AN ASSESSMENT OF THE EXTENT OF ICT DIFFUSION IN MICROFINANCE INSTITUTIONS: A CASE OF NAIROBI.

BY

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An assessment of the extent of ICT

AUGUST 2005.
DECLARATION

This Project Report is my original work and has not been presented for the award of a degree in any other University.

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DEDICATION

This work is dedicated to my husband, Fred Muchoki, my children, Rachael and Kenneth for their understanding, encouragement and support throughout this research and the entire course.

First and foremost, I would like to dedicate this work to my husband, Fred Muchoki. Your unwavering support and encouragement have been a constant source of strength and inspiration to me. I am grateful for your love and understanding through this journey.

My children, Rachael and Kenneth, have been my constant companions throughout this project. Your resilience and determination have been a source of pride and joy. Thank you for always being there for me.

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ABSTRACT

The purpose of this research was to study MFIs already using ICTs so as to assess the extent of ICT in such organizations. The study identified and assessed factors that influence the diffusion levels, the approaches used and the constraints such organizations face in the implementation for these technologies. This study will provide information to NGOs, GOK, researchers and MFIs with the hope of improving their standards.

The study was intra-organization where each micro finance institution was studied in regard to organization profile, automation, level of computerization, ICT models in use and the constraints. The study was done in MFIs in Nairobi, and only those registered with The Association of Microfinance Institutions. The study used descriptive survey design and data collection was done through census where structured and non-structured questions complimented by observations were used. The quantitative data was analysed using summary statistics of frequencies. Pilot Study was carried out at Kenya Post Office Savings Bank which was randomly selected.

It was found that majority of MFIs consider the high cost of ICT systems as a major obstacle in their efforts to integrate computer systems in their organizations. The problem was more severe for smaller organizations which have a smaller budget for the running of their activities.

Users of ICT solutions reported severe initial problems at the time the system was brought into the organization. A significant percentage of users indicated that no proper training was given to them and this had the effect of increasing their resistance to the new system. It was
found that users can be supportive of the new system if their concerns regarding job security, training and potential benefits are incorporated into the whole system implementation cycle.

On the whole, however, MFIs admitted that they had obtained significant benefits from the implementation of ICTs, the challenges of cost, user resistance, and changes in technology notwithstanding.

Finally, conclusions, recommendations and suggestions for further research were made.
## CHAPTER ONE

1.0 Introduction .............................................. 1
1.1 Background of the Study ................................. 1
1.2 Statement of the Problem ................................. 3
1.3 Research Objectives ....................................... 4
1.4 Research Questions ....................................... 4
1.5 Justification/Significance of the Study ................. 5
1.6 Scope of the Study ....................................... 6
1.7 Limitations of the Study ................................. 6

## CHAPTER TWO – LITERATURE REVIEW

2.0 Introduction .............................................. 7
2.1.1 The ICT Technology ........................................ 7
2.1.2 Information Systems and Infrastructure ............... 9
2.2 Micro-finance Institutions .................................. 11
2.3 Information System Required By Organisations/MFIs .... 13
2.4 Integration of ICT in Organisations/MFIs ................. 15
### CHAPTER THREE – RESEARCH METHODOLOGY

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0 Introduction</td>
<td>28</td>
</tr>
<tr>
<td>3.1 Research Design</td>
<td>28</td>
</tr>
<tr>
<td>3.2 Target Population</td>
<td>28</td>
</tr>
<tr>
<td>3.3 Sample Strategy</td>
<td>29</td>
</tr>
<tr>
<td>3.4 Data Collection Techniques</td>
<td>29</td>
</tr>
<tr>
<td>3.5 Pilot testing</td>
<td>30</td>
</tr>
<tr>
<td>3.6 Data Analysis and Presentation</td>
<td>30</td>
</tr>
</tbody>
</table>

### CHAPTER FOUR – DATA ANALYSIS AND FINDINGS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0 Introduction</td>
<td>31</td>
</tr>
<tr>
<td>4.1 Firms Profile</td>
<td>31</td>
</tr>
<tr>
<td>4.1.1 Period of Existence</td>
<td>31</td>
</tr>
<tr>
<td>4.1.2 Ownership Structure</td>
<td>32</td>
</tr>
<tr>
<td>4.1.3 Geographical Coverage</td>
<td>33</td>
</tr>
<tr>
<td>4.2 Relationship between Age of MFI and number of Employees</td>
<td>34</td>
</tr>
<tr>
<td>4.3 Implementation of Automated Systems</td>
<td>34</td>
</tr>
<tr>
<td>4.4 Benefits of Automated Solutions</td>
<td>36</td>
</tr>
<tr>
<td>4.5 Extent of Computerization</td>
<td>38</td>
</tr>
<tr>
<td>4.6 Challenges of ICT Diffusion</td>
<td>39</td>
</tr>
<tr>
<td>4.6.1 Challenges of Implementing ICT Systems</td>
<td>39</td>
</tr>
<tr>
<td>4.6.2 Users Motivation</td>
<td>40</td>
</tr>
<tr>
<td>4.6.3 Management of Resources in Implementing ICT Diffusion</td>
<td>41</td>
</tr>
<tr>
<td>4.6.4 Impact of ICT Diffusion on the Organisation</td>
<td>43</td>
</tr>
<tr>
<td>4.6.4.1 General ICT Objectives</td>
<td>44</td>
</tr>
<tr>
<td>4.6.4.1 ICT Diffusion and Change Management</td>
<td>44</td>
</tr>
<tr>
<td>4.7.1 Organisational Culture and Change</td>
<td>46</td>
</tr>
</tbody>
</table>
CHAPTER FIVE – SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction .................................................. 49
5.1 Summary .......................................................... 49
5.2 Conclusions ....................................................... 51
5.3 Recommendations ............................................. 51
5.4 Suggestions for further studies ............................. 52

REFERENCES .......................................................... 53

APPENDICES

Introductory Letter .................................................. 57
Questionnaire .......................................................... 58
Work Plan .............................................................. 64
Research Budget ..................................................... 65
List of Mfis ............................................................. 66

LIST OF TABLES

4.1a Period of Existence ............................................. 32
4.1b Nature of Ownership .......................................... 32
4.1c Geographical Coverage ...................................... 34
4.2 Relationship of Mfis Age with number of employees ...... 34
4.3 Other Automated Systems and their use ...................... 36
4.3 Departments Computerized .................................... 38
4.6a Response on Problems Incurred in Initial Computerization .. 40
4.6b User Problems with ICT Systems in MFIs .................. 41
4.6c Relationship between Age of Organisation and Cost of ICT .. 42
4.7 Cost in relation to the Size of an Organisation ................. 47
LIST OF FIGURES

4.1 Branch Network ........................................... 33
4.4 Office Automation software in use .................. 35
4.8 Cost Reduction of MFIs on basis of Age ............ 43
DEFINITION OF TERMS

Information Communication Technology - This encompasses hardware, software, network media, storage, processing, transmission and presentation of information.

Information Infrastructure - Telecommunication and information networks through which information is transmitted, stored delivered as well as embedded technology and know how.

Fourth generation languages - Programming languages that use human understandable syntax and incorporates computer-aided design (CASE), which helps in faster development of programs, has code generator, report and form generator which speeds up application development

Web site - Online details about an organization or its product.

Web server - A computer that is used to store and access websites.
Information systems - A system used to process information in an organization.

Scalability - Ability of a computer, product or system to expand to serve a larger number of users without breaking down.

Capacity planning - Process of predicting when a computer hardware system becomes saturated to ensure that adequate computing resources are available for work of different priorities and that the firm has enough computing power for its current and future needs.

MIX - Microfinance Information Exchange A web base information services linking microfinance institutions donors and investors.

Microfinancing - Provision of banking services to lower income people.

Human Design - A study of automations impact on the work place, how people work, how they relate to one another.
<table>
<thead>
<tr>
<th>Abbreviation</th>
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</tr>
</thead>
<tbody>
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<td>IT</td>
<td>Information Technology</td>
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<td>ICT</td>
<td>Information Communication Technology</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>TQM</td>
<td>Total Quality Management</td>
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<td>GII</td>
<td>Global Information Infrastructure</td>
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<td>IBM</td>
<td>International Business Machines</td>
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<td>NGOs</td>
<td>Non-Governmental Organizations</td>
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<tr>
<td>KWFT</td>
<td>Kenya Women Finance Trust</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>AMFI</td>
<td>Association of Microfinance Institutions</td>
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<td>MFIs</td>
<td>Microfinance Institutions</td>
</tr>
<tr>
<td>IS</td>
<td>Information Systems</td>
</tr>
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<td>CGAP</td>
<td>Consultation Group to Assist the Poor</td>
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<td>USAID</td>
<td>United States Agency for International Development</td>
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<td>KGT</td>
<td>Kenya Gatsby Trust</td>
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<tr>
<td>TCO</td>
<td>Total Cost of Ownership</td>
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<td>SACCOs</td>
<td>Savings and Credit Cooperatives</td>
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<td>IMF</td>
<td>International Monetary Fund</td>
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<td>K-REP</td>
<td>Kenya Rural Enterprise Programme</td>
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<td>COMESA</td>
<td>Common Market for Eastern and Southern Africa</td>
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<td>MOF</td>
<td>Microsoft Operations Framework</td>
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<td>CCK</td>
<td>Communication Commissions of Kenya</td>
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<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
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<td>FDCF</td>
<td>Financial Deepening Challenge Fund</td>
</tr>
</tbody>
</table>
CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND OF THE STUDY

‘Information Technology is rapidly changing all types of industries; it has become necessary to befit for competition. (Hanna, Boyson, 1993).’

There has been a significant economic growth realized from the increased ICT production and use. This was revealed by Zhen et al. (2004) who also quoting IMF, 2001, said that benefits of ICT will be realized by the owners through profits, the users low costs and labour through high wages. It is a tool that organizations cannot ignore though developing countries like Kenya have been noted as lagging behind developed countries in adopting it as noted by Zhen et al. (2004). However, opportunity costs from switching from old to new ICT technology according to them will enable them to learn from experiences of advanced economics and adopt more efficiently technologies through leap flogging like in the penetration of cellular phone.

