THE CONTRIBUTION OF INFORMATION SYSTEMS ON THE DEVELOPMENT OF MICRO FINANCE INSTITUTIONS IN UGANDA.

A CASE STUDY OF PRIDE MICRO FINANCE IN WAKISO DISTRICT

BY

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DEDICATION

I dedicate this research dissertation to my beloved mother Mrs. Nakato Morishah, Mr. K. Lawrence, Sister Ann Nanyondo, Mathias M, and Sister Nabakooza Betty and to all friends.

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ABSTRACT

Most of the changes and events in the business environment were predictable and to a large degree certain. However, technology innovation, long-term public policy shifts and deregulation are destabilizing the business landscape and reshaping the world in which we live. In particular, the Internet as a communication and transaction infrastructure has led (and will lead) to turbulence and uncertainty in the business and consumer markets.

Microfinance institutions (MFIs) are institutions that provide financial services to poor and low-income households (and their microenterprises), allowing them to better manage their risks, achieve consistent consumption patterns, and develop an economic base. Decades of experience have demonstrated that the poor are not only creative with micro-loans, but willing to repay as well.

Many microfinance institutions treat IS as an add-on and consider it as something the systems administrator should deal with (A seminar Report, April 26-27, Nairobi, Kenya, 2003). Therefore, it is from this background that the researcher has decided to study the contribution of information system on the development of micro fiancé institutions in Uganda.

The study will be guided by the following objectives; to examine the nature of information systems used on the development of Pride micro finance in Wakiso district; to find out the benefits of information systems on the development of Pride micro finance in Wakiso district and; to find out the difficulties faced when adopting the Information systems on the development of Pride micro finance in Wakiso district. Therefore, this dissertation gives a general overview on the contribution of Information systems on the development of MFIs**.**

CHAPTER ONE

INTRODUCTION

1.0 Introduction

Mainly, this chapter looked at; the background of the study, statement of the problem, purpose of the study, specific objectives of the study, research questions, conceptual framework, scope of the study and justification of the study.

1.1 Background of the Study

For long times business environments were relatively stable with changes taking place incrementally (Kidd, 2000). When a radical change occurred, the pace tended to remain relatively slow, and was not quickly followed by other significant changes. In these relatively stable environments organizations were not urged to be adaptive or pro-active to respond with speed to internal and external events. Most of the changes and events in the business environment were predictable and to a large degree certain. However, technology innovation, long-term public policy shifts and deregulation are destabilizing the business landscape and reshaping the world in which we live (Hegel and Brown, 2003). In particular, the Internet as a communication and transaction infrastructure has led (and will lead) to turbulence and uncertainty in the business and consumer markets.

The Internet has the potential to connect everyone and everything. Friedman (2005) claims that the globalized world of the twenty-first century has made the world flat. Radical "nonlinear change" which brings about a different order is becoming more frequent. Furthermore the pace of change is significantly more rapid. Business networks have become

more complex and interwoven. Interrelated supply and demand chains require coordination among different organizations (Klapwijk, 2004). On one hand there is the trend to blur industry boundaries (finance, media, telecom and information technology are converging) (Bradley and Nolan, 1998). On the other hand re-intermediation creates new actors with new capabilities, providing new services to the final customers. Regulatory changes and external requirements for accountability, sustainability and security have enormous impacts on organizations' products, processes and resources. As an example, in the Dutch energy market deregulation requires energy companies to unbundle products and services. Customers demand prompt service 24x7 via multiple channels and high levels of responsiveness to handle last minute changes. In order to remain competitive and persist as a business over time, the ability to sense uncertain events, to respond quickly and to learn from the experience is increasingly important (Dove, 2001).

Microfinance institutions (MFIs) are institutions that provide financial services to poor and low-income households (and their microenterprises), allowing them to better manage their risks, achieve consistent consumption patterns, and develop an economic base. Decades of experience have demonstrated that the poor are not only creative with micro-loans (loans as small as $50), but willing to repay as well. According to UNDP reports, despite the growth of microfinance industry, only 3% to 6% of the estimated global potential of 500 million poor households had been reached (MICT, 2001). Microfinance loans tend to have high interest rates in order to recover the high costs of loan administration. Information and communication technologies (ICT) can allow MFIs to lower the cost of loan administration, and thus, offer more affordable and flexible loan products to clients. In addition, ICT can also help MFIs to expand their service coverage by providing logical, strategic and analytical support (MICT, 2001).

Association for Microfinance Institutions of Uganda (AMFIU) acknowledged that there is need to support capacity building and computerization for sound microfinance institutions (MFIs) such that they have systems to control costs and establish efficient branch management, that is, growth potential (New Vision September, 2006). In the Philippines the introduction of basic banking software product enabled administrative costs of rural bank operations to be lowered by 60%. This was accompanied by faster services, better control of fraud, improved records and management reports. It is estimated that microfinance institutions with more than 1000 clients/members are sufficiently large to make computerization of operations an economic proposition (New Vision September, 2006).

Information Technology (IT) plays an increasingly important role in facilitating the introduction of new products or services, in improving operational services, and in guiding managerial decision-making. Therefore, mismanagement of IT can be detrimental to the competitive effectiveness of enterprises. Effective management of IT is particularly critical for small and medium enterprises (SMEs) because they operate different from large enterprises (Communication of the ACM, vol.49, No. 12, 2006). A Microfinance institution, as an SME, can only realize economic benefit from computerization if it manages its IT resources effectively. Effective ICT utilization, appropriate applications, and individually tailored solutions can create opportunities and thus ICT can play a substantial role to address a number of goals in the development agenda. In an attempt to identify sectors that are likely to be responsive to technological change and promise high return on investment, small and medium enterprises have materialized as one potential target sector to harness ICT for development.

1.2 Statement of the Problem

There are a number of microfinance institutions in Uganda and some of these have specifically opted to use information system, despite the existence of information system in micro finance institutions, there are still redundancies in performance of micro finance institutions. Many microfinance institutions treat IS as an add-on and consider it as something the systems administrator should deal with (A seminar Report, April 26-27, Nairobi, Kenya, 2003). Therefore, it is from this background that the researcher has decided to study the contribution of information system on the development of micro fiancé institutions in Uganda.

1.3.0 Objectives of the Study

1.3.1 General Objective

The general objective of the study was to establish the contribution of Information Systems on the Development of Pride micro finance in Wakiso district.

1.3.2 Specific Objectives

1.To examine the nature of information systems used on the development of Pride micro finance in Wakiso district.

2. To find out the benefits of information systems on the development of Pride micro finance in Wakiso district.

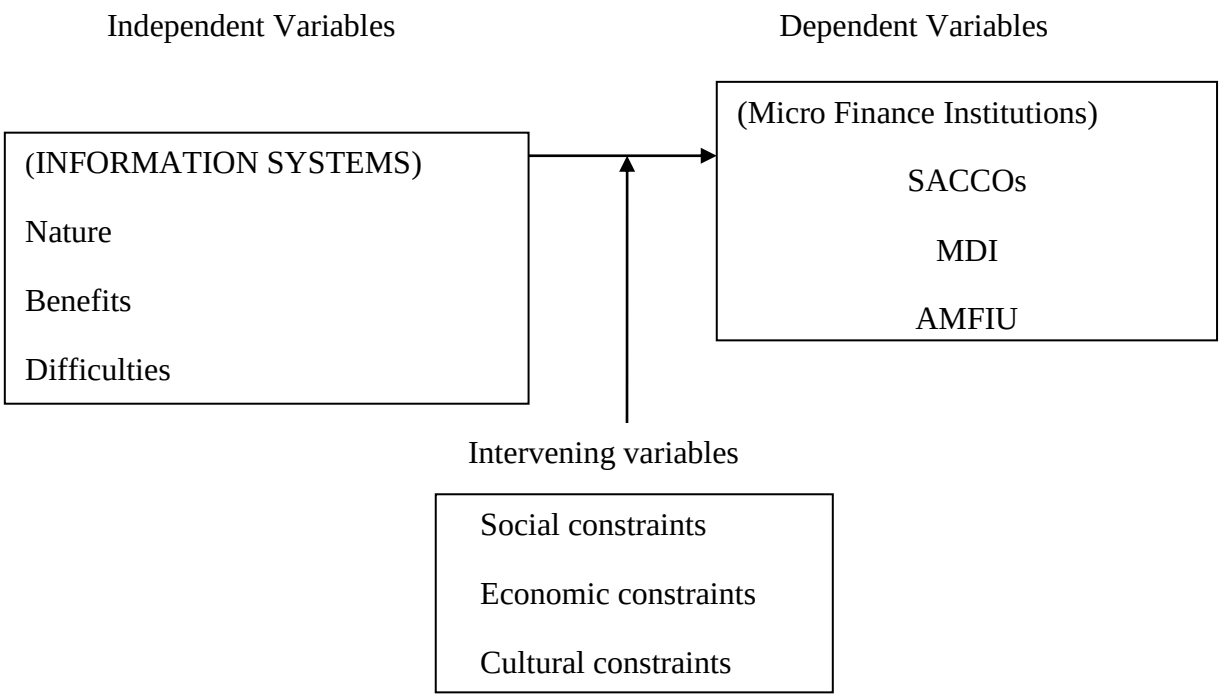
3. To find out the difficulties faced when adopting the Information systems on the development of Pride micro finance in Wakiso district.

1.4 Research Questions

The following research questions guided the study to achieve the stated objectives:

1. What nature of information systems was used on the development of Pride micro finance in Wakiso district?
2. What were the benefits of information systems on development of Pride micro finance in Wakiso district?
3. What were the difficulties faced when adopting Information systems on the development of Pride micro finance in Wakiso district?

1.5 Conceptual Framework



1.6 Scope of the Study

1.6.1 Subject Scope

The study focused on the contribution of Information Systems on the Development of Pride micro finance in Wakiso district. That is, information systems involved; Nature of information systems used by PRIDE, Benefits of using information systems and Difficulties faced in adopting the systems used by PRIDE.

1.6.2 Geographical Scope

The study covered the micro finance institutions in Wakiso district. The study was limited in some selected areas within Wakiso district. The main reason for selecting Pride micro finance was that they should be one of the beneficiaries of any of the Information Technological services. Details of such services were obtained from the MFIs.

1.6.2 Time Scope

The study was conducted from January to May, 2015 in Wakiso district. The study was also conducted in comparison with the related literature reviewed by other related researchers from 2011 to 2015.

Data was obtained from published materials, which includes; journals, magazines, online materials, internal reports and newspapers. They included among others; minutes, internal and managers' reports of Pride Microfinance Uganda Limited.

1.7 Justification of the Study

The study was conducted to investigate whether Information System had any impact on the Development of Pride Micro finance. That is, whether software, hardware, data, people, and procedure had any influence on PRIDE's development.

The study was also conducted to investigate whether the nature of Information systems used had any impact on the development of PRIDE micro finance. That is, whether Manual System, Semi-automated System and Fully Automated System were of any impact on PRIDE's development.

