monthly growth of clients for the MFI's ranged between 5- 1,700 clients with an average of 236 clients whilst on yearly basis, the growth of clientele of the MFI's ranged between 6- 19,994 clients with a mean growth rate of 2,399 clients as shown in Table 12.1. It must however, be noted that the average growth rates were affected by extreme values in that whilst some MFI's had very large clientele others have few clients. This notwithstanding, the growth rate of the MFI's was very remarkable.

Table 12.1: Growth Rate of Clients

Statistics	Monthly Growth	Yearly Growth
Mean	235.42	2,398.08
Median	80.00	710.00
Mode	5	6(a)
Range	1,695	19,994
Minimum	5	6
Maximum	1,700	20,000
Mean	235.42	2398.08

a Multiple modes exist. The smallest value is shown

12.2.2 Average Loan Processing Period

On the average, only 10.6% of the MFI's processed clients loan applications within 30 minutes or at most 24 hours (1 day). Over a third that is 42.2% of the MFI's, however, use 2 weeks in processing clients loan application whilst few (5.3%) of the MFI's took as much as 6 weeks to process clients loan application (Table 12.2).

Table 12.2: Average Loan Processing Period

Processing Period	Frequency	Percentage
30 minutes	12	10.6
1 day (24 hours)	12	10.6
3 days	6	5.3
4 days	12	10.5
1 week	12	10.6
2 weeks	48	42.2
3 weeks	6	5.3
6 weeks	6	5.3
Total	114	100.0

The results in Table 12.2 shows that the processing of clients loan applications by the MFI's took more time than expected.

12.2.3 Number of Loan Processing Personnel

The results in Table 12.3 revealed that it took at least 1 and at most 5 staff members to process an average loan request. However, it took mostly 2 staff members of the MFI to act on loan requests. This accounted for 50.0% of the responses on the number of loan processing personnel.

Table12.3: Number of Loan Processing Personnel

Number of staff	Frequency	Percentage
1	43	37.7
2	57	50.0
3	3	2.6
4	6	5.3
5	5	4.4
Total	114	100.0

12.2.4 Clients Record Tracking and Tracing Mechanisms

Records management is very essential if MFI's are to effectively carry out their functional activities such as loan processing and monitoring of repayment schedules. In line with these, the researcher investigated the availability or otherwise of records tracing and tracking systems in the MFI's (Table 12.4.)

Table 12.4: Availability of Record Tracking and Tracing Mechanisms

Availability of Records system	Yes	No	Total
Loan	94(82.5%)	20(17.5%)	114(100%)
Clients	94(82.5%)	20(17.5%)	114(100%)
Repayment schedules	94(82.5%)	20(17.5%)	114(100%)

The result in Table 12.4 shows that the majority of the MFIs, that is 82.5% of the MFI's affirmed that they had a complete records tracing and tracking mechanism for

loans, clientele and repayment schedules. These tracking system ranged from sophisticated software packages to simple Ms excel design. These indicate a high level of commitment on the part of the majority of the MFI's towards ensuring success through proper internal control and quality client record management systems.

12.2.5 Discount for Prompt Repayment

On affirming discounts for prompt or full payment, only 14 (12.5%) of the MFI's affirmed that they offered client's discounts in the form of reduced interest rate for prompt payment. On the other hand, 100 (87.7%) of the MFI's indicated that they did not offer any form of discount to clients for prompt or full payment. According to most of the MFIs prompt and early payments, qualifies a client for a new loan and sometimes higher loan amount. This was confirmed by the Chief Executive Officer of one of the MFIs as stated below:

'' We do not give discounts as a policy. What we do is that if a client shows a good repayment track record he or she then qualifies for higher loan amount with or without collateral. This we believe is a good incentive for clients to want to pay back quickly. We may want to consider giving cash discounts in future, but now, no''.

Table 12.5: Nature of Discount for Prompt Repayment Scheme

Discount scheme	Frequency	Percentage
Reduced interest rate	14 (12.5%)	14 (12.5%)
No discount	100 (87.5%)	100 (87.5%)
Total	114	100.0

12.2.6 Savings Scheme

When asked whether they had saving scheme, 71 (62.3%) of the MFI's answered in the affirmative as against 43 (37.7%) who stated otherwise. This was due to the fact that FNGOs are not allowed by law to take deposits from clients.

12.2.7 Auditing in the MFI's

On internal and external auditing 79.8% of the MFI's indicated that they had both internal and yearly external auditing systems in place. Thus, the majority of the MFI's affirmed that they had auditing systems in place even though it was voluntary. This was borne out of their belief that subjecting their institutions to periodic audit will improve accountability and corporate governance.

Also, 14.1% of the MFI's stated that they had external auditors and further undertake statutory yearly external auditing, 2.6% indicated only an external statutory mid-year audit due to the volume of transactions, whilst 3.5% of the MFI's (all Susu companies) did not have any form of formal audit (Table 12.6).

Table 12.6: Rate and form of Auditing

Response	Frequency	Percentage
Internal/External/ Yearly	91	79.8
Only External/ yearly	16	14.1
Only External/half year	3	2.6
No Audit	4	3.5
Total	114	100

The result in Table 12.6 therefore indicates that most of the MFI's undertook both internal and external auditing on annual basis.

12.2.8 Staff Remuneration

On staff remuneration, whilst 43.8% of the MFI's indicated that their staff were sufficiently remunerated, 65(57.0%) stated otherwise. Thus, most of the MFI's indicated that their staff members were not sufficiently remunerated especially when compared to what the big traditional banks were paying their staff. One Chief Executive had this to say about staff remuneration during the exploratory research;

''In terms of remuneration, I can say with all confidence that we are not the best nor are we the worst. We try to complement this with good training both locally and abroad.''

12.2.9 Staff Turnover Rate

A measure of satisfaction or dissatisfaction could be measured by the rate the staff leave the employment or are retained. If they are satisfied they will stay for a long time and feel a part of the organization. On the other hand if members of staff are dissatisfied they would leave in search of better job opportunities. The effect is that it would add to cost as new recruits will take time to learn and adjust to their new positions. Level of remuneration was cited as the main reason for high staff turnover rate (refer to 12.2.8).

The results in Table 12.7 show the level of staff turnover in the MFI's sampled.

Table 12.7: Level of Staff turnover

Level of Staff turnover	Frequency	Percentage
High	14	12.3
Moderate	63	55.3
Low	37	32.4
Total	114	100.0

It can be observed that only 37 (32.4%) of the MFI's described the staff turnover in their outfits as low. Sixty three of the MFIs representing 55.3% rated the level of staff turnover as moderate with the remaining 14 (12.3%) describing it as high. Thus most of the MFIs rated their level of staff turnover between moderate and high. They however conceded that most of the big banks entice their staffs with big and better offers; hence their outfits have become poaching grounds for these multinational banks. One Chief Executive explained this in this way;

''It has been observed that staff turnover is low among the older staff who are about going on retirement but very high among the youth. These young ones are very ambitious and are not prepared to sacrifice for anything. If any of the big financial institutions come to them offering them anything slightly above what they are currently receiving they quickly resign and leave. I do not blame them too much because we cannot match the big banks in terms of salaries and incentives. You see we have become virtual training grounds for these multinational corporations. These are people we have trained at great cost to the institution. This is unfair.''

12.2.10 Closure of Branches

When the MFI's were asked whether they have ever closed down any branch office within the last five years, only 11.1% answered in the affirmative. They stated the reason for the closure as lack of funds and bad debts, fraud or misappropriation of funds. On the other hand, 88.9% of the MFI's indicated that they have not closed down any of their branch offices within the last five years.

12.2.11 Opening of New Branches

The number of branches opened by the MFI's within the last five years range between 6 - 45, all totalling 35 branches, most of the MFI's had opened at least a branch over the last five years.

Table 12.8: Number of New Branches established

Number of New Branches	Frequency	Percentage
FNGO	14	31
Savings and Loans	11	25
Credit Unions	8	18
Rural Banks	6	13
Susu	6	13
Total	45	100

From Table 12.8 the FNGOs opened more branches 14 (31%) probably due to their large capital base which were mostly foreign, followed by the Savings and Loans institutions 11 (25%).

12.2.12 Level of Success of MFI

The results in Table 12.9 show the perceived level of success achieved by the MFI's.

Table 12.9: Level of Success of MFI

Level of Success	Frequency	Percentage
Successful	57	50.0
Moderately successful	51	44.7
Fairly successful	6	5.3
Total	114	100.0

It can be observed that half (50.0%) of the MFI's rated themselves as successful. They explained that they have been able to achieve their targets, improve their institutional capacities, increased their profit margins, and recorded increased growth in clientele coupled with regular monitoring and auditing and low default rate. On the other hand, 44.7% of the MFI's described themselves as moderate success achievers with the explanation that there was still room for improvement and even though profits had been moderate they had not grown as they would have wished.

The remaining 5.3% of the MFI's, described themselves as fairly successful because their loan recovery had dropped and they had very little capital to work with.

12.2.13 Success of MFI

On the success of the MFI's, only 8 (6.3%) of the respondents believed that their institutions would not survive in the next 2 years under the current economic and political conditions. This was because funds were very hard to come by. On the other hand, the majority (93.7%) of the MFI's indicated that their institutions would not collapse or were sustainable beyond the next two years even under current conditions. They explained that they had put in place strong internal control mechanisms, increased deposit mobilization and enhanced customer care, increased product innovations and given the high level of commitment of staff and management, there was a lot of hope for the sustainability of their institutions.

12.3 Hypotheses testing on impact of MFI's Successes

Jain (1996), is of the view that the success of Grameen Bank and MFIs in general lies in the adoption of such policies which he terms ''strategic credit policies''Yaron (1994), Khandker and Khan (1995), Schreiner and Yaron (1999) have further gone ahead to define success as economic sustainability and institutional viability as a means of measuring the success of MFIs. The construct for success of the MFI's include client growth, effective and efficient loan processing, good record keeping, increased savings by clients, availability of proper internal and external auditing systems, high staff remuneration, and low staff labour turnover. In an attempt to

determine how the MFI's successes impact on its sustainability, seven hypotheses were postulated and tested on success factors and the MFI's.

12.3.1 Client Growth and Success of MFI

The growth of client may enhance the success of the MFI's through increased returns on loans granted to clients. Expectations are that if the MFI's acquire more clients they may be described as being successful and ultimately sustainable. It was therefore hypothesized that:

H (5a) If the MFI's acquire more new clients, then success will significantly increase.

On clients growth and success, the result (X^2=22.20, df=1 and p<0.000) was recorded This means that increases in the level or numbers of new clients correspond with increased level of success of MFIs. Thus the more clients that MFIs get the more successful they will become through increased outreach and more on-lending interests. Therefore at 95% significance level the *hypothesis that if the MFIs acquire more new clients, then success will significantly increase was supported.*

12.3.2 Loan processing and Success of MFI

Prompt loan processing induces confidence in client about the institution. This however, depends on a host of factors including the quality of information provided by clients for the purpose of conducting background checks, and the number of loan officers involved in the processing of documents and the time of receipt of clients request to the time of disbursement of the loan to the clients. In order to ascertain

how the loan processing systems impact on the success of the MFI's, it was hypothesized that:

H (5b) If loan processing is effectively and efficiently managed, then success of MFI's will increase.