There are also according to centre for Global Studies (2001), some organizations that have begun initiatives to help MFIs acquire ICT resources. The Center identifies Consultative Group to Assist the Poorest some initiatives being in form of information, research, technical consultants and finance. In 1998 for instance, it sponsored the publication of management Information Systems for Microfinance Institutions, which offered practical information for lay people and specification for database programmers on the unique information
components of MFIs. Its Information System Services on its website “Service to assist MFI Managers in the process of selecting an IS application that best suits their organization needs” has also assisted MFIs.

As MFIs explore strategies for maximizing their reach to new population of clients, they are discovering that well-designed computerized information system is one catalyst for success. This view was expressed by Center of Global studies (2001) who also revealed that Cost reducing efficiencies offered by computerization, are however, characterized by challenges of high costs, infrastructure problems, shortages of human and organizational capacity.

The price that organizations pay is as immense as the benefits. Jeremy et al.. (2003) who despite recognizing ICTs as potential tool in the right to encourage equitable development to serve the poor in the rural areas view it as relatively expensive. As a result of this, they continue, there is digital divide where most MFIs continue using manual systems of accounting and loan tracking, while those with 10,000 clients or more use spreadsheet based system and those with more than 10,000 may install much more accurate systems (creating market opportunity worldwide).

A World Bank report as reported by Joanna (2000) revealed that, there were estimated 500 million economically active poor people in the world most of whom had no access to adequate financial services. Numerous technologies and innovations suitable for MFIs have emerged for the last 10 years as noted in the options for a new Microfinance promotion Agency (2001). However, views the heterogeneous nature of these institutions as creating barrier to innovation of one-size-fits-all technology. Even with the variety of software and hardware aimed specifically at MFIs, there appear to be few evaluation methods and divergence views over what constitutes best practice in theory applications. Walu (2005),
observed that developing countries like Kenya are still lagging behind and cited the study of internet business start-up without making sufficient evaluation and analysis as one of the causes. According to Nagy et al. (1995), even where IT is used in a wide spectrum of issues, gains from adopting it appear to vary across developing countries a view echoed by Hanna & Boyson, (1993) who indicated that, productivity increase was only possible where best practices were adopted. In developing countries, they continue the diffusion of such practices was found limited.

1.2 STATEMENT OF THE PROBLEM

The Kenya Development Plan of 2002-2008 (2000) recognises ICT Policy as a tool for effective management for sustainable Economic Growth and Poverty Reduction and, therefore has set out policy measures which will promote ICT in organizations. The government has also realized the potential contribution of ICT to the MFIs, resulting to ICT policy paper being one of the Bills listed for debate in parliament in March, 2005. (Walu 2005). Harpe (2004) noted the MFIs realization on the significant impact the use of ICTs has on their strategies, operations and services to the clients, a view echoed by CGAP (2005) in their Donor Brief No. 23. MFIs are, however, noted to lack the capacity to scale up a successful technology project due to lack of the right mix skills, commitment and vision. Concern on the failure of the developing countries not creating their own technological tools for funding solutions to their own problems was also expressed by Gorton et al. (2002); Taylor et al., (2002) which, according to them is believed to be the most sustainable way to bring the deepest results of the digital revolution.
A report by Waterfield (2004) revealed that, a good infrastructure, good capital base, adequate training and an appropriate implementation model are necessary before an MFI can undertake e-banking. He has also noted lack of readiness in adopting ICTs as having militated against faster diffusion of these technologies in many MFIs. This report poses the question as to what extent the Kenyan MFIs have adopted ICTs in their operations and what problems they have faced in their quest to computerize their operations as a way to realizing the significant benefits that ICTs bring. This study, therefore, seek to investigate the extent to which microfinance Institutions in Nairobi district have adopted information and communication technologies by identifying and assessing factors that influence ICT diffusion, approaches used and constraints faced in the implementation of such technologies.

1.3 The general objective of the study was to determine the extent of information communication technology (ICT) diffusion in MFIs.

The study was designed to:-

i) Identify the issues that influence the extent of ICT diffusion in an MFI.

ii) Identify factors that affect ICT use in Microfinance Institutions.

iii) Analyse the extent of diffusion of ICT in MFIs.

1.4 RESEARCH QUESTIONS

The study attempted to answer the following questions:-

i) What issues influence the diffusion of ICTs in an MFI?

ii) What factors impede ICT implementation in Micro Finance Institutions?
iii) What is the extent of the diffusion of information and communication technologies in the Micro Finance Institutions?

1.5 JUSTIFICATION/SIGNIFICANCE OF THE STUDY

Increased ICT production and use has contributed significantly to economic growth. (Zhen et. al, 2004). According to Nagy (1995), it is revolutionizing all types of industries and services making it core of the business primary management. This has made many organizations and governments come up with ICT initiatives. CGAP, (2003) together with many funding initiatives came up with software, “Bankers Realm” to serve microfinance market. The government of Kenya has also shown interest by drafting and tabling in Parliament a Bill, which is aimed at creating an enabling environment to the MFIs. ICT Policy Framework is also one of the items included in the countries National Development Plan of 2002-2008.

The introduction of MFIs according to Global envision (2001) was an economic approach intended to benefit low-income people which supply services that fill gaps and integrate the preserved groups. ICTs will enhance these services because as observed by Joanna, (2000) IMF's have significant scale-up of activities, which has made the managers become aware of the need to improve their information systems. This study is hoped to be useful to the following:-

- NGOs that wish to implement programmes aimed at improving the standards of MFIs in regard to ICTs.
- The GOK in promoting the activities of MFIs.
- The researchers who might be interested in carrying out further research in this area to fill the gaps in the research.

- The MFIs in having a clear understanding of issues associated with the use of ICTs in regard to reaping full benefits. This will help them increase their customer base and also improve people’s standard of living.

- The MFIs and the country will acquire more benefits in general.

1.6 SCOPE OF THE STUDY

The proposed study was carried out in microfinance institutions in Nairobi that are already using ICTs. Most of them were able to offer information on the approaches, systems used and the constraints faced.

1.7 LIMITATIONS OF THE STUDY

i) Lack of adequate financial resources and time constraints. The researcher utilized the holidays and any other free time and also did most of the typing and fieldwork to reduce the expenses.

ii) Most organisations were hesitant to give information. To mitigate this, the researcher used an introductory letter whose content assured the respondents of the highest confidentiality in the information they offer.

iii) Bureaucracy. It took a number of days to get the management approval to allow the researcher carry out the study in some organisations.
CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

2.1.1 THE ICT TECHNOLOGY

"Global economy is entering a “digital age” and Information has become the primary resource for economic development” Jeremy et al. (2003).

Technology according to Nagy et al. (1995) is a key to competitiveness and economic growth. IT, they continue revolutionizes business practices and has a great influence on the global economy making it possible to collect, process and transmit information fast and at a declining cost. Which increases productivity, quality and efficiency of services. Developing countries Zhen et al. (2004) have even greater opportunities to participate globally because even the most remote countries can be connected to knowledge and data banks. This has been seen in the recent rapid spread of the Internet world. This view is supported by Jeremy et al. (2003) by saying that ICTs have allowed the expansion of banking services in developing countries to previously underserved groups. In South Africa especially “Auto Bank E” has developed a saving systems aimed at the poorest depositors where a customer opens an account with small deposits but benefits from a wide range of electronic services.

In addition, ICTs benefit a developing country’s access to venture finance by improving risk management techniques, protecting investors against exchange rate, commodity price fluctuation and also enhances efficiency.
Some sectors in Africa such as tourism and handcraft are realizing ability to deliver their product information and distribute their wares direct to consumers. (Jeremy et al. 2003). Naushane Trading Company, which sells local woodcarvings, pottery and baskets had by year 2003 recorded revenue growth from $10,000 to over $2 million in 2 years since it went online which was a major breakthrough. Other than overcoming global boundaries ICT offers a wide variety of changes by offering capabilities to overcome constraints and distance in the organization. (Geraldine, 1995). This view is supported by Thompson, Feldman (1998) in the their article “Electronic mail and organizational communication”. Microfinance institutions that have implemented it have according to Global Envision, (2001) continued to record great improvement in their operations worldwide. A positive trend is even expected in view of the continued fall in prices of the relevant technology and constant development of new technologies and applications aimed at increasing the reach and efficiency of MFIs. Developing countries like Kenya can now meet the unmet demand for microcredit. A good information system will Joanna (2000), enhance monitoring of portfolios and areas of responsibilities as well as assist management to orchestrate the work of the entire organization. This is also indicated in the CGAP Annual Report (2003) which reveals how the new technologies have the power to improve the delivery of financial services and offer significance opportunities for Microfinance institutions to reach more credits.

In view of this, it continues, organizations have come up with initiatives to help MFIs acquire ICT resources. Some of those that are in record for this are CGAP which in 1998 sponsored the publication of management Information Systems for MFIs to assist the lay people as well as a service to assist MFI Managers in the process of selecting appropriate IS application. USAID in 1999 published a management system for Microfinance: An evaluation
Framework by Andrew Manhart of Development Alternatives, Inc., for assessing the quality of commercial and internally developed I.S. The UN Development Program – special unit on Microfinance (SUM) established in 1997 also support the start-up cost of promising MFI operations. There are many groups that have raised concern on this issue. A paper by Jeremy et al. (2003), however, reveals that despite the strong evidence that ICTs have an impact on economic growth and can change business practices, the success will depend on how the governments respond to a new technology.

2.1.2 INFORMATION SYSTEMS AND INFRASTRUCTURE

Production of ICT services and their efficient use as revealed by Zhen et al. (2004) rely heavily on a dependable infrastructural framework. Most developing countries, however lack adequate information and communication infrastructure which makes the services limited and expensive. According to a World Bank Group report (2002), it is through telecommunication and information networks through which information is transmitted, stored and delivered. This is also echoed by Laudon & Laudon (2003), who views this as a platform on which a firm can build its specific information systems which constitutes software, data and network and which will also require computer hardware which provides the underlying physical foundation for the IT.