The study was conducted to investigate whether information systems were of importance to PRIDE's development and whether there were any difficulties faced in adopting the systems used by PRIDE micro finance.

1.8 Significance of the study

The study enabled management to understand the impact of information systems on the development of Pride micro finance. That is, the impact of software, hardware, data, people, and procedure on PRIDE's development.

The study also enabled management to clearly understand the nature of information systems used by PRIDE .That is, Manual System, Semi-automated System and Fully Automated System impact on PRIDE's development.

The study enabled management to understand the benefits of information systems to PRIDE's development and also difficulties faced by Pride micro finance in adopting to the systems.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter looked at ;Information Technology, Information Technology in Uganda , Micro Finance Institutions, Microfinance Sector in Uganda, Microfinance technologies, Benefits of computerized MIS to Microfinance, Integration and Consolidation, Importance of Effective Management Information Systems (MIS) to MFIs , Difficulties in Adopting MIS, Getting the Right Fit, Summary of the Gaps and Conclusion

2.1.0 Information Systems

An **information system** (**IS**) is a system composed of people and computers that processes or interprets information.

(http://pespmc1.vub.ac.be/ASC/INFORM_SYSTE.html).The term is also sometimes used in more restricted senses to refer to only the software used to run a computerized database or to refer to only a computer system.

Silver et al. (1995) provided two views on IS that includes software, hardware, data, people, and procedures. Zheng provided another system view of information system which also adds processes and essential system elements like environment, boundary, purpose, and interactions. The Association for Computing Machinery defines "Information systems specialists as focusing on integrating information technology solutions and business processes to meet the information needs of businesses and other enterprises."(The Joint Task Force for Computing Curricula 2005). There are various types of information systems, for example: transaction processing systems, decision support systems, knowledge management systems, learning management systems, database management systems, and office

information systems. Critical to most information systems are information technologies, which are typically designed to enable humans to perform tasks for which the human brain is not well suited, such as: handling large amounts of information, performing complex calculations, and controlling many simultaneous processes.

Information technologies are a very important and malleable resource available to executives.(Rockart et al., 1996). Many companies have created a position of Chief Information Officer (CIO) that sits on the executive board with the Chief Executive Officer (CEO), Chief Financial Officer (CFO), Chief Operating Officer (COO) and Chief Technical Officer (CTO). The CTO may also serve as CIO [Chief Information Officer], and vice versa. The Chief Information Security Officer (CISO) focuses on information security management.

2.1.1 Components of information systems

The 5 components that must come together in order to produce a computer-based information system is:

1. Hardware: The term hardware refers to machinery. This category includes the computer itself, which is often referred to as the central processing unit (CPU), and all of its support equipments. Among the support equipments are input and output devices, storage devices and communications devices.

2. Software: The term software refers to computer programs and the manuals (if any) that support them. Computer programs are machine-readable instructions that direct the circuitry within the hardware parts of the system to function in ways that produce useful information from data. Programs are generally stored on some input / output medium, often a disk or tape.

3. Data: Data are facts that are used by programs to produce useful information. Like programs, data are generally stored in machine-readable form on disk or tape until the computer needs them.

4. Procedures: Procedures are the policies that govern the operation of a computer system. "Procedures are to people what software is to hardware" is a common analogy that is used to illustrate the role of procedures in a system.

5. People: Every system needs people if it is to be useful. Often the most over-looked element of the system are the people, probably the component that most influence the success or failure of information systems.

2.1.3 Types of information systems

A four level pyramid model of different types of information systems based on the different levels of hierarchy in an organization

The "classic" view of Information systems found in the textbooks in the 1980s was of a pyramid of systems that reflected the hierarchy of the organization, usually transaction processing systems at the bottom of the pyramid, followed by management information systems, decision support systems, and ending with executive information systems at the top. Although the pyramid model remains useful, since it was first formulated a number of new technologies have been developed and new categories of information systems have emerged, some of which no longer fit easily into the original pyramid model.

Some examples of such systems are:

Data Warehouses

Enterprise Resource Planning

Enterprise Systems

Expert Systems

Search Engines

Geographic Information System

Global Information System

Office Automation.

A **computer (-based) information system** is essentially an IS using computer technology to carry out some or all of its planned tasks. The basic components of computer based information system are:

Hardware- these are the devices like the monitor, processor, printer and keyboard, all of which work together to accept, process, show data and information.

Software- are the programs that allow the hardware to process the data.

Databases- are the gathering of associated files or tables containing related data.

Networks- are a connecting system that allows diverse computers to distribute resources.

Procedures- are the commands for combining the components above to process information and produce the preferred output.

The first four components (hardware, software, database, and network) make up what is known as the information technology platform. Information technology workers could then use these components to create information systems that watch over safety measures,

risk and the management of data. These actions are known as information technology services.(Rainer, R. Kelly Jr and Casey G. Cegielski, etal, 200).

2.2.0 Information Systems used by MFIs

The microfinance sector is also quite diverse in its use of information systems. Generally there are the following three types: **(**ADB Releases, 2005; Rao, M, 2004 and Firpo, J., 2005)

1. Manual System

Some MFIs still rely on manual systems, which involves maintenance of records in forms and ledgers .Organizations having manual systems are either small micro-credit programs or NGOs.

Disadvantage of manual systems:

Some of the disadvantages of manual Information Systems are:

Too laborious and time consuming.

Prone to Errors.

Data manipulation and analysis is very difficult.

Maintenance of large amount of data is almost impossible.

Data and information is not secured.

Loosely controlled.

Highly inflexible (addition of new products and change in business processes cannot be made).

Business continuity is at risk in case of damage to information due to fire, water or any other disaster.

Reporting is very cumbersome, time consuming and difficult.

2. Semi-automated System

More than 50% of MFIs are operating in a semi-automated mode. Within this category, the spreadsheet is the common tool being used either in conjunction with a manual system or with an MIS application that does not fulfill the information requirements of the MFI. The majority of non-regulated MFIs have semi-automated systems.

3. Fully Automated System

Few MFIs are fortunate enough to have a fully automated and integrated MIS, fulfilling the whole information requirements of the organization. Such systems are existent with banks or regulated MFIs.

2.2.1 Benefits of computerized MIS to Microfinance

There is no doubt that "the right information" at "the right time" at "the right place", is crucial in decision making. Therefore, information and data is considered among the most valuable assets fundamental to the success of an organization. The primary roles of the MIS are to capture information, create new information, store information, and convey information to the user. The two major objectives of MFIs are Outreach and Sustainability. MIS can add substantial value in achieving both the objectives: **(CALMEADOW**, 2003; ADB Releases, 2005; Rao, M, 2004 and Firpo, J., 2005)

A major advantage of MIS is that it provides easy access to accurate and up-to-date information. For example, loan officers get information on loans that need follow-up, branch managers can monitor daily progress of the branch, and senior management can get a full picture of the portfolio performance and quality. Customers also get quick information on their accounts, payments and balances.

Detailed information is captured on customers and their activities that can then be used to assess client business to assess impact. It is also useful in tracking historical information of clients.

Activities, such as disbursements, repayments, deposits, withdrawals and money transfers are completed faster, better controlled and with minimum opportunity for errors.

Information is produced in user-required formats, which facilitates better understanding, setting priorities, objectives and strategy.

Key performance indicators provide an overview of the organization's performance, efficiency and effectiveness of business procedures so that timely adjustments can be made.

Use of ICT helps make MFI services more interactive, accessible and transparent.

In terms of innovation, ICT provides full flexibility to structure products and services to the needs of its target group.

Efficiency and productivity of staff is increased, as they are able to manage more products, customers, and transactions in less time.

To meet target market needs, introduction of new products and setting procedures is easy and can be quickly applied throughout the branch network.

It can also provide the flexibility to integrate with other applications and delivery mechanisms. MIS lowers transaction cost, increases productivity, reduces risk of failure, and pushes the boundaries beyond bricks and mortar infrastructure to carryout business.

2.3 Integration and Consolidation

With the growth and advancement of the microfinance industry, new innovations are being witnessed. Among these innovations, technology-based delivery channels and mechanisms are creating opportunities as well as intensifying the competitive environment for MFIs. These channels are not only targeted at lowering transaction costs and extending the reach of MFIs to large populations, but are also focused around customer convenience. These technology-based mechanisms enhance efficiency of the

MFIs, while posing substantial challenges in managing such technologies. One of the main challenges is that of integration and consolidation. It is essential that the back-office MIS has the flexibility to integrate with such systems.

The back-office MIS has received little attention within the sector. The general perception is that new technology based delivery systems would easily integrate with the core MIS, whereas in reality it is not that simple. Examples show that MFIs that have adopted such systems without assessment of their core MIS are struggling to integrate these. Because of non-integration, MFIs fall back on electronic spreadsheets or manual procedures to prepare consolidated information. Integration and consolidation are very important for MFIs and inability to integrate new technological innovations holds them back, making them less rather than more efficient.**(**Rao, M, 2004; Firpo, J., 2005).

2.4 Importance of Effective Management Information Systems (MIS) to MFIs

MFIs usually operate in remote and rural areas and therefore, employees are predominantly not well educated. Further, MFIs have low budgets, making it difficult to build and operate Management Information Systems (MIS) that can have a positive impact. The major challenges such firms face are that MFIs are significantly different from commercial banks, existence of infrastructure issues in implementing MIS in MFIs, lack of Information and Technology (IT) support in MIS , lack of organized training in IT for the MFI employees and lack of standardization in procedures in the MIS (Ahmad ,2008).

The challenge was addressed through the following strategy :**(** Rao, M, 2004; Firpo, J., 2005)

Establishment of a strong IT department

Short-term solution that involved integration of an off-the-shelf application with its existing portfolio management system.

Long-term plan to build an enterprise MIS with the functionality to deliver all banking and microfinance services, and flexible enough to meet the current and future technology requirements of the bank.

The management of FMFB had demonstrated their understanding and commitment in making IT one of its strategic objectives and to opt for best practices in MIS.FMFB has been able to implement an advanced MIS that has already started to make positive differences to its business. As a result of its strong and flexible MIS, FMFB has been able to introduce a wide range of products and services, including loans, deposits, remittances and insurance. The system is used to obtain maximum information to support timely decisions.

2.5 Difficulties in Adopting MIS

A number of MIS solutions are emerging. Currently, there are 56 MIS applications listed on the CGAP website ,although more are being used by various organizations that are not publicized. Despite the advances in MIS, practical experience shows that the acquisition of a suitable MIS is not simple. Many MFIs are struggling with their MIS.**(**ADB Releases, 2005;Rao, M, 2004)

Some of the reasons for these difficulties are:

Microfinance operations are unique and complex ,compared to commercial, retail banking.

The Microfinance sector is still evolving and lacks standardization in its procedures, methodologies, customer characteristics, type of transactions and reporting.

There is no of-the-shelf software available that can address the requirements of every MFI.

Those MIS that are available are complex and costly for adoption by MFIs.

MFIs lack human and organizational capacity to develop or select an appropriate MIS.