The results in Table 12.10 show the relationship between the loan processing period of the MFI and the perceived level of success of the MFI.

Table 12.10: Loan processing period and level of Success of MFI

Loan processing period	Level of Success of MFI					Total
	Successful	Moderately successful	Fairly successful	Unsuccessful	Very Unsuccessful	
Within 24 hours	-	-	-	-	-	-
1 day – 1 week	41(71.9%)	36 (70.6%)	-	-	-	77(67.5%)
1 – 2weeks	10 (17.5%)	11(21.5%)	6 (100%)	-	-	27(23.7%)
More than 2 weeks	6 (10.6%)	4 (7.9%)	-	-	-	10(8.8%)
Total	57(100%)	51(100%)	6 (100%)	-	-	114(100%)

It can be observed that whilst the majority (71.9%) of the MFI's who processed clients loans promptly were perceived as successful, those of the MFI's who delay in processing clients loan were perceived as not successful. The chi-square test yielded (X^2=21.01, df=4, p<0.011). This means that there was a significant relationship between loan processing period of the MFI and the perceived level of success of the MFI. Thus, those MFI's who processed clients loans promptly were perceived to be successful. Therefore at the 0.05 level*, the hypothesis that if loan processing is effectively and efficiently managed, then success of MFI's will increase significantly was supported.*

12.3.3 Record keeping and Success of MFI

Keeping records of clients enables MFIs to effectively monitor their clients towards achieving success and sustainability. Since good records' keeping enhances accountability, transparency and efficient administration, it was hypothesized that:

H (5c) If record keeping is effective, then success of MFI's will increase.

The result in Table 12.11 shows that 89.4% of the MFIs who monitored their clients' records effectively were to a large extent successful as compared to 10.6% of the MFIs who said they were moderately successful because some clients still managed to elude them despite the detailed information they had about them.

Table 12.11: Tracking and keeping of clients' records and level of success of MFI

Tracking and keeping of clients records	Level of Success of MFI					Total
	Successful	Moderately successful	Fairly succes sful	Unsuc cessful	Very Unsuc cessful	
Yes	102 (89.4%)	12 (10.6%)	-	-	-	114 (100%)
No	-	-	-	-	-	-
Total	102 (89.4%)	12 (10.6%)	-	-	-	114 (100%)

The results in Table 12.11 thus show a significant relationship between tracking of clients records and the level of success of the MFI's, thus MFIs who kept an effective clients records systems were perceived as successful than those who did not (X^2=25.14, df=1 and p<0.00). Hence, at the 95% significance level *the hypothesis that if loan processing is efficient and effectively managed, then success of MFI's will increase was supported.*

12.3.4 Savings and Success of MFI

A compulsory saving programme helps clients of microfinance institutions to build up assets over time and develop the discipline of savings (Armendariz de Aghion and Morduch, 2005). This in a way also helps the institutions to acquire capital and to secure a form of collateral from borrowers thereby enhancing the success and sustainability of the microfinance institution. All the microfinance institutions except the FNGOs indicated that deposit taking were very critical to the growth of their organizations. The FNGOs by law are not allowed to take deposits from clients. However, most of the Chief Executive Officers interviewed indicated that they would be happy to see that law amended to enable them take deposits since they believed that deposits collection from clients significantly impacts on sustainability of MFIs. Of the 81 FNGOs sampled, 72 (88.8%) believed their operations would be better enhanced by deposit taking. Only 9 (11.1%) indicated that deposit taking has no bearing on the sustainability and success of their operations. In line with this it was hypothesized that:

H (5d) If savings increase in MFI's, then success of MFI's will also increase significantly.

Table 12.12: Operation of savings scheme and level of success of MFI

Operation of saving scheme	Level of Success of MFI					Total
	Successful	Moderately successful	Fairly successful	Unsuccessful	Very Unsuccessful	
Yes	33(78.6%)	72(100%)	-	-	-	105 92.1%)
No	9(21.4%)	-	-	-	-	9 (7.9%)
Total	42(100%)	72(100%)	-	-	-	114 (100%)

The results in Table 12.12 show the level of success of the MFI's as against the operation of savings scheme. It can be observed that 33 (78.9%) of the MFI's

operated saving schemes and those who believe that it would impact on their businesses as against 9 (21.4%) who did not think deposit taking had any success effect on their operations. The test results, that is (X^2 =21.12, df=1 and p<0.012), indicates a significant relationship between availability of saving scheme and level of success of MFI. Therefore at the 95% significance *level the hypothesis that if savings increase in MFI's, then success of MFI's will also increase significantly was supported.*

12.3.5 Audit systems and Success of MFIs

Evidence of internal and external financial audit system was used as a precursor to audits which ensures that the laid down rules of the organization are adhered to with the ultimate result that the organization becomes profitable. Given that the availability of the internal and external audits is indicative of a properly functioning system, it was hypothesized that:

H (5e) If the internal and external audit divisions function properly, then success of MFI's will increase.

Table 12.13: Availability of properly functioning audit unit and level of success of MFI

Availability of properly functioning audit unit	Level of Success of MFI					Total
	Successful	Moderately successful	Fairly successful	Unsuccessful	Very Unsuccessful	
Yes	110 (100%)	-	-	-	-	110(96.5%)
No	-	-	-	4 (100%)	-	4(3.5%)
Total	110 (100%)	-	-	4 (100%)	-	114(100%)

The results in Table 12.13 show that the perceived level of success of the MFI's was dependent on the availability of properly functioning audit units. That is the MFI's with properly functioning audit units were perceived to be successful (96.5%) than those who without properly functioning units who were largely unsuccessful (3.5%) who were mostly the Susu institutions. The test results was X^2=20.05, df=1 and p<0.00, which means that at the 95% significance level *the hypothesis that if the internal and external audit divisions function properly, then the success of the MFI's will increase was supported.*

12.3.6 Staff remuneration and Success of MFI

Motivation in the form of salary, no doubt has great impact on employee job satisfaction and performance. It is thus obvious that when there is salary differentials within a particular industry, poaching will be high and employees in organizations with low remuneration will be most attracted to those institutions with higher remuneration. To ascertain if the sustainability of the MFI's was dependent on the staff remuneration, it was hypothesized that:

H (5f) If staff remuneration is high, then success of MFI's will increase.

Table 12.14: Level of staff remuneration and level of success of MFI

Level of staff remuneration	Level of Success of MFI					Total
	Successful	Moderately successful	Fairly successful	Unsuccessful	Very Unsuccessful	
Low	-	-	4 (3.5%)	-	-	4 (3.5%)
Moderate	-	-	-	-	-	-
High	110(96.5%)	-	-	-	-	110 (96.5%)
Total	110(96.5%)	-	4 (3.5%)	-	-	114 (100%)

From Table 12.14 it can be observed that the perceived level of success of the MFI's was dependent on the level of staff remuneration. That is the MFI's with high staff remuneration were perceived to be successful (96.5%) than those with low remuneration whose level of success was low (3.5%). The test results was X^2=21.12, df=1 and p<0.001, which means that at the 95% significance level, *the hypothesis that if MFI's staff remuneration was high, then the success of the MFI will increase was supported.*

12.3.7 Staff turnover and Success of MFI

When employee turnover is low, organizations are able to save on cost of recruitment and hiring and rehiring of employees to replace departed staff while retaining their high quality staff. High staff turnover has been strongly linked to staff remuneration, dissatisfaction among staff due to poor conditions of service, lack of career development, among others. In order to determine the impact of staff turnover on the success of the MFI's it was hypothesized that:

H (5g) If staff turnover is low, then success of MFI's will also increase.

The results show that the assertion that if staff turnover is low then success factors will increase is true. A chi-square result of X^2=20.15, df=1 and p<0.002 was recorded. This means that if MFIs are able to retain their staff for long periods then they will be perceived as successful and therefore at the 95% significance level *the hypothesis that if staff turnover is low then success of MFIs will also increase was supported.*

Table 12.2: Summary Table for Hypotheses on impact of success on MFI's

Hypotheses	Impact on MFI	Test Results
H (5a) If the MFI's acquire more new clients, then success will significantly increase.	Positive	Positive and significant
H (5b) If loan processing is effectively and efficiently managed, then success of MFI's will increase.	Positive	Positive and significant
H (5c) If record keeping is effective, then success of MFI's will increase.	Positive	Positive and significant
H (5d) If savings increase in MFI's, then success of MFI's will also increase significantly	Positive	Positive and significant
H (5e) If the internal and external audit divisions function properly, then success of MFI's will increase.	Positive	Positive and significant
H (5f) If staff remuneration is high, then and success of MFI's will increase.	Positive	Positive and significant
H (5g) If staff turnover is low, then success of MFI's will also increase.	Positive	Positive and significant

12.4 Conclusion

The data for the study revealed that success of the MFI's depended on some factors. In all instances the success was found to be dependent on client growth, loan processing period, good record keeping, savings in MFI's, availability of audit systems, staff remuneration and staff turnover. The results of the hypotheses on the impact of success factors on MFI's are shown in Table 12.2.

CHAPTER THIRTEEN

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

13.1 Introduction

This chapter presents a summary of the study and draws conclusions based on the findings that emerged from the data collected from the MFI's by the use of questionnaires as well as the interviews held with the CEO's of the MFI's. Recommendations for enhancing the sustainability and success of micro financing activities and MFI's in Ghana for national development have also been included in this chapter.

13.2 Nature and Scope of the Investigation

The thesis examines factors that influence sustainability and success of microfinance institutions in Ghana. The topic is important, particularly in poverty stricken Africa, where micro-financial institutions play a significant role in supporting governments' initiatives to reduce/alleviate poverty. The developed model is tested using data collected from 14 face-to-face interviews and 114 questionnaires. The data is analyzed using different techniques- descriptive statistics, cross-tabulations and regression analysis. The research design and scale of the study are appropriate to both the problem addressed and doctoral level research. A number of factors in the model developed were found to be influencing the sustainability and success of microfinance institutions

The study was guided by five principal objectives which was supported by a total of 31 hypotheses. The major goal of this study was to develop an explanatory framework for a better understanding of the factors that affect sustainability and

success of Microfinance institutions in Ghana. The main objective therefore was to determine which factors (institutional characteristics, agency costs, business strategy, environment/governance and success) affect sustainability of Microfinance Institutions in Ghana and to make recommendations for enhancing the efforts of Executives in Microfinance institutions.