Organizations, they continue, can use infrastructure based on powerful networks and Internet technology to coordinate and to enable smooth flow of activities of entire firm and even entire industry. First Service Network (FSN), based in Stamford, Connecticut reported a major wireless web breakthrough, which enabled it to coordinate its activities within and with their customers. In choosing IT infrastructure, therefore, managers should think of the level
of connectivity in terms of meeting today’s requirements and that, which is suitable for future expansion. Accessible and reliable telephone service will also remove some of the physical constraints on organization communication. Jeremy et al. (2003). Inter-organizational Systems automate the flow of information across organizational boundaries to customers, suppliers, distributors, which according to Laudon & Laudon (2003) can lead to higher levels of efficiency value to customers and significant competitive advantage. Internet also links thousands of organization into a single network and creates an electronic market through computer and communication technologies.

Organisations should know that technological innovation is interactive and therefore success depends on the energy in the system. Firms should research so as to plug in outside information networks, understand and assimilate knowledge. (Nagy et al. 1995). Managers and information system specialists need to even pay more attention to hardware capacity planning scalability and total cost of ownership that they did in the past. (Laudon & Laudon 2003). They also noted that selection of software is based on the efficiency, compatibility with organization technology platform, vendor support and the appropriateness for the intended task. The general trend in software, however, is towards user friendly high level languages like Fortran, Cobol, Basic, Pascal and C increase professional programmer productivity and make it possible for end users to work directly with information systems. The fourth generation languages are less procedural and therefore viewed as user friendly. This however, as observed by Zhen (et. al, 2004) has even made the skills to diminish.

There are many application software packages. Rogers Communications in 1999 as noted by Laudon & Laudon (2003), to increase timeliness and accuracy of employee attend once reporting chose a management software called Kronos Workforce Manager client Servicer. It
could be used by employees to enter their time sheets online which supervisors used to monitor attendance and overtime. As Microfinance institutions are waking up to a huge efficiency gains they can achieve through technology as revealed by Laud & Laudon (2003), they even recognize how effective information infrastructure will enhance transparency in the industry. In the fiscal year 2003, as revealed in the CGAP Annual Report (2003), the CGAP came up with a mix web-based information service linking MFIs, donors and investors whose services constitute MFIs information exchange rating fund and information technology initiative.

2.2 MICROFINANCE INSTITUTIONS

As revealed by Mutua (1995), people are not poor because they want to be poor but because they found a system that is a stumbling block. This is echoed by Joanna (2000), who says that Microfinance arose in 1980 as a response to doubts and research findings about state delivery of subsidized credit to poor farmers. Report by Center of Global Studies (2001) indicates that, MFI sector comprises of thousands of small organizations that serve on average 500-5000 clients each and that Institutionally, they can take any form including SACCOs, NGOs, Government institutions created to run loan schemes for specific target group and small banks. In support of this, they say how the government and international donors assumed that the poor required cheap credit which resulted to many NGOs among others coming up with approaches such as Grameen Bank by Dr. Yunis of Bangladesh, ACCION International in Latin American Bank and Rakya in Indonesia. According to UNDP, Ngugi (2005) there is an estimated one billion economically active people in the world which has led to the growth of non-banks as an economic development approach for the low income. These institutions are viewed to play an important role in development of
poor communities by easing access to credit, enabling households to accumulate wealth and assets was noted by Joanna (2000). That enables them to better cope with their economic and social vulnerable. In addition to financial intermediaries, they provide services such as group formation, development of self-confidence, training and management capabilities.

In Kenya MFIs offer small loans pegged to savings over a given period, collateral substitutes in the form of group co-guarantees and compulsory savings. Access to repeat and larger loans based on repayment performance and monitoring of their growth tendencies is also characteristics of their lending. AMFI, as reported by Ngugi, (2005) emphasizes on the importance of non-bank lending institutions saying that informal sector which is the target of the Microfinance institutions provide 64% of all non-agricultural jobs, but only 5.7% and only the largest SMEs can access loans for commercial banks. The Shs. 500 million bonds issued by Faulu Kenya, the first in Africa emphasizes on the important role the MFIs play among policy makers. The international year of micro credit 2005 exhibition was even a clear manifestation of the MFIs tremendous growth for the last 15 to 20 years. The Microfinance bill will even enhance this since it is expected to not only give legal teeth to empower the industry to do crucial economic activities but also to streamline them. Other MFIs that have made landmarks as revealed by Ngugi, (2005), are K-REP that has besides funding the rural and the poor has become full pledged bank and also does consultancy in the Eastern Region of Africa to help set up MFIs while KWFT has become one of the largest onward lenders to self-help groups in the country while KGT offers bridging finances known as factoring.

New technologies as reported by CGAP, Annual Report (2003), have the power to improve the delivery of financial services and offer significant opportunities for Microfinance
institutions to reach more clients. Credit reporting firms would do little business without IT. IT is one of the many tools that managers use to cope with change as powerful information and communication systems lead to organizations becoming competitive participants in the market. However, MFIs experience with Information Technology innovations has been limited and has yielded mixed results. This has prompted the CGAP among other services aimed at increasing financial transparency address Microfinance Information Exchange (MIX), the rating fund, and the Information Technology Initiative. CGAP also hope to address the Information Systems Services Resource Centre by offering a web-based service with information on IS issues to guide MFI managers in selecting IS Software suitable to their organization and IT innovation series, an initiative to evaluate the potential of new information technologies to improve the outreach and efficiency of Microfinance.

Despite the recognition of the role the MFIs play in the economic growth, the MFI Bill according to a report given by Ngugi, (2005) has been lying in abeyance for a long time. Many MFIs as indicated by Joanna (2000) lack supportive policy frameworks and operate on the fringes of existing regulation especially, the provision of adequate and affordable infrastructure which would enhance performance is lacking. This view is supported by Juma (1991) & Mirravales, Abuodha (1993), who feel that technology in general has not been promoted and policies have not recommended to enhance diffusion.

2.3 INFORMATION SYSTEMS REQUIRED AN ORGANIZATIONS/MFI

Laudon & Laudon (2003) revealed the importance of information system in the survival and prosperity of any organization. They identify the functional areas in a contemporary organization as sales and marketing, manufacturing, finance, accounting and human
resources. In its operations, an organization may use operational level, management level, decision support and executive support systems. A measure of integration among them will enhance the flow of information in different parts of the firm. They however, noted that introduction of a new information system will affect organizational structure, goals, work design, values competition between interest groups and decision-making. They should, therefore, be shaped by the above and be designed to serve the needs of important organizational groups.

Joanna (2000) identifies the main MFIs systems as Accounting, Credit and Savings monitoring, gathering data and clients impact. There have been initiatives aimed at suitable MFIs systems. An article, “Creating Marketing Opportunities” by Global Envision (2004) noted some software that can be used by MFIs such as PRODEM’s ATM, developed by a subsidiary of PRODEM, Innova Impresario which has easy to use administrative interface. It has a number of reporting options: daily, weekly and monthly which enables the rural poor people access credit and also allows verification of the customers identity. Others are HISAAB, a grip-level software designed for illiterate and uneducated users and microfinancial MATRIX which links the head office to branch offices and has a built-in accounting and evaluation system.

A report by Centre of Global Studies (2001) supports this view on the emergence of software applications tailored to the unique methodologies of MFI sector such as micro banker, the most established and successful MFI technologies with over 35 clients, 1000 installations in 26 countries, e-merge based in Cape Town, loan performance of Kampala, A-3 Partners of Seattle, which offer flexible range of options for customization. several other countries were also noted to hire programmers to custom design parts of the systems or develop new ones to
to suit their environment and local technical support. Joanna (2000) also noted loan tracking software as a problematic component of an MFI information system and therefore, on acquiring it, it should be well evaluated in terms of ease of use, features, security support and any report on it. This may be acquired through purchase off-the-shelf, modification or developing a customized system.

2.4 INTEGRATION OF ICT IN ORGANIZATIONS/MFIS

In digital firms IT is the core of the business and the primary management tool. According to Laudon & Laudon (2003), companies are relying on internet and networking to conduct more of their work electronically linking offices and sales force around the world; they even extend their networks to suppliers, customers and other groups outside the organization to enable them react fast to the needs of their customers and market shifts. The use of IT in the organization referred to as digital integration to them is changing how organizations manage their business and this calls for managers to try and discover the technologies that will help them. Organisations should, therefore adopt a holistic approach as reported by Nagy et al. (1995) that ICT diffusion involves more than acquiring computerized equipment, micro-electronics-based product design and the related know-how but also development of technical change which involves generating capabilities to adopt given technology to a widening range of needs. Hanna, Boyson, (1993) support this view by revealing that effective use of IT involves more than introduction of hardware and software but also transformation in internal organization, interconnections with markets and suppliers and effective planning organization capabilities. In addition, pace, direction and extent of the diffusion of IT will be influenced by the overall incentive framework under which a firm is operating such as industrial licensing, controls of ownership and labour. Fear caused by lack of know-how on the
potential pay off should also be addressed in the IT diffusion programme. Skills required, regulations and infrastructure to support it have also been noted by Nagy et al (1995) to affect the IT take-up rate.

Developed countries seem not to be doing well in the field of ICT as compared to the developed countries. Financial constraints according to Zhen et al. (2004), make their ICT investment relatively limited which was demonstrated in the low ICT expenditure as a % of GDP; in year 2002, the ration was about 10% in 10 a view echoed by Nagy et al. (1995) who observed a sharp contrast between developed and developing countries in the diffusion of IT and viewed the latter to lack readily available reliable information, which hinder their numerous developmental objectives. A significant gap, they continue still exist between the expectation and what developing countries have gained despite their observed positive response to the possibility of Global Information Infrastructure by formulating National Informatics Policies, reforming and upgrading key telecommunication infrastructures, experimenting and instituting promotional instruments to develop local capabilities necessary for effectively acquiring and mastering IT. In support of this, Laudon & Laudon (2003) observes that, despite the gains from fourth generation Laudon & Laudon (2003) languages, personal desktop software tools, object-oriented programming and software tools for the world wide-web, many businesses continue to face a back log of 2 to 3 years in developing the information systems they need while at times are not be able to develop at all.