MFIs operate in remote and difficult areas where communication and power infrastructure do not exist, and are therefore constrained from using IT equipment required to run MIS applications.

2.6 Getting the Right Fit(CALMEADOW, 2003; ADB Releases, 2005; Rao, M, 2004 and Firpo, J., 2005)

MFIs face great challenges in choosing the right system solution that can best fit their business needs. An MIS for microfinance must have the following characteristics:

1. **Cost effectiveness**: Total ownership and lifetime system operations costs, including hardware, software, network, infrastructure and human resource.

2. **Functionality & flexibility:** Fulfill maximum of the current business requirement and flexible enough to incorporate future changes. Capture and generate relevant information on an individual, group, and at a consolidated level.

3. **Reliability**: Incomplete and unreliable systems are dangerously risky and can hamper the business. Such systems do not produce the right results and are unable to complete processes to the desired level. Users could be misguided by such systems.

4. **Simple to use**: Should be user friendly and easy to setup and operate. Activities can be performed in a systematic way and flow.

5. **Scalability:** System should accommodate changes to products, services and delivery channels. It should grow as the business grows. For example, if the system design is scalable, it can be run on an individual PC, Local Area Network (LAN) or Wide Area Network (WAN)

6. **Integration:** Combining data from multiple sources is of great importance to microfinance. Integration of branches to get single consolidated picture should be a priority.

2.7 Micro Finance Institutions

Microfinance is considered to be an effective tool in alleviating poverty by increasing income of poor households and reducing their vulnerabilities. Today, when the majority of the world's population is living below subsistence level, more than 3,000 organizations are providing microfinance services to millions of the world's poor. Yet most of the poor still have little or no access to financial services. Microfinance institutions (MFIs) have reached a mere 70 million out of 2 billion poor people. The task of reaching such a big number is a major challenge. With a population of around 150 million people, Pakistan has big potential for microfinance. 70% of the population lives in rural areas. Despite achieving a growth rate of 6-7% in recent years, poverty has increased by 2%, showing low penetration of economic benefit to the lower income sector. Unemployment rate stands over 8% and per capita income is US$652. The financial sector of the country comprises some 35 scheduled banks. These banks have an outstanding portfolio of US$20.7 billion against 3.2 million accounts and they hold deposits worth US$33.3 billion in 28.5 million deposit accounts. More than 50% of the deposits and portfolio are concentrated in three main banks with large branch networks. **(CALMEADOW**, 2003; ADB Releases, 2005)

Alemayehu (2010), defined microfinance as a provision of financial services to low income clients or solidarity lending groups including consumers and the self-employed, who traditionally lack access to banking and related services. Similarly, according to Grameen‟sTrust Foundation (1999), microfinance is sometimes called the „banking for the

poor". Analogous to Morduch (1999), the primary clientele of MFIs consists almost by definition those who face severe barriers to access financial products from conventional financial institutions. These barriers comprise mainly high operational costs, and risk factors. Related to the above, Roodman and Qureshi (2006) are of the view that the term micro finance includes the provision of a wide range of financial services to the poor: savings, insurance, money transfers, and credit. The microfinance movement to date, however, has generally favored microcredit.

2.8.1 Distinctive features of the business of microfinance

Microcredit is at the heart of many microfinance business models, and has a number of distinctive features. (Jansson et al 2004 and Christen et al 2003). Product design, client profile and labour-intensive underwriting methodologies give microcredit a unique risk profile. Effective credit risk management thus requires different tools and analyses than for conventional retail lending. Some of the more distinctive features of microcredit include:

(a) Micro borrowers. A microcredit provider usually caters to low-income clients, both the underemployed and the entrepreneur with an often informal family business (e.g. petty traders). Borrowers are typically concentrated in a limited geographic area, social segment or entrepreneurial undertaking. Loans are usually very small, short term, and unsecured, with more frequent repayments and higher interest rates than conventional bank loans. Many providers require higher interest rates to offset higher operational costs involved in the labour-intensive micro lending methodology.

(b) Credit risk analysis. Loan documentation is generated largely by the loan officer through visits to the borrower's business and home. Borrowers often lack formal

financial statements, so loan officers help prepare documentation using expected cash flows and net worth to determine the amortization schedule and loan amount. The borrower's character and willingness to repay is also assessed during field visits. Credit bureau data are not always available for low-income clients or for all types of microfinance providers, but when they exist, are used as well. Credit scoring, when used, complements rather than supplants the more labor-intensive approaches to credit analysis.

(c) Use of collateral. Micro borrowers often lack collateral traditionally required by banks, and what they have to pledge is of little value for the financial institution but are highly valued by the borrower (for example, TV, furniture). Where the lender does take some sort of collateral, it is for leverage to induce payment rather than to recover losses. In the absence of collateral, underwriting depends on a labor-intensive analysis of the household's repayment capacity and the borrower's character.

(d) Credit approval and monitoring. Because micro lending tends to be a highly decentralized process, credit approval by loan committees depends heavily on the skill and integrity of loan officers and managers for accurate and timely information.

(e) Controlling arrears. Strict control of arrears is necessary given the short-term nature, lack of collateral, high frequency of payments (e.g. weekly or bi-weekly), and contagion effects (see h. below) of microloans. Traditionally, monitoring is primarily in the hands of loan officers as the knowledge of the client's personal circumstances is important for effective collections.

(f) Progressively increasing lending. Customers who have limited access to other financing are usually dependent upon ongoing access to credit. Micro lending uses incentive schemes to reward good borrowers with preferential access to future, larger loans (sometimes with favorable repayment schedules and lower interest rates), which raises the risk of over-indebtedness, particularly where credit information systems are absent or deficient. This feature also affects interest rate risk management, as microfinance customers expect rates to decline as the customer's track record grows, regardless of changes in the general level of interest rates.

(f) Group lending. Some micro lenders use group lending methodologies, where loans are made to small groups of people who cross guarantee other members of the group. Peer pressure also helps to ensure high repayment levels, as the default of one group member could adversely affect the availability of credit to others.

(h) Contagion effects. Tight control of arrears and peer pressure has driven traditionally sound repayment rates in most jurisdictions to date. However, the quality of individual loan portfolios can deteriorate quite rapidly, due in part to the unsecured or under-secured nature of microloans as well as so-called contagion effects, where borrowers who notice increasing delinquency in the institution may stop paying if they believe the institution will be less likely to offer future loans due to credit quality problems.

(i) Currency-related risks. Occasionally micro lenders lend in a currency other than that of a borrower's repayment source (e.g. sale of goods or services), so foreign currency fluctuations may affect the borrower's ability to repay. While not unique to

microcredit, micro borrowers may be less able to appreciate the nature of this exposure, much less take measures to mitigate it.

(j) Political influences .Micro-credit, and microfinance in general, may be seen as a political tool in some countries, tempting politicians to demand forbearance or forgiveness of loans to poor customers during times of economic stress. This might affect repayment culture of microfinance borrowers.

The dynamics of microfinance assets and liabilities also differ from those of commercial banking, affecting liquidity and interest rate risk management. On the asset side, loan repayment is often driven by expectations of repeat loans over time, transforming short-term loan portfolios into long-term, fixed-rate assets. Illiquidity of such assets is heightened by the fact that there are few established securitization markets available for microcredit portfolios. Microfinance institutions also tend to grow rapidly, particularly in their early stages. In this situation, they may lack a cushion of unencumbered, high-quality liquid assets to enable them to withstand a range of stress events, since most funds are designated to support loan growth.

On the liability side, data on the historical volatility of deposits in ODTIs may not be available to allow for meaningful gap analysis. In addition, ODTIs tend to have less certain access to backup sources of liquidity from local banks, although lack of bank liquidity lines may be mitigated by the existence of a local wholesale lender or government program set up to provide funding to the microfinance sector. ODTIs are also vulnerable to disruptions in commercial borrowings due to delays or changes in policies of public (government) and private (donors and lenders) funders. Nonetheless, borrowing from international lenders may be a stable source of liquidity depending on individual relationships and contract terms. (Collins et al 2009).

2.8.2 Sources of Funding for MFIs

Rhyne (2006) states that, currently, domestic sources (personal funds and donor funds) account for 85% of microfinance funding while foreign sources account for 15%. Although 15% seems a small percentage given the amount of attention given to private entry of inclusive finance, there is a large up surging market potential for continual growth in private inclusive financing of MFIs. MFIs are facing challenges in acquiring foreign or external financing and most of them rely on domestic funding which is not easy to obtain.

According to Rhine (2006) and Gonzalez-Vega (1997b) structuring partnerships with commercial banks are a form of financing. It is essential to ensure that solid business principles prevails and that no one of a company's business will depend on an ongoing subsidy for its success, though start-up subsidies often help reduce the risk of experimentation, but dependence on subsidy and donors will lead to operational hiccups and failure. The dependency on subsidies as a source of funding for MFIs significantly reduces the chances of success.

Christen and Rosenberg (2000) also highlighted that one alternative that some microfinance institutions have pursued is borrowing from banks. ACCION International, for example, has fostered this approach by using guarantees to develop borrowing relationships between its affiliates and commercial banks.

In addition the two authorities indicated that many other microfinance institutions, however, have preferred to investigate the possibility of mobilizing deposits from the general public. In line with Rhine (2006), Gonzalez-Vega (1997b) as well as Christen and Rosenberg (2000), Brau (2002) Woller (2002) corroborates that in practice, there are currently several ongoing practical attempts to tap capital market investors for MFI funding. The ACCION Gateway

Fund makes equity, quasi-equity, and debt investments in MFIs with a proven track record of financial sustainability. The AfriCap Microfinance Fund makes equity investments in African-based MFIs, as well as financing technical assistance for said MFIs.

The First Microfinance Bank Ltd (FMFB) is the first private-sector, regulated MFI in Pakistan, with operations all over the country in rural and urban areas. FMFB was formed as a result of the transformation of the microfinance program of the Aga Khan Rural Support Programme (AKRSP), which has been running an integrated rural development programme in the remote and isolated north of Pakistan for the past 20 years. FMFB has transformed its technology solution from a very basic level to one of the most advanced within its peer groups. The Microfinance program at AKRSP started its operations with a manual system, then semi-automated and finally a full-fledged MIS for loans. The transformation from NGO to a microfinance bank posed a big challenge to its MIS solution as the existing MIS did not have any functionality related to deposits, remittances and insurance that the bank envisaged to offer.**(** CALMEADOW, 2003; Rao, M , 2004)

2.8.3 Challenges Faced by Micro financing

The Microfinance Institution in Ethiopia is growing with an incredible speed changing the lives of the poor. Besides the good things, below are some challenges faced by MFIs (Wolday, 2000).

Limited outreach particularly for women (Befekadu, 2007)

Lack of adequate whole sale funding possibilities (guarantee facility)

Operating and financing expenses are high

Illegal government and NGO operations which spoiled the market.(Woldemicheal, 2010)

High turnover of MFI staff consequently deteriorating the skills based in the industry

Lack of knowledge about microfinance services

Weak governance and management capacities for further developments

Limited financial products unable to address the various needs of clients

Lack of standardized reporting and performance monitoring system

Less attention and emphasis on the financial sustainability of MFIs

Inadequate donor funding

Drought and local market failures

Poor infrastructure affects the outreach and sustainability of MFIs. This

Increases the transaction cost and affects the profitability of the institution.

