

**EFFECT OF FINANCIAL INNOVATIONS ON PERFORMANCE OF
MICROFINANCE INSTITUTIONS IN NAKURU TOWN, KENYA**

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DECLARATION

This research project is my original work and has not been presented for a degree in any other University.

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DEDICATION

This research project is dedicated to the Almighty God for His gracious provision and guidance. Further dedications go to my wife, Carolyn Wamaitha and my beloved boy, Ryan Kibugo. Special dedications also go to my mum, Ann Wanjiru and my younger siblings, Muthoni, Kioni and Mbugua for their concern, encouragement, support, and prayers. I hope this study will be a source of motivation to my son when he becomes of age.

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ABBREVIATIONS AND ACRONYMS

AMFI	Association of Microfinance Institutions
ATMs	Automated Teller Machines
CBK	Central Bank of Kenya
EFT	Electronic Record Keeping
EIU	Economist Intelligence Unit
KWF	Kenya Women Finance Trust
MFIs	Micro Finance Institutions
NGOs	Non-Governmental Organization
RTGS	Real Time Gross Settlement
SACCOs	Savings and Credit Co-Operative Societies
SMEs	Small and Medium Enterprises
UNDP	United Nations Development Programme
US	United States
USAID	United States Agency for International Development
WEF	World Economic Forum

ABSTRACT

Innovation is described as the process by which, firms master and implement design, and the production of goods and services that are new to them. Innovations generally assume different forms such as product innovations, marketing innovations, micro MFIS, location innovation, and research and development innovation. Financial innovations include institutional innovation, product innovation, and process innovation. These innovations have eased the way of doing business for financial institutions including microfinance institutions. It remains largely unclear whether MFIs are adequately innovative in running their businesses given that they are faced by the challenge of limited growth and expansion. Performance and growth are related in that a firm cannot grow if it fails to post sound performance. The general objective of the study was to determine the effect of financial innovation on performance of microfinance institutions in Kenya. Specific objectives include examining the effect of institutional innovation, product innovation, and process innovation on performance of microfinance institutions. The study was guided by theory of induced institutional innovation, demand-supply theory of innovation, theory of innovation diffusion, and economic value added theory. Descriptive survey research design was used in this study. The target population comprised of all employees working with MFIs registered with AMF-Kenya and the accessible populations were 187 employees working with MFIs registered with AMF in Nakuru town, Kenya. Samples of 70 respondents were drawn from the study population using stratified random sampling technique. The study used questionnaire as the tool for primary data collection. Secondary data was collected using a data collection sheet. A pilot study was conducted before the main study with the aim of determining the reliability and validity of the research instrument. The study determined the validity of the questionnaire by use of content validity test. Reliability was tested using the Cronbach alpha coefficient. Data processing and analysis was facilitated by the use of the Statistical Package for Social Sciences. Data analysis encompassed both descriptive statistics and inferential statistics. Descriptive statistics such as means, mode, standard deviations, and variance was used. On the other hand, inferential statistics was in form of Pearson's correlation coefficient, and multiple regression analysis. The result of the analysis was presented in form of tables, charts, and graphs. From the findings, the research concluded that there is a supervisory framework that monitors MFIs. Some of the innovations observed by MFIs in mobile banking include partnerships, financial trainings, branch networking and opening up new branches. It is also concluded that innovations can be a source of competitive advantage if a firm understands customer needs, competitors' actions and technological development and act accordingly to stay at par with rivals. The study recommended that in order to enhance firm performance the management of microfinance ought to focus on the firm activities aligned towards renewing routines, procedures and processes in an innovative manner in a firm. This will positively improve the performance of microfinance.

DEFINITIONS OF TERMS

Financial innovation	This refers to something new that minimizes costs and/or risks, or provides an improved product or service or instrument that better satisfies participants' demands within a financial system (Dary&Issahaku, 2013).
Performance	This refers to a measure of how well a firm can employ assets from its primary mode of business and generate revenues and profits (Imali, 2013).
Innovation	This refers to the process by which, firms master and implement design, and the production of goods and services that are new to them regardless of whether they are new to their competitors, country or the world (Mytelka, 2000).
Institutional innovation	These are innovations that relate to changes in microfinance structures, establishment of new types of financial intermediaries, and changes in the legal and supervisory framework (Nugroho& Mile, 2009).
Process innovation	This refers to a combination of facilities, skills and technologies that are used to produce products or provide services (Ongwen, 2015).
Product innovation	This is a form of financial innovation that offers protection to a firm from markets threats and competitors (Hult, Hurley & Knight, 2004).

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Innovation is described as the process by which, firms master and implement design, and the production of goods and services that are new to them regardless of whether they are new to their competitors, country or the world (Mytelka, 2000). More so, Spielman (2005) defines innovation as the continuous process of upgrading by employing new knowledge or the new combination of existing knowledge that is new to the local area. Innovations generally assume different forms such as product innovations, marketing innovations, micro MFIS, location innovation, and research and development innovation.

In particular, financial innovations include institutional innovation, product innovation, and process innovation (Lawrence & Scott, 2001). Institutional innovations relate to changes in microfinance structures, establishment of new types of financial intermediaries, and changes in the legal and supervisory framework. Product innovations include the introduction of goods or services with improved characteristics to respond to changes in market demand or to improve the efficiency. These may include new credit cards, personal unsecured loans, money transfers services, mobile banking and mobile lending. Process innovations cover the introduction of new business processes leading to increased efficiency, market expansion and client data management. Process innovations include electronic banking, automated teller machines (ATMs) and Real Time Gross Settlement (RTGS).

Financial innovations provide easy access to accurate activities like disbursements, repayments, deposits, withdrawals, and money transfer. As such, there are minimal

opportunities for errors. Innovations are associated with risk. In this regard, therefore, microfinance institutions carry out risk analysis before implementing innovations (Dary&Issahaku, 2013). According to Frame and White (2004) financial innovations also refer to development of new products like telephone banking, formation of new services like internet banking, new production process like electronic record keeping (EFT) or new organizational forms.