Organisations have a broad choice from which they may acquire their software. They may according to Laudon & Laudon (2003) implement all enterprise software offered by a vendor or only what they need. However, firms should be careful since they may require to make changes, which are sometimes risky. Given the high computerization cost as viewed by
Centre of Global Studies (2001), those MFIs with fewer clients and limited plans for growth continue to use manual systems of accounting and loan tracking. There are, however, some who use spreadsheet based systems while those that recognize the need for much more accurate and comprehensive information use a computerized database. Although MFIs are simple in structure, it continues, variations occur in their operations and therefore, no one-size-fit-all approach to automation. Individual institutions will, therefore, opt for off-the-shelf system, modify existing one, develop a custom in-house or buy an off-the-shelf accounting package but design an in-house portfolio system.

Majority of MFIs as reported by Global Envision Centre (2004) are donor funded, which is an obstacle to their scalability and sustainability. It was revealed that more than 7000 MFIs worldwide, only less than 100 can claim financial self-sufficiency. Some are however, using new information and communication technologies to improve their operations in expanding their customer base and extending their reach into underserved areas. There has also been reported use of smartcards, hand held and modified ATMs to by pass the traditional methods of providing bank services. The Center also noted that PRODEM MFI in Bolivia, in 1996 designed an ATM tailored to meet the needs of its rural customers by serving them without being electronically connected to the central office and which are capable of “speaking” to their users in their local language thus enabling illiterate to access services. Pride Africa also, a cluster of MFIs, with a branch in Kenya has launched an experimental Portal Drumnet, which stores information on the buying and business habits of pride clients in order to group the purchasing power of thousands of small entrepreneurs. This is done with an aim to increase both efficiency and growth.

Organizations are everyday introducing new ways of performing their businesses with an aim to edge out competition. This may result to scale-up of activities which according to Joanna
(2000) will require managers in MFIs to improve their information systems. Ability to track the status of its portfolio in a timely and accurate manner is a most pressing need and the reliability of the system determines success or failure of lending operations. However, success comes with a price and the MFI must be prepared for it.

It is certain that MFIs are at different levels in ICT. Rao (2003) noted that there are obstacles with MFIs in the development and methods of electronic finance in Africa which indicated unequal development of ICT. A good example is India which is well known for IT development and knowledge base, and yet he continues, 70% of population are not deriving benefits and power of IT. This view is supported by Piercy (1987) who identified varied activities and services and heterogeneity nature in MF as requiring corresponding ICT applications to suit the diverse needs which would be an indicator of more obstacles in IT implementation. However, he noted that effective implementation is not only technological but also organizational, political and human. During a UN conference (UNCTAD, 2003), it was indicated that, the government has an influence on the ICT in MFIs. The governments in COMESA regions emphasized on the need to draft legislature on e-commerce to facilitate the development of ICT. Such would include legal validity of electronic messages, which would instil confidence in the users and also a flexible and relevant model law. Success in implementation will, however be achieved if the entire organization is involved. This view was also expressed by Piercy (1987), who observed the importance of involving both the managerial and non-managerial staff in the process since they could restrict or spread the scope of change. Manager’s action and attitudes have also been shown by other studies to mediate technology, a view supported by McConnel, Koch (1990) saying that good technical skills but lack of management skills will slow implementation.
A good implementation model have been found to influence faster ICT scale up. Some studies have revealed various models used by MFIs. There are especially the new generation MFIs that integrate IT in their vision, mission and even their growth curve which was viewed by Turaga (2004) as an approach to speed the transition and also echoed by Piercy (1987) in his growth model in which he indicated the change in operations along the curve as moving from simple to complexity which will also influence the systems used at each growth stage. Despite the MF sector heterogeneity nature, most ICT models are in agreement on a number of issues with the emphasis according to Piercy (1987), being on how diffused the organization is and its technology and how infused the applications are. Situational approach to Information System, suggested by Pyburn in 1983 as quoted by Piercy (1987) was based on strategic planning and was dependent on business environment, technological context, management style and organization structure. He also identifies Earl’s multiple methodology which is based on business needs, technology opportunities, capability and current position of the organization as having been used by MFIs in IT implementation.

