THE INFLUENCE OF STRATEGIC INFORMATION SYSTEMS ON THE PERFORMANCE OF MICROFINANCE INSTITUTIONS IN NAIROBI COUNTY, KENYA

BY

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DECLARATION

This project is my original work and has not been presented for a degree in any other University. No part of this proposal should be reproduced without authority from the author or University of Nairobi.

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D61/64791/2013

I confirm that the work in this project was done by the candidate under my supervision as the appointed University Supervisor

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DEDICATION

This project is dedicated to my family and parents who have been my key asset to success and supported me emotionally during the draft of the project. I sincerely appreciate their support and prayers that led to the completion of this project within the stipulated timeframe.

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Above all, I thank God for his grace, provision and seeing me through the project. Individually I take the formatting errors that would be spotted in this script. My special gratitude goes to my supervisor Dr. Kennedy Ogollah who tirelessly through his effort and initiative guided me through the whole process. I would like to acknowledge all the MBA students, colleagues, friends and my family especially for their moral and material support for the completion of this project.

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DEFINITION OF TERMS

Strategic Information Systems: These are systems that are developed and implemented by an organizations with aim of achieving their corporate goal using the available resources. The systems focus on organization efficiency and effectiveness using modern technologies (Petter & DeLone, 2013).

Information Systems: This is a system that depends on people and information technology to process or interpret information (Behl, 2009)

Information Technology: This refers to the use of computers and telecommunications equipment to store, retrieve, transmit and manipulate data (Rao, 2009).

Automated Teller Machine: Is a computerized machine that provides the customers of Banks the facility of accessing their accounts for dispensing cash and to carry out other financial transactions without the need of actually visiting a Bank Branch (Iganiga, 2014).

Electronic Banking: Refers to any transfer of funds initiated or processed using electronic techniques. EFT uses computers, smart phones and electronic technology in place of

cheques and other paper transactions. EFTs is initiated through devices like card or codes thus you and those you authorize, access your bank account (Rose, 2014).

Electronic Mobile Devices: This refers to potable electronic gadgets that are used in ebanking to carry out transactions. Such include point of sale terminals, mobile phones, laptops and others (Iganiga, 2014).

E-commerce: This refers to buying and selling of goods and services, or the transmitting of funds or data, over an electronic network (Ratan, 2008).

Turn-around time: This is the total amount of time taken from initiation to completion of a task or process (Bharadwaj, 2000).

Organizational Performance: The ability of the organization to achieve its intended objectives with minimal resources available (Laudon & Laudon, 2010).

ABBREVIATIONS AND ACRONYMS

CRS	Customer Relationship Management
MIS	Management Information System
ERP	Enterprise Resource Planning
SIS	Strategic Information Systems
IT	Information Technology
IS	Information Systems
CRM	Customer Relationship Management
ATM	Automated Teller Machine
ICT	Information, Communication and Technology
CBK	Central Bank of Kenya
EFT	Electronic Funds Transfer
EFTPOS	Electronic Funds Transfer at Point of Sale

ABSTRACT

The reason for this study was to discover the impact of vital data framework (SIS) on execution of microfinance foundations in Nairobi County, Kenya. The goals of the study were to discover the impact of web based management of an account, portable saving money and robotized teller machines on the execution of MFI's in Nairobi County, Kenya. Descriptive research plan was received in this study and used to decide the impact of SIS on execution of MFI's in Nairobi County, Kenya. It was fitting since it set up the relationship amongst factors and recording of information without control. The objective populace of the study was 56 microfinance establishments that worked in Nairobi County, Kenya. Essential information was gathered utilizing organized polls. Respondents of the study were chosen from branch directors, operations administrators and bookkeepers of MFI's. Unmistakable and inferential measurements was utilized to break down information gathered. Information was investigated utilizing numerous relapse technique to build up the measurable relationship that existed amongst free and ward factors. Information was exhibited in type of rates, means and standard deviation in connection to factors of the study and information examined was displayed in type of tables. It was built up that MFI's embraced web keeping money, portable saving money to enhance their execution as far as benefits, consumer loyalty, minimize expenses of creation and repay on profit for ventures. The study uncovered that versatile managing an account administrations were still received by shoppers to a bigger degree because of comfort of getting to money related data going from electronic monetary articulation and openness of keeping monetary services. The concentrate on distinguished that greater part (81%) of the clients directed the majority of the exchange via online saving money in spite of the test of buyer mindfulness and worker trainings on web saving money administrations. The study set up that larger part of clients directed their budgetary exchanges utilizing ATM cards significantly because of their accommodation, security, productivity and adequacy. The study reasoned that there was a positive measurable relationship between free factors and ward factors of the study. Lastly, this study suggests that MFI's need to apportion monetary assets to make greater strides in e-banking and train their staff to upgrade their execution in the changing business environment.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The evolution in Strategic Information Systems (SIS) has brought drastic changes in financial institutions in the global market (Teymouri & Ashoori, 2011).These systems have opened new horizons for business enterprises and have enabled them carry out their commercial activities by use of advanced technologies. With the changing business environment, globalization, competition, changing consumer needs and influence of technology, modern competitive organizations have sought to adopt strategic information systems in order to improve their performance (Petter & DeLone, 2013). The part of data frameworks in a key way, incorporates usage of data innovation to create items, administrations, and capacities. These tend to give an organization key points of interest over its rivals. It makes vital data frameworks, that support or shape the focused position and procedures of an endeavor.

According to Siami (2006), performance of competitive firms has been associated with strategic information systems. Investment in SIS has contributed to improved efficiency and effectiveness of the system, improved customer service delivery, market expansion and information management among competitive firms. SIS plays a major role in giving an organization a competitive edge and also improving the performance through allowing innovation of unique products which may lead to first mover advantage, reduction in operation costs by increasing efficiency, development of strategic alliances with key customers, suppliers, consultants and other partners, plus differentiation of products and services which contribute to improvement of business processes (Alipour & Mahdi, 2010).

This study will be anchored on Resource Based-view theory to determine the problem under investigation. Other supportive theories will be open systems theory and dynamic capability theory. Pearce and Robinson (2013) contend that asset construct see hypothesis is moored in light of the commence that associations firms are relied upon to perform on the off chance that they incorporate the extraordinary assets towards authoritative objectives. Technology integration in the system, employee training, information management and customer development are resources that can assist in the efficiency and effectiveness of an organization. Salwe *et al*, (2010) posit that Open systems is based on the notion that organizations are environmental dependent.

Strategic Information Systems being an externally oriented strategic management philosophy in the modern organizational context, helps them circumnavigate through the ever-changing environment in order to be efficient and effective in the long run (Muraleedharan, 2014). Dynamic capability theory is based on the assumption that, for organizations to cope with uncertainty in the changing business environment, technology integration in the system has remained a competitive drive of competitiveness (Hooley et al, 2005). To persevere and prevail in today's turbulent surroundings, associations need to wind up adaptable to inward and outer powers of progress (Salwe et al, 2010).

Chandan and Urhuogo (2012) recommend that numerous money related institutions invest in vital data frameworks with a specific end goal to enhanced proficiency and viability. Through SIS, an association might have the capacity to convey items or administrations at a lower cost, items that are separated or even concentrate on a specific

market fragment. Frameworks which incorporate, production network administration, client relationship administration and endeavor asset arranging are embraced by firms to minimize costs and enhance client encounter. The point of these systems is to use data innovation in making of proficient and viable connection amongst providers and clients (Bharadwaj, 2000). SIS program help firms improve customer service as well as creation of a lasting relationship between the firm and its consumers. SIS can help companies manage and reduce the cost of products and services and also assist with differentiation and focus strategies which have a positive impact on performance.

This study is based on the concept that Strategic Information Systems have become drivers of organizational competitiveness in the changing business environment. Like other countries, Kenya has also accepted this challenge of 21st century by making efforts in the investment and development of Strategic Information Systems to transform and enhance industry competitiveness. A decade ago SIS had very little penetration in the country, but recently with efforts of both private and government sectors, the concept of SIS has become very popular among Microfinance Institutions in Kenya. The Microfinance sector in Kenya is striving to invest in SIS in order to gain competitiveness. Investment in Strategic Information Systems like internet banking, mobile banking and automated teller machines has resulted to increased productivity among firms (Muriuki, 2011).