The major impetus for financial innovation has been globalization of financial systems, deregulation, and great advances in technologies. Financial innovation is broadly seen as an essential component of competitiveness, embedded in the organizational structures, processes, products and services within a firm. The developments in financial sector have not only led to the increase in the number of financial institutions, but also the development in level of sophistication with new payment systems and asset alternatives to holding money. The significance of financial innovation is described by Roberts and Amit (2003) as a means leading to competitive advantage and superior performance. Financial innovation fosters faster dissemination of information and more rapid incorporation into financial market prices (Mosongo, 2013).

1.1.1 Global Perspective of Financial Innovation

The role of financial innovation is very critical particularly in developing countries. This is necessitated by the challenges facing the microfinance sector including complexity in demand for microfinance services. Some of the challenges hampering success of microfinance institutions in developing countries border on scalability, outreach, sustainability, and impact of microfinance initiatives (Filpo, 2006). It is held that, the foregoing challenges can be overcome through adoption of innovative

strategies that can maximize outreach and sustainability. De Mel, McKenzie and Woodruff (2009) assert that in developing countries, incremental changes, acquisition of embodied technology, and application or adaptations of existing products or processes are believed to be the most frequent forms of innovation.

In the People's Republic of China, there is a big question on how the government ought to promote rural and microenterprise financing. The microfinance reforms in the country have marked a significant change in approach since 2005. The changes witnessed in the country include a change in focus from a narrow lending outreach to a more open rural finance and microfinance market with aid of government incentives, and also from a limited number of rural finance and microfinance products to product and service innovations (Asian Development Bank, 2014). It is indicated that one of the strides taken in Chinese financial sector is coming up with innovative rural financial products and services. In the recent past the government has started paying more attention to innovations in rural financial products and services.

The World Economic Forum (WEC) brings on board several countries across the world and its headquarters are in Geneva, Switzerland. The WEC Report (2012) indicated that innovation is the critical source of economic growth and plays a crucial role in improving social welfare. It is indicated that the recognition and acknowledgement of the role of innovation in economic growth, many governments around the world encourage investment in research and development. The WEC report puts into perspective the various functions of financial innovation. These include providing ways of clearing and settling payments to facilitate trade as exemplified by credit and debit cards, PayPal, and stock exchange. Another function is providing ways to transfer economic resources through time, across borders and among industries as it is the case with savings accounts and loans. Financial

innovations also provide mechanisms for pooling resources and for subdividing shares in various enterprises. Suitable examples include mutual funds, and securitization.

Financing innovation has been a longstanding concern particularly in the European Union where there is widespread perception that there are more difficulties raising finance for innovation than in the US (Nugroho& Mile, 2009). It is further pointed out that MFIs have a distinct advantage in process and product innovation to meet the requirements of poor clients. Innovations arise in competitive conditions as MFIs attempt to tackle the challenge of developing products and services suitable to their customers, of expanding and maintaining market shares.

In South East Asia, countries such as Philippine have witnessed innovations in microfinance (Llanto& Fukui, 2003). Emerging innovations in microfinance in this region have enabled MFIs to reach a greater number of poor households on a sustainable basis. It is observed that innovations help minimize transaction costs and risks among MFIs. Furthermore, they make it possible for poor households to satisfy their investment and consumption smoothing requirements.

1.1.2 African Perspective of Financial Innovation

Since 2010, there has been significant introduction of an array of innovations in Ghanaian microfinance sector (Dary&Issahaku, 2013). The innovations have been employed in varying degree and include product innovations, marketing innovations, micro MFIS, location innovation, and research and development innovation. Product innovation encompasses loans and savings. Moreover, innovators can be potential, slow, moderate or high innovators respectively according to their degree of coming up and adopting innovations. It is noted that innovative activities are not only focused on

lowering transaction costs and extending the reach of MFIs, but they are also geared towards enhancing customer convenience (Hans, 2009).

According to Gupta (2008), the microfinance sector in most of African countries including Ethiopia, is largely underdeveloped. Indeed, as at 2009 the continent had 27 million people who were being served by MFIs. This represented 4% of the Africa's population. Most of MFIs' borrowers were concentrated in Sub-Saharan Africa (Nugroho & Miles, 2009). In this light, therefore, there is need to reinforce the capacity of African MFIs through technological innovations and product refinements in order to minimize costs, increase outreach, and enhance overall profitability (Dary & Issahaku, 2013).

It is a well-known fact that in several African Countries with exceptions of the likes of South Africa, where personal computers and Internet access are not readily available in many regions, cellular phones have been in enormous use. According to Nugroho and Miles (2009), mobile phones have been deployed as electronic pulses that can be employed in transactions of various forms, and it is plausible that microfinance can find uses for such systems. The foregoing is a probable case of financial innovation emerging from developing countries and being transferred to the industrial world.

Wangwe and Lwakatare (2004) examined innovation in rural finance in Tanzania. It is noted that economic and financial reforms have been taking place since 1980s. Reforms in the financial sector which are associated with innovations take the form of decontrolling interest rates, restructuring existing public sector banking institutions and allowing entry of private financial institutions. Financial innovations in the country have led to product diversification where there are financial products

designed or customized to suit the needs of specific communities. Microfinance sector in Tanzania is moulded around the concept of Grameen Bank found in Bangladesh. This bank is credited for initiating microfinance where it targeted the poor rural people and has over the years increased financial inclusion.

There has been a microfinance revolution in East Africa. The revolution in the three countries in the region (Tanzania, Uganda, and Kenya) is characterized by innovations in products, services, and delivery channels in the past two decades. The foregoing efforts are incentivized by increased use of technology. Driven by a need to leapfrog outdated technologies, and helped by responsive central banks, East Africa has become a hotbed of innovation in financial services. Branchless banking and mobile money allow for a much faster inclusion of rural populations into financial systems, expanding the market potential of microfinance (Research Insight, 2013).