13.3 Discussion of the Research Model

The study revealed that the level of subsidy dependence was high among the MFIs. It must be noted that the objectives of the study were met. Not only did the study confirm the research model, but it also revealed that, to large extent sustainability and success of microfinance institutions is possible in Ghana although slow. Although there were positive relationships between the dependent variable (sustainability) of Microfinance institutions and their independent variables (success, business strategy, environment and governance institutional characteristics and agency costs), the study revealed a very strong and significant interrelationships between success, business strategy, environment/governance, agency costs, institutional characteristics and sustainability of MFIs. This means that though all the perceived factors tended to impact on sustainability of MFIs, they placed much emphasis on their success, business strategy, and environment/governance (see table 13.1). This is a deviation from the original model which seeks to suggest the same level of impact between independent variables (institutional characteristics, agency costs, business strategy, environment and governance and success) and the dependent variables of MFIs.

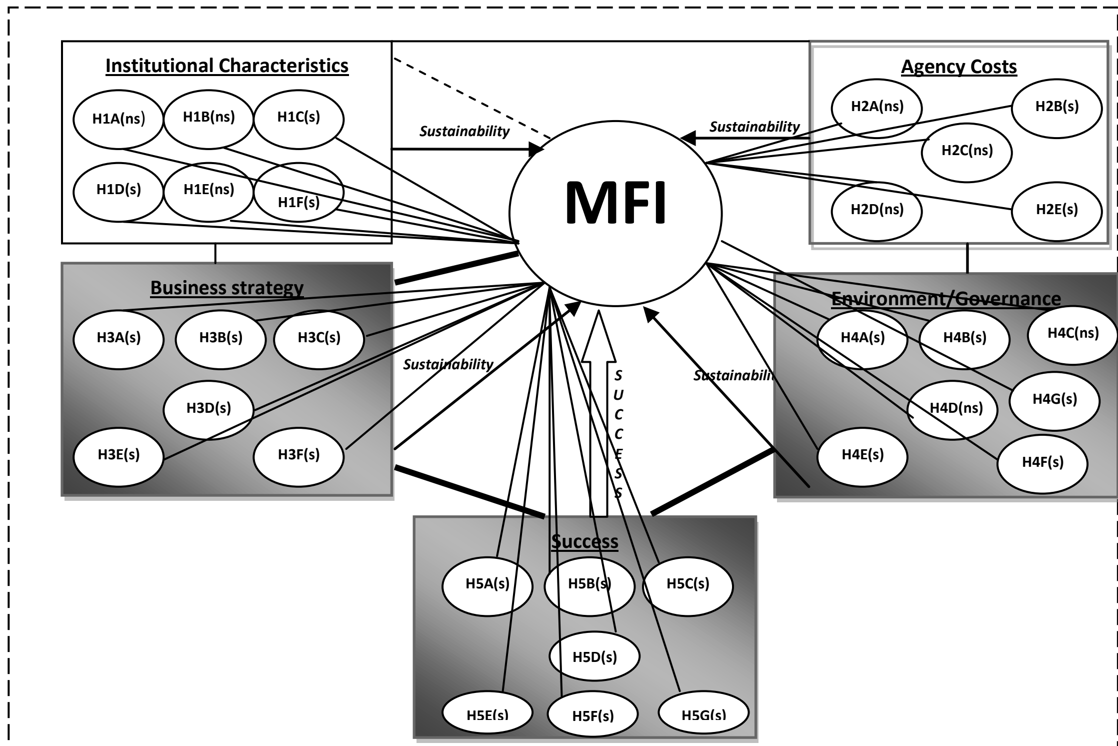
Table 13.1 shows the summary of hypotheses tested and the differentiation of those supported and those not supported by our test. There is therefore the need to proceed

to discuss only the hypotheses supported and their relevance to Managers/Executives of MFIs in Sub-Saharan Africa.

Table 13.1 Listing of significant and non-significant hypotheses

Hypothesis	Path	P value	Sig	Results
	Institutional characteristics → Sustainability of MFI			
HIA	Ownership of institution→ *sustainability of MFI*	**0.718**	$p>0.05$	Not supported
HIB	More funds for lending→ *Sustainability of MFI*	**0.202**	$p>0.05$	Not supported
H1C	Motivation to grow business.→ *Sustainability of MFI*	**0.000**	$P<0.05$	Supported
H1D	Lending to Urban traders→ *Sustainability of MFI*	**0.012**	$P<0.05$	Supported
H1E	Increase funding→ *Sustainability of MFI*	**0.087**	$p>0.05$	Not supported
H1F	Good quality information→ *Sustainability of MFI*	**0.000**	$P<0.05$	Supported
	Agency costs → Sustainability of MFI			
H2A	Increased sources of finance→ Sustainability of MFI	**0.100**	$P>0.05$	Not Supported
H2B	High subsidy dependence → Sustainability of MFI	**0.000**	$P<0.05$	Supported
H2C	Increased branches→ Sustainability of MFI	**0.827**	$P>0.05$	Not Supported
2D	Rigid enforcement→ Sustainability of MFI	**0.100**	$p>0.05$	Not Supported
H2E	Improved lender-borrower relation→ Sustainability of MFI	**0.000**	$P<0.05$	Supported
	Business strategy → Sustainability of MFI			
H3A	Effective screening → *Sustainability of MFI*	**0.015**	$P<0.05$	Supported
H3B	Enforcing group collateral → *Sustainability of MFI*	**0.010**	$P<0.05$	Supported
H3C	Regular clients meetings → *Sustainability of MFI*	**0.013**	$P<0.05$	Supported
H3D	High methods of minimizing default rates→ *Sustainability of MFI*	**0.000**	$P<0.05$	Supported
H3E	Intensifying peer monitoring→ *Sustainability of MFI*	**0.015**	$P<0.05$	Supported
H3F	Innovation in financial prod. → *Sustainability of MFI*	**0.001**	$P<0.05$	Supported
	Environment and Governance → Sustainability of MFI			
H4A	Emergency loans→ *Sustainability of MFI*	**0.012**	$P<0.05$	Supported
H4B	Job creation→ *Sustainability of MFI*	**0.000**	$P<0.05$	Supported
H4C	Increase competition→ *Sustainability of MFI*	**0.201**	$p>0.05$	Not supported
H4D	Board of Directors→ *Sustainability of MFI*	**0.601**	$p>0.05$	Not supported
H4E	Highly qualified staff→ *Sustainability of MFI*	**0.001**	$P<0.05$	Supported
H4F	Increased loan recovery→ *Sustainability of MFI*	**0.000**	$P<0.05$	Supported
H4G	Favourable regulatory framework→ *Sustainability of MFI*	**0.000**	$P<0.05$	Supported
	Success factors→ Success of MFI			
H5A	Acquire more clients→ *Success of MFI*	**0.000**	$P<0.05$	Supported
H5B	Effective & Efficient loan processing→ *Success of MFI*	**0.011**	$P<0.05$	Supported
H5C	Effective record keeping→ *Success of MFI*	**0.000**	$P<0.05$	Supported
H5D	Increased savings→ *Success of MFI*	**0.012**	$P<0.05$	Supported
H5E	External & Internal Audits→ *Success of MFI*	**0.000**	$P<0.05$	Supported
H5F	High staff remuneration→ *Success of MFI*	**0.001**	$P<0.05$	Supported
H5G	Low staff turnover→ *Success of MFI*	**0.002**	$P<0.05$	Supported

Fig 13.1: The research model as observed from the findings



LEGEND

(ns) means hypothesis not supported (s) means hypothesis was supported

▬▬ Relationship was significant ……… Relationship was not significant

═══ Shows the path of the hypotheses

13.3.1 Institutional Characteristics

On the impact of the institution's characteristics on sustainability, the results supported hypotheses on motivation to grow, lending to urban traders and good quality information.

Motivation to grow is important if a microfinance institution is to become sustainable. Managers of MFIs must understand the difficulties involved in microfinance delivery and adopt prudent measures including the use of modern technology to enable the institution to grow. An institution that does not learn and

adapt to changing technology can face a slow death.

Our study supported lending to urban traders as a sustainability factor. Of all the types of clients in the microfinance delivery, traders appear the most dominant. This is because they are classified as less risky and able to sell their wares quickly in the market and pay back their loans.

Good quality information is critical for the sustainability of MFIs. Lack of adequate and reliable information on the depth and breadth of outreach remains a challenge to the industry. These problems adversely affect the ability to properly target the right clients in order to meet the specific needs of such clients.

13.3.2 Agency costs

Another objective of the study was to ascertain which agency costs impacts significantly on sustainability of microfinance institutions. The study confirmed high subsidy dependence, and improved lender-borrower relationship as significant and positive on sustainability of MFIs.

Our study revealed that most of the MFIs were managing the agency issues fairly except for the FNGOs. This situation supports the reason why most of the FNGOs were highly subsidy dependent, with most of them not having any immediate plans of exiting (refer to chapter 7). However the managers of MFIs that depend on subsidies need to understand that their long term survival and sustainability depends on being financially self-sufficient. As noted by Morduch (1999), financial sustainability is the ability of an MFI to operate without reliance on donor subsidy. Indeed Schreiner and Yaron (1999) contend that the subsidy dependence index is a summary of the sustainability of an MFI.

From the results the importance of managing the agency problem in microfinance is

revealed in three ways; managing the lender-borrower relationship, the agency-staff relationship and subsidy dependency. In the first instance, reducing the dropout rate, increasing the number of active borrowers and increasing the usage of smaller loans, all help to develop a good lender-borrower relationship. These require paying special attention to regular and potential borrowers and monitoring borrowers to ensure prompt repayment. A good lender-borrower relationship ultimately results in greater outreach, the production of quality loans, efficient operations and greater sustainability. Again, increasing staff productivity and reducing the cost per borrower help to promote staff efficiency. An efficient staff translates into the production of more and quality output in the form of active borrowers and loans. This provides an incentive for the institution to further motivate the staff to become more productive. A well managed agency-staff relationship further produces higher staff quality and output which reduces operational cost and deepens the operations of the MFI making it more sustainable. In addition, the results show the importance of reducing costs of lending to borrowers. Such costs increase the operational burden of MFI's and reduces their self sufficiency levels. It can therefore be argued that the results point to the fact that to be sustainable, MFI's need to be effective in managing borrowers, staff and cost.

13.3.3 Business Strategy

On business strategy factors that impact significantly and positively on sustainability, the study confirmed effective screening, enforcing group collateral, regular clients meetings, high methods of minimizing default rates, intensifying peer monitoring and innovation in financial products as significant.

The combination of effective screening, enforcement of group collateral, regular

clients meeting intensified peer monitoring will all culminate into high methods of minimizing default rates. According to Adjei, J.K., (2010), growth in new products and services and in the use of technology will characterize the microfinance industry soon. Credit cards, smart cards and mobile phones are already being used by players in the industry. Technology could used to add to add point-of-sale systems, to make the administrative work of the loan officers more efficient, to transfer information and to lower costs of operations as well as interest on loans and other charges borne by poor clients.