McConnel & Koech (1990), came up with an implementation cycle based on McConnel cycle as indicated below: -

```
1. Planning
2. Analysis
3. Design
4. Implementation
5. Evaluation
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Most recent is MOF process model, supporting Quadrant Implementation by Microsoft (2004). Which implements full MOF process (process and team model). It starts with a workshop of the management team, them evaluation of the existing support processes, implementation, operations and service level management review. When Microsoft conducted a project using this model at Deloitte in 2003, it was done in close cooperation with the Deloitte ICT staff, management and employees to ensure successful implementation which created mutual understanding of the primary responsibility of the employees in the operation. This idea is supported by CGAP (2005) in their donor brief No. 23; funding Microfinance Technology. However, Technology is dynamic and as Piercy (1987), puts it “Living with IT is like sleeping with an elephant; keep your eye open lest the beast roll over on you”.

There are many ICT initiatives by different bodies targeting the MFIs activities. During the UN conference on Trade and Development on ICT Development Agenda (2003) in which
Kenya was included, it was suggested that each country define its priorities so as to identify elements that may be used in national and International strategies. Of concern was how the government were to establish new, simple and attractive economic models in response to the challenges facing them and democratization of access to information and communication technology. The UN Economic Commission for Africa through African Information Society initiative launched in 1996, offered a regional framework for e-commerce activities. In Kenya as indicated by CCK (2004), development of a large-scale telecommunication infrastructure capable of delivering efficient and affordable information communications services is a critical prerequisite for country’s economic growth. As a result of the enactment of the Kenya Communications Act in 1998 as revealed by CCK (2004), the Mobile telephone services in Kenya has registered tremendous growth.

The CGAP key priorities in its work according to its (Annual Report, 2003) is to improve the quality and availability of information on microfinance providers. In its endeavour to do so, in its fiscal year 2003, it came up with a microfinance Information Exchange (MIX). The mix is a web-based information service linking MFIs, donors and investors and providers in depth information on MFIs. By June 2003, as indicated by (Annual report, 2003) 154 MFIs had posted their information on the MIX market site. However, due to the high costs involved in developing MFIs information systems most do not provide relative standardized information. Microfinance gateway is also an initiative of CGAP, a source of MF information whose features are: Resource center library, discussion groups and gateway highlight, and has created a CD-ROM version of the site to distribute in Markets with limited Internet access. With an aim to improve delivery of financial services CGAP also launched IT innovation series aimed at evaluating the potential of the IT to improve the outreach and efficiency of MFI. This was done through studying several IT in use already in MFIs.
In its software Reviews report, CGAP (2003) talked of Bankers Realm, a newly designed banking application which has integrated modules such as loan savings, accounting and several languages. It also uses client-centric approach which includes training and consulting. Thirty four (34) countries including Kenya are already implementing it. However, CGAP (2003) indicates one of its constraints as high reliance on well qualified IT database administrator and strong technical skills. Basix, one of the largest and fastest growing MFI in India has also come up with a mobile computing solution which involves carrying a palmtop, required software, mobile printer and modem to the field. As reported by Rao (2004), it allows MFIs to provide all financial services at the rural poor doorstop in a highly integrated and cost effective manner. It also includes training on the use and maintenance of the hardware and software. The company is reported to have derived many benefits form this solution including minimal error and fraud, instilling confidence in the clients, reduction in costs, saving time et. However, the organization has had to deal with power problem in some areas. FDCF as noted by enterplan (2004) made some effort through its projects, some of which are in Kenya. One of them is a software for product delivery and management information system. Equity Bank, Kenya, in its mobile banking is also using GSM technology which provides online links between mobile units in remote villages and main branches for processing transaction.

2.5 ICT BENEFITS

An organization that closes its eyes to the huge benefits offered by automation will have themselves to blame for the immense gains they lose. Although new information system will necessitate restructuring of the organization in terms of staff, processes and flows, according
to Jeremy et al. (2003) there are substantial benefits associated with these costs. Individuals and organizations that have carried out studies on this have supported this view.

Laudon & Laudon (2003) views IT as an enabler as well as a core of the business and the primary management tool while Zhen et al. (2004) identifies as a strategic management tool which impact on strategies and operations in an organization. This is in agreement with Harpe, (2004) who in his study revealed that MFIs around the world are realizing the impact resulting form the use of ICT. Efficiency and transformation of MFIs would be enhanced through ICT because according to Doyle (1990) it makes organizations speed their operations, react to the market quickly and also use it as a strategic resource making it more than just a supportive activity.

The Kronos Workforce Manager Client/server system used by Rogers Communications runs on a client/server computing network and provides supervisors with decentralized administration managerial function, which according to Laudon & Laudon (2003) facilitated effective monitoring of attendance and also created “trigger events” to alert them to problems requiring attention. Better coordination of the activities and effective use of information in decision-making has also been noted with Organizations that use ICT. This was revealed by by Jeremy et al. (2003) who also noted that ICTs are a powerful tool for empowerment. The MFIs for example as observed by Global Envision (2004) reach more customers, enhance security through finger print verification and increases efficiency which lowers the overhead costs and make MFIs sustainable. This was echoed by Waterfield, (2004), saying that an MFI with sufficient number of relevant access savings points will attract more clients and high deposits, and viewed those organizations that do not continually train and retrain on how to make the most of their information systems as missing a huge opportunity to add value.
Although economic benefits obtained from ICT diffusion depend on the level of investment as revealed by Zhen et al. (2004), with the advent of Internet, economic benefits of networking will be greater. Developing countries will easily access global markets and integrate themselves into global supply chains; even the remote small countries can begin to sell output directly to buyers without having to go through middlemen. Micro finance institutions cannot afford to ignore the myriad benefits. It is the only way they can have power to improve delivery of their financial services and offer significant opportunities to reach more clients. (CGAP, 2003). However, economic benefits obtained from ICT diffusion will according to Zhen et al. (2004) depend on the level of investment.

2.6 CONSTRAINTS TO ICT

The Microfinance Institutions, that wish to automate their operations must have to contend with a number of issues that many studies have revealed as restraining forces some of which are internal while others are external. Zhen et al. (2004) revealed that, adoption and diffusion of new technology will be identified in view of skills, practices, networks and infrastructure. Problem, challenges and issues that managers have to deal with according to Laudon & Laudon (2003) include how to use ICT, understand the business and system requirement of a global economic environment given the many adversities that exist in different countries.

Past studies as revealed by the same writers have clearly shown that organizations have challenges to contend with in regard to developing information architecture and technology infrastructure and associated this to the rapid technology change the different organizational levels/operations as well as the task of determining business value of information system. Many studies are in agreement on specific issues that may challenge the MFIs. Many
observers as revealed by Zhen et al. (2004) identify high cost as a major impediment to the diffusion of Internet services in developing countries; more so because of the extreme levels per capita in African countries. Connectivity, hardware and software, therefore become prohibitive that only a few can afford. This view is supported by Rao (2004) who identifies the MFI transactions as requiring highly automated solution that are very costly an observation also made by CGAP (2003); McConnel, Koch, (1990); Turaga (2004). A World Bank Paper (2002), also revealed that developing countries usually find adjustment cost of introducing ICT relatively high because most of the ICTs are designed with the capital, labour endowment and economic structure of developed countries in mind.

For a firm to successfully automate its organization, there is need to identify with certain issues that may challenge it. As observed by Global Envision Centre (2004), most MFIs are faced with the challenge of not knowing what software they need. A change of attitude was also viewed as key in implementation. Most MFIs, the centre continues are not culturally ready to adopt IT and also very few qualified software technicians and managers in developing countries are willing to work for MFI salaries. Conflict of interest and also in the model of implementations may pose challenges to organizations. McConnell, Koch (1990) observed a case where the General Managers may want to influence the process even when he is inadequate in qualification while the IT executive may insist on pursuing the implementation alone yet not well versed in the organizations needs resulting to failure in identifying and exploiting the changing role of IT. The fact that there are many models as stated by Piercy (1987), different ideas on which is best is likely to come up. This thought was shared by Walu (2005) by suggesting some of the principles of ICT governance as establishing clearly understood responsibilities for ICT activities within an organization and
ensuring that ICT resources are correctly and effectively utilized in respect to rules, polices, human conditions and circumstances.

Organizations should, therefore address institutional issues so as to benefit fully from the support availed to them. Hanna, Boyson (1993) observed that, even with appropriate support policies, there are substantial learning process, major institutional and skill changes which result to long gestation period before any implementation can be realized. They cited complex scientific and technological information as some of those that make IT application harder for developing countries. Lack of skills was also seen to be an impediment to implementation. Some solutions like Bankers Realm have been observed to require highly qualified IT database administrator and strong technical skills to manage and support the application as reported by CGAP (2003). Even when the organizations have invested in the capabilities to generate and manage IT, there are external environments that may slow their implementation. An ICT development agenda by UNCTAD (2003), on internet of which Kenya was included enumerated some of the major constraints facing African countries as lack of infrastructure, access to telecommunications at affordable cost and lack of a legislative and regulatory framework. Lack of human resources and know-how were also viewed to constitute principle barriers to ICT development.

According to a World Bank (2002), it is through telecommunication and information networks that information is transmitted, stored and delivered. This is supported by Zhen et al. (2004) who revealed that ICT services rely heavily on a dependable infrastructure framework. Lack of this platform, therefore, as viewed by Laudon & and Laudon (2003) on which a firm can build its specific information systems which constitute software, data and
network and also provide the underlying physical foundation for IT would derail the implementation.

**ANTECEDENT VARIABLES**

- Change Management
- Training
- Financial Resources
- Information
- Good Infrastructure

**INDEPENDENT VARIABLES**

- Acceptability
- Capability
- ICT Diffusion
- E-Commerce
- Capital
- Websites
- Connectivity

2.7 **CONCEPTUAL FRAMEWORK OF THE STUDY**

It is expected that, when the antecedent variables are applied to independent variables the ICT Diffusion will increase. For example when the staff is well trained and treated like potential users in the implementation, they will have the skills needed to implement a new system and also the willingness to Institute the change, the result of which will be faster adoption, effectiveness and efficiency.
CHAPTER THREE

RESEARCH METHODOLOGY

3.0 INTRODUCTION

This chapter describes the methods and procedures that were used in data collection for the purpose of measuring the ICT diffusion levels in Micro finance Institutions. It constitutes the research design, sampling procedures and techniques, data collection, analysis and presentation.

3.1 RESEARCH DESIGN

The research study used a descriptive cross-sectional design to understand the extent to which ICT has been used within the MFIs. Descriptive statistics was obtained to measure the extent to which information technology has spread within the various departments within the surveyed institutions. It also describes issues that may be influencing diffusion of ICT in MFIs and also enable the researcher to investigate areas of concern to the research problem so as to determine the current ICT status in each organisation.

3.2 TARGET POPULATION

Population of the study constituted all the 20 MFIs in Nairobi district. These are registered with The Association of Microfinance Institutions (AMFI) as per the list obtained from their office, and whose core business is viewed to be the delivery of micro-credit services.