1.1.3 Kenya's Perspective of Financial Innovation

Changing business environment within the Kenya's financial system has created more innovation in the fields of product, process and market. Information technology has given rise to new innovations in the product designing and their delivery in the finance industries. Customer services and customer satisfaction are their prime work. In the Kenyan perspective financial innovation has happened in various forms, these include: mobile banking, stock brokerage and MFIs services; with commercial banks moving to acquire stock brokerage firms, Islamic banking guided by the Islamic (Sharia) law as exemplified by Gulf African Bank, First Community Bank and Barclays Bank of Kenya; and electronic banking (CBK, 2014).

The financial sector in Kenya can be reviewed in three phases according to (Misati et al., 2010). The first is in the 1970's to early 1980's. During this time, the financial

sector was highly dominated by the banking sector, which was characterized by financial repression. The government played key role in allocating credit to investments by utilizing direct instruments of monetary policy such as interest rate controls, exchange rate controls and allocation of credit to priority sectors among other government restrictions (Misati et al., 2010). The second phase began with advent of structural adjustment programmes and liberalization of policies in the late 1980's. Over this period, relaxation of the interest rate, exchange rates and capital accounts controls were witnessed. The essence of the financial sector reforms this time was to trigger narrow interest rates spreads, increase availability of financial resources through increased savings, enhanced efficiency in credit allocation and increased investments. Liberalization was also meant to encourage usage of indirect tools in monetary policy formulation (Misati et al., 2010). The third phase is the late 1990's to date which can be classified as the era of financial innovation and emerging financial instruments. The period has witnessed emergence of new products such as Islamic banking, automated teller machines (ATMs), plastic money and electronic-money (e-money) amongst others within the banking sector (Misati et al., 2010).

1.1.4 Microfinance Institutions in Kenya

In Kenya, micro finance institutions (MFIs) were pioneered by non-governmental organization (NGOs) in collaboration with the government. The government aided the development of micro finance institution (MFI s) by providing the policy framework and platform for donor support; these NGOs include World Bank, USAID (U.S. Agency for International Development), UNDP (United Nations Development Programme) and later the commercial banks supported NGOs by financing the operations (Mutua, 2006).The micro finance movement gained momentum in the late

1980s as a result of the exclusion of a large proportion of the Kenyan population from the formal financial institution mainly banks.

Micro finance emerged with the aim of filling the gap left by banks in providing credit to individuals, micro, small and medium enterprises which were on the rise during this period (Ogindo, 2006). Kenya's micro finance industry has come a long way since the 1980s, and particularly since the landmark micro finance intermediaries Act of 2006. The country now has five deposit taking micro finance intermediaries (MFIs) operating under a regulatory framework assessed by the Economist Intelligence Unit (EIU) as the best in Africa (EUI, 2010).

Although this evolution in form of new financial instruments and new and more efficient methods of offering financial services has affected the entire global financial system, relatively little research in Kenya concerning this subject is documented within the micro finance industry (Ogindo, 2006).. The Kenyan financial sector has undergone tremendous changes in the last two decades. A lot of reforms have been undertaken in the sector that have led to penetration of financial products, activities and organizational forms that have improved and increased the efficiency of the financial system. Advances in technology and changing economic conditions have created impetus for this change. All these developments coupled with changes in the international financial environment and the increasing integration of domestic and international financial markets have led to rapid financial innovation (Ongwen, 2015).

In Kenya, micro finance institutions play an essential role in the economic development by serving the population ignored by the big banks. This is the micro savings and credit service where banks failed to meet the needs of the poor customers and citizens. Currently, statistics indicate that banks serve approximately 22.6% of the

population, 17.9% is served by the micro population unreached by any financial service. In the last three decades, there has been emergence of numerous MFIs to serve this segment. By serving the enormous poor population successfully there has been transformation of some MFIs to fully fledged banks like Equity Bank, KRep Bank (now Sidian Bank), Kenya Women Finance Trust (KWFT) and Family Bank (Mutua, 2006).

1.2 Statement of the Problem

The importance of financial innovations cannot be underrated. These innovations have eased the way of doing business for financial institutions including microfinance institutions (Ongwen, 2015). As a result of innovations, there can be greater outreach, for instance when technology is adopted in transacting business. Leading financial institutions such as commercial banks are very innovative in their institutionalization, products and processes which have resulted in improved performance. However, this has not been the case with MFIs in Kenya.

It remains largely unclear whether MFIs are adequately innovative in running their businesses given that they are faced by the challenge of limited growth and expansion. This is underscored by the fact that only 11 MFIs are hitherto registered with the Association of Microfinance Institution of Kenya (AMF-Kenya) as opposed to a total of 42 commercial banks registered with the Central Bank of Kenya (CBK). Performance and growth are related in that a firm cannot grow if it fails to post sound performance. MFIs have been around for decades and have primarily been serving the low cadre members of the society (EUI 2010). Against the backdrop of dynamics in the world today and advancement of technology in the financial sector, in addition to

commercial banks providing microfinance services, MFIs have found themselves in an awkward position in terms of competition. This has threatened their very existence.

The financial challenges facing MFIs have far reaching impact. These institutions employ thousands of Kenyans who are breadwinners in thousands of households across the country. As such, in the event that MFIs post poor performance and downsize their staff or close shop altogether, there are many Kenyans who would directly and indirectly be affected. More so, these firms pay taxes to the government through Kenya Revenue Authority and poor performance would translate to reduced tax remittances. The foregoing would definitely affect the revenue collection by the government.

Various local scholars have examined the themes of financial innovation and performance. Kariuki's (2010) study noted that process innovation affected performance positively. However, the study focused on commercial banks as opposed to MFIs. A study by Mugo (2012) focused on MFI institutional innovativeness. However, the study did not link institutional innovation to performance. Chemitei (2012) investigating the role of innovation in creating competitive advantage in MFIs as opposed to performance. Mwangi (2014) studied the effect of financial innovation on financial returns of deposit taking MFIs in Kenya. Yet, the study was limited to deposit taking MFIs whereas majority of MFIs do not take deposits, rather they give out credit facilities. It's against the backdrop that this study will be carried to fill these research gaps.