1.1.1 Strategic Information System

Laudon and Laudon (2010) view Strategic Information System as a dynamic capacity logic of an association that is intended to drive intensity in view of proficiency and adequacy. These frameworks are coordinated at particular corporate business pushes whose primary point is to acknowledge beneficial results. Moving IS professionals into business related departments as well as hiring IS personnel who have vast knowledge of wide ranging topics is a strategy framework that can be utilized. These are frameworks that tend to influence an association's items and business operations in view of the frameworks where data administrations are connected to vital business operations (Ghaziri, 2000). Organizations embraced data frameworks in a vital way in order to profit by huge upper hand which helps in execution.

Lucas (2005) shows that deliberately adjusting SIS includes moving Information Systems workers into business arranged divisions, making business-related exercises a prerequisite for these IS representatives, sending them to outside business occasions, and enlisting workers with an extensive variety of instructive base into IT positions.

As indicated by Gheorghe (2008), data frameworks can be utilized deliberately as a part of item advancement, administrations and abilities which give a firm vital edge over its rivals in the worldwide commercial center. This makes vital data frameworks, that support or shape the aggressive position and procedures of an endeavor. It assumes a noteworthy part in giving an association an aggressive edge; furthermore enhancing the execution through such means as, permitting the advancement of interesting items which now and again prompt to first mover advantage, lessening in operation costs by

expanding effectiveness, creating vital unions with clients, providers, experts and different organizations, separation of items and administrations to serve a specific market, enhance business prepare and to build nature of items offered to clients (Alipour and Mahdi, 2010).

1.1.2 Organization Performance

Authoritative execution incorporates the positive yield or results of a business as measured against its arranged yields (or objectives and destinations). Norton and Kaplan (2006) state that authoritative execution constitutes a scope of official/top level exercises adapted towards checking, measuring and modifying parts of individual and hierarchical execution through different sorts of administration controls. Execution administration consolidates authoritative execution administration with individual performance management. Hierarchical execution points of view proposed by Norton and Kaplan, incorporate budgetary viewpoint, that involves measuring whether the association is creating benefits from its center organizations; Customer point of view, that involve consumer loyalty from merchandise and enterprises; Internal business forms, that includes constant change of administrations utilizing present day innovation lastly advancement and realizing, that involves capacity of associations to grow new items and administrations, hence group learning and co-associations in the business.

Pearce and Robinson (2013) contend that authoritative execution constitutes the genuine yield or result of a firm as analyzed against its focused on result (or objectives and targets). It includes an association doing its best to satisfy its objective by utilization of sound and strong administration, solid administration and a constant reminder to all on

accomplishment of results. Successful charitable making associations, have clear missions, are adaptable, concentrate on the client, inventive, comes about situated and maintainable. Formation of versatile, execution driven, learning associations is a certain approach to increasing upper hand in a regularly evolving environment. Measures of execution can be both money related and non-budgetary utilized by firms as a part of dynamic business setup. Organizational execution is connected with framework adequacy, effectiveness, economy, quality, and consistent employee behaviors towards authoritative objectives.

1.1.3 Microfinance Institutions in Kenya

Microfinance is a monetary establishment transcendently gaining practical experience in keeping money administrations for low-pay gatherings or people. A microfinance establishment gives account administrations to little adjust accounts that would not ordinarily be acknowledged by conventional banks, and offers exchange administrations for sums that might be littler than the normal exchange expenses charged by standard budgetary foundations. The Kenyan microfinance division is a standout amongst the most energetic in Sub-Saharan Africa. It incorporates a differing qualities of institutional structures and a genuinely substantial branch system to serve poor people (CBK, 2016).

Microfinance foundations have been adding to social financial improvements in the province before the reverted County Governments in Kenya. Microfinance industry in Kenya has been developing additional time principally because of advancement realized by colossal interests in Strategic Information Systems. There has been an expansion in

assortment of items offered furthermore expanded effectiveness of administrations. The push to contribute e-business has been because of different difficulties running from; rivalry, globalization, client evolving needs, progresses in Information Technology (IT) and evolving arrangements/directions (Aduda and Kingoo, 2012).

Microfinance organizations have been headed to put resources into SIS because of different components which incorporate; rivalry, globalization, client evolving needs, progresses in Information Technology (IT) and evolving strategies/controls (Kariuki, 2005). Ferguson, Finn and Hall (2004) suggest that advances in IT has seen the introduction of electronic banking platforms through which customers are able to transact on their mobile phones and through the internet from the comfort of their offices or homes. Investments in strategic information systems have been seen to have a positive impact on the performance of MFI's in Kenya despite the internal challenges of adopting SIS.

1.2 Research Problem

Due to the changing business environment, globalization, influence of technology and customer demands, organizations have been keen to leverage their unique firm attributes with investments in information technology to realize long term performance gains. Adoption of SIS by modern microfinance institutions has contributed to improved customer service, increased profits, minimal costs of operation and new product development. Internet banking, mobile banking and automated teller machines have enabled MFI's to differentiate their services, minimize cost, develop innovations, expand their market share and profits and form strategic alliance (Alipour & Mahdi, 2010).

A study conducted by World Bank (2014) on the performance of microfinance institutions in developing countries identified that 73% of the microfinance institutions were underperforming due to inappropriate technology adopted. The informal nature of MFI's when conducting their operations was among the challenges that contributed to poor performance of microfinance institutions in Kenya. A study by Ghaziri (2000) established that SIS plays a major role in giving organisations a competitive edge and also improving the performance through such means as; allowing the innovation of unique products which at times lead to first mover advantage, reduction in operation costs by increasing efficiency, developing strategic alliances with industry stakeholders including; customers, suppliers, consultants and other companies.

A study by Muriuki (2011) recognized that crumbling execution of Microfinance Institutions in Kenya has been a tough undertaking for 10 years because of conventional methodologies of operation. High expenses of operation, changing business environment, hardened rivalry, changing client needs, strategies are a portion of the issues experienced by MFI's in Kenya because of absence of fitting Strategic Information System. A study by Aduda and Kingoo (2012) established that financial related organizations in Kenya have been putting resources into SIS with a specific end goal to build productivity and to decrease blunders which are as an after effect of deficient or wrong information. The foundations concentrate on grasping the most recent innovation in doing their operations proficiently and successfully furthermore in making aggressive items.

In any case, from the discoveries of past studies it was built up that little has been finished with respect to the impact of key data frameworks on the execution of microfinance establishments in Kenya. Therefore, this study sought to answer the question; what was the influence of Strategic Information Systems on the performance of microfinance institutions in Nairobi County, Kenya?

1.3 Research Objective

The objective of this study was to establish the influence of Strategic Information Systems on performance of microfinance institutions in Nairobi County, Kenya.

1.4 Value of the study

Firstly, aftereffects of this study would add to the current hypothesis and practice particularly helping researchers and scholastic foundations. Specialists or researchers would have top to bottom comprehension and experiences. The data created from this study would help specialists to make relative studies and set up the changing patterns in the MFI's in Kenya. What's more, it would help them grow new hypotheses that would add to new learning and scaffold the data holes in microfinance foundations in Kenya.

Furthermore, the discoveries of the study would come close to bolster the Central Bank of Kenya as a controller in its mission to streamline operations in the microfinance industry putting at the top of its priority the economy, which generally depends on performance of MFIs. CBK would formulate and review the already existing policies to enhance competition of MFI’s in Kenya. Policies of protecting customer privacy using digital platform would enhance ethical values and corporate governance of MFI’s in Kenya.

Lastly, the study would benefit directors, managers and other leaders in MFIs understand how SIS influences performance. These employees would benefit from the study as they would be able to identify some of the SISs that have made MFI's competitive. MFI customers would use the findings to gain insight on the various types of SIS they can use.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents the theoretical foundation of the study, the relationship between strategic information systems and organizational performance, conceptual framework and finally summary and knowledge gaps of the empirical studies conducted locally and internationally.

2.2 Theoretical Foundations

A theory is the explanatory device for comprehension, clarifying, and making forecasts about a given topic (Kothari, 2006).The after three hypotheses were received to portray, clarify, anticipate and control the issue that was under scrutiny. Resource-based view Theory was the key theory under which the deductive arguments of the study were based while Open System Theory and Dynamic Capability Theory were the sub-theories which underpinned this study as discussed:

2.2.1 Resource Based View Theory

Resource Based View model was established by Barney (1991) and is one of the concepts applied by modern competitive firms in the dynamic business environment when formulating, implementing and monitoring strategies. As indicated by Pearce and Robinson (2013), Resource Based View is a strategy for evaluating and finding an organization's vital rewards on the premise of examining its key blends of benefits, abilities, capacities and intangibles as a firm. Maintainability of hierarchical aggressiveness depends on interesting assets of the association that range from representative abilities, innovation, client advancement and new item improvement.