3.3 SAMPLE STRATEGY

This study made use of census methodology rather than sampling owing to the small number of organizations under consideration. Whereas sampling is useful in cases of large numbers of organizations under study, or where the units are spread out geographically, this particular study had only 20 units and they were all within a geographically manageable area, that is, within Nairobi District. Use of census methodology provided the researcher with sufficient and complete information to be able to understand the extent of ICT diffusion within the micro finance institutions. Each organization was surveyed on the extent to which it has adopted ICTs in its various departments.

3.4 DATA COLLECTION TECHNIQUES

Data was collected from primary and secondary sources. The former consisted of what the researcher collected from the field while the latter were books, publications or materials by authors not participating in this study. Primary data was collected using standard questionnaires comprising structured and non-structured questions. The researcher chose to use a questionnaire because it could be conveniently given to respondents simultaneously even when they are widely distributed and those that could not afford a full interview session. It also enabled standardization in wording, so that responses would be comparable.

The researcher administered the questionnaires personally with the help of an assistant. An introduction letter by the researcher from Kenyatta University was used as an introductory document. The researcher noted relevant observations pertaining to the issues under study.
The instruments were designed in English and consisted of simple and straightforward questions.

3.5 PILOT TESTING

The questionnaire was pre-tested in one randomly selected unit. The purpose of this was to establish the accuracy and appropriateness of the questions and also to certify the format. There were no ambiguities and so no modifications were made.

3.6 DATA ANALYSIS AND PRESENTATION

Collected data was coded, processed and analyzed statistically. The analysis was done with the help of the SPSS software (Statistical Package for Social Sciences). Both quantitative and qualitative analyses were used in the study. Summary statistics of frequencies were used to analyse quantitative data. Open-ended questions were analysed subjectively by noting how many similar responses appeared to a particular question and recorded. This provided the researcher with a feel of what respondents considered important to that question. A detailed presentation of the findings of the study supported with data in form of tables, various graphs, and charts is given. Tables and figures have been carefully and appropriately labeled to enhance readers' interpretation.
CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.0 INTRODUCTION

This study which sought to investigate the extent to which Micro Finance Institutions (MFIs) in Nairobi have adopted information and communication technologies (ICTs), considered the operational background of each organization, namely, the maturity or period organization has been in existence; nature of ownership; geographical spread and size of the organization.

In addition, specific factors that were thought to influence ICT diffusion were surveyed, along with the constraints that such organizations have faced in the process of implementing and sustaining the ICT culture. The results are discussed in the following sections.

4.1 FIRMS’ PROFILE

4.1.1 YEARS FIRM HAS BEEN IN OPERATION

The study found that a significant percentage of MFIs (40.0%) have been in existence for more than 10 years indicating that they are quite mature and well-established. Those that have been in existence for more than six years comprised 80.0% of all organizations surveyed. It can, therefore, be concluded that participating organizations are mature, having been in operation for a reasonable period of time. Only 20.0% of the MFIs have been in
4.1.3 GEOGRAPHICAL COVERAGE

The organizations had a large geographical coverage, on average, with 40.0% having more than eight branches. Other relevant figures for number of branches are captured in the figure below:

![Branch coverage chart]

Figure 4.1: Branch network

The largest percentage of these organizations (60.0%) have more than 6 branches in line with expected growth in operations attained over the years these have been in existence. In fact, majority of organizations that have been in existence for many years account for a
proportionately higher percentage in number of branches (more than 6) as shown in Table below:

<table>
<thead>
<tr>
<th>Number of years in existence</th>
<th>Frequency</th>
<th>Percentage (for 6 branches or more) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 5</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>6 to 8</td>
<td>1</td>
<td>6.7</td>
</tr>
<tr>
<td>9 to 10</td>
<td>3</td>
<td>20.0</td>
</tr>
<tr>
<td>More than 10</td>
<td>6</td>
<td>40.0</td>
</tr>
</tbody>
</table>

Table 4.1c: Branch network for MFIs

4.2 RELATIONSHIP BETWEEN AGE OF MFI AND NUMBER OF EMPLOYEES

Also, 80.0% of the MFIs have more than 41 employees working for them. As expected, mature organizations are heavily represented in the category of MFIs with employees above 41 as shown in the next table:

<table>
<thead>
<tr>
<th>Number of years in existence</th>
<th>Frequency</th>
<th>Percentage of MFIs with &gt;41 employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 5</td>
<td>1</td>
<td>6.70</td>
</tr>
<tr>
<td>6 to 8</td>
<td>2</td>
<td>13.3</td>
</tr>
<tr>
<td>9 and above</td>
<td>7</td>
<td>46.7</td>
</tr>
</tbody>
</table>

Table 4.2: Relationship of MFIs age with number of employees

4.3 IMPLEMENTATION OF AUTOMATED SYSTEMS

Most of the surveyed organizations have implemented common office automation software. In addition, they have implemented others, less common software customized to meet their unique business needs. The extent of office automation software in use is shown in the
It is seen that majority of organizations have implemented the most prevalent office automation systems. The lower representation (53.3%) for other office software can be explained by the fact that each organization has unique needs and can only be expected to implement such software as best meets its needs.

In addition to the common office automation software, respondents indicated that they have other automated solutions in use. These include computerized members database (13.3%), an organizational web site (6.7%), an email facility (13.3%), or a combination of these solutions (60.0%).

Common uses for other automated software include storing employee and customer details (53.4%), marketing of the company's products (6.7%), or for both storage of customer/employee details and marketing purposes (33.3%). This is shown in the table.

Figure 4.3: Office automation software in use
Table 4.3: Other automated systems and their use

Some of the uses falling in the category of multiple applications, is the use of solutions for financial intermediation, accounting and planning, storing details related to sponsors and general management of the operations of the business.

4.4 BENEFITS OF AUTOMATED SOLUTIONS

Those organizations that reported relatively higher levels of ICT diffusion (66.7%) indicated that major successes have been realized in their business operations. Some of them include improved loan tracking which made it easier for the organisation to track loan recipients, their repayment schedules, and interest calculations and amounts due and faster processing and retrieval of information which has enhanced sharing of information between head office and branches. Easier access to, and maintenance of data was another advantage cited by respondents.

Better office and credit management as well as improved generation of management reports were some of the benefits realised in some organisations. Reduction of paperwork and freeing up office space was also reported together with the modern trend towards a paperless office. The increase of credit assessment has enabled MFIs quickly determine who qualifies
in the loan while the risks inherent in lending have been reduced through proper tracking and evaluation of the credit history of the loan applicant. Timely generation of reports, particularly on a weekly basis has been made faster and this has improved decision-making processes within the organisation. Also, managers have been enabled to concentrate on exception reporting and management, rather than relying on all the information to make decisions. It makes better use of management time when managers can single out exceptions and take corrective action.

The overall effect of implementing these solutions has been an improvement in the decision-making process, an increase in the number of customers (since service is improved and speedy processing is enhanced), and a reduction in the number of staff needed to run business processes. All this has led to increased profitability for these organizations. Other anticipated benefits of automated solutions were given as improvement in customer profiling; efficient and timely customer service; progress towards a paperless office (and related cost reductions); improvement of forecasting procedures for purposes of projecting marketing trends; and, general improvement of management information systems.

It was also felt that automated systems have the potential to successfully integrate electronic banking into the organization’s traditional banking models and expand services to remote areas.

The study also found that in MFIs with a major ICT diffusion extent, better use of organizational resources has been achieved. Direct savings have been achieved in cost of equipment replaced, reduction in clerical staff, reduced overtime charges and reduced communication costs. Better management information has also been realised by improving
the speed of information flow and making it more accurate, comprehensive and meaningful.

Finally better planning has been achieved through improved planning systems through the help of better tools and computer models, which can be tested first before actual decisions are undertaken.

5 EXTENT OF COMPUTERIZATION

Computerization has found much use in the departments which handle complex numerical data (which also require that data be accurate) and which also consume a lot of time. As such, the first departments to have been computerized were those involved with payroll, banking, finance, and accounting. With time, the power of automation has gradually spread to other departments throughout the organization.

This survey found that majority of organizations (66.7%) use computers in multiple departments, as opposed to only one particular department. However, a small percentage of MFIs reported using computers in selected departments, such as human resource, administration, and payroll (all at 6.7%).

<table>
<thead>
<tr>
<th>Department computerised</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple (combination of departments)</td>
<td>10</td>
<td>66.7</td>
</tr>
<tr>
<td>Payroll</td>
<td>1</td>
<td>6.7</td>
</tr>
<tr>
<td>Administration</td>
<td>1</td>
<td>6.7</td>
</tr>
<tr>
<td>Human resource</td>
<td>1</td>
<td>6.7</td>
</tr>
</tbody>
</table>

Table 4.5: Departments computerised

About three-quarters of the respondents (73.3%) reported having a computerized database of which the most common software were Oracle, MS SQL, Loan Performer, MFTRACKER,
among others. This computerized database was found to be a relatively recent phenomenon, with 90.9% of organizations having installed it within the past five years.

4.6 CHALLENGES OF ICT DIFFUSION

Although majority of respondents (66.7%) reported having implemented significant ICT solutions, this implementation was not without challenges. Challenges noted included preparing the entire organization to accept the new system, management of resources, motivation of users, training and production of user manuals and actual changeover. These aspects are discussed in subsequent sections.

4.6.1 CHALLENGE OF IMPLEMENTING ICT SYSTEMS

Implementing ICT systems is not an easy task in any organization. It requires that the system be first accepted, tested, and satisfactorily operated. For all these to be achieved the entire implementation process must be properly managed or else it would be sabotaged.

In the surveyed organizations, 66.7% of the respondents agreed or strongly agreed that they incurred many problems in the initial computerization process. Only 13.3% strongly disagreed that there was any major problem in the whole diffusion process.
<table>
<thead>
<tr>
<th>Description category</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree/strongly agree</td>
<td>10</td>
<td>66.7</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>2</td>
<td>13.3</td>
</tr>
</tbody>
</table>

Table 4.6a: Firms’ response on problems incurred in initial computerisation

It is, therefore, clear that these MFIs faced severe challenges in the introduction and implementation of ICT systems. This also explains why 33.4% of the respondents felt that ICT systems would lead to major organizational changes.

4.6.2 USERS MOTIVATION

The challenge of motivating all users is very real in all organizations. It is not limited to the persons who would directly be using the system in the day-to-day business activities, but extends all the way to the management. For top management, motivation should consist of consultations to determine the requirements and involve them in overall planning; presentations to explain the system and gain its acceptance; and, demonstrations and conferences to assist in equipment selection and procurement. Any new system will definitely meet resistance, which, if not properly managed, can lead to its outright rejection.

This survey found that there were significant user problems at the implementation of the ICT system. This is shown in Table 4.6b.
### Table 4.6b: User problems with ICT systems in MFIs

<table>
<thead>
<tr>
<th>Problem area</th>
<th>Frequency</th>
<th>Percentage (Agree/Strongly Agree) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users not well trained to work with the system</td>
<td>3</td>
<td>20.0</td>
</tr>
<tr>
<td>Users rejected the system at implementation</td>
<td>2</td>
<td>13.4</td>
</tr>
</tbody>
</table>

These results show that about one-fifth (or 20.0%) of surveyed organizations failed to manage user aspects of ICT diffusion leading to rejection of system at implementation and users’ inability to operate the system properly because of poor training.

#### 4.6.3 MANAGEMENT OF RESOURCES IN IMPLEMENTING ICT DIFFUSION

Computerization is an expensive process despite the fact that unit cost of equipment has been falling. The reason ICT diffusion is expensive is due to the impact of the system across the whole organization and the pervasiveness of such changes.