1.3 Objectives of the Study

The study sought to address both the general objective and three specific objectives.

1.3.1 General Objective

The general objective of the study was to determine the effect of financial innovations on performance of microfinance institutions in Nakuru town, Kenya.

1.3.2 Specific Objectives

- i. To examine the effect of institutional innovations on performance of microfinance institutions in Nakuru town.
- ii. To assess the effect of product innovations on performance of microfinance institutions in Nakuru town.
- iii. To analyze the effect of process innovations on performance of microfinance institutions in Nakuru town.

1.4 Research Hypotheses

H₀₁: There is no significant relationship between institutional innovations and performance of microfinance institutions in Nakuru town.

H₀₂: There is no significant relationship between product innovations and performance of microfinance institutions in Nakuru town.

H₀₃: There is no significant relationship between process innovations and performance of microfinance institutions in Nakuru town.

1.5 Justification of the Study

This study will provide empirical data to researchers and other interested scholars who would wish to undertake studies on financial innovation as well as illustrate the gaps that come along with the study of financial innovation, therefore opening more

areas for future studies in the field of financial innovations and performance. Moreover, this study will contribute to the already existing body of knowledge and form basis for further research work. It is also hoped that this study will be used by the government and industry regulators to understand the types of financial innovations in the microfinance industry so as ensure that the regulations that exist cover all the innovations and no gap exists.

As a main player in registering and regulating the banking industry this study will help them gain an understanding on the future of the industry and guide their decision making. Moreover the study will inform investors about the recent trend in the microfinance industry in respect to new microfinance products, services and processes for them to invest in and enjoy the first mover advantage before the products are known to the rest of the market. This understanding will also assist the investor to re-think their investments in line with the emerging microfinance products, processes and institutions.

1.6 Scope of the Study

The study was conducted in Nakuru town, Kenya. It focused on microfinance institutions which are registered with the Association of Microfinance Institutions (AMFI) of Kenya and which have operations in this town. The study was precisely delimited to employees working with the aforementioned MFIs. The study was guided by three independent constructs that characterize financial innovations. These include institutional innovations, product innovations, and process innovations. More so, the study was delimited to one dependent construct which is performance. The study was carried out between the month of March to September 2016.

1.7 Limitations of the Study

The study was confronted by a couple of challenges. Performance is a sensitive topic; some respondents did not feel at ease giving out information touching on the Microfinance institution. The researcher had to assure them that there were ethics that were to be put into consideration including ensuring that the identity of the participants was never to be disclosed to third parties and the information gathered was exclusively for academic purposes. The research instrument was limited to close-ended questions, a fact that deterred respondents from giving their open views regarding the topic. In view of this challenge, it was ensured that the questionnaire was structured in such a way that it enabled collection of data pertinent to all study objectives

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter covers a review of theories followed by the conceptual framework of variables. A conceptual review that outlines the operationalization of study variables is outlined. This is followed by empirical review of studies that have been carried out in the past relative to financial innovations and performance. A summary of the studies reviewed is then presented followed by research gaps identified from the empirical studies reviewed.

2.2 Theoretical Review

This section discusses theories that are in line with financial innovation and performance. The reviewed theories include theory of induced institutional innovation, demand-supply theory of innovation, theory of innovation diffusion, and economic value added theory.

2.2.1 Theory of Induced Institutional Innovation

The theory of induced institutional innovation was proposed by Vernon and Hayami (1984). The theory states that changes in the demand for institutional innovation are induced by changes in relative resource endowments and by technical change. Institutions are the rules of a society or of an organization that facilitate coordination among people by helping them form expectations in which case each person can reasonably hold in dealing with others. Institutions provide assurance respecting the actions of others, and they give order and stability to expectations in the complex and uncertain world of economic relations (Olsen, 1982).

The model of induced institutional innovation maps the general equilibrium relationships among resource endowments, cultural endowments, technologies and institutions. It is observed that the four elements are interrelated. The model goes beyond the conventional general equilibrium model in which resource endowments, technologies, institutions, and culture are given. Instead, the relationships among the variables must be treated as recursive (Vernon & Hayami, 1984). The theory of induced institutional innovation can be used to explain institutional innovation in financial institutions. For there to be effective institutional innovations, financial firms must have requisite resources particularly in terms of technical expertise and finances to enable them source the necessary technologies. The organizational culture must also be willing to embrace the innovations.

2.2.2 Demand-Supply Theory of Innovation

The demand-supply theory of innovation was proposed by Tidd (2006). The theory states that the source of innovations can be analyzed from either the demand theory or by the supply theory of innovation. The demand theory holds that innovations are created as a response to demand of business firms that want to acquire competitive advantage in their business environment. This type of new developments is referred to as the demand-driven innovations. Yet, the foregoing can be influenced by either the internal needs of the business firm aiming at improvement in its activities or by the changes in its environment requiring proper adjustments in its business strategy (Blach, 2011).

The second approach emphasizes on the role of supply side, as innovations are firstly created by the innovation providers and then they are implemented in the business entities who happen to be the end-users of innovations. These are called supply-driven

innovations and are achieved as a result of the process consisting of three phases. These phases include the creativity phase otherwise called invention, innovation phase, and the diffusion phase which is realized by commercialization or diffusion of the innovative solutions (Stradomski, 2006). The demand-supply theory can be used to explain financial innovations in general and product innovations in particular. Firms, based on competition, can ignite demand for certain products or services. In the financial sector, competition is stiff, and firms seek to outdo each other in coming up with innovations that can address the issue of demand and supply relative to the market.

2.2.3 Theory of Innovation Diffusion

The theory of innovation diffusion was pioneered by Rogers (1995). The theory states that innovation diffusion is based on the notion that adoption of an innovation involves spontaneous or planned spread of new ideas. Rogers defines innovation as an idea, practice, or object that is perceived as new (Rogers, 1995). The theory stresses that the perception of change is important and that if and when the idea seems new to the potential adopter, it is then ought to be considered as an innovation.