The hypothesis suggests that a firm has a managed upper hand over another firm and when its rival can't copy its methodologies. While assets are the wellspring of a company's know-hows, capabilities are the principle wellspring of its upper hand. An association has a focused edge over its opponents, when it has a relative favorable position over another firm and when this preferred standpoint is not being executed by any contender (Thompson, Gamble and Strickland, 2012).

This theory underpins this study based on the notion that SIS adopted by microfinance institutions in Kenya is a strategic resource that would contribute to improved performance of MFI's. Inability to imitate the new technologies by industry players and integration of systems with modern technologies will enhance efficiency and effectiveness of MFI's in Kenya. Training employees and investing in modern SIS are unique capabilities that will give MFI's a competitive edge in the changing business environment.

2.2.2 Open System Theory

The open system hypothesis was set up by Millett (1998).The hypothesis proposes that firms are viewed as open frameworks that are environment dependent (Lungu, 2000).All frameworks have limits, a few limits have a tendency to be difficult to recognize since frameworks have a tendency to be progressive. Open frameworks have penetrable outskirts and these guarantee that input can unreservedly be traded and caught on. Shut frameworks, rather than open frameworks, have strong fringes through which little data is exchanged. Shut limit firms are regularly undesirable. The outer environment contains a

limitless choice of wishes and impacts that can annoy the association, however which the association can't specifically control. Impacts can be political, monetary, environmental, societal and innovative in nature (Pearce & Robinson, 2011). Firms are likely to cope with uncertainty during strategy implementation if they have lean internal processes (Salwe *et al*, 2010).

Ravichandran and Lertwongsatien (2005) suggest that SIS engrained within organizational plans and structures tend to promote a firm's values in tandem with those of the extended social environment. Organizational leaders must understand that as much as the environment changes their organization, they also have an influence on the environment. Hierarchical aggressiveness is upgraded by embracing fitting models to examine the dynamic business environment. Michael Porter's model empowers associations comprehend strengths that impact business operation that range from; new participants, bartering force of purchasers and providers, industry competition and substitutes. Open System Theory supports the study by portraying how MFI's will have the capacity to last and prevail in today's whimsical surroundings; firms should be active and versatile to interior and outer elements that impact execution.

2.2.3 Dynamic Capabilities Theory

The Dynamic-Capabilities Theory was presented by David Teece as an expansion of the asset based perspective of the hypothesis of the firm (Hooley et al, 2005). Dynamic Capabilities Theory takes a gander at how firms incorporate, form, and reconfigure their inward and outer firm-particular capacities into new abilities that match the turbulent environment they work in. The hypothesis fights that associations with a more extensive

scope of element abilities will in the long run out last and beat firms with littler element capacities. The hypothesis expects to comprehend the way firms will utilize dynamic abilities in creation and sustainment of upper hand over different organizations by making and reacting to natural changes.

Petter and DeLone (2013) fight that the speculation expect that associations with more conspicuous component capacities will defeat firms with tinier component limits. The purpose of the speculation is to perceive how firms use dynamic abilities to make and bolster a high ground over various firms by responding to and rolling out common improvements.

Dynamic Capabilities Hypothesis bolsters the study by depicting how MFI's will utilize SIS to expand execution. MFI's have the dynamic capacities when they can fuse, shape and reconfigure its inside and external firm-specific limits in light of its turbulent environment. Despite the fact that progressive proficiencies need to do with capable abuse of existing resources, dynamic capacities suggests compelling evaluation and execution of new open entryways.

2.3 Strategic Information Systems and Organization Performance

As indicated by Bharadwaj (2000), an associations SIS can be connected with execution. Sister can be said to be the capacity of assembling and sending IT-based assets in blend with different assets and abilities. Muriuki (2011) on impact of innovation appropriation on office managing an account among business banks in Kenya, showed that there were a few saving money advancements affecting the organization keeping money in Kenya, which are ATMs, web saving money, versatile saving money and EFTPOS.

Behl (2009) attests that web keeping money is viewed as administration approach that is equipped towards creation, advancement and upgrade of associations with focused clients with the aim of boosting client esteem and increment an association's profitability. Investment in SIS is a driver for expanded income and benefit by making and improving powerful solid and long haul connections amongst organization and client. Sister likewise sets up and builds trust amongst client and organization. This trust prompts to the fulfillment, unwaveringness, cross and up offering, rehash purchases, customer fulfillment, high piece of the overall industry, bring down expenses and productivity.

Muhammad et al(2015) attests that associations that actualize and bolster use of portable managing an account and web banking, have positive authoritative effect, for example, enhanced gainfulness or profitability. Reddy et al (2009) likewise affirm that innovation upheaval, especially World Wide Web contributed significantly on the execution of business banks in type of upgraded client communications, customization of customer needs and arrangement of enduring arrangements in view of online stages.

Khaled et al (2014) hypothesize that the world has turned out to be more digitized. Business banks are relying upon innovations like web saving money, versatile saving money and e-trade to help them improve their business forms. It upgrades profitability and conveys more benefit to organizations. It could annihilate organizations. There has been an incredible increment in IS speculation adjusted to the associations system as firms expect that this will enhance budgetary performance. Adoption of SIS and other electronic gadgets encourage programmed execution of undertakings by workers which likewise add to proficient interior procedures and increased levels of fulfillment among

clients. It helps an association in handling enormous information from various sources in the most productive way. These frameworks likewise help with reacting to client addresses and tending to gripes and subsequently prompting to enhanced turnaround time.

Akram (2011) affirm that usage of SIS has been credited, in addition to other things, with diminishing acquirement charges among money related foundations, making very proficient deals techniques, bringing down organization rates, and diminishing immediate and roundabout work costs. It is through Human IT assets firms begin to end up defectively imitable by making the connection amongst asset and execution through sharing and joint efforts. Use of IT has come about to enhanced client benefit, improved item quality, expanded market responsiveness, and better coordination amongst purchasers and providers.

Bharadwaj (2000) proposes that SIS by money related establishments includes the advancement and use of data framework that help organizations accomplish their objectives and destinations. It is a gathering of part that collaborate to deliver convenient data. A model of the parts of a SIS can go from: PC equipment, programming, information, methods and individuals. Innovation that encourages the preparing, exchange and trade of data and correspondence administrations upgrades firm profitability. Shehadeh et al (2013) propose that clients of SIS need a level of technical skills and capabilities to empower them do their work all the more adequately.

Hendriks et al(2012) contend that vital data framework by monetary foundations is supported by the mechanical leaps forward; the progressions in media communications, for example, the web, the globalization that made a worldwide boundless commercial center, the solid developing for data economy, and the ascent of aggressive computerized firms. Adekunle and Tersia (2014) noticed that reception of e-business and e-trade techniques and apparatuses by budgetary establishments have coordinate connection with hierarchical execution. Benefits got from the interests in SIS have exceeded operational expenses of various firms in numerous areas. At the end of the day, money related establishment contemplations and potential returns are seen to drive ICT speculation. The conceivable increment in ICT speculation depends on its common sense, which ranges from operational proficiency and adequacy. Interest in ICT frameworks has extraordinarily added to a critical change of data and information administration inside the organizations, which comes full circle in effective business procedures and better firm execution.

2.4 Conceptual Framework

It was established that MFI's accomplished enhanced execution by grasping SIS. Web managing an account upgraded online store and withdrawals, and client enquiries. Internet saving money through conventional banks endowed consumers familiarize with all standard exchange, for instance, exchange of accounts, charge installments, adjusts request, and stop-installment solicitations, and some banks go to an extent of providing online applications of credit. Clients got to record data whenever, day or night, and this was done from anyplace. It was uncovered that versatile keeping money upgraded portable store and withdrawals, SMS alarms and cash exchange administrations among

clients therefore proficiency and viability. The extent of the study offered administrations that included offices to lead business exchanges, direct records and to get to redid data. Mechanized Teller Machines upgraded store and withdrawal administrations, cash exchange administrations and enquiries. ATM essentially enhanced client comfort and diminished costs which prompted to enhanced proficiency and adequacy in administration conveyance.