Low interest rates in the microfinance industry affecting the financial health and viability of MFIs

2.8.4 The Effects of Competition to MFIs

Marulanda (2005) articulates that the more threatening competition to existing MFIs is not coming from informal moneylenders as in the past; but from private commercial banks and other regulated financial intermediaries. However, Dorado (1998) went on to argue that increased competition is always welcome, because competition spurs technical efficiency; competition spurs improvements in the quality of outreach and in the variety of services offered. Competition spurs actions to reduce costs that, in turn, allow lower interest rates. This has clearly happened in Bolivia. Gonzalez-Vega *et al* (1996) backs up the need for increased competition because they believe that it encourages efficiency but it also increases risk. However, the drawback of competition is that it may force some MFIs out of the market. Ironically, when exit is due to entry of better actors in the market, it is a healthy outcome. Navajas et al., (2003) studied competition in the Bolivian microfinance market by focusing on two major MFIs (Casa Los Andes and BancoSol), which collectively have around 40 percent market share. The results suggest that outcome of competition is ambiguous since

competition leads to innovation thereby expanding outreach. However, it reduces the ability of lenders to cross-subsidize less profitable smaller loans.

2.8.5 Effect of Poor Management Skills

According to Hudon (2006), results indicate that management performance and skills are clearly associated with financial performance. Each of the four dimensions which includes leadership skills, technical skills ,organizational and communication abilities provide better results for MFIs performance. Tucker (2001), Armendariz and Morduch (2005) upholds Hudson (2006) and further argue that management is a major variable in promoting growth of MFIs.

2.8.6 Poor Corporate Governance Effect on MFI Performance

Labie (2001) ascertain that the emergence of structural problems has emphasized the importance of MFIs management and governance. Indeed the MFIs community has experienced major failures, for which inadequacy of government and management is to blame. Good corporate governance can improve firm performance and help assure long-term survival (Thomsen, 2008). The issue of corporate governance has therefore been of increasing interest for microfinance as it is today considered to be one of the weakest areas in the industry (CSFI, 2008). In conformity, Rock et al. (1998), Otero and Chu (2002) suggest importing best practices in governance from developed countries, such as board independence and shareholder ownership while Van Greuning et al. (1999) and Hardy et al. (2002) argue for better MFI regulation.

2.8.7 Outlook of MFIs

It is evident that the MFIs around the world are diverse intheir structure and practices. Following are some of the factors that differentiate MFIs from each other:**(CALMEADOW**, 2003; Rao, M, 2004 and Firpo, J., 2005)

1. Type of organization:

NGO

MFI (non-regulate)

Regulated MF Institution

Microfinance banks

2. Type of Products and Services:

Minimalists (those who offer only credit services)

Loans as well as savings services

Full range of products (including loans, deposits, remittance, insurance, leasing and social services)

3. Organizational Structure:

Branch setup (small, medium and large)

Staff structure

Departments (cost centre and profit centre)

4. Size:

Branch network

Portfolio size

No. of employees

Sections and departments

Growth

5. Geography:

Area specific (operations are limited to a small area)

Country specific (operations are spread over an entire country)

Global operations (operating in multiple countries)

6. Operational Environment:

Rural areas

Urban areas

Other

7. Processes and procedures:

Models (associations, cooperatives, credit unions, Grameen, etc.)

Methodologies (individual, group, village banking, community banking etc)8. Regulatory environment

9. Reporting:

Management reporting

Stakeholder reporting

Microfinance networks and peer group reporting

2.9 Microfinance Sector in Uganda

The Microfinance sector in Uganda is made of formal and informal MFIs. The formal institutions are either companies which are regulated under the banking laws; financial intermediaries which are not banks but regulated by the government as Microfinance Deposit taking Institutions (MDI); non-regulated companies that offer only credits; or formally registered cooperatives and societies that serve their members. The formal institutions are members of the Association of Microfinance Institutions of Uganda (AMFIU). There are two banks, four MDIs, thirty one Credit only MFIs, and forty one Savings and Credit Cooperative Societies (SACCOs). The informal institutions are those SACCOs which are not registered by the government. These institutions have been ranked and categorized by Bank of Uganda and AMFIU, based on their size and level of operation. Table 1 shows the structure of the microfinance industry in Uganda as cited in Nanyonjo et al.(2004).

2.10 Microfinance technologies

A wide range of technologies are available to help microfinance providers improve efficiency, track operations more accurately, increase transparency and reach new customers. Yet the majority of the microfinance institutions struggle to select the right technologies and get the most from their investments. **The following technologies are used in microfinance** (G. Ivatury and N. Pasricha, Donor Brief No. 23, April. 2005):

 Information systems (IS) technology which helps microfinance institutions (MFIs) to track, analyze, and report on their operations. Small MFIs may manage with manual ledgers or spreadsheets, but most MFIs eventually need custom-built or commercially available IS software to track financial transactions and create reports for management, donors, and regulators. IS technology can also include handheld computers that record client information, scoring techniques that analyze data to predict customer behavior, and connectivity technologies that transmit data among staff and branches, such as broadband or VSAT (a wireless data connection via satellite).

 Delivery technologies. Large MFIs and banks sometimes use non-traditional delivery technologies, such as automated teller machines (ATMs), point-of-sale (POS) networks (devices in retail outlets which use debit/credit cards to facilitate electronic payments and transactions), and mobile phone banking. These technologies allow customers to make payments, transfers, cash withdrawals, and cash deposits outside branch offices. Although new delivery technologies have the potential to reduce the cost of serving the poor, in many countries they have not yet proven as cost-effective as more conventional operations.

2.10.1 Technology can benefit microfinance service providers in the following ways :(**G. Ivatury** and N. Pasricha, Donor Brief No. 23, April. 2005)

More informed decisions. An IS that produces timely, accurate data enables managers to continually evaluate performance, better predict cash needs, and anticipate and respond to crises rapidly. By upgrading its IS, Spandana (India) management was able to compile timely, reliable data and monitor performance across the MFIs 45-branch network.

Increased flexibility. Cooperative 23 de Julio (Ecuador) transmits data instantaneously throughout its branch network using dial-up and VSAT connections, which are faster and cheaper than physically transferring data, and allows customers to bank at any branch.

Lower operating costs. Mibanco (Peru) reduced loan origination costs by 10 percent by streamlining its loan approval process with a scorecard to predict client repayment behavior.

Better reporting. First Microfinance Bank (Pakistan) developed an IS that allowed managers to produce reliable, standardized reports which follow accounting industry and national standards.

Increased deposits. By placing easy-to-use ATMs in well trafficked areas, Prodem (Bolivia) gave its clients the ability to save more often, and in smaller amounts, when they had cash available.

Improved customer convenience. Cerudeb (Uganda) is experimenting with POS devices that enable clients to use their bank cards to withdraw cash at local retail outlets, instead of waiting in line at the branch.

More rural customers. Standard Bank's (South Africa) low minimum balance, easy-to-use "plan" account can be opened at manned ATMs in rural areas where it would be too expensive to open branches debit/credit cards to facilitate electronic payments and transactions), and mobile phone banking. These technologies allow customers to make payments, transfers, cash withdrawals, and cash deposits outside branch offices. Although

new delivery technologies have the potential to reduce the cost of serving the poor, in many countries they have not yet proven as cost-effective as more conventional operations.

2.10.2 ICT for Microfinance accessibility

Management information system application software, the Smart Cards and personal digital assistants (PDAs) are some of the technologies that can facilitate microfinance business (P. Si, 2001). These technologies allow the loan officers to more efficiently serve their clients by reducing paper work, increasing accessibility to information and finally simplify computations of complex analyses. The above cutting-edge technologies that have been used by microfinance institutions are described as follows:

Management information systems (MIS) – through well-defined MIS, MFIs can access or analyze information more efficiently for better decision-making, operations management, and product development. Some of the features expected from MIS include: access control and security (i.e. passwords, audit trails), loan functionality (processing different types of loans with changing repayment periods and interest rates), deposits functionality (including access for the user to the interest rates, fees and penalty charges), report generation and database query/analysis capacity (i.e. loans profile by gender and risk, credit scoring, etc)

Smart Cards – are plastic in nature and similar in appearance to debit/credit cards. Smart cards have micro-chips embedded in them. The function of the micro-chip is to store data and this brings opportunity for MFIs to carry all their related loan and purchase information on a micro-chip. Therefore, a smart card can serve as a debit cards, an account passbook and even a credit card.

Personal Digital Assistants (PDAs) – these are small portable handheld computers that can be used by loan officers to access the institution's MIS. The loan officer can use PDA to update information at the head office while still in the field.

2.10.3 Open-source software for microfinance business

Micro-banks and credit cooperatives have sprung up all over the developing world, providing loan services to millions of poor people. Taking care of these businesses has become a big challenge for micro-bankers. The money in microfinance is constantly recycled. As money is repaid, usually within six months to one year, the money is recycled to another loan. Keeping track of thousands of clients with hundreds of thousands of ongoing transactions requires computers. The price of computer hardware has continued to fall down in the world in the recent years. The computer hardware is affordable, but the specialized software tools (MIS) are not. The MIS is expensive and the training and supports services to it in the developing world is too costly or unavailable (IDRC, e tal).

Mifos software developed by Grameen foundation is open-source software designed to revolutionalize the way that microfinance practitioners access and use technology to run their operations. This system was launched in Global microcredit summit in Canada on November 13, 2006, during that time IDRC announced its intention of extending Mifo to microfinance to African community of users and developers. Microfinance institutions have scarce resources to invest in the purchase, maintenance and upgrading of MIS systems. Mifos being open-source software has reduced costs and can easily be adapted; anyone with right skills can modify the system to meet particular local needs and language requirements. This enables microfinance institutions to manage their own information systems with the help of local technicians. Mifos has same features and functionalities as its commercial counterparts. The features include client management, loan repayment tracking, fees, and savings transactions.

The system is web-based within-built security and support to different languages and currencies (IDRC, e tal).

IDRC and the Grameen in principle agreed to have partnership with Adept systems, and IT consulting company in Nairobi, and the East African center for open source software (EACOSS) in Kampala, Uganda to encourage and support an Africa-wide community of Mifos users and developers(IDRC, e tal).

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2.10.4 Distributed system for microfinance business

Around 45% of existing microfinance institutions still track and record their operations and accounting in Excel sheets or even completely manually. This is costly in terms of time and resources. This approach of information management leaves room for errors, prevents institutions from growing quickly, and undermines their ability to manage risks.