13.3.4 Environment/Governance

On how the environment and governance impact on sustainability, the study supported emergency loans, job creation, highly qualified staff, increased loan recovery and favourable regulatory framework.

Microfinance institutions in the formal sector operate within a rigid regulatory and supervisory environment which presents some challenges for innovations, outreach and the overall performance of such institutions. There is also an absence of specific Central Bank regulatory guidelines for the apex bodies in the semi-formal and informal sectors for the supervision of their members which may account for the high interest rates charged by most MFIs. This has culminated in uncoordinated oversight roles and responsibilities which do not adequately address the need for better and safer performance by their member institutions. Regulations for disclosure and transparency could help build confidence in the operations of microfinance providers.

A recently released report by the Centre for the Study of Financial Innovation (CSFI,

2008) identified the greatest risk for microfinance as being in the area of governance and human resources. The dominance of today's microfinance leaders will be sustained only if these institutions can develop a set of highly skilled staff which they do not currently possess today. They will face difficulties in loan recovery. To be prepared for such situations, these MFIs will need good corporate governance and dynamic management who will pursue an agenda of improvement in efficiency and innovation.

13.3.5 Success

The study supported all the success factors of acquiring more clients, effective and efficient loan processing, effective record keeping, increased savings, external and internal audits, high staff remuneration and low staff turnover.

Institutional capacity building is amongst the principles for success. Capacity building, in the form of a skilled and professional human capital base coupled with decent remuneration is essential for the building of a sustainable and efficient microfinance sector. With regard to human capital, there is the need to develop consistent, comprehensive and coherent training targeting the existing and potential employees and taking into consideration their respective roles and responsibilities as well as their needs. This is a means of ensuring a low staff turnover. Internal and external audits are necessary especially where most of the MFIs depend on subsidies and grants from donors. Compulsory savings that are associated with MFIs provides an opportunity for members to begin to accumulate their own financial resources reducing their vulnerability to crisis and dependency on outside credit sources. It also serves as a form of security for the group in times of default. These funds also serve

as a source of increased savings to support its lending programme especially in this era of limited grants from donors and development partners.

13.4 Summary

The general aim of the study was to investigate the sustainability and success of MFI's in Ghana and to suggest ways for enhancing the sustainability and success of micro financing activities in Sub-Saharan Africa especially Ghana for national development. The study was based on the sustainability and success model of an MFI and was guided by five principal objectives and 31 hypotheses.

The study used the survey methodology and adopted both quantitative and qualitative techniques to collect data. The quantitative techniques involved the use of questionnaires to collect primary data on institutional characteristics, agency cost, business strategy, environment and governance as well as success of the MFI's. In addition, secondary data on the economic and financial performance of the MFI's for a period of 5 years (2003-2007) was also collected. On the other hand, qualitative technique involved interviewing some selected CEO's of the MFI's. In all 130 MFI's were surveyed with 114 responding and 14 selected CEO's of the MFI's were interviewed. Micro Excel 2007 and Statistical Package for Social Scientist (SPSS version 16) were used to analyze the data. The chi-square tests of independence and Spearman's ranked correlation co-efficient were used to test the hypotheses at the 95% significance level.

The following were the major findings of the study;

i. Subsidy dependence among the MFI's in Ghana was high especially the FNGOs who do have any immediate plans of exiting and the significant operational

self-sufficiency (OSS) variable were drop-out rate and average loans.

ii. The management of the agency issues-moral hazard and adverse selection appear to shore up in the subsidy and sustainability indicators of MFIs.

iii. Most of the MFIs appear to apply general ways of dealing with borrowers and staff and do not exhibit a deep sense of involvement and innovation.

iv. There are no clear policy guidelines governing the operations of all the various sectors of MFIs in Ghana especially in the area of interest charged on loans to clients. Consequently the microfinance sector is 'littered' with institutions which could be described as vampires sucking the poor. Microfinance loans are designed to be offered at market rates of interest such that the microfinance institutions can recover their costs with surplus for growth, but not so high that they make immoral excessive profits from the poor. This is an important concept because institutions which charge very high rates can be scarcely cheaper than the moneylenders they are supposed to replace (Adjei, J.K., 2010).

13.5 Conclusions

The study analyzed the sustainability and success of microfinance institutions, by observing 114 MFIs in Ghana over a five year period 2003-2007. The analytical framework for a sustainable and successful MFI is drawn from the literature on microfinance and hinges on the problems of moral hazard and adverse selection in microfinance. Results from the model of determinants of operational self-sufficiency show that a reduction in dropout rates helps MFIs to increase the worth of outreach and obtain additional revenue from lending (see Table 7.7). This further helps MFIs to cover their operational costs and thereby increase operational sustainability.

Similarly an increase in the number of active borrowers results in operational costs being spread thin across thereby reducing costs. Again operational sustainability is enhanced through the use of small loans (average loans) to increase the depth of outreach. Furthermore, increasing staff productivity in producing quality loans and borrowers and reducing the cost per borrower go a long way in increasing operational sustainability. These determinants of operational sustainability also form the main crux of managing the agency problem in microfinance.

13.6 Contributions made to the subject field

The thesis has potential to make a useful contribution to the theory and practice on the sustainability and success of microfinance institutions in terms of the factors influencing sustainability and success, particularly in an African context. There are a number of interesting results. These interesting results and contributions have been grouped under LDCs literature, managerial contribution and policy implications.

13.7 Contribution to LDCs Literature

This research is important in that it adds to the relatively small number of studies in sustainability and success of MFIs in Least Developed Countries (LDCs). Most of the studies done in this area in LDCs were qualitative based due to the difficulties associated with carrying our surveys in LDCs. Again, it must be emphasized that there is a general difficulty in getting financial data in most organizations. Most Organizations are always suspicious of researchers and would not trust them with their financial data thinking it may end up in the hands of their competitors or made public, especially when most of the MFIs rely on donor funding.

Since there are not many previous studies on LDCs for comparative analysis it is important the exploratory and descriptive studies which have been limited in LDCs

receive much attention (Samir et al., 1997). Due to this limitation, Gibb (1992) and Kirby (1995) suggested the use of stepwise ‘’stage ‘’ approach that involves an initial exploratory qualitative research aimed at developing initial insight or understanding into a firm’s activities to be followed by qualitative research intended to identify the specific practices of the firm. Kirby (1995) suggests that each research stage builds upon what has been learnt in previous stages, in making an incremental contribution to the established base, thus allowing researchers to provide an in-depth and focused analysis of firm characteristics.

Kirby (1995) concludes that the debate is not about either a ‘qualitative’ or ‘quantitative’ approach, but developing a research design, which is appropriate for the issue under investigation. What is important is that this research benefited from the stepwise ‘’stage’’ approach of Gibb (1992) and Kirby (1995); it combined both qualitative and quantitative methodologies to explore sustainability and success of MFIs in Sub-Saharan Africa.

13.7.1 Managerial Contributions

For a MFI to be sustainable and successful it should be able to reduce reliance on subsidies, manage clients and staffs effectively and further increase its operations and revenue levels. This implies that an MFI that manages the agency problem effectively increases its operational sustainability and also rely less on subsidies. In effect, while microfinance institutions may need subsidies from donors to increase the depth and breadth of microfinance provision to the poor, their success and sustainability depends on their ability to exit subsidy independence in the event of donor fatigue. To be subsidy independent, an MFI must be in the position to increase its revenue from on lending substantially, whilst maintaining a high quality outreach

level, with a low client dropout, high loan quality and a good repayment/enforcement scheme. In addition there should be a concerted effort at providing incentives at motivating staff to be highly productive in credit extension.

13.7.2 Policy implications

The study concluded that poverty alleviation using the vehicle of microfinance is indeed very important. The study will help give a new perspective on the debate and provide additional evidence that prove or disprove existing evidences. For example in order to achieve the Millennium Development Goals in the area of poverty reduction, development partners including the World Bank, bilateral partners and philanthropic investors will have to continue to be essential players by providing resources to develop the institutional capacities necessary for microfinance operations. Development partners will need to build the capacities of MFIs by using lessons that they know are working effectively in other countries.

Government should as a matter of urgency streamline the laws governing microfinance sector as it is becoming clear that some MFIs are rather exploiting the already poor and marginalized by the prohibitive on-lending interest rates they charge their clients. The regulatory framework as observed is too broad and general. It does not seem to put the informal lenders like the Susu operators into a regulatory framework. Indeed there is the concern that some of them are not registered. Again, the Government should refrain from engaging directly in microfinance since it is always coloured with political affiliations and patronage with the result that the loans are thought to be free and should not be paid back. Therefore the Government should desist from being a regulator and a player at the same time in the microfinance industry.

13.8 Limitations

The study looked at the aggregate effect of each of the five factors namely institutional characteristics, agency costs, business strategy, environment/governance and success.

The study was based on cross sectional data; therefore causal links among variables could not be established clearly. The model developed therefore suffers from this limitation. To compensate for this however, our hypotheses benefited from the initial exploratory research where respondents took us through their microfinance activities. Additionally, the hypotheses were developed based on existing theories and empirical research, hence having positive effects on the validity of the results. In this regard, longitudinal data may be required to control differences in time and its effects on the research results.

The results were based on the perception of owners of the microfinance institutions without any reference to clients or donors; undoubtedly data collected from dyadic sources could have enhanced reliability and validity of the study. In view of this limitation, efforts were made to interview Chief Executive Officers who ultimately receive complaints from customers and donors. Additionally many relationship officers who were closer to the clients were involved in the qualitative study to corroborate the testimonies of the Chief Executives. Again it must be emphasized that only seven out of the ten regions of Ghana were covered.

Finally, it must be said that data collected from both Chief Executives and Relationship Officers was based on self-reporting and we did not verify these from any other independent source; we assumed what the respondents told us were true.

13.9 Future Research

This study focused on MFIs as a unit of analysis by looking at sustainability and success. Earlier researches in this area in Sub-Saharan Africa had concentrated more on impact and to some extent sustainability but not sustainability and success. The study confirms the view that sustainability and success of MFIs is a complex phenomenon, hence more research that combines multiple factors to arrive at a better understanding of what leads to sustainability and success is advocated. The replications of this research by covering all the ten regions of Ghana showing their peculiarities in the delivery of microfinance are advocated.

Finally, an appraisal of the professional capabilities and experience of the Chief Executives and staff in the delivery of microfinance in Ghana can be conducted to evaluate the training needs and requirements of the staff who are employed for such positions. Most Chief Executives are not trained in microfinance delivery and they tend to use general knowledge in finance or banking. Consequently, most MFIs are not helping the cause of the poor as intended.

The End

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APPENDICES

Appendix A
Questionnaire Administered to sampled MFIs
EXPLORATORY RESEARCH GUIDE
The exploratory research guide is divided into 5 segments.