It is stated that in diffusion theory, the existence of an innovation is viewed to cause uncertainty in the minds of potential adopters (Berlyne, 1962). In this case, uncertainty refers to lack of predictability and of information. Rogers (1995) further describes diffusion as an information exchange process amongst members of a communicating social network driven by the need to reduce uncertainty. Uncertainty can be considered as the degree to which a number of alternatives are perceived in relation to the occurrence of some event, along with the relative probabilities of each of these alternatives occurring. Those involved in considering adoption of the

innovation are motivated to seek information to reduce this uncertainty (Rogers 1995).

Diffusion theory contends that a technological innovation embodies information, and so its adoption acts to reduce uncertainty. According to Rogers (1995) diffusion of an innovation is subject to five important characteristics which include its relative advantage, compatibility, complexity, trialability, and observability. The innovation diffusion theory can be employed to explain process innovation where technology is a component. For instance, the theory can be used to explain automation of service delivery by financial institutions.

2.2.4 Economic Value Added Theory

The proponent of economic value added theory was Stewart (1982). The theory is a measure of a firm's performance based on the residual wealth calculated by deducting its cost of capital from its operating profit, adjusted for taxes on a cash basis. It is an alternative model to CAPM used in capital budgeting because it focuses on the ability of a firm to create wealth from the point of view of the economic model and not the accounting model (Abate, Grant & Stewart, 2004).

It is an integrated financial system used in decision making and different corporate applications including performance measurement, determination of shareholder value, valuation of equity (Hatfield, 2002). The critics of the theory argue that it is a financial fiction inoperable unless markets are efficient (Chen & Dodd, 2002). However, the theory can be applied to examine the performance of microfinance institutions given the flexibility and efficiency of the financial markets and financial sector.

2.3 Conceptual Framework

A conceptual framework is a diagrammatic framework that shows the relationship between study variables as shown in Figure 2.1. As shown in the framework, there are two different types of variables which are independent and dependent variables. Independent variables are institutional innovation, product innovation, and process innovation. Performance is the dependent variable.

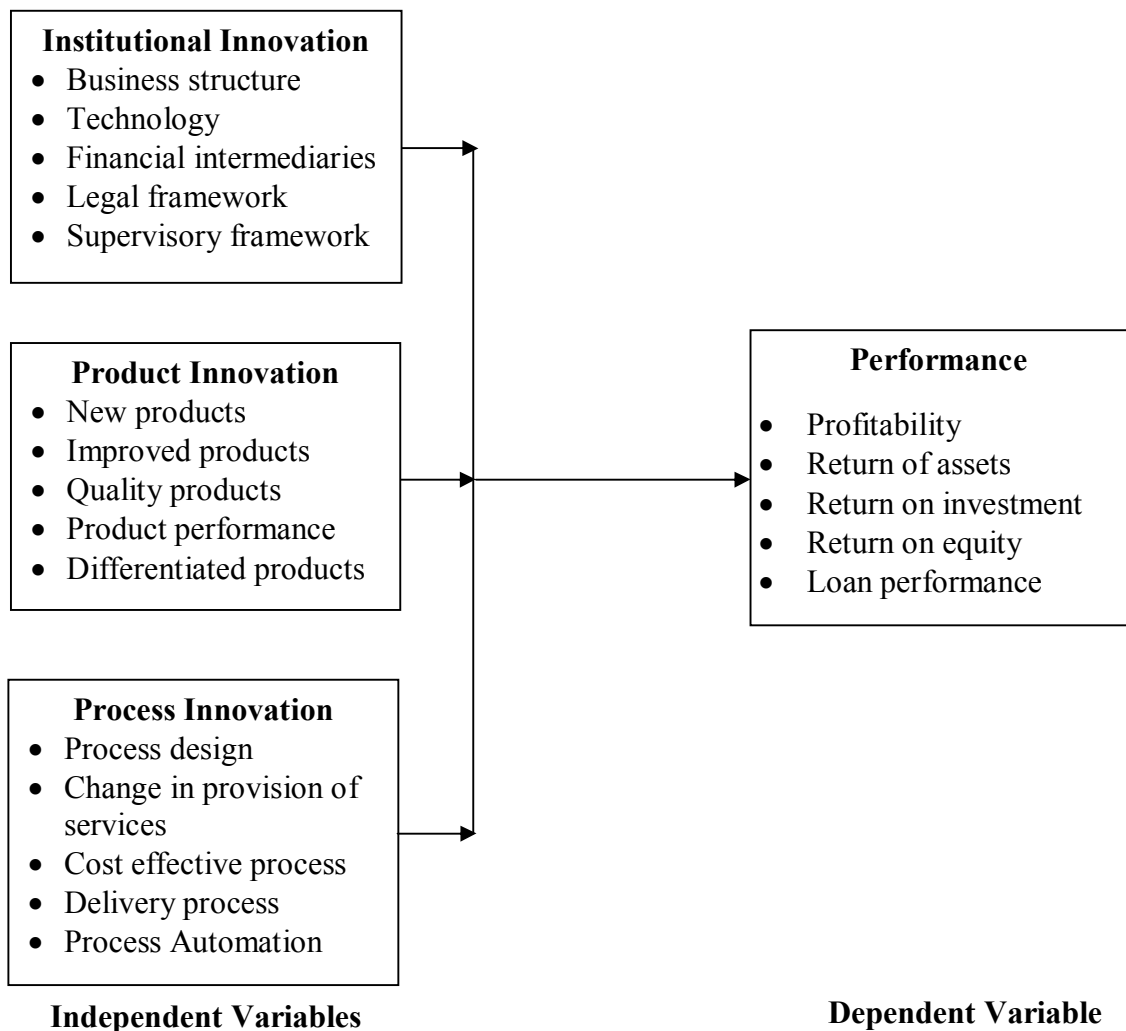


Figure 2.1: Conceptual Framework for Effect of Financial Innovations on Performance of microfinance institutions

2.3.1 Institutional Innovation and Performance

Institutional innovations in financial system entail the changes in the business structure, establishment of new types of financial intermediaries and changes in legal and supervisory framework (Frame & Lawrence, 2001). Salim and Sulaiman (2011) hypothesizes that organizational innovation is positively related to company performance. It is noted that indeed organizational innovation led to company performance. It is concluded that innovations can be a source of competitive advantage if a firm understands customer needs, competitors' actions and technological development and act accordingly to stay at par with rivals.