IBM has developed a microfinance processing hub, that is, a shared infrastructure and software platform that provides groups of MFIs with a centralized core banking system, data center, operations management, and transaction processing. This plan initially covered eleven countries and opened to all kinds of financial institutions. Connected institutions had slightly standardized their business processes and product features]. The following are the benefits MFIs can get from centralized IBM information system (Siedek, IBM hearts MFIs, 2008):

MFIs group themselves to better negotiate prices with different service providers;

Investment fixed costs are turned into variable costs (e.g. cost per client per year, or by transaction);

Internet connection is the only resource needed to open a branch, installation of hardware and software is not needed;

New products can be added without difficulties in system adjustments;

Portfolio, accounting, and client information is readily available for external and internal use improving the overall transparency of the industry;

Local banks feel more comfortable to fund MFIs since reporting is transparent and readily available;

Connecting with additional distribution channels like ATM networks, retail agent chains, is a "plug and play" issue.

2.10.5 Loan Performer software for Microfinance Business

Crystal Clear software limited is a registered computer company in Uganda. This company develops markets and supports a microfinance software package called loan performer with primary purpose of tracking loans and savings. This software has been recognized by World Bank and UNDP as a good tool for managing microfinance business process. The key

functionalities of loan performer include: client communications when in sending general messages, message after a savings deposit/withdrawal, message after a savings transfer, repayment due reminder message, arrears notice massage to guarantor and loan/arrears balance messages. Other features of loan performer include: poverty assessment, bank reconciliation, loan refinancing, foreign exchange transactions, custom reports, SMS banking and Fingerprint scanning (AND, 2000)

2.10.6 ICT and Microfinance in Developing Countries

Studies have established that small depositors and small businesses are good savers, and they always want to leave their money intact, unless they have a serious need for money (Asian Development Bank, 2000; Sanchez, 2003). They are also generally diligent in paying off their obligations. The loan recovery is usually more than 95% (Feiner, 2003). These developments have spurred the growth of microfinance institutions. The microfinance sector has grown exponentially in the last decade with a turnover estimated at US$2.5 billion worldwide, and it is expected to grow further with the introduction of mobile banking. The World Bank has estimated 7000 MFIs globally serving 16 million people in developing countries; and 13 million are micro-creditors with US$7 billion in outstanding loans with a repayment rate of more than 95% (Kashyap, 2009). The impediments to the success of MFIs in developing countries are the scalability, sustainability, outreach, and the impact of the various microfinance initiatives (Kashyap, 2009). These impediments can only be overcome through the usage of ICT to maximize outreach and sustainability (Kashyap, 2009; Gibson and Meehan, 2002). ICT is an enabler of affordable solutions to MFIs. It can enable MFIs to reach remote rural based clients in an effective low cost manner. Rao (2003) observed that for an MFI, transaction costs are one of the crucial bottlenecks to increase profits and to achieve long-term sustainability. ICT has been found to alleviate some of the problems faced by MFIs

through provision of secure, low cost, and reliable means of transactional data capture and successful transfer MFIs (Filpo, 2006).

ICT offers various benefits to clients and MFIs in various countries. The benefits to clients have been identified as access to banking services, more convenient services, faster loan processing, less time in queues; and for the MFIs as reduced transaction costs, less fraud, improved quality of financial information, increased outreach, reduction in operational costs, and increase in customer satisfaction and loyalty (Hishigsuren, 2006). ICT has been used to create "branchless banks" through mobile banking, automated teller machines (ATM), and point-of-sale (PoS) networks among others where clients can access various financial services. Rogers (2007) examined the role of ICT and in particular mobile phones in the delivery of financial services in five countries and summarized it as follows. In Philippines, more than 2 million people are using their phones as mobile wallets to receive and send payments, pay utility bills among other services. In India, rural farmers and MFIs are using mobile phones to do bookkeeping, receive and send payments and to pay utility bills. In addition, handheld devices and smart card technology are used to automate loan processing and tracking. Biometric ATMs with smart cards are used for financial transactions without the need for personal identification. In Bolivia, ATMs capable of speaking in local languages are being used to provide financial services including depositing and withdrawing funds without filling forms, and to facilitate funds transfer. In Peru, phone-based systems with voice prompts are being used to provide financial services in rural areas. In South Africa, Wizzit, a virtual bank uses mobile banking for their clients to send and receive domestic and international payments. In East Africa, the telecom companies of Safaricom, MTN Uganda and Zain are offering financial services of sending and receiving domestic and international

payments. Safaricom alone serves more than seven million users with an agent's network that exceeds the total number of bank branches in Kenya (Kinyanjui, 2009).

The diffusion of ICT in the operations of MFIs in developing countries is growing (CGAP, 2006). Despite the high diffusion, there are challenges that are to do firstly with the limited infrastructure in terms of mobile network and Internet bandwidth in most of the countries, which limits outreach to rural areas; secondly, illiterate clients not having personal identification nor credit history requires MFIs to invest in more sophisticated technologies to serve them; thirdly, computer illiteracy of the borrowers; fourthly, limited funding to invest in the infrastructure, human resources and the ICT; and lastly, the high costs of administering small transactions on savings accounts, money transfer and loans to poor people provide low profit margins (Amin, 2007, Hishigsuren, 2006, and Mathison, 2005) . With these challenges, there is a lot to be done for ICT to enable MFIs meet their dual objectives of outreach and sustainability.

2.11 Summary of the Gaps

Challenges faced by MFIs (CALMEADOW, 2003; ADB Releases, 2005; Rao, M, 2004 and Firpo, J., 2005)

1. Microfinance is a rapidly changing industry. Due to the ongoing evolution of the industry, MFIs face difficulty in defining business objectives, needs, priorities and limitations for acquisition of an MIS solution. There is lack of standardization within the microfinance sector, and business practices of MFIs differ from each other. Consequently, software developers face problems in coming-up with an MIS that can be used by most of the MFIs. Common failures are due to ill defined business process and procedures.

2. There is a shortage of skilled professionals who can understand technology as well as the microfinance industry, and be able to suggest the right solution. Such professionals can act as a bridge in filling the gap between use of ICT and microfinance operations

3. Majority of the MFIs do not have the technical capacity and required resources to understand, adopt and implement MIS solutions.

4. Most MIS solutions are not affordable to the majority of MFIs.

5. In some cases there is a lack of vision and commitment from the management towards use of technology

6. Integration is becoming one of the big challenges, as most of the MIS solutions for microfinance are built on weak platforms, thus not being flexible and scalable enough to integrate with emerging technologies and delivery channels.

7. There is poor information sharing on successful MIS deployments within the microfinance as well as the financial sector.

8. ICT vendors still do not see the tremendous business opportunity and growth in the microfinance industry thus are reluctant to invest and establish strategic partnerships with MFIs.

9. Power and communication infrastructure, which is the foundation for hosting ICT services, is inadequate in those areas where MFIs operate.

10. Non-availability of efficient technical support by vendors

2.12 Conclusion

The use of ICT can rightfully be to the strategically advantage of MFIs. Innovations in ICT have transformed traditional approaches to microfinance, facilitating growth and reducing cost. Some of the players have already started getting the benefit by using MIS and similar IT

solutions, while the majority of the MFIs have yet to realize the importance of its use to achieve outreach and sustainability.

The implementation of the right MIS still remains a big challenge faced by MFIs .Efforts are also made from various corners of the world in overcoming these challenges. CGAP's Information System Support is a prudent initiative to assist MFIs in getting access to ICT, aligning their MIS and using the appropriate IT solution. One of the realizations is "first things first" i.e. having an appropriate core MIS first before other systems: keeping in mind the strategic importance of ICT to the microfinance industry, renewed efforts are required from all the stakeholders to overcome the challenges faced by the microfinance industry in taking on IT.

CHAPTER THREE

METHODOLOGY

3.0 Research Methodology

This chapter included the detailed ways in which the data was carried out. It highlights the research design, study population, sample size, sampling techniques, simple random sampling, data sources and types, data collection methods, data processing and analysis, data procedure, data reliability and validity, presentation of data and the limitations of the study.

3.1 Research Design

The researcher used a cross sectional study designed with both qualitative and descriptive approaches. Descriptive and analytical data was found suitable since this provided the researcher a clear understanding about the contribution of information system on the development of Pride micro finance in Wakiso district from January to May, 2015.

3.2 Study Population

The study was carried out in Wakiso district. The study cover people like; employees, management staff, past clients and present clients. Since the type of information required was qualitative in nature, purposive sampling was the most appropriate to use.

3.3 Sample Size

The targeted respondents was made up of 15employees in micro finance institutions, 15from the management staff,10 past clients and 10 present clients making a total of 50 people. These was selected using purposive sampling, this was a deliberately non-random method of sampling, which aims to sample a group of people or settings, with a particular

characteristic, usually in qualitative research design. It was used so as to attain information from the parties.

3.4 Data Source

The researcher used both primary and secondary sources of data.

3.4.1 Primary data

Data was collected from the field which was obtained mainly by administering questionnaires and interviews to the respondents.

3.4.2 Secondary Data

Data was obtained from published materials, which includes; journals, magazines, internal reports and newspapers. They included among others; minutes, internal and credit officers' reports of Pride micro finance.

3.5 Instruments of Data Collection

The researcher used a number of data collection instruments like; questionnaires and interviews.

3.5.1 Quantitative Tool of Data Collection

3.5.1.1 Questionnaires

The researcher designed self administered questionnaires which were distributed to Pride micro finance clients. Such questionnaires were designed to meet the needs of Pride Micro Finance s'; past clients and present clients. The completed questionnaires were then picked from respondents for analysis.

3.5.2 Qualitative Method of Data Collection

3.5.2.1 Interviews

The researcher designed appropriate questions relating to the topic of discussion and then presents the questions to micro finance institutions' respondents like; employees and management staff while noting down the responses in the research book. The collected responses were then be analyzed.

3.5.3 Other methods of data collection

3.5.3.1 Observation

The researcher ensured that he took a step to appear at the selected micro finance institutions' premises to look at the way things are done in the organization, systems used and how they use them. He also tried to observe whether the systems used are user friendly to the interactions (people using them).

3.5.3.2 Enterprise documents

The researcher ensured that he interacts with the management in position of documentaries so that required information can be obtained. Such documentaries may include MFIs' journals, internal and external reports of the information systems' manager and other relevant documents.

3.6 Data Processing and Analysis

Data was collected, then sorted out using SPSS and a summary was made. Data was then classified into the main elements in the data that was in relation with the research being undertaken. Such elements include; descriptive and statistical approaches in processing and analyzing the data. Data was then reviewed and

assessment was hen made on the contribution of information technology on the development of micro finance institutions.

3.7 Data Collection Procedure

The research was conducted after getting permission from the university and an introduction letter was carried from the faculty office. Data was collected by the use of questionnaires which were distributed to the respondents and then collected after. For those respondents that do not understand the English language, interpretations were made in order to help them (respondents) give accurate information.

3.8 Presentation Of Data

Presentation was basically through use of descriptive words. The study was presented in the chapters; introduction, literature review and research methodology.