1. Institutional Characteristics
2. Agency costs
3. Business Strategy
4. Environment/Governance
5. Success

1. **INSTITUTIONAL CHARACTERISTICS**
Q1. Name of your organization:
Q2. When was the institute established?
Q3. In which district/region is your institution?
Q4. What is the main economic activity of the area?
Q5. Why was the organization established?
Q6. What is the source of your funds?
Q7. What is the ownership?
Q8. Who are your clientele? b) How do you obtain information on your clients? c). How would you describe your relationship with your clients? Q9 Apart from on-lending interest, do you have any other source of finance? Yes No Q9b If 'Yes', name the source.
2. **a) SUSTAINABILITY/AGENCY COSTS**
Q10a. Does your institution engage in investment in Financial Securities such as T-Bills? i)Yes ii) No Q10b. If Yes, how often does your institution do that? Q 10c. How do you obtain information about your clients?
Q11. What is your institution's level of dependence on subsidies from donors? a) Never b) Rarely c)Low d) Average e) Highly
Q12. If your institution depends on subsidies, do you have plans of exiting? a) Yes b) No
Q13. What measures have you put in place towards exiting?
b) agency costs
Q14. How much information do you have about your clients a) Little b) Just Enough c) Enough d) A lot
Q16. Does your institution enter into any contractual agreement with your clients? a) Yes b) No Q17b. If Yes, what is the nature of such contracts?
Q18. How many branches does your institution have across the country?
Q19. Are the processes for obtaining information about your clients the same across branches? i)Yes ii) No Q19b. If is No, give reasons…………………………………………

3. BUSINESS STRATEGY

a) Screening and selection

Q20. Does your institution have in place any screening mechanisms? i)Yes ii) No
Q21. What does this screening mechanism entail?

Q22. Does the screening differ from sector to sector? i)Yes ii) No
Q22b. Give reasons for your answer?
Q23. On the average how much (On annual basis) do you give the following clients and why?
a) Farmers .... Why……………………………………...
b) Traders .... Why……………………………………...
c) Artisans .... Why……………………………………...
d) Fishermen .... Why……………………………………...
e) Other (specify) ....
Why……………………………………..

b) moral hazard and adverse selection

Q24. Does your organization use group as collateral for lending? i)Yes ii) No
Q25. What type of collateral do you require?..
Q26. What level of interaction does the organization have with the group?
a) Never b) Low c) Frequent d) Seldom

Q27. Is the organization very much involved in group activities? i)Yes ii) No
Q27b.If your answer to question 30 is Yes, what is the form and nature of involvement?
Q28. Do you have regular meetings with your clients? i)Yes ii) No
Q29. How often do you meet your clients in a year? …………………………….................
Q30. How long does a meeting take?
Q31. How do you ensure that borrowers use credit for purposes, for which the loan is required?

Q32. How many financial products do you have?
Q32b. Why?

c) repayment and default rates

Q33. What does your institution do to ensure that default rates are kept to the barest minimum?

Q34. Do these actions differ from sector to sector? i)Yes ii) No
Q35. Are the same strategies employed in other communities where you operate? a)Yes b)No
Q35b. Explain;
Q36c. Are these strategies informed by past experiences? i) Yes ii) No
Q36d. Explain:
Q37. How much role do the groups play in enforcing repayments?
a) Never b) Average c) Very d) Modest

Q38. Do you increase the loan amount disbursed to a client over time when the client has a Good repayment track record? a) Yes b) No
Q39. How are defaulters handled in case there is one?...
Q40. Is this group/sector /borrower specific? i)Yes ii) No
Q40b. Explain:
Q41. State some of the difficulties involved in ensuring repayment?

Q42. Are the groups involved in dealing with defaulters especially if they are group members? a)Yes b)No
Q42b. Explain:
Q43. How do the groups ensure that peer monitoring mechanism succeeds?

4. ENVIRONMENT/GOVERNANCE,

44. What difficulties do you have regarding personnel?

…………………………………………………………………………………………….
Q45. Do you provide loans for emergency situations? i)Yes ii) No
Q46. What is the rationale for these products?
Q47. Apart from your core activity, do you engage in other income generating activities(such as investments) a) Yes b) No
Q47b. Why?

Q48. Have you created any job for your clients and why?..
Q49. Are the above activities undertaken to reduce risk? i)Yes ii) No

b) competition
Q50. Do you face competition a)Yes b)No
Q51. What is the source of such competition...

c) Board of Directors
Q52. Does your institution have a Board of Directors in place? i)Yes ii) No

Q53. Answer the following questions with respect to your Board:
a) How committed is the board to your institutional mission……………
b) What kind of Board structure do you have?: a) CEO chairman b) Separate chairman
c) How many people are on your board?
d) How many of your board members come from outside your institution?
e) How is your Board composed?
Number of women:
Members from University/Professional bodies:
Members from Clients:
Other Professionals:
Fiduciary responsibility of Board

ENVIRONMENT AND GOVERNANCE

54(a)regulation

1. Explain the nature of your main constraint with regards to the following:

i. Personnel :
ii. Management :
iii. Loan Recovery :
iv Finances:

Q54 (b). Are there environmental and regulatory difficulties? a) Yes b) No

Q55. Is the regulatory framework a) restrictive or b) favourable ?:

Q56. Kindly give your candid comments towards the future and sustainability of microfinance in Ghana:

Q57. On the average how many new clients do you obtain on the following basis:
a) Monthly…………………..) Yearly……………………………..

Q58. How long does it take on the average to process a loan request? :

Q59. How many staff members does it take to process an average loan request? :

Q60. Do you have in place a mechanism for tracking and keeping record of :

a) Loans? i) Yes ii) No

b) Clients? i) Yes ii) No

c) Repayment schedules? i) Yes ii) No

SUCCESS

d) savings and discounts

Q61. Do you have discounts for prompt or full repayment? i)Yes ii)No

Q61b. If yes how does this scheme work?

Q62. Do you have a savings scheme? i)Yes ii)No

e) systems and controls

Q63. Do you have an internal auditing system in place? i)Yes ii)No

Q64. How often do you have external auditing? a) Yearly b) other (specify):

e) staff motivation

Q65. Would you say your staff is sufficiently remunerated? i)Yes ii)No

Q66. How would you rate your staff turnover? i) High ii) Moderate iii) Low

Q67. Have you closed down any opened branch since 2003? i)Yes ii)No

Q67b. If yes how many:

Q67c. Why?

Q68. How many new branches have you opened since 2003?

Q69. How would you rate your performance over the past 3years? a) Successful b) Moderate c) Fair d) Low e) Poor

Q69b. Please provide reasons for your choice above

Q70. Is there a possibility that your institution may collapse in the next 2 years under current conditions? Yes No

Q70b. Explain……………………………………………………………………………………

Appendix B- Institutional Characteristics

Name of institution	ownership	Geographical spread	motivation	clientele	funding	Information gathering
FNGO 1	Foreign	Five regions and ten districts. We have a fund springing up in the E/R.	To eradicate poverty and hunger in partnership with rural community	Farmers, but we try to balance the risk with others	Foreign revolving capital	Through group leaders and project officers
FNGO 2	Foreign and local	Three regions	First to finance the church, but now empowering people through MF to rise to their God given potentials	Traders	Foreign capital and local borrowing	During training and application forms
FNGO 3	Foreign & Local	Ten regions	To bring financial services to the economically active	Traders	Borrowing from the international and local market	Sourced from markets queens, chiefs, opinion leaders and from the people themselves
FNGO 4	Local and foreign	Eight regions	Empower people economically	Farmers, traders, artisans, fishermen	Borrowing from the local market	From the community by field officers
FNGO 5	Foreign	One region	To help small businesses	Traders	Grants and subsidies	By interviewing them and cross checking with application forms
S&L 1	Foreign	Five regions	To transform the economically active into sustainable livelihood	Traders	Equity and debt	From loan officers and other reliable sources
S&L 2	Foreign	Four regions	To encourage people to save to get out of poverty	Traders, artisans, farmers and workers	Foreign capital but now self-dependent	Loan officers
S&L 3	Foreign and local	Four regions	To provide credit to businesses	Traders, tailors, food vendors, garage owners	Foreign and local	Through interviews
CUA 1	Local	Ten regions	To use savings as the basis for human development	All forms of businesses, and personal loans	Foreign subsidies and grants but now self-funding	Through the loan officers
CUA 2	Local	One region	To give people the opportunity to save and borrow	Staff members	From members own savings	Through interviews
RB 1	Government	One region	To bring banking near to the community	All forms of businesses	Government	Field officers
RB 2	Government	One region	To help advance loans to rural	Workers, traders,	Government	From the community

			folk	teachers, and student nurses		and field officers
SUSU 1	Sole proprietor	Two regions	To bring banking to the unbanked and the downtrodden	Traders, corporate farmers	Family capital	Field officers
SUSU 2	Sole proprietor	One region	Help in savings mobilization	Traders	Personal capital	Field officers

Appendix C-Agency costs

Name of Institution	**Sources of income**	**Subsidy dependence/exiting ?**	**Number of branches**	**Contractual agreements**	**Relations hip With clients**
FNGO 1	Interest on loans and treasury bills	Yes, but no immediate plans of exiting	Ten branches	Yes, by filling forms	Very cordial
FNGO 2	Interest on loans and treasury bills	Yes, but weare also looking internally for other sources of funding	Three branches	They fill forms accepting terms	Very cordial
FNGO 3	Interest on loans and treasury bills	Yes, but very low. We are about exiting	Twenty two branches	By filling out forms	Good
FNGO 4	Interest on loans	yes	Thirteen partners	Yes, by filling forms	Very cordial
FNGO 5	Interest on loans	Foreign subsidies and grants. Cannot tell when exiting.	Four branches	Loan contract form	We call them partners, we create a strong bond.
S&L 1	Interest on loans and treasury bills	Yes , from our partners overseas	Ten branches	Yes, contract form	Very good
S&L 2	Interest on loans, treasury bills and other income generating activities	No more. Currently self-sufficient	Seven branches	Yes, by signing a loan form	Based on trust, quality of service and profession alism
S&L 3	Interest on loans, T-bills ,commissions and fees	yes	Six branches	Yes ,a loan agreement	Good relations our clients are our priority.
CUA 1	Interest on loans, treasury bills and	No more. We are about 90% self-	One	They fill forms	Very good

	fixed deposits	sufficient now. We've almost exited			
CUA 2	Interest on loans, dividends and treasury bills	No subsidy	One	They fill a loan form	Cordial
RB 1	Interest on loans, treasury bills	Yes, from government	One	Filling a loan form	It is good
RB 2	Interest on loans, treasury bills	Yes, from government	Two	Filling a form	Very friendly
SUSU 1	Interest, commissions and other ventures	No	Five	Loan form	Excellent
SUSU 2	Interest on deposits by clients	No	One	Agreement form	Very cordial