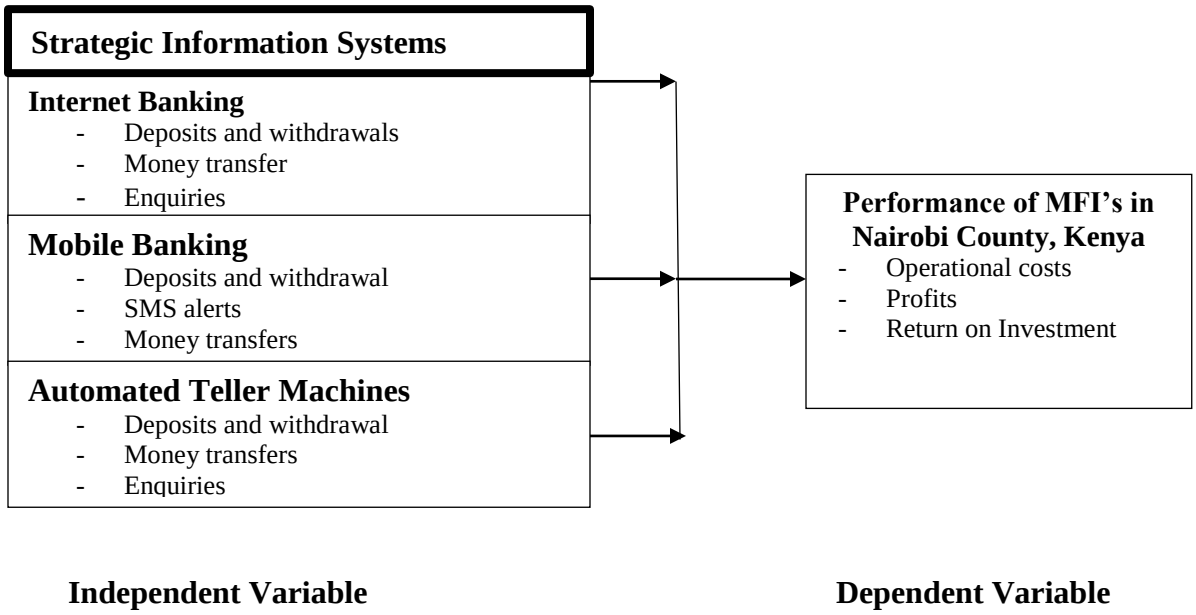

Figure 2.1: Conceptual Framework

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research methodology that was adopted to analyse data collected. It includes the research design, the population of the study and the data collection procedure. It finally presents the data analysis and presentation methods.

3.2 Research Design

As indicated by Krishnaswami (2003), an exploration outline included course of action of conditions for gathering and investigation of information in a way that was gone for joining pertinence to the examination purpose. The think about received enlightening examination plan to determine the impact of vital data frameworks on execution of MFI's Nairobi County, Kenya. An unmistakable study technique was fitting since it investigated and depicted the relationship between factors in their common setting without controlling them.

The unmistakable research outline went for acquiring data that was broke down, examples separated and correlations made with the end goal of illumination and arrangement of a reason for deciding (Gall& Borg, 2006). Information was broke down utilizing quantitative and subjective approach. Subjective approach was proper on the grounds that it gave a chance of gathering thoughts, suppositions and perspectives of respondents concerning the issue under scrutiny. The subjective approach was used to pick up knowledge into respondents' mentalities, esteem, frameworks, concerns, inspirations as to the issue under scrutiny. Quantitative approach was likewise embraced because of its precision of the exploration discoveries. Conclusions and proposal of the study depended on quantitative figures.

3.3 Target Population

As indicated by Kothari (2006), an evaluation is the method of deliberately gaining and recording data about the individuals from a given populace. Data from each individual from the populace was tried to build up the issue under scrutiny. An enumeration was favored on the grounds that the MFI's working in Kenya were restricted and it was reasonable to gather information to cross over any barrier of the issue under scrutiny. This study tried to gather data from all the MFI's (56) working in Kenya according to Central Bank of Kenya (2015). Respondents were representatives of MFI's who were chosen from branch directors, operations administrators and bookkeepers.

3.4 Data Collection

Essential information was gathered from respondents by the utilization of polls as the fundamental instrument of information accumulation. Respondents of the study were chosen from branch directors, operations supervisors and bookkeepers. Surveys were regulated to respondents by the scientist utilizing drop and pick later technique.

Bother and Borg (2006) propose that surveys are favored in logical studies because of their capacity to catch respondent assessments in an organized way and in composed frame for future reference. Surveys helped with the interpretation of the examination goals into research theory which roused the respondents to give the data being looked for. They likewise empowered the respondents answer addresses uninhibitedly and honestly even on touchy issues since they were not required to uncover their character, this improved the probability of getting precise data.

3.5 Reliability and Validity Tests

3.5.1 Reliability Tests

Dependability of the exploration instrument was upgraded through a pilot study that was done on 2 MFI's in Nairobi County, Kenya. Dependability included the degree to which a measuring gadget was reliable in measuring whatever it quantifies (Saunders, Lewis& Thornhill, 2009). It included a measure of how much an examination instrument yielded predictable research or information after rehashed trials. Unwavering quality of the instruments was impacted by arbitrary mistake which was a deviation from a genuine estimation because of components that were not successfully tended to by the analyst.

Annoy and Borg (2006) recommend that dependability of the instrument is tried utilizing Cronbach's alpha strategy. The technique was suitable since it gauged inside consistency of the instrument utilizing coefficients. The most widely recognized unwavering quality coefficient was the Cronbach's alpha which assessed inward consistency by deciding how all things on a test identifies with every single other thing and to the aggregate test, which was the interior rationality of information. The unwavering quality was communicated as a coefficient somewhere around 0 and 1.00. Cronbach's alpha esteem was in this way broadly used to confirm the unwavering quality of development. Cooper and Schindler (2006) take note of that acknowledgment esteem for Cronbach's Alpha is somewhere around 0.7 and 0.9. In this manner, this study embraced a stacking of 0.7 as the satisfactory esteem.

Table 2.1: Reliability Coefficients

Scale	Cronbach's Alpha	Number of Items
Internet Banking	0.842	11
Mobile Banking	0.835	9
Automated Teller Machines	0.795	7

Reliability of the questionnaire was evaluated through Cronbach's Alpha which measures the internal consistency. Cronbach's alpha was ascertained by utilization of SPSS for unwavering quality analysis. The value of the alpha coefficient ranges from 0-1and may be utilized to depict the dependability of factors extracted from dichotomous and or multi-point formatted questionnaires or scales. A higher esteem demonstrates a more dependable created scale. Cooper & Schindler (2004) has shown 0.7 to be an acceptable reliability coefficient. Table 2.1 demonstrates that web saving money had the most astounding dependability (α=0.848) trailed by portable managing an account (α=0.842) and mechanized teller machines (α =0.795). This delineates all the three scales were dependable as their unwavering quality qualities surpassed the endorsed limit of 0.7.

3.5.2 Validity Test

The legitimacy of the instrument was controlled by the specialist through looking for feelings of specialists in the field of concentrate particularly the analyst's chief and industry specialists working in MFI's in Kenya. Legitimacy involves the suitability, importance and convenience of surmising a specialist makes in view of the information gathered (Sekaran, 2011).

Cooper and Schindler (2006) attest that substance legitimacy measured how much the test things speak to the space or universe of the characteristic or property being measured. IT specialists and Lecturers of University of Nairobi were utilized to recognize the substance of the instrument. Build legitimacy was a property that was offered to clarify some part of human conduct. For this situation, the analyst tried the development of the study by disseminating the 4 polls to representatives of MFI's in Nairobi County to decide the sufficiency of the test. Basis Related legitimacy was worried with distinguishing the nearness or nonappearance of at least one criteria considered to speak to characteristics or builds of premium. Representatives of MFI's working in Nairobi County were utilized to do the pilot ponder.

3.6 Data Analysis and Presentation

To investigate the information, the Statistical Package for Social Sciences, (SPSS variant 21) programming was utilized. The information gathered in the examination was altered, coded, ordered on the premise of similitude and after that classified. Engaging insights was utilized to break down information and clarify the discoveries. To allow quantitative examination, information was changed over into numerical codes speaking to characteristics or estimation of factors. Elucidating insights, for example, recurrence dispersions, rates and recurrence tables was utilized to outline and relate factors which were accomplished from the study. The study embraced Multiple Regression examination strategy to concoct the model communicating the speculated relationship between the free factors and the needy variable.

Every variable was measured on a size of 1-5 and results were spoken to quantitatively. Subjective information was broke down utilizing content examination strategy where key topics of the distributed substance were audited made deductive contentions concerning the issue under scrutiny. Particularly the regression demonstrate utilized was as a part of the frame. $\mathbf{Y = \beta 0 + \beta 1X1 + \beta_2 X_2 + \beta_3 X_3 + \beta}$

$Y= 1.139+ 0.887X_1+ 0.752X_2+ 0.645X_3$.