3.9.0 Data Validity and Reliability

3.9.1 Data validity

Data validity was ensured through trial survey. It is from the pilot studythat the researcher asked a series of questions and often looked for answers from respondents. He will pre-test his instrument by developing Questionnaires which were filled in by some people and answers were obtained. Sometimes the researcher asked some direct questions with an intention of getting responses from respondents. The questions were adjusted according to the results of the pre-test study.

3.9.2 Data reliability

The researcher looked at the extent to which the results are consistent over time and an accurate representation of the total population under the study. The researcher ensured that there was no question that can be misunderstood by the respondents so that they were not answered differently which might result into low reliability. This was done through giving assistance to some respondents as regards to interpretation of certain questions that were confusing to them.

3.10 Ethical issues in research

The researcher ensured that there was confidentiality during the research study as much as possible where it was necessary. The researcher also ensured that people give out answers willingly without any form of bribe or payment.

CHAPTER FOUR

4.0 PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

4.1 Introduction

This chapter presents the findings of the study, the findings relating to the discussion, analysis and presentation as revealed by the field survey conducted by the researcher. Both primary and secondary data were used. The findings are presented in percentage tables and bar graphs. The presentation is guided by the following objectives;to examine the nature of information systems used on the development of Pride micro finance in Wakiso district, to find out the benefits of information systems on the development of Pride micro finance in Wakiso district and to find out the difficulties faced when adopting the Information systems on the development of Pride micro finance in Wakiso district.

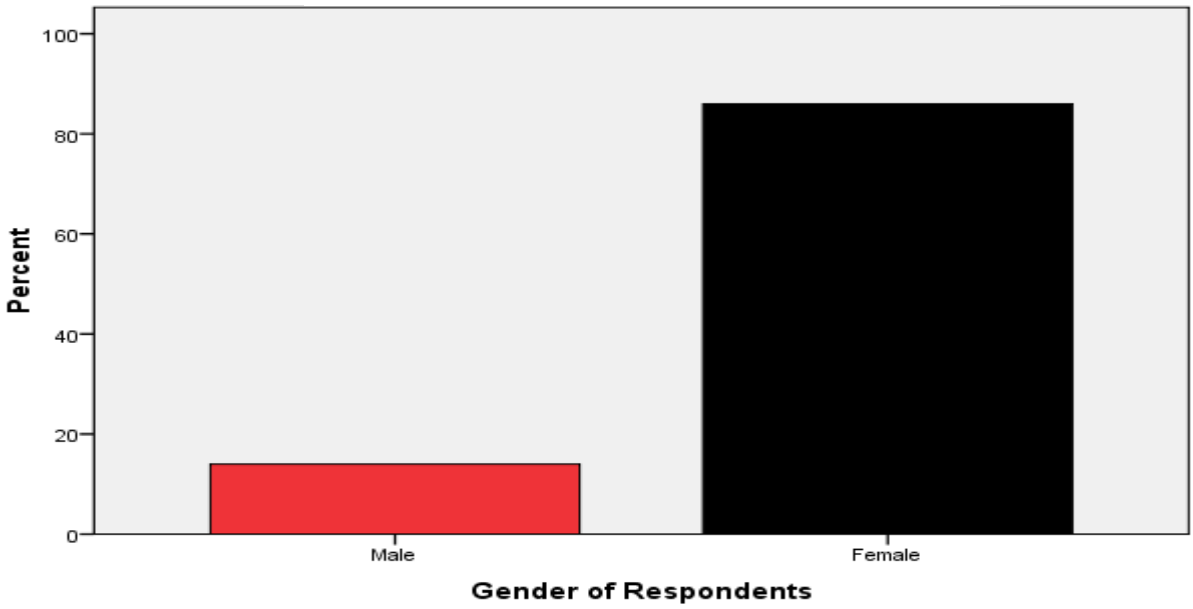
4.2 General Background Information

This section presents the general characteristics of the respondents. These include; sex, age brackets, educational level, Period of dealing with Pride microfinance and Position held in Pride microfinance.

4.2.1 Gender Distribution of the Respondents

The study established the gender or sex of the respondents who were interviewed and answered questionnaires. Figure 1 shows the findings.

Figure 1: Showing Gender Distribution



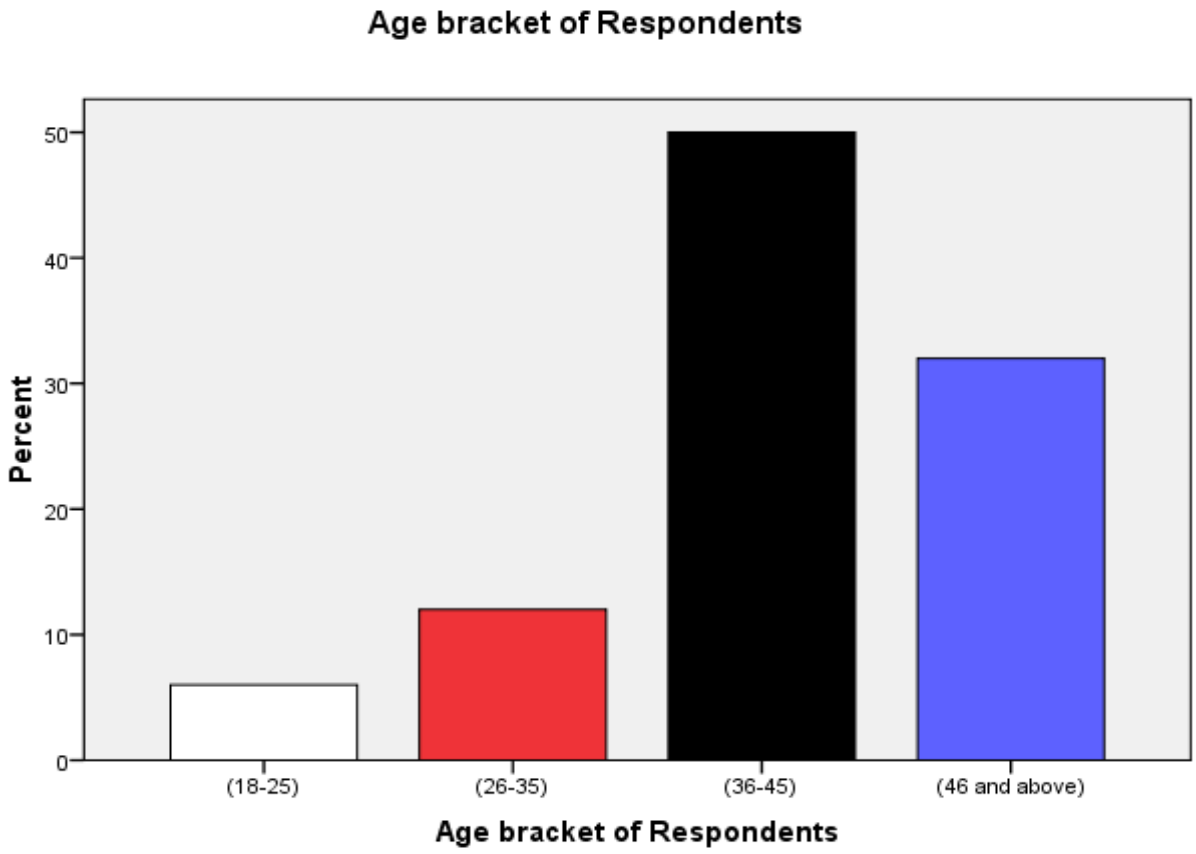
Source: Primary data, 2015

From figure 1 above, 86% of the respondents were found to be male and 14% were found to be female. This implies that majority of the people who work and interact with pride microfinance comprise of a group of female.

4.2.2 Age bracket of the respondents

The study also established the age bracket of the respondents that mostly who work and interact with Pride microfinance. Figure 2 shows the findings.

Figure 2: Showing the age bracket of respondent



Source: Primary data, 2015

From figure 2 above, 12% represented the age bracket of (26-35) years, 50% represented the age bracket of (36-45) years, 32% represented the age bracket of (46 and above) years and 6% represented the age bracket of (18-25) years. This signifies that majority of the respondents were in the risk taking and working class age of (26-35) years.

4.2.3 Highest level of Education of Respondents

The study also established the highest level of education attained by the respondents. Table 1 shows the findings.

Table 1: Showing the Highest level of Education of Respondents

Highest level of Education of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Primary	7	14.0	14.0	14.0
	Secondary	4	8.0	8.0	22.0
	Certificate	18	36.0	36.0	58.0
	Diploma	14	28.0	28.0	86.0
	Degree	6	12.0	12.0	98.0
	Masters	1	2.0	2.0	100.0

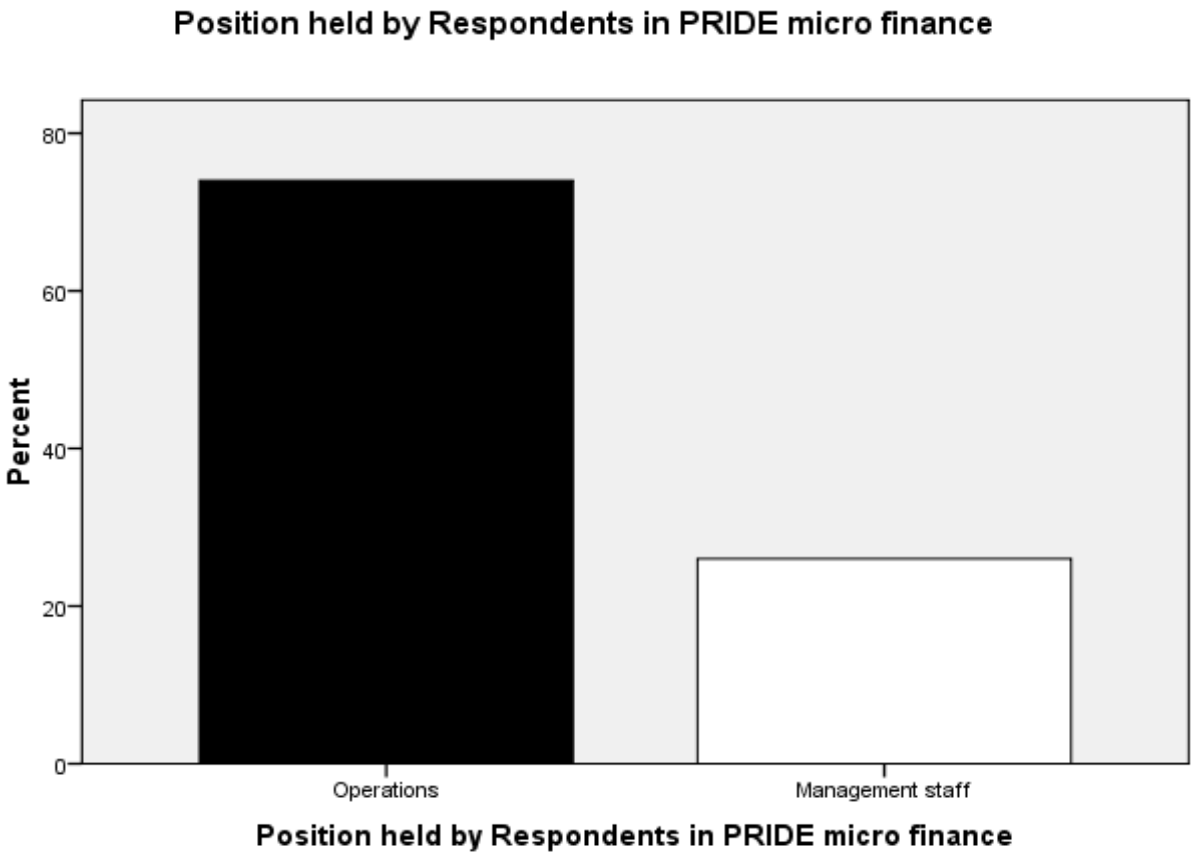
Source: Primary data, 2015

From table 1 above; 28% were secondary school drop outs, 36% were certificate holders, 14% were primary school levellers, 8% were diploma holders, 12% were degree holders and 2% were masters' holders. This implies that majority of PRIDE'soperations and management staff attained educational level though the most prominent people were the diploma and certificate holders.