It is noted that there is a relationship between innovation and performance (Lin & Chen, 2007). The study sought to determine whether innovation results to performance in Taiwanese enterprises. They establish that organizational innovations enhance sales in the enterprises. The foregoing was echoed by Noruzy, Dalfard, Azhdari, Nazari-Shirkouhi and Rezazadeh (2013) who established that organizational innovation positively enhance business performance when they examined organizational innovation, transformational leadership, knowledge management, organizational learning and organizational performance in Malaysian companies.

Boachie-Mensahand (2015) notes that innovation in general accounts for over fifty percent of the variation in firm performance. Specifically, the study establish that organizational innovation or institutional innovation among various types of innovation significantly and positively influence firm performance. It can therefore be suggested that performance of microfinance institutions can be driven by institutional innovativeness. It is observed that to further enhance firm performance management ought to focus on the firm activities aligned towards renewing routines, procedures and processes in an innovative manner in a firm.

Locally, it is noted that MFI institutional innovativeness observed in mobile banking, partnerships, financial trainings, branch networking and opening up new branches enhance firm growth. Moreover, it is ascertained that institutional innovation through redesigning of the institutions to strategically serve the target market enable MFIs to enjoy economies of scale and more so, using technology enable the institutions to cut down costs and reduce interest rates (Mugo, 2012). Institutional innovations are characterized by entrepreneurship, leadership, ownership, governance, and technology.

2.3.2 Product Innovation and Performance

Product innovation is vital in a firm as it offers protection to a firm from markets threats and competitors. Indeed, while looking into new product introductions, Bayus, Erickson and Jacobson (2010) established that product innovation in firms have positive and significant impact on organizational performance. The foregoing was affirmed by Alegre, Lapiedra and Chiva (2006) when they investigated product innovation performance in firms. It was noted that product innovations dimensions which were efficacy and efficiency in terms of new products, improved products, and quality products largely and positively influenced firm performance.

It is argued that innovation enhances firm performance by strategically placing a firm in the market. As a result innovations lead to competitive advantage and superior performance (Walker, 2004). Walker (2008) on the other hand noted that specific product improvements in a firm enhance firm growth. The aforementioned tallied with Rosli and Sidek (2013) observations that product innovation indeed significantly influences firm performance when they investigated innovation and firm performance in Malaysian enterprises.

According to Kojo (2013) the major innovations in microfinance institutions are savings and product innovations. However, it is noted that the Northern region market of the country remains largely underserved by the MFIs. As such it is observed that MFIs in the region ought to develop unique micro MFIS products and other loan and service product in order to meet the rising demands of the poor and the marginalized who cannot afford the current packages offered by the institutions.

2.3.3 Process Innovation and Performance

According to Lopez-Mielgo, Montes-Peon and Vazquez-Ordas (2009) process innovation has a positive effect on total quality management in the organization. The study further add that process innovation beside enhancing speed and quality result to flexibility and cost efficiency. However, an investigation on German firms indicated that not all process innovations result to cost savings. The study further noted that where process innovation leads to cost savings, it enables a firm to market its products at competitive prices. Wang and Wei (2005) on the other hand established that process innovations result to general increase in customer satisfaction and improve firms' market share.

According to Nader (2011) the availability of phone banking positively influence profit efficiency. This was observed when the study analyzed the effect of banking expansion on profit efficiency of Saudi banks. It was however noted that availability of mobile banking and personal computer banking did not improve profit efficiency. This suggests that mobile banking as one of process innovation in banks enhances profitability and therefore more focus should be on the innovation. Kagan, Acharya, Rao and Kodepaka (2005) on the other hand not that adoption of internet banking positively influenced performance of the banks

A study by Mabrouk and Mamoghli (2010) notes that if process innovation is continued and new technologies are introduced then innovative banks continue to earn high profits. However, profitability may reduce as innovations become more widely adopted and used by competitor banks. Indeed it is noted that process innovation in mobile and internet banking in Ghana results to increased revenue, reduction of operating costs and improving profitability in commercial banks (Sampong, 2015).

The relationship between financial engineering and performance of commercial banks in Kenya was examined (Kariuki, 2010). The study sought to establish the effect of financial engineering on performance of the banks. The study employed a causal research design. All commercial banks in Kenya were targeted. The findings indicated that commercial banks had adopted various financial engineering strategies among them process innovation. It was further noted that financial engineering strategies influenced positively performance. Indeed, it was noted that a unit increase in process innovation led to a 0.128 increase in performance measured by return on assets.

2.3.4 Performance

The performance is associated with profitability and efficiency. Financially, sustainable microfinance expansion results to achievement of social goals due to financial wherewithal the institution is endowed with. The essence of adequate liquidity, efficiency and proper capitalization in enhancing profitability is emphasized. Increase in credit risk is noted to scale down profitability and therefore it is noted that proper and adequate management of credit risk is vital for increased profitability. The study concludes that efficiency, capital adequacy, adequate liquidity and risk management are significant factors that influence performance (Adhikary, 2014).

A study by Yenesew (2014) focused on MFIs in Ethiopia. The study noted that performance is influenced by such factors as gearing ratio, capital to asset ratio and market concentration. The aforementioned factors are noted to adversely affect performance of MFIs. The study further consider the age of MFI as an important determinant of performance. It is observed that Ethiopian MFIs ought to implement sound financial management and good managerial governance to not only enhance performance but also ensure financial sustainability.