The survey found that the cost of ICT solutions was felt to be too high by almost half of those who had implemented them (46.6%). Only 26.6% of the respondents felt cost was not an important factor. Thus, the issue of cost has significantly impacted on MFIs ability to acquire and implement ICT solutions, with higher costs being linked to lower diffusion levels.

Relatively younger organizations (under 5 years in existence) had higher likelihood of reporting the cost of ICT solutions as being too high compared to mature, and more stable
organizations. These results are captured in the table below:

<table>
<thead>
<tr>
<th>Number of years in existence</th>
<th>Percentage reporting ICT cost too high (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 2</td>
<td>100.0</td>
</tr>
<tr>
<td>3 to 5</td>
<td>50.0</td>
</tr>
<tr>
<td>6 to 8</td>
<td>33.3</td>
</tr>
<tr>
<td>9 and above</td>
<td>33.3</td>
</tr>
</tbody>
</table>

Table 4.6c: Relationship between age of organization and cost of ICT

Thus, younger organizations face high ICT deployment costs compared to older, more established ones. This could be due to the high ICT installation costs as a percentage of the total budget for younger MFIs (which tend to be smaller and to have less resources) compared to the older, and more resource endowed MFIs. However, on a positive note, majority of MFIs (60.0%) indicated that deployment of ICT solutions in their activities has led to reduced costs of running the organization’s activities. Along with decreased running costs, two-thirds (66.7%) of surveyed MFIs confirmed that adoption of ICTs has led to increase number of customers.

With respect to perception about cost reduction in deploying ICTs, both younger and older organizations agreed that computerized systems have been beneficial in this respect. These
Thus, relatively older organizations report more cost reduction compared to younger ones. This may be understood in the context of the system achieving more cumulative benefits over the long run than when it has been in use for only a shorter time.

4.6.4 IMPACT OF ICT DIFFUSION ON THE ORGANISATION

Respondents did not feel that ICT systems would lead to major changes in staff levels. In fact, 40.0% of MFIs disagreed or strongly disagreed that ICT will lead to staff layoffs. Instead, it was felt that the system would increase number of customers leading to expansion of employment opportunities, particularly in the areas of marketing and customer service. ICT diffusion was believed to contribute to better management of information, improved decision-making processes, and a communication system with fewer bottlenecks. Accordingly, 66.7% of MFIs agreed or strongly agreed that ICT has increased accountability in their organizations.
4.6.4.1 GENERAL ICT BENEFITS

Respondents also strongly disagreed that ICT systems have no recognizable benefits to their organizations. Any failure to adopt the systems then, would not be for reason of lack of benefits or for want of proper security features but for other issues, particularly that of cost.

4.6.4.2 ICT DIFFUSION AND CHANGE MANAGEMENT

Introduction of any change in an organization calls for tact if it is to be accepted. This is particularly relevant to ICT systems. This is because human beings, by nature, are resistant to change. In the cases where users rejected the ICT system or cited serious initial problems, there were possible reasons cited such as fear of losing one’s job, wage reduction, or of inability to learn a new job, loss of prestige or of interest in the job because the work is eliminated altogether or re-defined.

Suspicion of management’s motives for making the change to ICT systems from manual ones can set employees against management with the former believing that there is something management is hiding from them. This is amplified in organizations where communication channels are blocked by various obstacles.

Resentment against personal attack, or a feeling that the new system is a personal criticism of the way a job was being done before can arise. This is especially so in cases where an atmosphere of criticism is entertained in the organisation and particularly at the time the new system is being implemented. Many times ICT systems redefine working patterns,
destroying cherished teams and working groups. Where previously a task was undertaken by a team of workers, computer systems might make it possible for only one worker to do the entire task. This creates social upsets which are unwelcome.

Human beings have always resisted change for fear of what the future portends. Computer systems have had more than their share of rejection because they represent the unknown and also are a modern invention. In some industries, the introduction of computer systems has eliminated the certainty of the workplace and spawned a whole new way of doing things. This has really unsettled employees unused to phenomenal change and who only crave the usual familiar working environment.

An understanding of these reasons may enable the Micro finance Institutions (MFIs) decrease user resistance and improve diffusion of ICTs in their organizations. Possible ways to enhance accelerated adoption of information and communication technologies include: organizations striving to keep their people knowledgeable about what is intended with regard to ICT role in their organization, and the expected benefits; employees being involved in the entire implementation process-from the time the system is being designed to its satisfactory operation and the involvement process must be made credible by incorporating their suggestions on what the system should do and its interface with the users; giving security to the employees, if necessary by guaranteeing their financial future or providing retraining; and taking time in introducing change.

The change atmosphere should be made friendly, in order to give the workers time to get accustomed to the system before implementing it. It may be more prudent to run both the
manual and the ICT system side by side until workers are comfortable in taking the plunge to the computer-based one.

Other measures may include top management providing personal examples by being seen to be honest and well-meaning. Workers will quickly develop confidence in their managers and are likely to accept the new system. Also organizations should learn to cultivate the habit of change. When changes are frequent, people will learn to get used to the idea, and new developments will be more readily acceptable.

4.7.1 ORGANISATIONAL CULTURE AND CHANGE

The advent of distributed ICT systems has enormously shaped the scope and flexibility of computer systems. Unfortunately, this study showed that such a system seems to bring out the very worst fears for employment prospects (with 20.0% of respondents protesting that there was no prior adequate training). The unionization of employees has also caused the shift of power from the top to the bottom. This has created a new paradigm shift where introduction of a new system (particularly one with the potential to destroy the certainty of work and eliminate some jobs altogether) has become a collective, almost negotiated process between management and employees.

The use of ICTs, with its potential of seriously altering the working methods, is now no longer an implementation training task but a major task that the workforce must cooperate (and negotiate) with management, if it is to succeed.
4.7.2 COST OF ICT SYSTEMS

This study revealed that cost is perhaps the single most important impediment to ICT diffusion in MFIs. Smaller organizations faced the greater difficulty in adopting ICT systems because of cost as shown in the next table. Larger organisations had less difficulty with the cost of the computerized systems, whereas all the MFIs with less than 30 employees reported that cost is a serious problem.

<table>
<thead>
<tr>
<th>Number of Employees</th>
<th>Percentage (Agree) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 30</td>
<td>100.0</td>
</tr>
<tr>
<td>31 to 40</td>
<td>50.0</td>
</tr>
<tr>
<td>41 and above</td>
<td>30.0</td>
</tr>
</tbody>
</table>

Table 4.7: Size of the organisation and cost of ICT systems

ICT diffusion costs include costs relating to manpower, materials, equipment, identifiable expenses, and working capital. The proposed system will have additional operating costs such as data preparation, computer time, data control, system maintenance and modification, special stationery and associated equipment. Additionally, significant development costs must be met which include system specification, interviewing, analysis, design, programming, testing, file conversion, parallel running and training.

All these aspects add to significant costs of ICTs, which have been found to put off smaller, less resource-endowed MFIs.
4.8 BENEFITS OF ICT DIFFUSION

The study found that in MFIs with a major ICT diffusion extent, better use of organizational resources has been achieved. Savings have been achieved in the following areas: Direct savings- savings could occur in terms of cost of equipment replaced, reduction in clerical staff, reduced overtime charges and reduced communication costs; better management information by speeding up the information flow and making it more accurate, comprehensive and meaningful and finally by better planning whereby ICTs improved planning systems because better tools are available and computer models can be tested first before actual decisions are undertaken.
CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 INTRODUCTION

The purpose of this study which was carried out in Nairobi district was to investigate the factors that influence ICT diffusion in Microfinance Institutions so as to analyse and assess the extent to which these Institutions have adopted information and communication technologies (ICTs). A summary of the findings, conclusions, recommendations and suggestions for further studies are, therefore, presented in this chapter.

5.1 SUMMARY

The study found that microfinance institutions have a significant extent of ICT diffusion with two-thirds of the surveyed organizations reporting significant investment in computerized systems. It was also found that older, more established organizations were more likely to have significant ICT systems in place compared to younger, less established ones.

Issues that were important in influencing ICT diffusion were those relating to cost of adopting and implementing the system and the user reactions to the new system. Majority of surveyed MFIs felt that cost was an important component in their decision to computerize their activities. Smaller organizations were hardest affected by the cost of the ICT system. However, there was no significant difference on perception of cost as an important factor on
the basis of the nature of ownership of the organization—both local and foreign owned entities felt that the issue of cost was quite significant.

Many systems fail because users are not involved in the implementation process. This study found a significant user problem with respect to how the system was introduced and implemented. Users complained that no sufficient training was given to them before the new system was installed. They also reported serious initial problems at the implementation stage of the system—no doubt because their involvement at the beginning was very limited, if any.

To increase ICT use in these organizations, respondents indicated that certain measures had to be put in place among them making sure that users are always involved and top management provides an enabling environment to facilitate easy adoption of the system; benefits of the new system are understood beforehand to make all persons in the organization enthusiastic and enhance acceptance.

The organization as a whole must be committed to a changing culture. When workers understand that change is a part of life in their organization, they are more likely to welcome it and embrace it. Organizations that do not put emphasis on continuous change had the most difficult in adopting new systems.

Information and communication technologies were found to aid in reducing cost of running the organization, improving management decision making systems and making planning more scientific and less dependent on the "rule of thumb". All this led to increased customer numbers and improved profitability of the organization.
5.2 CONCLUSIONS

The study found that micro finance institutions surveyed had a reasonable degree of information and communication technology diffusion in their areas of operation with two-thirds of them reporting sufficient usage of ICT systems.

The cost of ICT systems was found to be a significant factor in the decision to implement computerised systems. Although all the organisations felt that cost was a serious issue, the problem was more pronounced in the case of younger, less established, MFI s. This is likely to the fact that such less established organisations have fewer resources at their disposal and decisions regarding installation and implementation of ICT systems have to be undertaken in the context of overall resource availability. Thus, larger organisations were found to have more extensive use of ICT in contrast to smaller ones.

The success of ICT systems in the surveyed organisations was found to be dependent on the user preparedness in terms of training and motivation. Users reported severe initial problems at the implementation of the system caused by inadequate training, lack of user involvement in the implementation process, and lack of training manuals. This situation led to user rejection of the system in some organisations. Therefore, lack of user participation impacted negatively on the success of ICT usage in about one-fifth of the organisations surveyed.

5.3 RECOMMENDATIONS

It is recommended that organizations intending to introduce ICT systems do a thorough study on change management and address issues related to user resistance, user education, and
general alignment of their organization into a learning-changing model. User resistance and lack classical approach to ICT introduction has been found to cripple potential benefits of information and communication technologies in MFIs.

The issue of cost of the system should be put in the perspective of potential benefits to be derived so that the organization is able to create a budget for ICT. Postponing the day of implementation would only delay the benefits that the organization should accrue through incremental gains made in productivity, better management, and improved business processes.

5.4 SUGGESTIONS FOR FURTHER STUDIES

1. The research focused on the ICT diffusion in MFIs. Further study may be conducted on the impact of ICTs in MFIs.

2. This research was carried out in Nairobi District. A similar study may be done in another district.