4.2.4 Position held by respondents

The study also examined the position of respondents in Pride micro finance. Figure 3 shows the findings.

Figure 3: Showing the position held by the respondents.



Source: Primary data, 2015

From figure 3 above, 74% of the respondents were in operations while 26% of the respondents were management staff. This implies that the majority of employees in Pride comprise of operations positions.

4.2.5 Period spent when working with PRIDE micro finance

The study also identified the period spent when working with Pride microfinance. Table 2 shows the findings.

Table 2: Showing the Period spent when working with PRIDE micro finance

Period spent when dealing with PRIDE micro finance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-6 months	3	6.0	6.0	6.0
	6-12 months	7	14.0	14.0	20.0
	1-3 years	19	38.0	38.0	58.0
	4-10 years	19	38.0	38.0	96.0
	Had never	2	4.0	4.0	100.0
	Total	50	100.0	100.0	

Source: Primary data, 2015

From table 2 above, 38% of the respondents spent 4-10 years while working with the company, 38% worked with the institution for 1-3 years, 14% worked with Pride for 6-12 months, 6% worked with the institution for 1-6 months and 4% had never dealt with Pride. This implies that on average, majority of the respondents dealt with Pride for 4-10 years and 1-3 years.

4.3 Components of information systems used

The study also established the components of information systems used in PRIDE. Table 3 shows the findings.

Table 3: Showing the Components of information systems used in PRIDE.

Components of information systems used in PRIDE micro finance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Hardware	14	28.0	28.0	28.0
	Software	13	26.0	26.0	54.0
	Data	7	14.0	14.0	68.0
	Procedures	7	14.0	14.0	82.0
	People	6	12.0	12.0	94.0
	Others	3	6.0	6.0	100.0
	Total	50	100.0	100.0	

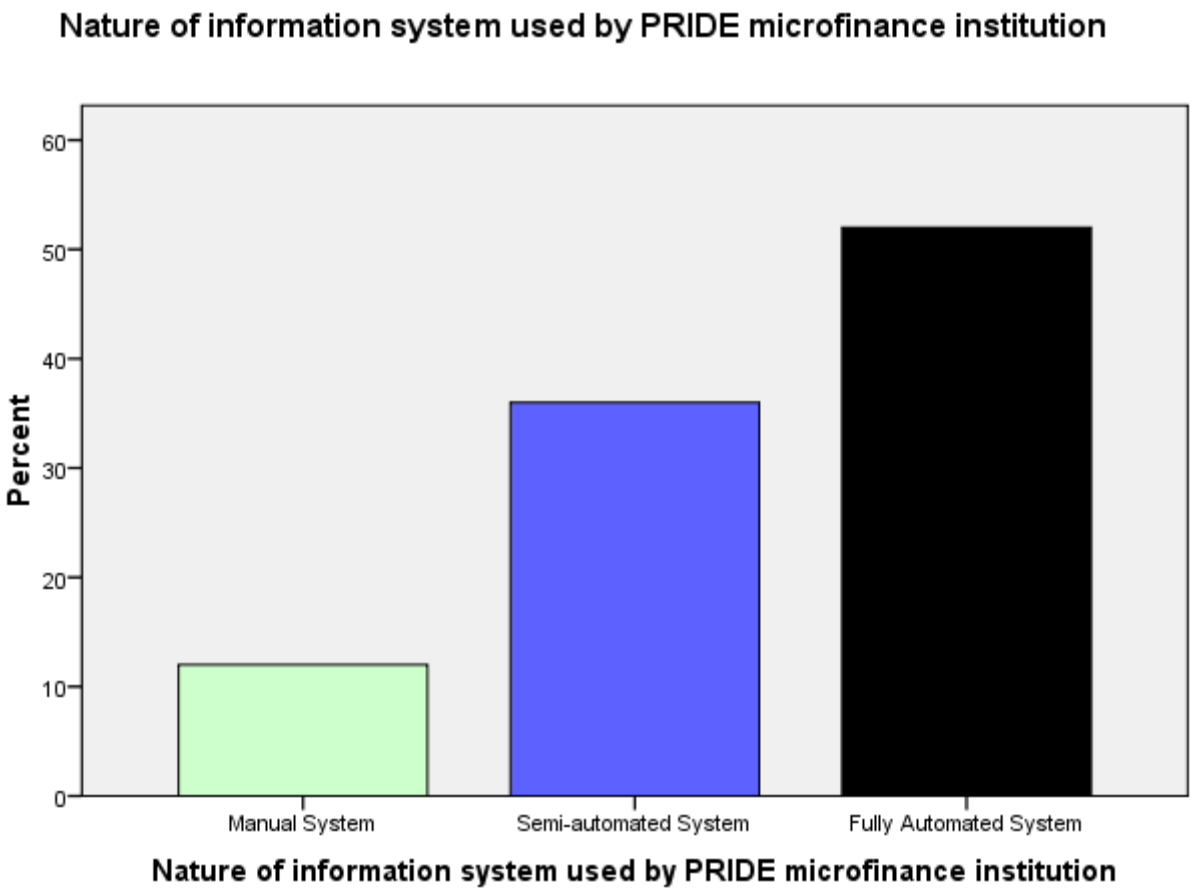
Source: Primary data, 2015

From table 3 above, 28% of the respondents supported hardware as a component of information systems, 26% supported software, 14% supported data, 14% supported procedures, 14% supported procedures, 12% supported people and 6% supported other components of information systems. This signifies that hardware and software are the most prominent components of information systems used in PRIDE.

4.4 Nature of information system used

The study identified the nature of information system used by pride microfinance. Figure 4 shows the findings.

Figure 4: Showing the nature of information system used by pride microfinance.



Source: Primary data, 2015

From figure 4 above, 52% of the respondents supported full automated system, 36% supported semi-automated system and 12% supported manual system. This implies that fully automated system is the most commonly used system in pride micro finance.

4.5 Characteristics to be consideration when getting the right system

The study also established the characteristics that might be considered when getting the right system. Table 4 shows the findings.

Table 4: Showing the Characteristics to be consideration when getting the right system

Characteristics to be consideration when getting the right system

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cost effectiveness	16	32.0	32.0	32.0
	Functionality & flexibility	6	12.0	12.0	44.0
	Reliability	12	24.0	24.0	68.0
	Simple to use	11	22.0	22.0	90.0
	Scalability	3	6.0	6.0	96.0
	Others	2	4.0	4.0	100.0
	Total	50	100.0	100.0	

Source: Primary data, 2015

From table 4 above, 32% of the respondents supported cost effectiveness as one of the characteristics of information systems, 24% supported reliability, 22% supported simple to use, 12% supported functionality and flexibility, 6% supported scalability and the 4% raised other characteristics of information systems. This implies that information systems hold various characteristics with cost effectiveness as the most prominent characteristic.

4.6 Benefits of information systems on the development of PRIDE micro finance

The study also established the benefits of information systems on the development of Pride microfinance. Table 4 shows the findings.

Table 5: Showing the Benefits of information systems on the development of Pride

Benefits of information systems on the development of PRIDE micro finance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Easy access to accurate and up-to-date information	12	24.0	24.0	24.0
	Detailed information is captured on customers	7	14.0	14.0	38.0
	Activities are completed faster	13	26.0	26.0	64.0
	Information is produced in user-required	11	22.0	22.0	86.0
	Efficiency and productivity of staff is increased	5	10.0	10.0	96.0
	Others	2	4.0	4.0	100.0
	Total	50	100.0	100.0	

Source: Primary data, 2015

From table 4 above, 26% supported Activities are completed faster as one of the benefits of information systems, 24% supported Easy access to accurate and up-to-date information, 22% supported Information is produced in user-required, 14% supported Detailed information is captured on customers, 10%supported Efficiency and productivity of staff is increased and 4% supported other benefits of information systems. This implies that information systems are of a benefit on pride's development.

4.7 Difficulties faced when adopting Information system in PRIDE micro finance

The study established the difficulties faced when adopting information system in Pride microfinance. Table 5 shows the findings.

Table 6: Showing the Difficulties faced when adopting Information system in PRIDE micro finance

Difficulties faced when adopting Information system in PRIDE micro finance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lack of standardization in its procedures	13	26.0	26.0	26.0
	Lack of human and organizational capacity to develop MIS	16	32.0	32.0	58.0
	No of-the-shelf software available that can address the requirements of MFI	9	18.0	18.0	76.0
	MIS that are available are complex and costly for adoption by MFIs	4	8.0	8.0	84.0
	Operate in remote and difficult areas where infrastructure do not exist	5	10.0	10.0	94.0
	Others	3	6.0	6.0	100.0
	Total	50	100.0	100.0	

Source: Primary data, 2015

From Table 5 above, 32% of the respondents supported Lack of human and organizational capacity to develop MIS, 26% supported Lack of standardization in its procedures, 18% supported No of-the-shelf software available that can address the requirements of MFI, 10%

supported Operate in remote and difficult areas where infrastructure do not exist, 8% supported MIS that are available are complex and costly for adoption by MFIs and 6% supported other difficulties.

4.8 Products offered by Pride microfinance

The study also established the products offered by Pride microfinance institution. Table 6 shows the findings.

Table 7: Showing the Products offered by Pride microfinance

Products offered by Pride microfinance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Micro-savings	17	34.0	34.0	34.0
	Micro-leasing	5	10.0	10.0	44.0
	Micro-credit	13	26.0	26.0	70.0
	Money transfer	8	16.0	16.0	86.0
	Micro-insurance	5	10.0	10.0	96.0
	Others	2	4.0	4.0	100.0
	Total	50	100.0	100.0	

Source: Primary data, 2015

From table 6 above, 34% of the respondents argued that micro-savings is a product offered by PRIDE, 26% supported micro-credit, 16% supported money transfer, 10% supported micro insurance, 10% supported micro leasing and 4% raised other services. This implies that pride is of use to the society through product offering with micro savings and micro credit as the most prominent ones offered by pride.