According to Addai and Pu (2015) delinquent loans is one of the determinants of performance of banks. It is noted that delinquent loans significantly influenced interest income and net profit. Indeed, delinquent loans accounted for 70.7% of the variation in interest rate and 52.1% variation in net profit. Therefore, it is established that delinquent loans significantly influenced performance. As such, it was observed that it is imperative for commercial banks to effectively monitor credit from disbursement to the final repayment in order to reduce delinquent loans which impact negatively on interest income and net profit.

2.4 Empirical Literature

The study reviewed studies pertinent to institutional innovation, product innovation, process innovation and performance in the microfinance sector in that order. Muyoka (2013) investigated the relationship between financial innovation and performance of insurance firms in Kenya. In the study, it was noted that institutional innovations increase firm performance by considerably reducing administrative and transaction costs, reducing costs of service and improving labor productivity. The study established that institutional innovation in the MFIS companies were partnerships with organizations, strategic alliances with commercial banks and new branch networks. It was ascertained that institutional innovations positively influenced

performance of the companies. However the study never focused on performance, and also it was limited to the insurance sector.

An empirical study on the effect of financial innovation on performance was carried out (Muteke, 2015). On focus were Savings and Credit Co-Operative Societies (SACCOs) in Mombasa, Kenya. The main objective of the study was to determine the effect of institutional innovation, process innovation and product innovation on performance of the SACCOs. It was ascertained that institutional innovation marginally but positively influenced performance.

Moreover, Kojo and Yazidu (2015) carried out a study on financial characteristics and innovations in microfinance institutions in Ghana. The study sought to establish the relationship between financial structure of MFIs and their innovativeness. It was established that product innovation or new savings product in the institutions were largely influenced by interest rate and loan repayment rates. More so, it was noted that the sources of funding, that is equity from owners and bank funding enhanced product innovation. It was recommended that MFIs in the country should diversify their funding sources in order to enhance product innovation and innovation in general. However, the study failed to link product innovation to performance.

A study was carried out on effect of microfinance innovations on access to finance by small and medium enterprises was examined (Atieno, 2014). The study purposed to establish the innovative products available for Small and Medium Enterprises (SMEs) in Kenya. The study established that microfinance innovative products were positively correlated to access to finance by SMEs. It was noted that innovative loan products and saving products improved access to finance by SMEs. In addition, it was ascertained that deposit taking microfinance institutions had introduced a number of

innovations in the recent past, among them savings and loan products. The study recommended that MFIs should create awareness of their products in order to ensure that SMEs access much required credit. Though the theme of product innovation has been addressed, the study has failed to examine the implication of the same innovation on performance of MFIs.

Gitau (2011) studied the nexus between financial innovation and performance of commercial banks in Kenya. The study findings revealed that commercial banks were using product, institutional and more so process innovation. It was noted that the process innovation adopted were mobile, internet banking and real time gross settlement. The study concluded that financial innovations were key to enhancing performance. However, the study was limited to commercial banks and failed to address MFIs.

The effect of innovation orientation on performance of commercial banks was put into perspective (Koech&Makori, 2014). The National bank of Kenya was considered for the study. Managers, assistant managers and officers of the bank were targeted. The results of the analysis revealed that innovation enabled the bank to remain competitive and effective in the banking industry. It was noted that there was flexibility in application of process innovation and there were product success as a result of embracing product innovation. Process innovation was noted to influence performance of the bank. Indeed, it was established that process innovation led to cost savings.

A study on the determinants of performance of MFIs was conducted (Imali, 2013). The study sought to determine the influenced of assets quality, capital adequacy, liquidity management, management efficiency and outreach level influenced

performance. Exploratory research design was employed. Microfinance institutions in Nairobi were considered. Secondary data from microfinance information exchange was used. The study findings revealed that capital adequacy, liquidity management, management efficiency and outreach level were not statistically significant in determining performance of the institutions. However, asset quality significantly influenced performance. The study concluded that asset quality is the primary determinant of performance of microfinance institutions in Nairobi County. It was recommended that the institutions should focus on formulating plans, strategies and policies that enhance asset quality in order to further enhance performance.

Similarly, Njeri (2014) examined the effect of liquidity on performance of deposit taking MFIs in Kenya. Descriptive research design was employed. Secondary data used were gathered from published institution's annual audit reports, Association of Microfinance Institution (AMFI) reports and CBK bank supervision reports. The measure of performance was return on equity while cash and equivalents divided by total average assets proxied liquidity. The study findings revealed that there was a positive relationship between liquidity and performance. It was concluded that enhancing MFI's liquidity would result to efficiency and increased performance of the microfinance sector in Kenya. The reviewed empirical study failed to find the effect of financial innovations on performance.

2.5 Summary of Reviewed Literature

The theory of induced institutional innovation states that changes in the demand for institutional innovation are induced by changes in relative resource endowments and by technical change. For there to be effective institutional innovations, financial firms must have requisite resources particularly in terms of technical expertise and finances to enable them source the necessary technologies. It was noted that institutional

innovations increase firm performance by considerably reducing administrative and transaction costs, reducing costs of service and improving labor productivity. It was ascertained that institutional innovations positively influenced performance of the companies. Other reviewed studies revealed that institutional innovation marginally but positively influenced performance. It has been indicated that institutional innovation largely influenced performance of the SACCOs.

The demand theory holds that innovations are created as a response to demand of business firms that want to acquire competitive advantage in their business environment. The demand-supply theory can be used to explain financial innovations in general and product innovations in particular. Firms, based on competition, can ignite demand for certain products or services. It was established that product innovation or new savings product in the institutions were largely influenced by interest rate and loan repayment rates. More so, it was noted that the sources of funding, that is equity from owners and bank funding enhanced product innovation. It has been established that microfinance innovative products were positively correlated to access to finance by SMEs. In addition, it was ascertained that deposit taking microfinance institutions had introduced a number of innovations in the recent past, among them savings and loan products.