Where,

β_0, β_1, β_2 and β_3 are the regression co-efficient

Y – Performance of Microfinance Institutions in Nairobi County, Kenya

X_1 – Mobile Banking

X_2 – Internet Banking

X_3 – Automated Teller Machine

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the research findings of the study carried out to examine the influence of strategic information systems on the performance of microfinance institutions in Nairobi County, Kenya. This research objectives that guided the study were: To determine the effects of internet banking, mobile banking, and automated teller machines on performance of Microfinance Institutions in Nairobi County, Kenya.

4.2 Response Rate

The study targeted a total of 56 MFI's operating in Nairobi County, Kenya. Out of the 56 questionnaires administered to branch managers, operations managers and accountants, only 49 questionnaires were returned duly filled from employees of MFI's. This contributed to 88% response rate from employees of MFI's. This response rate from was adequate for data analysis and conforms to Cooper and Schindler (2006) whom stipulates that a response rate of more than 50% is justifiable to make accurate decisions concerning the problem under investigation in any scientific studies. In addition, this chapter provides discussions of the findings of this study in relation to existing literature.

4.3 Employee Period of Work

Respondents were asked to indicate the period they had worked with their MFI's. The findings were summarized as shown in Figure 4.1.

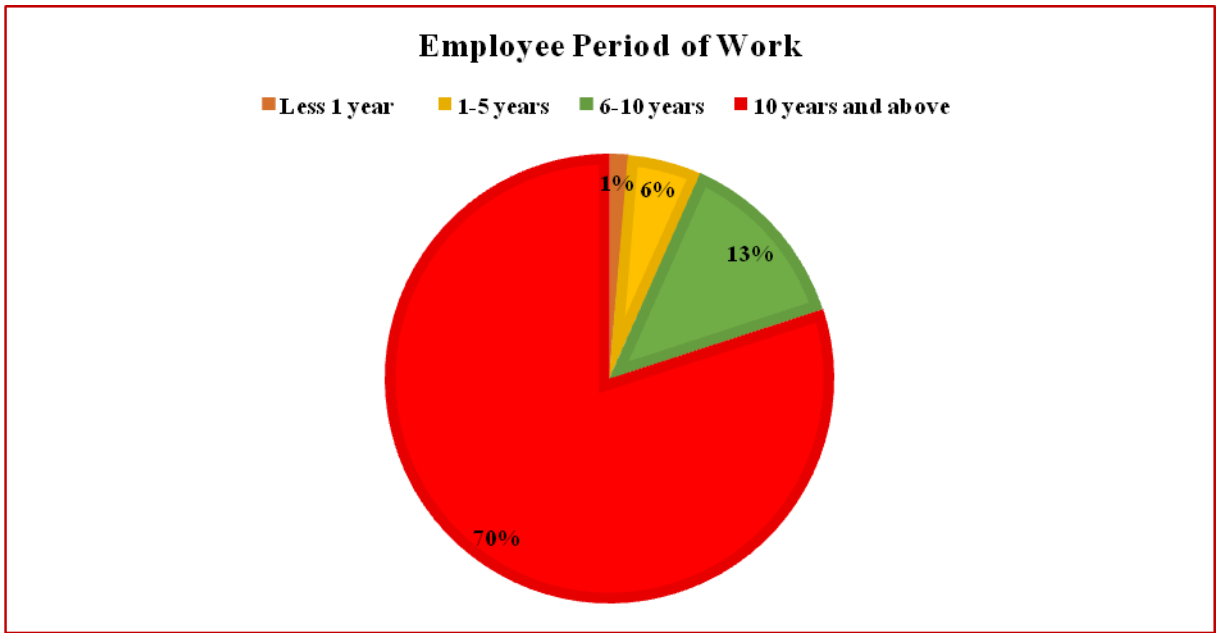

Figure 4.1 Employee Period of Work

Source: Research data (2016)

As shown in Figure 4.1, majority of the respondents (70%) had worked with their MFI's for more than 10 years. 14% of them had worked for a period of 6 to 10 years. 5% had worked for a period of 1to 5 years and 1% had worked for a period less than one year. This implied that majority of the respondents contacted had adequate information in relation to strategic information systems on the performance of their firms.

4.4 Level of Education

Respondents were asked to indicate their level of education. The findings were summarized as shown in Figure 4.2.

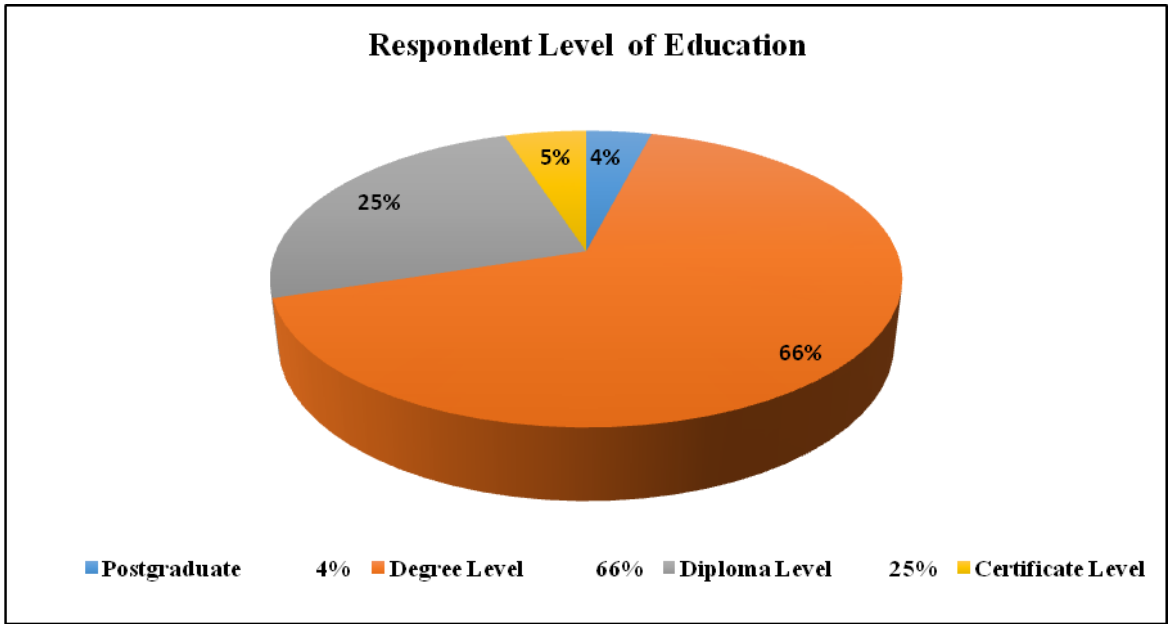

Figure 4.2 Respondent Level of Education

Source: Research data (2016)

As shown in Figure 4.2, majority (66%) of the respondents were degree holders. 25% were diploma holders. 5% of them were certificate holders and 4% were postgraduate holders. This implied that majority of the Microfinance institutions were engaging employees with a bachelor's degree as the minimum entry requirement.

4.5 Strategic Information Systems

Respondents were asked to indicate whether their MFI's had operational Strategic Information Systems. The findings were summarized as shown in Table 4.1.

Table 4.1: Strategic Information Systems

Opinion	Frequency	Percentage
Yes	47	88
No	09	12
Total	**56**	**100**

Source: Research data (2016)

As shown in Table 4.1, majority (88%) of the respondents indicated that their institutions had operational strategic systems while 12% of them indicated that their MFI's had no operational strategic information systems. This implied that majority of the MFI were embracing strategic information systems to enhance efficiency and effectiveness.

4.6 Possession of ATM Cards

Respondents were asked to indicate whether their MFI's had ATM cards. The findings were summarized as shown in Table 4.2.

Table 4.2: Possession of ATM machines

Opinion	Frequency	Percentage
Yes	43	77
No	13	23
Total	**56**	**100**

Source: Research data (2016)

As shown in Table 4.2, majority (77%) of the respondents indicated that they had ATM cards for their customers while 23% of them indicated that they had no ATM cards. This implied that most of the MFIs were using electronic means to transact.

4.7 Internet Banking

Respondents were asked to indicate the extent to which they agreed on how internet banking influence performance of their MFI's. The findings were summarized as shown in Table 4.3.