Appendix D-Business Strategy

Name of institution	**Screening mechanism**	**Group as collateral**	**Meetings**	**Minimizing default rates**	**Handling Defaulters**	**Peer monitoring**	**Financial products**
FNGO 1	Yes. We use our epicenters and the loan committees to weed out those we perceive as not credit worthy.	Yes	Yes. We meet them once or twice a month	Partners must adhere to regular repayment schedule	The whole group loses the chance of a future loan. It is based on trust	Through regular meetings	Two. We have 'SPIA' for men and 'AWFI' for women
FNGO 2	Yes. We use eight weeks orientation to assess them	Yes, but for the individual we demand a guarantor	Yes, we meet twice a month	We use permanent recovery team and group guarantee system	The group takes responsibility	Community based so they know themselves	Five
FNGO 3	Yes, through the field officers	Yes, but for the individual we demand movable or unmovable asset	2 weeks. They are interested in long speeches. Max of 20 mins.	Regular follow-ups	Resort to guarantor or resort to legal means	Regular monitoring among themselves	Two
FNGO 4	We have eligibility criteria	Yes	Weekly	Group guarantee	Group becomes responsible	Regular interaction	NA
FNGO 5	Cross check information supplied	Yes	Weekly	Through training and education	Group handles	They choose their own members	Two
S&L 1	We compare your	Yes the group is	Weekly depending	We ask for guarantors	Our legal dept takes	They choose a	Four

	application form with our own assessment	used as the collateral	on what the group decides	and collateral	over	leader from among themselves who ensures compliance	
S&L 2	Our field officers are trained to do evaluation of clients	No we do not believe in sharing responsibility of a loan among several people	Yes, it is not fixed. But mostly weekly	Regular monitoring by our loan officers	The final resort is our legal dept. taking responsibility.	We do not give group loans, so no peer monitoring	four
S&L 3	Save for at least six months, and we visit your workplace and home.	Yes we use liability concept where the group collectively is responsible	Weekly or bi-weekly	Regular monitoring and interaction	We chase them and keep modifying our strategy till we retrieve	They police one another	Three
CUA 1	No, we use education to change the mind-set of the members	Individuals we demand collateral sometimes. No group lending	Once a month	We enforce the rules to the letter	Loan officers use phone calls and follow up with demand letters	The group exerts pressure	We meet every need of our clients
CUA 2	Does not apply because they are known staff members of the university	No group lending	Yearly	We hold your benefits due you from the university	We use the university	It does not apply to us	We only give loans for good different purposes
RB 1	We require a new client to be introduced by an old existing client	Yes.	Every quarter	Regular visits	We issue first, second and third demand notices with threats of prosecution	We rely on the executives	Three
RB 2	We use the community and people who deal with the client	No	As often as possible	Through monitoring	We use the police as the last resort	Not applicable to us	Three
SUSU 1	We do some background checks	No	Weekly	We demand a guarantor	We use the police as the last resort	Not applicable	four
SUSU 2	We check your family standing, where you live and what you do	No	Regular visits	We use guarantors	I use persuasion	Not applicable	Two

Appendix E- Environment/Governance

Name of institution	Emergency loans	Job creation	competition	Board of Directors	Personnel constraints	Loan recovery	Regulatory framework
FNGO 1	Sometimes, not always	By extension. Confirmed by our baseline studies	Intense. Many institutions including banks are coming in	Eight members , with four women	Not at all	Difficult. because we are dealing with farmers the risk is high	Favourable
FNGO 2	On a pilot basis	Yes indirectly	From all levels as the banks are coming in.	Fifteen member board. Number of women not available	The big banks keep poaching them away	Recovery depends on the economic condition	Restrictive because we are FNGO we cannot do savings
FNGO 3	A new product we are developing	Yes through giving of loans	Because the commercial banks are also coming in.	Yes eight with two women	When they get attractive offers they leave	Encouraging	We cannot take savings
FNGO 4	Yes, but restrictive	Yes as a result of the loans and the education	Serious one	Five members, with one woman	We are unable to attract high caliber staff due low remuneration	Difficult but quite encouraging	indifferent
FNGO 5	No	Not directly	Yes, but we try to be different by targeting the poorest of the poor	Five members, with one woman	Inadequate remuneration	Our major task	Good
S&L 1	No, but we are developing one	Yes we can say so because we give loans	The emergence of the big banks	Seven members with two women	Our salaries are lower compared to the market rate	We do our possible best to recover all	No difficulty as at now
S&L 2	No because we deal with businesses.	Yes to a large extent	From several levels	Five members with four women	We train them well and they leave	Not much difficulty	The increase in the minimum capital requirement
S&L 3	Yes we call it express	Indirectly though	The universal banking law given to the banks has allowed them to come down into MF	Five members with two women	We have to recruit graduates without experience	We have a section that deals with this	The universal banking law is unfair to MFIs
CUA 1	Yes	Yes	The coming in of the big banks	Eleven with four women	Attracting the good caliber staff	Not much of a difficulty	The cooperative decree
CUA 2	Yes, but it is treated as ordinary loan	We believe so.	From the big banks	Eight members with one woman	No constraints	Not much difficulty	Current cooperative bill is outdated

RB 1	Yes	Yes by the nature of our operations	From the big banks	Thirteen members with one woman	We train them and they leave	We are able to collect them	We are comfortable
RB 2	Yes	Because we give loans our clients are able to expand and employ people	From the big financial institutions	Nine members with one woman	We are now computerizing so we need well trained personnel	Our rate of collection is good	Not at the moment
SUSU 1	Yes ,we call it “walk-in”	No not for clients	The big banks	Five with one woman	Our personnel are good	Not much	Lack of code of ethics
SUSU 2	Even though the agreement does say so we do give	Not exactly	From the big banks	No board	I have four people who have been with me since	Not a problem	We pay assessed tax which is arbitrary and discriminatory

Appendix F-Success

Name of institution	New clients	Loan processing	Record Keeping	Savings/ Discounts	Internal /External Audit	Staff remuneration	Staff turnover/performance
FNGO 1	Many applications but we screen them	A week with two officers	We use excel spreadsheet	We do not have savings scheme.10 % discount if paid within 6 months	We have both internal and external audit	Salaries are subjective, but it is good	Low turnover Good performance
FNGO 2	Not less than two hundred	Eight weeks for the group, one week for the individual, with two officers.	Yes	No savings. We give bonus for early payment	We have both	About eight on the scale of ten	Low turnover Performance is good
FNGO 3	About three hundred	Two weeks for the individual and four weeks for the group	We use a software	No savings, no discounts	Both, we have	Good	Low turnover Very good performance
FNGO 4	Not available	Two weeks maximum	Yes	No Savings, no discount	We have both	Good	Average turnover. Performance is good
FNGO 5	Seven hundred and fifty	One week with two officers	Software developed in Uganda	No savings, no discount	Yes we have both	Average	Mixed turnover Average performance
S&L 1	Not available	One week, with five people	Software called Image	Savings yes, but no discount	We have internal and external auditors	Good within the MFI, but average within the wider financial sector	High among the loan officers.
S&L 2	Not available	We have a three day rule, but it could take longer.	Yes	We have savings. No discounts but we lower rates for a long good payment record	Yes both	We are not the best, nor are the worst. We complement this with good training.	Relatively stable
S&L 3	Twelve new clients per officer per month	Three days, with two officers	Yes	Savings yes, but no discount.	We have both	Yes, it is good	Low. Good performance
CUA 1	About one hundred and fifty a month	It ranges from a day to a month with three officers	Yes	Savings we have, but no discount	We have both	No, but we try to motivate our staff in other ways	Low among the older staff but high among the youth
CUA 2	It depends	Two days with four people processing	We have a software	Yes we have savings, but no	Yes we have both	Good	Very Low. Performance is good

				discount			
RB 1	About fifty A month	About three days, With a whole department	We use a software	We have savings, but no discount	Both internal and external auditors	Better than before	High, but management is trying to stem that trend. Good performance
RB 2	About eighty a month	Two weeks with three departments	Yes	We have savings, no discount but we reduce the interest rate for good performance	Both internal and external audit	Average	Turnover is low. Performance is good
SUSU 1	About four to five hundred a month	From two hours to three days, with two officers	We use an IT network	We have savings. We also give discounts	Yes we have both	Very good, and in addition we give commission for exceeding target	Low turnover. Performance is good
SUSU 2	It depends	About one month	I use a software	Yes we have savings but no discount	I do both functions myself through monitoring	I pay them well	Low turnover. Very good performance

APPENDIX G

DEFINITIONS

Adverse selection is defined as the inability of banks to easily determine which customers are likely to be more risky than others.

Collateral is defined traditionally to include property such as land, machinery and other fixed assets.

Financial products The general name given to all the types of loans and incentives given to clients.

Group lending is defined as the lending involving the formation of groups of people who have a common wish to access financial services; often including group guarantees.

Microfinance is defined as the provision of financial services to low-income clients, including the self-employed.

Moral hazard is defined as the incentive of an agent who holds an asset belonging to another person to endanger the value of that asset because the agent bears less than the full consequence of any loss.

Peer monitoring this is where members in a group who have accessed loans collectively, ensure that every member acts responsibly in order to avoid defaults in the loan repayments.

Portfolio at risk is defined as the outstanding balance of all loans having an amount overdue. In distinction to arrears, portfolio at risk includes the amount in arrears plus the remaining outstanding balance of the loan.

Savings is defined as regular or periodic deposits of money by customers into a fund which attracts interest and also enables them to access bigger loans. It sometimes acts as a collateral.

Screening is defined as where financial institutions use some methods to enable them identify potential good and bad customers who may default in repaying loans advanced to them.

Subsidy is defined as funds donated to cover operational costs.

Subsidy Dependence Index is defined as the percentage increase required in the on-lending interest rate to completely eliminate all subsidies received in a given year

APPENDIX H

FIELD QUESTIONNAIRE

This questionnaire is designed to solicit information for purely academic purposes. Any information provided therefore will be used only for academic work. I thank you in advance.

BACKGROUND INFORMATION

1. Name of your organization……………………………………………………………………………………………….
2. When was the institute established?..
3. In which district/region is your institution?...
4. What is the main economic activity of the area?..
5. Why was the organization established? ....
6. Was the nature of economic activity part of the reason for establishment? ....
7. Tick as appropriate your clientele base……………………………………………………………………………..
   a) Farmers b) Traders c) Artisans d) Fishermen

8. What is the ownership of your institution? a) Local b) Foreign c) Local and Foreign

FINANCIAL SUSTAINABILITY/AGENCY COST

8. Apart from on-lending interest, do you have any other source of finance? Yes No
9. If your answer to question 8 is Yes, name the source…………………………………………………………….
10. Does your institution engage in investment in Financial Securities such as T-Bills? Yes No
11. If Yes to question 10, how often does your institution do that? ....
12. What is your institution's level of dependence on subsidies from donors?
    a) Never b) Highly c)Low d) Average e) Rarely
13. If your institution depends on subsidies, do you have plans of exiting? ....
14. What measures have you put in place towards exiting…………………………………………………………..