CHAPTER FIVE

DISCUSSION OF RESULTS, CONCLUSION AND RECOMENDATIONS

5.1 Introduction

This chapter discusses the findings by comparing what was in this study with what other scholars have established before in the literature review. It helps to draw conclusions as well as recommendations and other areas for future research. The discussion is according to the study objectives.

5.2 Nature of information systems used on the development of Pride micro finance

The findings from the study revealed that; 52% of the respondents supported full automated system, 36% supported semi-automated system and 12% supported manual system.

The above findings were supported by ADB Releases (2005) who argued that for Manual System, some MFIs still rely on manual systems, which involves maintenance of records in forms and ledgers .Organizations having manual systems are either small micro-credit programs or NGOs.

He also added the disadvantage of manual systems which include: too laborious and time consuming; prone to errors; data manipulation and analysis is very difficult; maintenance of large amount of data is almost impossible; data and information is not secured; loosely controlled; highly inflexible; business continuity is at risk in case of damage to information due to fire, water or any other disaster Reporting is very cumbersome, time consuming and difficult.

The findings were also supported by Rao, M (2004) who argued that for Semi-automated System, more than 50% of MFIs are operating in a semi-automated mode. He also added that

within this category, the spreadsheet is the common tool being used either in conjunction with a manual system or with an MIS application that does not fulfill the information requirements of the MFI.

The above findings were also supported by Firpo, J. (2005) who argued that for Fully Automated System, few MFIs are fortunate enough to have a fully automated and integrated MIS, fulfilling the whole information requirements of the organization. Such systems are existent with banks or regulated MFIs.

5.3 Benefits of information systems on the development of Pride micro finance

The findings from the study revealed that, 26% supported Activities are completed faster as one of the benefits of information systems, 24% supported Easy access to accurate and up-to-date information, 22% supported Information is produced in user-required, 14% supported Detailed information is captured on customers, 10%supported Efficiency and productivity of staff is increased and 4% supported other benefits of information systems.

The above findings were supported by CALMEADOW (2003) who supported that a major advantage of MIS is that it provides easy access to accurate and up-to-date information. For example, loan officers get information on loans that need follow-up, branch managers can monitor daily progress of the branch, and senior management can get a full picture of the portfolio performance and quality. He also added that Customers also get quick information on their accounts, payments and balances.

The above information were supported by ADB Releases (2005) who argued that detailed information is captured on customers and their activities that can then be used to assess client business to assess impact. It is also useful in tracking historical information of clients.

The above information were supported by ADB Releases (2005) who again suggested that activities, such as disbursements, repayments, deposits, withdrawals and money transfers are completed faster, better controlled and with minimum opportunity for errors.

The above information were also supported by Rao, M (2004) who argued that information is produced in user-required formats, which facilitates better understanding, setting priorities, objectives and strategy.

The above information were also supported by Firpo, J. (2005) who argued that information is produced in user-required formats, which facilitates better understanding, setting priorities, objectives and strategy. He also added that the key performance indicators provide an overview of the organization's performance, efficiency and effectiveness of business procedures so that timely adjustments can be made.

The above information were supported by ADB Releases (2005) who argued that efficiency and productivity of staff is increased, as they are able to manage more products, customers, and transactions in less time. He also added that to meet target market needs, introduction of new products and setting procedures is easy and can be quickly applied throughout the branch network.

The above information were also supported by Rao, M (2004) who argued that it can also provide the flexibility to integrate with other applications and delivery mechanisms. MIS lowers transaction cost, increases productivity, reduces risk of failure, and pushes the boundaries beyond bricks and mortar infrastructure to carryout business.

5.4 Difficulties faced when adopting the Information systems on the development of Pride micro finance

From Table 5 above, 32% of the respondents supported Lack of human and organizational capacity to develop MIS, 26% supported Lack of standardization in its procedures, 18% supported No of-the-shelf software available that can address the requirements of MFI, 10% supported Operate in remote and difficult areas where infrastructure do not exist, 8% supported MIS that are available are complex and costly for adoption by MFIs and 6% supported other difficulties.

The above findings were also supported by ADB Releases (2005) who argued that microfinance operations are unique and complex, compared to commercial, retail banking; microfinance sector is still evolving and lack standardization in its procedures, methodologies, customer characteristics, type of transactions and reporting; there is no of-the-shelf software available that can address the requirements of every MFI; and that MIS that are available are complex and costly for adoption by MFIs.

The above findings were also supported by Rao, M (2004) who argued that; MFIlack human and organizational capacity to develop or select an appropriate MIS; and that MFIs operate in remote and difficult areas where communication and power infrastructure do not exist, and are therefore constrained from using IT equipment required to run MIS applications.

5.5 Conclusion

MFIs face great challenges in choosing the right system solution that can best fit their business needs. An MIS for microfinance must have the following characteristics: Cost effectiveness: Total ownership and lifetime system operations costs, including hardware, software, network, infrastructure and human resource; Functionality & flexibility: Fulfill maximum of the current business requirement and flexible enough to incorporate future

changes, capture and generate relevant information on an individual or group, and at a consolidated level; Reliability: Incomplete and unreliable systems are dangerously risky and can hamper the business. Such systems do not produce the right results and are unable to complete processes to the desired level. Users could be misguided by such systems; and other challenges.

5.6 Recommendation

Management should ensure that maintenance of records in forms and ledgers is undertaken through adopting manual information system.

Management should also ensure that the spreadsheet as the common tool is being used either in conjunction with a manual system or with an MIS application that does not fulfill the information requirements of the MFI.

Management should also install a Fully Automated System, which is automated and integrated MIS, thus fulfilling the whole information requirements of the organization.

Management should also recognize the advantage of MIS is that it provides easy access to accurate and up-to-date information. For example, loan officers get information on loans that need follow-up, branch managers can monitor daily progress of the branch, and senior management can get a full picture of the portfolio performance and quality.

Management should also ensure that Customers also get quick information on their accounts, payments and balances.

Management should ensure that detailed information is captured on customers and their activities that can then be used to assess client business to assess impact. It is also useful in tracking historical information of clients.

Management should also ensure that activities, such as disbursements, repayments, deposits, withdrawals and money transfers are completed faster, better controlled and with minimum opportunity for errors.

Management should also ensure that information is produced in user-required formats, which facilitates better understanding, setting priorities, objectives and strategy.

Management should also ensure that information is produced in user-required formats, which facilitates better understanding, setting priorities, objectives and strategy. Management should also ensure that the key performance indicators provide an overview of the organization's performance, efficiency and effectiveness of business procedures so that timely adjustments can be made.

Management should also ensure that efficiency and productivity of staff is increased, as they are able to manage more products, customers, and transactions in less time. He also added that to meet target market needs, introduction of new products and setting procedures is easy and can be quickly applied throughout the branch network.

Management should also ensure that the system provides the flexibility to integrate with other applications and delivery mechanisms. MIS lowers transaction cost, increases productivity, reduces risk of failure, and pushes the boundaries beyond bricks and mortar infrastructure to carryout business.

5.7 Limitations to the study

The research was constrained by the limited financial resources. However, efforts were made to try out a reasonable piece of work out of that which was given.

Uncooperative respondents like during the time when questionnaires were dispatched. The questionnaires had to be answered by the targeted respondents for which most of the times were busy and uncooperative.

The measures on interest were so hard to access especially those at www.emeraldinsight.com.

5.8 Areas for Further Research

From the study conducted, findings achieved, the researcher recommends further research in the following areas;

The effect of reward system on the development of microfinance institutions.

The effect of micro finance institutions on the standards of living o f people.

The effect of microfinance funding on profitability of small scale businesses.

The effect of tax system on the performance of micro finance institutions.

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APPENDIX I

QUESTIONNAIRE

Re-questionnaire on the contribution of Information System on the Development of Micro finance institutions in Wakiso district.

Dear respondents,

I Ssenyondo Joseph a Bachelor of Business Administration and Management student of Uganda Martyrs University. You are kindly requested to fill or tick this questionnaire as honestly as you possibly can. The information obtained will be used for academic purposes only and will be treated with ultimate confidentiality.

PERSONAL DATA

1. What is your gender or sex as a respondent?

   Male ☐ Female ☐

2. Which is your age bracket?

   (18-25) ☐ (26-35) ☐ (36-45) ☐ (46 and above) ☐

3. What is your highest level of Education?

   Primary ☐ Secondary ☐

   Certificate ☐ Diploma ☐

   Degree ☐ Masters ☐

   If any other, specify…….....

4. Which position do you hold in the PRIDE micro finance?

Operations ☐ Management staff ☐

5. For how long have you been or dealt with such an institution?

1-6 months ☐ 6-12 months ☐

1-3 years ☐ 4-10 years ☐

Had never ☐

6. What Components of information systems do you use in PRIDE micro finance?

PLEASE TICK.

Hardware ☐ Software ☐

Data ☐ Procedures ☐

People ☐

If any other, specify……

7. What nature of information system is used by the microfinance institution you are or have been dealing with? PLEASE TICK.

Manual System ☐ Semi-automated System ☐ Fully Automated System ☐

8. What characteristics do you think PRIDE micro finance should put into consideration when getting the right system to be used?

Cost effectiveness ☐ Functionality & flexibility ☐

Reliability ☐ Simple to use ☐

Scalability ☐

If any other, specify……

9. What do you think are the benefits of information systems on the development of PRIDE micro finance in Wakiso district?

Easy access to accurate and up-to-date information ☐

Detailed information is captured on customers ☐

Activities are completed faster ☐

Information is produced in user-required ☐

Efficiency and productivity of staff is increased ☐

If any other, specify……

10. What do you think are the difficulties faced when adopting Information system in such micro finance institutions in Wakiso district?

Lack of standardization in its procedures ☐

Lack of human and organizational capacity to develop MIS ☐

No of-the-shelf software available that can address the requirements of MFI ☐

MIS that are available are complex and costly for adoption by MFIs ☐

Operate in remote and difficult areas where infrastructure do not exist ☐

If any other, specify……

11. What product or service have you ever utilized from such an institution?

Micro-savings ☐ Micro-leasing ☐

Micro-credit ☐ Money transfer ☐

Micro-insurance ☐

12. Suggest other areas for research in Information systems?

……

……

……

……

Thank you for your time and response.

APPENDIX II

INTERVIEW SHEDULE

1. What do you understand by the term information systems according to PRIDE micro finance?
2. Which kind of information systems are used by PRIDE micro finance?
3. Which kinds of services are offered by your PRIDE micro finance?
4. How has information system been used in service delivery of PRIDE micro finance?
5. What challenges do PRIDE micro finance face when adopting their selected information system to be used?
6. Which kind of staff should be employed so as to have effective management information systems?
7. What development programmes have PRIDE micro finance come up with as far as usage of information systems is concerned?
8. Which other non financial services are being offered by your institution?
9. What is the contribution of information systems on the Development of micro finance institutions in Wakiso district according to you?
10. What are the benefits of information systems on the performance of micro finance institutions in Wakiso district?
11. What are the difficulties faced when adopting Information systems on the development of micro finance institutions in Wakiso district?