Table 4.3: Internet Banking

Indicators of Measurement	Mean	SD	Item	1	2	3	4	5
Customers carry out their transaction through online services	3.78	1.12	2	0.00	72.1	0.00	27.5	0.00
Customers make online inquiry and transfers	3.61	1.32	2	0.00	84.4	0.00	15.6	0.00
Customers have access to online payment options	3.58	1.22	2	0.00	79.2	0.00	20.8	0.00
Customers access to online trust funds	3.47	1.19	3	0.00	88.2	0.00	11.9	0.00
Customers access online deposit accounts	3.33	1.29	2	0.00	66.3	0.00	23.9	0.00
Customers always are updated about their account information monthly through e-statement	2.10	1.05	3	39.3	0.00	19.3	41.5	0.00
Customers always give feedback online	1.10	1.09	3	39.0	2.2	31.4	2.4	22.2

Source: Research data (2016)

As shown in Table 4.3, the study sought to determine the extent to which respondents agreed on the influence of internet banking on performance of Microfinance institutions in Nairobi County. From the findings, the study established that majority (84%) agreed to a larger extent that; customers carried out their transaction through online services with a mean of 3.78. However, it emerged that fear of technology from some (26%) of the customers had a negative effect on the profitability of MFI's in Kenya. Customers made online inquiry and transferred money with a mean of 3.61. This implied that majority (71%) of the customers had adequate knowledge on how to make online enquires from their MFI's.

Customers had access to online payment options on a larger extent with a mean of 3.58. This implied that majority (78%) of the customers were in a position to pay their bills online despite the challenges of interacting with the MFI systems. Customers accessed online trust funds with a mean of 3.47. Customers accessed online deposit accounts with a mean of 3.33.Customers were always updated about their account information monthly through e-statement on a large extent with a mean of 2.10.Customers always gave feedback online with a mean of 1.10. The major reason behind high adoption of internet banking practices from customer perspective convenience of accessing services from any location in a more cost effective manner.

4.8 Mobile Banking

Respondents were asked to indicate the extent to which they agreed on how mobile banking influence performance of their MFI's. The findings were summarized as shown in Table 4.4.

Table 4.4: Mobile Banking

Indicators of Measurement	Mean	SD	Item	1	2	3	4	5
Customers receive balance enquiry alerts though their phone	3.41	1.39	2	90.3	0.00	0.00	9.9	0.00
Customers receive SMS alert on new banking products and services	3.41	1.31	2	77.2	0.00	0.00	23.4	0.00
Customers make enquiries about their account through phone	2.80	1.94	3	51.2	2.4	17.1	26.8	2.4
Customers can make money transfers from their phone	2.10	1.05	3	39.3	0.00	19.3	41.5	0.00
Customers can deposit money to their account through phones	2.10	1.09	3	39.0	2.2	31.4	2.4	22.2
Customers receive periodical promotional messages on new banking products	1.22	1.21	3	50.2	0.00	10.00	40.02	0.00

Source: Research data (2016)

As shown in Table 4.4, the study sought to determine the extent to which respondents agreed on the influence of mobile banking on performance of Microfinance institutions in Nairobi County. From the findings, the study established that majority agreed to a larger extent that; Customers received balance enquiry alerts though their phone with a mean of

3.41. Customers received SMS alert on new banking products and services with a mean of 3.41. Customers made enquiries about their account through phone with a mean of 2.80.Customers made money transfers from their phone with a mean of 2.10. Customers deposited money to their account through phones with a mean of 2.10.Customers received periodical promotional messages on new banking products with a mean of 1.22. This implied that majority of the customers of MFI's had embraced mobile banking practices to a large extent despite the few challenges associated with new systems and customer training.

4.9 Automated Teller Machines

Respondents were asked to indicate the extent to which they agreed on how ATM cards influence performance of their MFI's. The findings were summarized as shown in Table 4.5.

Table 4.5: Automated Teller Machines

Indicators of Measurement	Mean	SD	Item	1	2	3	4	5
Customers prefer an ATM to withdraw money	3.13	1.33	7	0.00	10.00	10.3	30.2	40.1
Customers prefer an ATM due to minimal charges when transacting	3.11	1.44	5	0.00	10.03	10.4	30.1	50.0
Customers prefer an ATM to manage time	2.28	1.34	6	10.2	40.4	10.4	40.2	0.00
Customers prefer an ATM due to its convenience	2.21	1.27	5	20.4	15.3	25.04	10.11	30.12
Customers prefer an ATM for security purposes	2.11	1.31	7	40.04	0.00	20.00	0.00	30.12
Customers prefer an ATM for cashless transfers	2.03	1.54	6	32.5	22.0	0.00	45.3	0.00

Source: Research data (2016)

As shown in Table 4.5, the study sought to determine the extent to which respondents agreed on the influence of automated Teller Machines on performance of Microfinance institutions in Nairobi County. From the findings, the study established that majority agreed to a larger extent that; customers preferred an ATM to withdraw money with a mean of 3.13. Customers preferred an ATM due to minimal charges when transacting with a mean of 2.28.Customers preferred an ATM to manage time with a mean of 2.28. Customers preferred an ATM due to its convenience with a mean of 2.21.Customers preferred an ATM for security purposes with a mean of 2.11. Customers preferred an ATM for cashless transfers with a mean of 2.03. These findings implied that majority of the customers preferred to transact with ATM cards compared to other means due to convenience of transacting.

4.10 Performance Indicators

Respondents were asked to indicate the extent to which they agreed on the following performance indicators were determined by strategic information systems adopted by their MFI's. The findings were summarized as shown in Table 4.6.

Table 4.6: Performance Indicators

Indicators of Measurement	Mean	SD	Item	1	2	3	4	5
Adoption of SIS has contributed to increased profits among MFI ‘s	3.13	1.09	7	17.9	0.00	0.00	22.0	60.3
Adoption of SIS has contributed to minimal costs of operation of the MFI ‘s	3.11	1.04	4	27.7	0.00	40.2	0.00	22.0
Adoption of SIS has led to enhanced customer service delivery among MFI ‘s	2.80	1.44	5	29.9	0.00	0.00	48.0	22.0
Adoption of SIS has contributed to increased members of MFI’s	2.80	1.54	6	32.5	0.00	0.00	45.3	22.0
Adoption of SIS has contributed to penetration of MFI ‘s into new markets	2.11	1.35	4	0.00	62.4	0.00	0.00	48.8
Adoption of SIS enable MFI to increase its asset base	2.09	1.44	5	0.00	10.03	10.4	30.1	50.0
Adoption of SIS enable MFI’s to penetrate global markets	2.07	1.34	6	10.2	40.4	10.4	40.2	0.00

Source: Research data (2016)

As shown in Table 4.6, the study sought to determine the extent to which internet banking, mobile banking and automated teller machines influenced performance of Microfinance institutions in Nairobi County. From the findings, the study established that majority agreed to a larger extent that; adoption of SIS could contribute to increased profits among MFI‘s with a mean of 3.13. Adoption of SIS could contribute to minimal costs of operation of the MFI‘s with a mean of 3.11.Adoption of SIS could lead to

enhanced customer service delivery among MFI's with a mean of 2.80. Adoption of SIS could lead to enhanced customer service delivery among MFI's with a mean of 2.80. Adoption of SIS contributed to penetration of MFI's into new markets with a mean of 2.11. Adoption of SIS could enabled MFI's to increase its asset base with a mean of 2.09 and adoption of SIS could enable MFI's penetrate into global markets with a mean of 2.07. This implied that MFIs were likely to remain competitive in the turbulent environment if they used SIS.

4.11 Correlations Analysis

Pearson's product moment correlation analysis was used to assess the relationship between the variables while multiple regressions was used to determine the predictive power of the strategic information systems and performance of microfinance institutions in Nairobi County as shown in Table 4.7.

Table 4.7: Correlations Analysis

		Performance of MFI's in Nairobi County	Internet Banking	Mobile Banking	Automated Teller Machine
Performance of MFI's in Nairobi County	Pearson Correlation	1			
	Sig. (2-tailed)				
Internet Banking	Pearson Correlation	.710	1		
	Sig. (2-tailed)	.0012			
Mobile Banking	Pearson Correlation	.693	.027	1	
	Sig. (2-tailed)	.0017	.799		
Automated Teller Machines	Pearson Correlation	.579	.560	.762	1
	Sig. (2-tailed)	.0023	.000	.560	.

Source: Research data

The data presented before on internet banking, mobile banking and automated teller machines was computed into single variables per factor by obtaining the averages of each factor. Pearson's correlations analysis was then conducted at 95% confidence interval and 5% confidence level 2-tailed. The table above indicates the correlation matrix between the factors (internet banking, mobile banking and automated teller machines) and performance of microfinance institutions in Nairobi County, Kenya. According to the table, there is a positive relationship between performance of microfinance institutions in Nairobi County and internet banking, mobile banking and automated teller machines of magnitude 0.710, 0.693 and 0.579 respectively. The positive relationship indicates that there is a correlation between strategic information systems and performance of microfinance institutions in Nairobi County, Kenya. Internet banking having the highest value and automated teller machines having the lowest correlation value.