3. Since this research was an intra-organisation, an inter-organisation study may be carried out.
REFERENCES


Enterplan (2004). **DFID/FDFC/Theme Paper No. 3 to Improve Delivery.**


To the Respondent

Dear Sir/Madam

**RE: QUESTIONNAIRE**

I am Postgraduate Student pursuing a Masters of Science Degree in Entrepreneurship Development at Kenyatta University. In partial fulfillment of the course, I am conducting a research on "ICT DIFFUSION LEVEL IN MICROFINANCE INSTITUTIONS."

Towards meeting the research endeavours, your firm has been elected to form part of the study. I therefore kindly request you for your time in completing the questionnaire attached. The information obtained will be for academic use only and will therefore be treated with highest confidence possible.

Looking forward to your response.

Thank you.

Yours faithfully,

Esther Muchoki
Student
APPENDIX 2 QUESTIONNAIRE

Please note:

In my research, some words have been used interchangeably. They include:

i. ICT (Information and communication technology) and Computerization or adoption of computer based systems

ii. Automation means use of word processors, spreadsheet and e-mail (for e-mail only not for contacting customers)

iii. Major ICT solution means you have a computerized database for employee or some marketing / outreach software.

A. ORGANISATION PROFILE

1. Name of organization ................................................................. (Optional)

2. Number of years since inception. (Please tick one)

   O 0 – 2 Years

   O 3 – 5 Years

   O 6 – 8 Years

   O 9 – 10 Years

   O More than 10

3. Please indicate ownership of organisation

   O Wholly Locally Owned

   O Wholly Foreign Owned

   O Mixed (Jointly owned)

   O Others (Please state) ...............................................................
5. Number of employees in the organisation

- 0 – 10
- 11 - 20
- 21 - 30
- 31 - 40
- 41 and above

B. QUESTIONNAIRE TO MFIs THAT HAVE IMPLEMENTED AUTOMATED SYSTEMS IN KENYA

1. What office automation software have you implemented?
   - Ms. Word
   - Ms. Excel
   - Powerpoint
   - E-mail software
   - Others (Please specify)

2. What other AUTOMATED solutions do you use?
   - Have a computerized members database
   - Have an organisation website
   - Have e-mail facility
   - Others (Please specify) .................................................................

3. How do you use your AUTOMATED solutions?
○ Store employee details
○ Customer details
○ Store employee and customer details
○ Market our products
○ Others (Specify) .................................................................

4. List major successes gained since implementation of the AUTOMATED solutions
..............................................................................................................................
..............................................................................................................................
..............................................................................................................................

5. How else would you expect AUTOMATED SOLUTIONS to assist you in your operations?
○ ..............................................................................................................................
○ ..............................................................................................................................
○ ..............................................................................................................................
○ ..............................................................................................................................
○ ..............................................................................................................................

B1. FOR ORGANISATIONS THAT HAVE MAJOR ICT IMPLEMENTATION

6. Which areas of the organisation have you computerized? (Please tick in the appropriate box)
○ Marketing / Outreach
○ Human Resource
○ Administration
○ Payroll
○ Others (Specify)
i. ..............................................................................................................................
ii. ..............................................................................................................................
7. If you have a computerized database system, what is its name? ..............................................

8. How long have you used the computerized database system? (Tick where appropriate)
   - 0 – 2 years
   - 3 – 5 years
   - 6 – 7 years
   - 8- 10 years
   - More than 10 years

9. Who is the vendor (supplier of the software) .................................................................

10. Who maintains your system
    - Ourselves (through our IT department)
    - The Vendors
    - Others (specify) .................................................................

11. In your assessment of ICT solutions in use, how would you rate them based on the guidelines below (Please tick in the appropriate box)

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Cannot answer</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of ICT solutions too high</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have increased customer base</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have increased accountability in organization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have reduced cost of running the organization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Lead to employee layoffs after implementation

There were many problems in the initial computerization process like change over

User rejection of system

12. What failures have you experienced since computerization?
   - .................................................................
   - .................................................................
   - .................................................................
   - .................................................................
   - .................................................................

13. What ICT models have you found beneficial to your organisation and why?
14. Why is it that your organisation have not implemented any major ICT solution

(Please tick in the box for your choice)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Cannot answer</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of ICT solutions too high</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICT solutions not available</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICT solutions not available</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Users not well trained to work with the ICT solutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System will lead to major organizational changes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICT solutions will lead to staff layoffs (leading to employees joblessness)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not enough time to implement the ICT solutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefits of computerized systems not recognizable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We do not trust the security of computerized systems/ICT solutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

THANK YOU FOR YOUR COOPERATION
## APPENDIX 3: WORK PLAN

<table>
<thead>
<tr>
<th>TASKS</th>
<th>TIME ESTIMATE - MONTHS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7 8 9 10 11 12</td>
</tr>
<tr>
<td>Conduct literature review and develop conceptual framework.</td>
<td></td>
</tr>
<tr>
<td>Develop and design instrument.</td>
<td></td>
</tr>
<tr>
<td>Field test instruments.</td>
<td></td>
</tr>
<tr>
<td>Construct sample frame and select sample.</td>
<td></td>
</tr>
<tr>
<td>Data collection</td>
<td></td>
</tr>
<tr>
<td>Field work</td>
<td></td>
</tr>
<tr>
<td>Follow-up</td>
<td></td>
</tr>
<tr>
<td>Data analysis</td>
<td></td>
</tr>
<tr>
<td>Report writing</td>
<td></td>
</tr>
</tbody>
</table>

Fig: Gantt Chart Illustrating Calendar time allocation to each task. A bar show the length of time allocated to each task.
APPENDIX 4: RESEARCH BUDGET

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Cost @</th>
<th>Kshs. Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Stationery and other resources</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Three reams of ruled papers</td>
<td>350/=</td>
<td>1,050.00</td>
</tr>
<tr>
<td>ii) Tree spring files</td>
<td>35/=</td>
<td>105.00</td>
</tr>
<tr>
<td>iii) Eight assorted pens and pencils</td>
<td>10/=</td>
<td>80.00</td>
</tr>
<tr>
<td>iv) 6 dozen computer diskettes</td>
<td>50/=</td>
<td>300.00</td>
</tr>
<tr>
<td>v) Binding charges, 7 copies of the proposal</td>
<td>70/=</td>
<td>490.00</td>
</tr>
<tr>
<td>vi) Binding charges, 5 copies of the report (Thesis)</td>
<td>500/=</td>
<td>2,000.00</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td><strong>4,525.00</strong></td>
</tr>
<tr>
<td><strong>2. Typing services</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Proposal typing 50 pages</td>
<td>25/=</td>
<td>1,250.00</td>
</tr>
<tr>
<td>ii) Thesis typing 80 pages</td>
<td>25/=</td>
<td>2,000.00</td>
</tr>
<tr>
<td>iii) Questionnaires and achievement test 10 pages</td>
<td>25/=</td>
<td>250.00</td>
</tr>
<tr>
<td>iv) Correction typing proposal and thesis</td>
<td></td>
<td>3,000.00</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td><strong>6,500.00</strong></td>
</tr>
<tr>
<td><strong>3. Photocopying services</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Proposal 50 pages for 7 copies</td>
<td>3/=</td>
<td>1,050.00</td>
</tr>
<tr>
<td>ii) Thesis 80 pages for 5 copies</td>
<td>3/=</td>
<td>1,200.00</td>
</tr>
<tr>
<td>...,iii) Questionnaires and tests 830</td>
<td>3/=</td>
<td>2,490.00</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td><strong>4,740.00</strong></td>
</tr>
<tr>
<td><strong>4. Field work</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Traveling during piloting and data collection 28 days</td>
<td>600/=</td>
<td>16,800.00</td>
</tr>
<tr>
<td>ii) Subsistence for 28 days</td>
<td>400/=</td>
<td>11,200.00</td>
</tr>
<tr>
<td>iii) Computer data analysis</td>
<td>10,000/=</td>
<td>10,000.00</td>
</tr>
<tr>
<td>iv) Telephone services</td>
<td></td>
<td>1,000.00</td>
</tr>
<tr>
<td>v) Mailing letters</td>
<td></td>
<td>400.00</td>
</tr>
<tr>
<td>vi) Field assistant</td>
<td></td>
<td>10,000.00</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td><strong>49,400.00</strong></td>
</tr>
</tbody>
</table>

**GRAND TOTAL** | | **65,165.00** |
<table>
<thead>
<tr>
<th>NAME</th>
<th>ADDRESS</th>
<th>LOCATION</th>
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<tbody>
<tr>
<td></td>
<td>NAIROBI</td>
<td>Naivasha Road Kawangware</td>
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<tr>
<td>KENYA WOMEN FINANCE TRUSY</td>
<td>P.O. BOX 55919</td>
<td>Muchai Road</td>
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<td></td>
<td>NAIROBI</td>
<td>Off. Muchai Drive (Residential House)</td>
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<tr>
<td>K - REP DEVELOPMENT AGENCY</td>
<td>P.O. BOX 39312</td>
<td>Ring Road Kilimani</td>
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<td>NAIROBI</td>
<td>Opp. Yaya Centre</td>
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<tr>
<td>KENYA POST OFFICE SAVINGS BANK (KPOSB)</td>
<td>P.O. BOX 3.311</td>
<td>Post Bank House</td>
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<td></td>
<td>NAIROBI</td>
<td>Banda Street</td>
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<tr>
<td>PRIDE LIMITED</td>
<td>P.O. BOX 63436</td>
<td>KCB Building</td>
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<tr>
<td></td>
<td>NAIROBI</td>
<td>2nd Floor, Jogoo Road</td>
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<tr>
<td>FAULU KENYA</td>
<td>P.O. BOX 60240</td>
<td>Muthengari Gardens</td>
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<tr>
<td>WEDCO</td>
<td>P.O. BOX 6711</td>
<td>Sifa House, Mission Road</td>
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<td>KISUMU</td>
<td>Off Kakamega Road</td>
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<tr>
<td>PLAN KENYA</td>
<td>P.O. BOX 61955</td>
<td>North Star Building</td>
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<td>NAIROBI</td>
<td>Lenana Road</td>
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<tr>
<td>KADET</td>
<td>P.O. BOX 63816</td>
<td>Kirichwa Road</td>
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<td>NAIROBI</td>
<td>Off 'Ngong Road</td>
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<tr>
<td>SUNLINK</td>
<td>P.O. BOX 19874</td>
<td>3rd Floor Woodvale Place</td>
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<td>NAIROBI</td>
<td>Woodvale Grove</td>
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<td>OIKO CREDIT</td>
<td>P.O. BOX 57161</td>
<td>AACC Building</td>
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<td>NAIROBI</td>
<td>4th Floor Waiyaki Way</td>
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<tr>
<td>MICRO KENYA LTD</td>
<td>P.O. BOX 52926</td>
<td>Off Lenana Road</td>
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<td>NAIROBI</td>
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<tr>
<td>EQUITY BUILDING SOCEITY</td>
<td>P.O. BOX 75104</td>
<td>5th Fourway Towers</td>
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<td>NAIROBI</td>
<td>Muindi Mbingu Street</td>
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<td>CO-OPERATIVE BANK</td>
<td>P.O. BOX 48231</td>
<td>Heile Selassie Ave.</td>
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<td>NAIROBI</td>
<td>Co-op Bank House</td>
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<tr>
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<td>P.O. BOX 34889</td>
<td>First Insurance Plaza</td>
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<td>NAIROBI</td>
<td>Muthithi Road</td>
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<tr>
<td>JITEGEMEE TRUST</td>
<td>P.O. BOX 21766</td>
<td>Ngong Lane</td>
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<td></td>
<td>NAIROBI</td>
<td>Off Ngong Road</td>
</tr>
<tr>
<td>SMEP</td>
<td>P.O. BOX 84063</td>
<td>Kirichwa Road</td>
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<td>NAIROBI</td>
<td>Off Argwings Kodhek Road</td>
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<td>CROSSBRIDGE CREDIT LTD</td>
<td>P.O. BOX 10208</td>
<td>Mezzanine 3 Avenue House</td>
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<td>NAIROBI</td>
<td>Kenyatta avenue</td>
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<td>WINDOW DEVELOPMENT FUND</td>
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<td>NAIROBI</td>
<td>Adams Arcade</td>
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<tr>
<td>SISDO</td>
<td>P.O. BOX 76622</td>
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