AGENCY COSTS

15. How would you describe your relationship with your clients……………………………………………………..
16. How much information do you have about your clients………………………………………………………
    a) Little b) Just Enough c) Enough d) A lot
17. How do you obtain information about your clients?
    ....
18. Does your institution enter into any contractual agreement with your clients?
    ....
19. If Yes to question 18, what is the nature of such contracts?
    ....
20. Does your institution have other branches across the country?
    ....
21. Are the processes for obtaining information about your clients the same across branches?
    a) Yes b) No
22. If your answer to question 22 is No, give reasons…………………………………………………………………

Please complete the following table :

	2003	2004	2005	2006	2007
1. No. of clients					
2. No. of active borrowers					
3. Dropout rate					
4. No. of women					
5. Product/ type/ mix					
6. Interest on loans					
7. Outstanding balance Of loans exceeding 90 days overdue					
8. No. of loan officers					
9. Total credit provided					
10. Cost of administering credit					
11. Total bad debt					
12. Total loans disbursed					
13. Total administrative expense					
14. Portfolio at risk 30 days					

3. BUSINESS STRATEGY

a)SCREENING & SELECTION: DEALING WITH MORAL HAZARD AND ADVERSE SELECTION

23. Does your institution have in place any screening mechanisms? ....
24. What does this screening mechanism entail? ....
……………………………………………………………………………………
………………………………………………………………….
25. Does the screening differ from sector to sector? Yes No
26. Give reasons for your answer to question to question 25…………………………………………………………..
……………………………………………………………………………………
…………………………………………………………………
……………………………………………………………………………………
………………………………………………………………….
27. On the average how much (On annual basis) do you give to clients from the sectors below and why? a) Farmers b) Traders c) Artisans d) Fishermen
……………………………………………………………………………………
…………………………………………………………………..
……………………………………………………………………………………
…………………………………………………………………..
……………………………………………………………………………………
…………………………………………………………………..
……………………………………………………………………………………
…………………………………………………………………..

28a. Does your organization use group as collateral for lending?
Yes No

28b. What type of collateral do you require?
....

29. What level of interaction does the organization have with the group?
a) Never b) Low c) Frequent d) Seldom
30. Is the organization very much involved in group activities?
Yes No
31. Do you have regular meetings with your clients? Yes No
32. How often do you meet your clients in a year?
……………………………………………………………………………
33. How long does a meeting take?...
34. If your answer to question 30 is Yes, what is the form and nature of involvement?....................
……………………………………………………………………………………
…………………………………………………………………….
……………………………………………………………………………………
…………………………………………………………………….

35. How do you ensure that borrowers use credit for purposes, for which the loan is required?.......
………………………………………………………………………………
…………………………………………………………………..
………………………………………………………………………………
…………………………………………………………………..
………………………………………………………………………………
…………………………………………………………………..
36. Do you personally monitor your clients? And why?...
………………………………………………………………………………
…………………………………………………………………..
………………………………………………………………………………
…………………………………………………………………..
………………………………………………………………………………
…………………………………………………………………..

DEALING WITH REPAYMENT AND DEFAULT RATES-ENFORCEMENT

37. What does your institution do to ensure that default rates are kept to the barest minimum? ......
………………………………………………………………………………
………………………………………………………………………………
………………………………………………………………………………
…………………………………………………..
38. Do these actions differ from sector to sector? Yes No
39. Are they the same strategies employed in other communities where you operate and why? ....
………………………………………………………………………………
………………………………………………………………………………
………………………………………………………………………………
…………………………………
40. Are these strategies informed by past experiences? Yes No
Explain…………………………………………………………………………
………………………………………………………………………………
………………………………………………………………………………
………………………………………………………………………………
………………………………………………………………………………
………………………………
41. How much role do the groups play in enforcing repayments?
a) Never b) Average c) Very d) Modest
42. Do you increase the loan amount disbursed to a client over time when the client has a good repayment track record?
....
43. How are defaulters handled in case there is one?
....

…………………………………………………………………..…………
……………………………………………………………………………
……………………………………………………………………………
…………………………………………………..

44. Is this group/sector /borrower specific? ....
Explain………………………………………………………………………
……………………………………………………………….

45. Name, if any, some of the difficulties involved in ensuring repayment? ....
……………………………………………………………………………
……………………………………………………………….
……………………………………………………………………………
………………………………………………………………..

46. Are the groups involved in dealing with defaulters especially if they are group members? ....
Explain………………………………………………………………………
……………………………………………………………………………
……………………………………………………………………………
…………………………………..………………………

47. How do the groups ensure that peer monitoring mechanism succeeds? ....
....
....

ENVIRONMENT AND GOVERNANCE

48a. How many financial products does your institution have, and name. them……………………………………………………………………

48b. Do you provide loans for emergency situations? Yes No

49. What is the rationale for these products? ....

50. Apart from your core activity, do you engage in other income generating activities, (such as investments) and why?...

51. Have you created any job for your clients and why? ....
....

52. Are the above activities undertaken to reduce risk? Yes No

53. Do you face competition and what is the source of such competition?
……………………………………………………………………………
…………………………………………………………………….

54. Does your institution have a Board of Directors in place? Yes No

55. Answer the following questions with respect to your Board:

How committed is the board to your institutional mission……………………………………………………………………
…………………………………………………………………………
What kind of Board structure do you have?

a) CEO of institution is the board chairman b) separate chairman for the Board

How many people are on your board?
How many of your board members come from outside your institution?
....
How is your Board composed?
Number of women……………………………………………………………

Members from University/Professional bodies……………………………………………………………

Members from Clients………………………………………………………………………
……………………………………………………………………
Other Professionals
…………………………………………………..................................

Fiduciary responsibility of Board

PROBLEMS AND CHALLENGES

56. Explain the nature of your main constraint with regards to the following:
    a) Personnel
    b) Management
    c) Loan Recovery
    d) Finances
57. Are there environmental and regulatory difficulties?..
    Explain…………………………………………………………………………
    ……………………………………………………………………….
    …………………………………………………………………………
    ……………………………………………………………………
58. Is the regulatory framework restrictive or favourable?...
59. Kindly give your candid comments towards the future and sustainability of microfinance in Ghana…………………………………………………………………………
    ……………………………………………………………………
    …………………………………………………………………………
    ……………………………………………………………………

SUCCESS

60. On the average how many new clients do you obtain on the following basis:
    Monthly
    Every 3 months
    Yearly
61. How long does it take on the average to process a loan request?
62. How many staff members does it take to process an average loan request?
63. Do you have in place a mechanism for tracking and keeping record of :
    Loans
    Clients
    Repayment schedules?
64. Do you have discounts for prompt or full repayment? Yes No
65. If yes how does this scheme work?
    ....
    ………………………………………………………………………………
66. Do you have a savings scheme? Yes No
67. Do you have an internal auditing system in place? Yes No
68. How often do you have external auditing?
    a) Every year b) Once every two years c) Occasionally d) other (specify)
69. Would you say your staff is sufficiently remunerated? Yes No
70. How would you rate your staff turnover?
    a) High b) Low
71. Have you closed down any opened branch since 2003? Yes No
    If yes how many, and why? Skip 71 if yes. If no, continue.
72. How many new branches have you opened since 2003?
    ……………………………………………………..
73. How would you rate your performance over the past 3 Years?
    a) Successful b) Moderate c) Fair d) Low e) Poor
       Please provide reasons for your choice above
74. Is there a possibility that your institution may collapse in the next 2 years under current conditions? Yes No
    Explain………………………………………………………………………
    …………………………………………………………………………

APPENDIX I
Sustainability and Success of Microfinance Institutions in Sub-Saharan Africa

Research Survey

Purpose of the Research

My name is Felix Kwame Aveh. I am a student of Bradford University (School of Management, UK) and also a lecturer at the Institute of Professional Studies (IPS), Legon. I am currently researching into sustainability and success of microfinance institutions as part of my Doctoral thesis. The purpose of this research is to gain a better understanding of how the twin problems of moral hazard and adverse selection affect sustainability and success of microfinance institutions.

Your institution was randomly selected from the Ghana microfinance institution's network (Ghamfin) .This research is for academic purposes only and is not in any way sponsored by any institution. However, your honest opinions, whether favourable or unfavourable, would greatly enhance our understanding of performance of microfinance institutions.

Any data provided will be kept strictly confidential. Under no circumstance will any individual be identified in the research, as your response will be combined with those of many others for the purpose of statistical analysis.

I sincerely thank you for completing this questionnaire.

Appendix J

TABLE OF RESEARCH QUESTIONS AND HYPOTHESES

Category of factor	Research Question	Hypotheses	Questionnaire Numbers
1.Institutional Characteristic	Which are the major institutional characteristics that impact on sustainability of MFIs?	H (1A) If the ownership of a microfinance institution is foreign, then sustainability will increase.	7
		H (1B) If microfinance institutions commit more funds to lending then sustainability will increase.	6
		H (1C) If Executives' motivation to grow and empower the poor is high then sustainability will increase.	5
		H (1D) If there is increased relationship between MFIs and traders then their sustainability will increase significantly.	8c
		H (1E) If funding for MFIs increase, then their sustainability will significantly increase.	9, 9b
		H (1F) If executives obtain good quality information on clients, then sustainability of MFIs will increase.	10c
2. Agency Costs	Which agency costs impact significantly on the sustainability of MFIs?	H (2A) If sources of income for MFIs increase, then sustainability will increase.	10, 10b
		H (2B) If subsidy dependence among MFIs is high then sustainability will also increase.	11, 12, 13
		H (2C) If MFIs increase their branches, then their sustainability will increase	18
		H (2D) Enforcement of rigid contractual agreements rigidly would lead to increased sustainability of MFIs.	17
		H (2E) If lender-borrower	

		relationship improves then sustainability of MFIs will increase.	14
3.Business Strategy	Which of the business strategies adopted has a significant influence on sustainability of MFIs?	H (3A) If screening mechanisms are made more effective, it will lead to significant increase in sustainability of MFIs. H (3B) If group collateral is highly enforced, then sustainability of MFIs will be increased. H (3C) If clients' meetings are highly enforced, then sustainability of MFIs will significantly increase. H (3D) If executives intensify their handling of defaulters then sustainability will increase. H (3E) If executives ensure that peer monitoring is intensified, then sustainability will also increase. H (3F) If innovations in financial products increase then sustainability of MFIs will increase.	20 24 28, 29, 30 34, 35, 36, 39 43 48
4. Environment/ Governance	Which environmental/governance factors have the most impact on sustainability of MFIs?	H (4A) If executives increase their response to emergency loans, then sustainability of MFIs will increase. H (4B) If MFIs create jobs directly, then sustainability will increase. H (4C) Increased competition in microfinance will lead to increased sustainability H (4D) If Board of Directors are present in MFIs, then sustainability will increase.	45 48 50 52