This notwithstanding, all the factors had a significant p-value ($p<0.05$) at 95% confidence level. The significance values for relationship between internet banking, mobile banking and automated teller machines were 0.0012, 0.0017 and 0.0023 respectively. This implies that internet banking was the most significant factor, followed by mobile banking and automated teller machines being the least significant.

4.12 Regression Analysis

In addition, a multiple regression analysis was conducted so as to test the statistical relationship among variables (independent) on performance of microfinance institutions in Nairobi County. The statistical package for social sciences (SPSS version 21) was applied to code, enter and compute the measurements of the multiple regressions for the study.

Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (performance of microfinance institutions in Nairobi County) that is explained by all the three independent variables (internet banking, mobile banking and automated teller machines).

4.13 Model Summary

Table 4.8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.923	0.852	0.789	0.6273

The three independent factors that were studied, explain only 85.2% of strategic information systems and performance of microfinance institutions in Nairobi County as represented by the R^2. This therefore means that other factors not studied in this research contribute 14.8% of strategic information systems and performance of microfinance institutions in Nairobi County. Therefore, further research should be conducted to investigate the other factors (14.8%) that influence performance of MFI's in Kenya.

Table 4.9: ANOVA Test

Model	Sum of Squares	df	Mean Square	F	Sig
Regression	0.003	7	.001	3.867	_015[b]
Residual	0.068	48	.021		
Total	0.071	56			

From the ANOVA statistics in table above, 4.9the processed data, which is the population parameters, had a significance level of 0.015which shows that the data is ideal for making a conclusion on the population's parameter as the value of significance (p-value) is less than 5%.

The calculated was greater than the critical value (2.262<3.869) an indication that the three variables significantly influenced performance of MFI's in Nairobi County, Kenya. Thesignificancevaluewaslessthan0.05, an indication that the model was statistically significant.

4.14 Relationship between Independent and Dependent Variables

Table 4.10: Coefficient of Determination

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	**Std. Error**	**Beta**		
1	**(Constant)**	0.139	1.2235		1.515	0.0133
	Internet Banking	0. 887	0.1032	0.152	4.223	0.0122
	Mobile Banking	0. 752	0.3425	0.154	3.424	0.0112
	Automated Teller Machines	0.645	0.2178	0.116	3.236	0.0111

Source: Research data (2016)

From the finding in table the established regression equation was

Y= 1.139+ 0.887X1+ 0.752X2+ 0.645X3.

From the above regression model, holding internet banking, mobile banking, automated teller machines to a constant zero performance of MFI's would be at 0.139. It was established that a unit increase in Internet Banking would cause an increase in performance of MFI's by a factor of 0.887, while a unit increase in Mobile Banking would cause an increase in performance of MFI's by a factor of 0.752, lastly a unit increase in automated teller machines would cause an increase in performance of MFI's by a factor of 0.645.

Therefore, it can be concluded that at 5% level of significance and 95% level of confidence, all the significance values were found to be less than 0.05 and indication that all the values were statistically significant to make the study conclusion.

Table 4.11: Performance Measurement Outputs

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	**(Constant)**	0.119	1.2225		1.415	0.0123
	Costs of Operation	0. 737	0.1132	0.132	3.113	0.0112
	Profits	0. 622	0.3325	0.134	2.224	0.0122
	Return on Investments	0.575	0.3278	0.196	2.136	0.0131

Source: Research data (2016)

As shown in Table 4.11, the study sought establish the effect of Strategic Information Systems on the performance of MFI's using costs of operation, profits and return on investment as indicators of performance measurement. After correlation analysis, it was established that performance of MFI's was determined by costs of operation, customer satisfaction and return on investment had significant values less than 0.05 and indication that all the values were statistically significant to conclude that MFI's determined their performance using costs of operation, customer satisfaction and return on investments.

4.15 Discussion of the Findings

The study established that the majority (88%) of the respondents preferred internet banking services due to its convenience and timely information obtained concerning their financial transaction. These findings corresponds with Creswell (2002) who argues that, investment in strategic information systems by firms has led to provision of state-of-the-art services to customers allowing rapid growth and increased firm performance in a very competitive marketplace. Further, Frenzel (1996) concurs that majority of the firms have invested in internet banking in a bid to tap into tech savvy customers who can transact through the internet. The internet banking can be viewed as a delivery channel which helps to overcome the inherent disadvantages of a traditional mortar and brick branch.

It was further established that most of the MFI's (71%) respondents had another preferred mode of conducting transactions despite challenges of customer information with new technological developments in the financial sector. These findings concur with Haynes and Thompson (2000) who argue that mobile banking has been a key method of reaching

the unbanked population who for a long time has not accessed banking services offered through traditional brick and mortar banking. Most MFI's in Kenya have strategically partnered with telecommunication service providers to provide mobile banking services to customers more efficiently and effectively.

It was established that majority (91%) of the respondents were conducting financial transaction using their ATM cards compared to other modes. These findings corresponds with Santha *et al*. (2001) who argue that the use of ATM has become exceedingly admirable and popular among customers as convenient mode of banking transactions. ATMs provide customers the opportunity of saving time, cost and convenience when conducting transactions.

This findings are supported by Lucas (2005) who argues that SISis directly correlated with performance of MFI's in the global market. SIS has created a significant impact on productivity and cost minimization of MFI's. The SIS are the only window of opportunity to financial institutions in the 21st century. Also Muriuki (2011) revealed that organizations that integrated technology into internal processes were more likely to be more efficient and effective and vice versa.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summaries of the study findings as per the study objectives, conclusions based on those findings and recommendations which are based on both the study findings and other relevant literature considered necessary and vital to be used in future to improve the study situation.

5.2 Summary of the findings

The study sought to establish the influence of strategic information systems on the performance of microfinance institutions in Nairobi County, Kenya. The study established that majority (89%) of the customers of MFI's adopted internet banking practices on a large extent despite challenges of consumer awareness on how to use electronic services. Most of the customers preferred internet banking services due to its security, provided twenty four hour access of their accounts, accessed their accounts from virtual location and accessed a variety of information concerning loans, investments and interest rates through online.

However, on the other hand, it emerged that some (26%) consumers were highly cautious in adopting the new ideas introduced by the MFI's. It was identified that some of the customers were rigid to traditional banking services that provided the opportunity for them to interact with employees of the MFI's for more clarification. The complexity of the system and internet accessibility by consumers of the banks were the challenges pointed out.

The study revealed that 91% of mobile banking services were used by consumers to a large extent due to a number of opportunities ranging from payments of bills, transfer of funds, confirmation of account balance and review of their transaction.

However, on the other hand, it emerged that some 31% of the customers were unable to use their accounts from their phones due to system challenges. MFI's systems were too slow to deliver instant information to customers. It was established that internal business processes of MFI's were not upgraded to send electronic SMS to customers with regard to new products and general account information. This was due inappropriate technology that was used by MFI's in customer service delivery.

The study established that majority of the respondents preferred conducting their financial transactions using an Automated Teller Machine Service due to their convenience, security, efficiency and effectiveness. The customers preferred the ATM mode due to less charges associated when withdrawing cash and making payments using debit cards.

However, on the other hand, it was further established that customers did not make enquiries through websites due to lack of internet accessibility. The MFI's automated all their departments despite the challenge of training staff and customers. Some of the customers received account information through SMS Alert after withdrawing and depositing money. The study found that customers did not have access to online account opening facilities since the system did not allow customers to upload their passport photos online.

Despite satellite branches internet connectivity, it was established that customers queued for long periods due to system delays. Most of the customer information was not reflected at the branch level due to system errors that were experienced occasionally. The study finally established that there was a positive relationship between independent variables (internet banking, mobile banking, and automated teller machines) and dependent variable (performance of microfinance institutions in Nairobi County).

5.3 Conclusion

Based on the findings of the study, it can be concluded that, the microfinance industry is the back bone of any developing or developed economy. Aspects of globalization, deregulation, competition, costs of operation, changing customer trends are drivers of adopting strategic information systems among MFI's in Kenya. Adoptability of SIS will lead to lower costs, increased profitability, improved customer service delivery, new product development, employee motivation and information access.