		H (4E) If MFIs employ and retain highly qualified staff, then their sustainability will increase. H (4F) If loan recovery increases for MFIs, then sustainability will increase. H (4G) If the regulatory framework is improved, it will increase sustainability of MFIs significantly.	52, 53a,b,c,d,e 54a 54b
5. Success	Which success factors have the most impact on MFIs?	H (5A) If MFIs acquire more new clients, then success will increase. H (5B) If loan processing is efficiently and effectively managed, then success will significantly increase. H (5C) If record keeping is effective, then success of MFIs will increase. H (5D) If savings increase in MFIs, then success will also increase significantly. H (5E) If the internal and external audits function properly, then success will increase. H (5F) If staff remuneration is high, then success will increase. H (5G) If staff turnover is low, then success will also increase.	57 58,59 60 62 63,64 65 66

Appendix K : Sampling Frame

NAMES	GREATER. ACCRA REG	CENTR AL REGION	WEST . REG.	EAST. REG.	VOLTA REG.	ASH. REG.	NORTH. REG.
FNGOs							
1.Adra-Ghana	x						
2.Kraban Support Foundation	x	x	x	x		x	
3. Assemblies of GOD Dev. & Relief serv.	x						
4.Freedom from hunger	x						
5. GECLOF	x						
6. Bread of Life	x				x		
7. Catholic Relief services	x						x
8. Christian mothers Association	x	x	x	x	x	x	x
9. Initiative Development Ghana	x						
10. IFESH Ghana	x						
11. ENOWID	x		x	x	x		
12. Dignity Coop. society	x			x			
13. Development Action Assoc.	x						
14. Copama Agric services	x	x	x	x	x	x	
15. Enterprise support serv.for Africa	x						
16. OAK extension	x					x	x
17. Plan International	x						
18. Rural Action for the Poor	x				x		
19. Sustainable rural initiatives	x						
20. Women and Development Project	x				x		
21. Youth Development Foundation	x						
22. Youth and social Enterprise Fund		x					
23. Aidez small project int.					x		
24. Women ventures Int.	x						
25. Hopeline Institute	x	x					
26. Opportunity Industries centre	x		x	x		x	x
27. Action Aid Ghana							x
28. Hunger Project	x						
29. Association of productive Entrep.							
30.Christian Rural Aid Network		x			x		
31. Institute of Cultural Affairs			x		x		x
32.Association of Productive Entrepren.				x			
33. Sweema Rural Developm't				x			
34. African Centre Human Development					x		
35. Better Life Organization					x		
36. Onuapa Financial services					x		
37.CEDEP						x	x
38. Cedi Finance Foundation						x	
39. GDCA							x
40. BILFACU							x
41 CALID							x
42. Community Action for Development							x
43. Maata-N-Tudu Association							x
44. Management Aid							x
45. Northern Rural Development							x
46. Northern Rural Development							x
47. E-Life Development							x
48. Centre for Agricultural & Rural Dev.							x
SAVINGS & LOANS							
49. Sinapi Aba Trust	x						
50. Opportunities Intl.	x						
51. ProCredit	x						
52. Johnsons Savings & Loans	x		x				
53. Womens World Banking			x			x	
54. First Allied Savings &Loans						x	
55. Union Savings and Loans						x	
56. Women Entrepreneurs Guarantee					x		
CREDIT UNION ASSOCIATIONS							
57. Legon Credit Union Assoc.	x						
58. Credit Union Assoc.		x					
59. Credit Union Association				x			
60. St. Peter's Coop. Credit Union						x	
RURAL BANKS							
61. Abokobi Rural Bank	x						

62. Bawjiase Area Rural Bank		x					
63. Mfantseman Community Bank		x					
64. Ahantaman Rural Bank			x				
65. Lower Pra Rural Bank			x				
66. Anum Rural Bank				x			
67. South Birim Rural Bank				x			
68. Upper Manya Rural Bank				x			
69. Adansi Rural Bank						x	
70. Juaben Rural Bank						x	
71. Bosomtwe Rural Bank						x	
72. Bessefa Rural Bank							x
73. West Mamprusi Community Rural B.							x
74. Agave Rural Bank					x		
75. Anum Rural Bank					x		
SUSU							
76. Adom Susu	x						
77. Jar Susu	x						
78. Jab Image Susu Services		x					
79 . Adom Susu & Loans Centre						x	
TOTAL	33	10	10	12	15	15	19

Appendix L:Microfinance Impact Studies: Asia

Study	Coverage	Methodology	Results
Hulme and Mosley (1996)	Indonesia (BKK, KURK, BRI), India (Regional Rural Banks), Bangladesh (Grameen, BRAC, TRDEP), Sri Lanka (PTCCS)	Borrowers and control Samples, before and after.	Growth of incomes of borrowers always exceeds that of control group. Increase in borrowers' income larger for better-off borrowers.
MkNelly et al (1996)	Thailand (village banks-Credit with Education)	Non-participants in non-Program villages used as Controls	Positive benefits, but no statistical test for difference reported
Khandker (1998)	Bangladesh (Grameen, BRAC)	Double difference comparison between eligible and ineligible households and between program and non-program villages	5% of participant households removed from poverty annually. Additional consumption of 18 taka for every 100 taka of loan taken out by women.
Pitt and Khandker (1998)	Bangladesh (BRAC, BRDB, Grameen Bank)	Double difference estimation between eligible and non-eligible households and programs with and without microfinance programs. Estimations are conducted separately for male and female borrowing.	Positive impact of program participation on total weekly expenditure per capita, women's nonland assets and Women's labor supply. Strong effect of female participation in Grameen Bank on schooling of girls Credit programs can change village attitudes and other village characteristics.

Coleman (1999)	Thailand (village Banks)	Double difference comparison between participant and non-participant households and between villages in which program introduced and villages where not yet introduced	No evidence of program Impact. Village bank membership no impact on assets or income variables.
Chen and Snodgrass (2001)	India (SEWA Bank)	Control group from same geographic area	Average income increase rose for bank's clients in comparison with control group. Little overall change in incidence of poverty, but substantial movement above and below poverty line.
Coleman (2004)	Thailand (village Banks)	Double difference estimation between participants and non-participants and villages with and without Microfinance program	Programs are not reaching the poor as much as they reach relatively wealthy people. Impact is larger on richer Committee members rather than or rank-and-file members.

Showing Microfinance Impact Studies: Latin America

Study	Coverage	Methodology	Results
Hulme and Mosley (1996)	Bolivia BancoSol	Borrowers and control samples, before and after. Retrospective assessment of incomes	Growth of incomes of borrowers always exceeds that of control group. Absolute increase in borrowers' income larger for better-off borrowers.
Mosley (2001)	Bolivia BancoSol ProMujer, PRODEM and SARTAWA	Borrowers and control samples, before and after. Time series data for BancoSol only; for other retrospective assessment of incomes.	Growth of incomes and assets of borrowers always exceeds that of control group. Increase in borrowers income larger for better-off borrowers. No evidence of impact on 'extreme poverty'

Banegas et al (2002)	Ecuador, Banco Solidario and Bolivia, Caja de los Andes	Logit model. Control groups selected from households working in the same sector but with no loans from other institutions.	Being a client of a program is associated with rising incomes.
Dunn and Arbuckle (2001a, 2001b)	Peru, Mibanco	Longitudinal study using ‘analysis of covariance’ methodology; control group based on non-participants with similar observable characteristics to participants. Focus on microenterprises.	Microenterprises of participants found to have substantial increases in net income, assets and employments relative to those of non-participants. Positive impact on poverty reduction with incomes in participating households rising relative to control group. Poor participants more likely to sell assets in face of a shock than control households.
MkNelly and Dunford (1999)	Bolivia, Credit with Education program	Longitudinal study of comparison with baseline for nutritional data. Control group of communities who would be offered same program two years later.	No evidence of improvements in household food security or nutritional status of client’s children relative to the control group.

Source: ADB Institute Discussion Paper No. 15 Sept 2004

Appendix M

1. $$\text{Operational Self-sufficiency ratio} = \frac{\text{Total Operational Income}}{\text{Interest expense + loan loss provision + Admin. expense}}$$

The explanatory variables for the operational self-sufficiency model are defined as administrative expensive ratio, the dropout rate, cost per borrower, portfolio yield, loan staff productivity, average loan size, portfolio at risk and active borrowers. Other variables are also considered by Woller (2003). The theoretical motivation for modeling these variables as determinants of operational self-sufficiency is based on the following hypothesized a-priori expectations between these variables and OSS.

2. $$\text{Cost per Borrower} = \frac{\text{Administrative expenses + in-kind donations}}{\text{Average number of Borrowers}}$$

The cost per borrower is the ratio of total administrative expenses and in-kind donations to the average number of active borrowers. This is a measure of the value of inputs required to produce a given level of output, as measured by loan per borrower. A higher ratio shows that more money and in-kind contributions are needed to produce a given number of loans per borrowers.

3. $$\text{Administrative expense ratio} = \frac{\text{Total Administrative Expense}}{\text{Total Loans}}$$

Administrative expense ratio is the ratio of total administrative expenditure to total loans. It is the expenditure per loan output that measures the amount of resources committed to producing a loan output. There is also some staff productivity variables used in explaining the efficiency of MFI's. The cost per borrower is the ratio of total administrative expenses and in-kind donations to the average number of active borrowers. This is a measure of the value of inputs required to produce a given level of output, as measured by loan per borrower. A higher ratio shows that more money and in-kind contributions are needed to produce a given number of loans per borrowers.

4. Staff Productivity ratio $= \dfrac{\text{Total Borrowers}}{\text{Total Staff}}$

5. Loan Officer Productivity Ratio $= \dfrac{\text{Total Borrowers}}{\text{Loan Officers}}$

The loan officer productivity ratio is the ratio of total active borrowers to loan officers and measures the number of loan officers required to produce a given level of output as measured by borrowers. A higher ratio is an indication that fewer loan officers are required to manage a given a given number of borrowers

6. Portfolio at Risk $= \dfrac{\text{Outstanding Balance of Loans exceeding 90 days}}{\text{Total Gross Loan Portfolio}}$

The quality of loan portfolio is also captured by the portfolio-at-risk. This is measured as the ratio of the outstanding balance of loans exceeding 90 days overdue to gross loan portfolio. The portfolio at risk (PAR) is also a cost indicator and also signifies the quality of loans. It also shows deterioration in the quality of

loans service. Thus increases in this variable push up the costs incurred by a MFI and results in an adverse effect on operational self sufficiency. Real portfolio yield, the real return on loan portfolio (a proxy for real interest charged) is also expected to be positively correlated with operational self-sufficiency.

7. Average Loan Size $= \dfrac{\text{Average Gross Loan Portfolio}}{\text{Number of Active Borrowers}}$

The average loan size is defined as the average gross loan portfolio divided by the number of active borrowers.

8. Dropout Rate $= \dfrac{\text{Number of Clients who have dropped out}}{\text{Total Clients}}$

The dropout rate is the number of clients who have dropped out divided by total clients, also measures the worth of output and the level of client dissatisfaction.