For MFI's to gain competitive edge and contribute to social economic developments in a country, the Government should support research and developments activities through internet connectivity to empower both large and small firms in the market. The Government of Kenya through the Ministry of ICT, should regulate policies that promote businesses in the competitive sector. Reduction of levies on electronic products by the Kenya Revenue Authority in the Kenya market will promote financial services of MFI both in the local and global markets. Therefore, it can be concluded that, for MFI's to achieve their goals using SIS, they should conduct awareness campaigns intended to change the attitude and perceptions of customers in the market with regard to new technology.

5.4 Recommendations

The study established that the extent of internet banking services was on a large despite the challenges of consumer awareness on internet baking. Therefore, this study recommends that MFI's should allocate adequate financial resources to create maximum awareness of their internet banking services and training their internal and field staff. Gradual change approaches should be adopted by MFI's in managing the transition of traditional banking practices to modern banking practices. Customer attitudes and perceptions should also be managed.

The study found that mobile banking services had a significant influence on performance of MFI's despite the challenges of system accessibility by customers. Therefore, this study recommends that MFI's should upgrade their systems in order to encourage customers to access their accounts using their mobile phones. Customers should be encouraged through social marketing campaigns in partnership with mobile phone companies to adopt phones that will enable them access their account information. The study established that majority of the respondents preferred conducting their financial transactions using an Automated Teller Machine Services due to their convenience, security, efficiency and effectiveness. Therefore, this study recommends that MFI's should improve or upgrade their debit cards to provide an opportunity of accessing a variety of services by customers. Opening more outlets in the country will enhance the penetration of electronic services and expansion of the market share.

The study also established that despite satellite branches internet connectivity, it was established that customer queued for long periods due to system failure. Therefore, this study recommends that MFI's should adopt the fiber optic internet connectivity to increase the speed of service delivery to customers thus improving efficiency and effectiveness. It is therefore important that MFI's constantly improve and upgrade their e-banking system's security. In order to change the perception, the MFI's will be required to post security provisions on their websites as well as send random SMS' to its customers, so as to increase confidence and improve trustworthiness of the e-banking and mobile banking systems. It can be concluded that MFI's should invest in Information technology infrastructure for their competitive advantage in the market. With the changing business environment, the only driver of MFI's against globalization and competition challenge is to institutionalize technological culture in the system to enhance efficiency and effectiveness.

5.5 Limitation of the Study

After evaluating the results of this study, the following limitations should be kept in mind. The limitations took on conceptual, contextual, and methodological manifestations. Conceptually, the study only focused on influence of strategic information systems on performance of MFI's in Nairobi County but not any other Counties. This limitation was overcome by suggesting further studies to be done in other 46 Counties

Gathering accurate information from the respondents was one of the major challenges since they may have feared that the information may be used against them by the management in terms of performance, hence insecurity of their jobs. Assuring the respondents of the confidentiality of the information they gave, reduced the trepidation they had. The respondents were unwilling to give information due to the sensitivity of disclosing company matters that require management clearance for interviews or disclosure.

Methodologically, this study relied on employees of MFI's, and in the absence of the interviewer, these questionnaires could have been answered by other members of staff whom did not have accurate information about the problem, therefore creating a possibility of bias. The methodology adopted by the study was quantitative in nature that may have been comprised during coding process. This was overcome by confirming quantitative figures before coding.

5.6 Suggestions for Further Research

Future studies should explore the reasons behind the influence of strategic information systems and performance of MFI's by focusing on different variables like e-commerce, continuous improvement and business process re-engineering. Researchers should go ahead and establish the reasons behind the failure of SIS practices among MFI's. Future studies should seek to minimize the challenges experienced by MFI's when trying to adopt SIS.

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APPENDICES

Appendix 1: Questionnaire for MFI'S Employees

SECTION A: Background Information

1. **Name of the MFI**……
2. **What is your designation**? ……..……..
3. **For how long have you been working in the MFI?**
   a) Less than a year [ ]
   b) Between 1 and 5 years [ ]
   c) Between 6 and 10 years [ ]
   d) Above 10 years [ ]
4. **What is the level of your education?**
   a) Diploma level [ ]
   b) Undergraduate level [ ]
   c) Graduate level [ ]
   d) Masters [ ]
   e) Others ……..
5. **Does your Microfinance Institution have strategic information systems?**
   Yes [ ] No [ ]
6. **Customers of the MFIs have ATM Cards**
   Yes [ ] No [ ]

SECTION B: STRATEGIC INFORMATION SYSTEMS AND PERFORMANCE OF MICROFINANCE INSTITUTIONS

7. **Please indicate your views on mobile banking by ticking appropriate response below:**

	MOBILE BANKING	**Strongly Disagree [1]**	**Disagree [2]**	**Undecided [3]**	**Agree [4]**	**Strongly Agree [5]**
1.	Customers carry out their transaction through online services					

2.	Customers make online inquiry and transfers					
3.	Customers have access to online bill-pay					
4.	Customers access to online trust funds					
5.	Customers access online deposit accounts					
6.	Customers always are updated about their account information monthly through e-statement					
7.	Customers always give feedback through online					

8. What are other services enhanced by mobile banking of your MFI?

……..……

……

9. Please indicate your views on internet banking by ticking appropriate response below:

	INTERNET BANKING	**Strongly Disagree [1]**	**Disagree [2]**	**Undecided [3]**	**Agree [4]**	**Strongly Agree [5]**
1.	Customers receive balance enquiry alerts though their phone					
2.	Customers receive SMS alert on new banking products and services					
3.	Customers make enquiries about their account through phone					
4.	Customers can make money transfers from their phone					
5.	Customers can deposit money to their account through phones					
6.	Customers receive periodical promotional messages on new banking products					

10. **Please indicate your views on automated teller machines by ticking appropriate response below:**

	AUTOMATED TELLER MACHINES	**Strongly Disagree [1]**	**Disagree [2]**	**Undecided [3]**	**Agree [4]**	**Strongly Agree [5]**
1.	Customers prefer an ATM to withdraw money					
2.	Customers prefer an ATM due to minimal charges when transacting					
3.	Customers prefer an ATM to manage time					
4.	Customers prefer an ATM due to its convenience					
5.	Customers prefer an ATM for security purposes					
6.	Customers prefer an ATM for cashless transfers					

11. **Please indicate your views on indicators of performance by ticking appropriate response below:**

	PERFORMANCE INDICATORS	**Strongly Disagree [1]**	**Disagree [2]**	**Undecided [3]**	**Agree [4]**	**Strongly Agree [5]**
1.	Adoption of SIS has contributed to increased profits among MFI 's					
2.	Adoption of SIS has contributed to minimal costs of operation of the MFI 's					
3.	Adoption of SIS has led to enhanced customer service delivery among MFI 's					
4.	Adoption of SIS has contributed to increased members of MFI's					
5.	Adoption of SIS has contributed to penetration of MFI 's into new					
6.	Adoption of SIS enable MFI to increase its asset base					

7.	Adoption of SIS enable MFI's to penetrate global markets					

12. What are other indicators used by your MFIs to measure performance?

……

……..

Thank you for your Cooperation

Appendix 2: List of Microfinance Institutions in Kenya

1. AAR Credit Services
2. ACDF
3. Adok Timo
4. BFDP
5. BIMAS
6. Century MFB
7. Caritas Microfinance Bank Ltd
8. Choice Microfinance Bank Limited
9. Daraja Microfinance Bank Ltd
10. DRC Microfinance
11. Eb-F
12. ECLOF - KEN
13. Equity Bank KEN
14. Fadhili
15. Family Bank
16. Faulu MFB
17. Greenland Fedha
18. Jamii Bora
19. Jitegemea Credit Scheme
20. Juhudi Kilimo
21. K-Rep
22. KEEF
23. KPOSB
24. KWFT MFB
25. Letshego KEN
26. Makao Mashinani
27. MCL
28. Milango Kenya
29. Musoni
30. Opportunity Kenya
31. PAWDEP
32. Platinum Credit
33. Rafiki MFB
34. Remu Microfinance Bank Ltd
35. RAFODE
36. Real People
37. Remu

38. Riverbank
39. Rupia
40. Samchi Credit Limited
41. SEED
42. SISDO
43. SMEP MFB
44. Springboard Capital
45. Sumac MFB
46. Taifa
47. U & I MFB
48. Ubunifu MFI
49. UBK
50. Ufanisi - AFR
51. Unaitas
52. Uwezo MFB
53. Vision Fund Kenya
54. WEEC
55. Yehu
56. YIKE

(Source: Central Banks of Kenya, 2016)