The theory of innovation diffusion states that innovation diffusion is based on the notion that adoption of an innovation involves spontaneous or planned spread of new ideas. The innovation diffusion theory can be employed to explain process innovation where technology is a component. Reviewed studies revealed that commercial banks were using product, institutional and more so process innovation. It was noted that the process innovation adopted were mobile, internet banking and real time gross

settlement. Reviewed local studies analysis revealed that innovation enabled the bank to remain competitive and effective in the banking industry. It was noted that there was flexibility in application of process innovation and there were product success as a result of embracing product innovation. Process innovation was noted to influence performance of the bank. Indeed, it was established that process innovation led to cost savings.

The economic value added theory is a measure of a firm's performance. The theory can be applied to examine the performance of microfinance institutions given the flexibility and efficiency of the financial markets and financial sector. It has been revealed that capital adequacy, liquidity management, management efficiency and outreach level were not statistically significant in determining performance of microfinance institutions in Kenya. However, asset quality significantly influenced performance. It is indicated that there was a positive relationship between liquidity and performance. Reviewed studies have concluded that enhancing MFI's liquidity would result to efficiency and increased performance of the microfinance sector in Kenya.

2.6 Research Gaps

The present study acknowledges the scholarly efforts put in previous studies relative to financial innovations. However, it is pinpointed that there are limitations regarding these studies that are supposed to be effectively addressed in the present study. A study by Mugo (2012) noted that MFI institutional innovativeness observed in mobile banking, partnerships, financial trainings, branch networking and opening up new branches enhance firm growth. The limitation of the study is the fact that institutional innovation has not been linked to performance; instead it has been related to growth of firms.

In respect to product innovation, Chemitei (2012) investigating the role of product innovation in creating competitive advantage in MFIs. The study noted that the product innovation in Kenyan MFIs do not contribute to firm profitability. Despite product innovations not resulting to profitability, it is noted that product development, management approaches, efficiency in serving customers and training contribute to profit, increased market share and revenue. A clear limitation of the findings in respect to the current study is the fact that it failed to determine the effect of product innovation on performance of MFIs.

The relationship between financial engineering and performance of commercial banks in Kenya was examined by Kariuki (2010). The findings indicated that commercial banks had adopted various financial engineering strategies among them process innovation. The study noted that a unit increase in process innovation led to a 0.128 increase in performance measured by return on assets. Though the study examined the effect of process innovation on performance, the study focused on commercial banks as opposed to MFIs. The identified research gaps will be looked into in the present research study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research design, population, sampling technique and sample size. It also discusses the research instrument, pilot testing, and data collection procedure. Lastly, it discusses how the collected data was processed and analyzed and how the resulting findings were presented.

3.2 Research Design

Research design is a plan or a framework for guiding a study (Kothari, 2008). The design connects the questions or objectives of the study to the data gathered. Descriptive survey research design was used in this study to assess the impact of financial innovations on the profitability of microfinance firms. The rationale for choosing this design is based on its ability to provide the researcher with appropriate techniques for a systematic collection of extensive data from a large group of respondent through administration of questionnaires (Orodho, 2009). Use of descriptive survey research design allows the use of self-completion questionnaires the respondents involved in the study. This design was appropriate to the study because it enabled the investigator obtain information of the variable of the study in their natural settings and allow valid general conclusions from the facts discovered. Mugenda and Mugenda (2003) note that descriptive surveys can be used to explain or expose the existing status of two or more variables at a given point in time.

3.3 Population

According to Cooper and Schindler (2008) population is referred to as the collection of elements about which we wish to reference. The target population for this study consisted of all employees working with the microfinance institutions in Kenya.

Accessible population constituted 187 employees working with MFIs in Nakuru town that have been registered with the Association of Microfinance Institutions - Kenya. There are 11 firms registered with the Association and employ 187 employees.

3.4 Sampling Technique and Sample Size

The large study population (187) had to be sampled. According to Kothari (2004) a study population that exceeds 100 should be sampled. Relative to this assertion, Nassiuma's (2008) formula was employed to determine the size of the sample as follows.

$$n = \frac{NC^2}{C^2 + (N-1)e^2}$$

Where

n represents sample size,

N represents study population

C represents coefficient of variation ($21\% \leq C \leq 30\%$), and

e represents error margin ($2\% \leq e \leq 5\%$).

Calculating the sample size,

$$n = \frac{187 (0.21)^2}{0.21^2 + (187-1)0.02^2}$$

$$n = 69.59$$

$$n = 70 \text{ respondents}$$

The size of the sample (n) was, therefore 70 respondents (employees). The respondents were drawn from the study population using stratified random sampling. This is due to the fact that the 11 MFIs in Nakuru town had different number of employees and this sampling method ensured proportionate participation of employees from all the MFIs. As shown in Table 3.1.

Table 3. 1: Sample Distribution

Microfinance Institutions	Accessible Population	Sample Size
Vision Fund Kenya Limited	13	5
BIMAS	19	7
SISDO	16	6
Eclof Kenya	13	5
Pamoja Women Development Programme	24	9
Real People	11	4
Jitegemee Credit Scheme	24	9
Micro Africa Ltd	19	7
Fusion Capital Ltd	13	5
Musoni Kenya Ltd	16	6
Platinum Credit Limited	19	7
Total	187	70

3.5 Research Instrument

The study used self-administered structured questionnaire as the tool for data collection. A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents (Mugenda&Mugenda, 2003). The use of questionnaire was also relatively quick in collecting information from the respondents. Additionally, potential information can be collected from a large portion of a group (Kothari, 2008). The questionnaire comprised of structured questions which was on a Likert scale of 5 points. Secondary data was collected using a secondary data collection sheet.

3.6 Pilot Test

A pilot study was conducted before the main study with the aim of determining the reliability and validity of the research instrument. The pilot study was conducted in Eldoret town where randomly selected MFIs had their employees participating in the pilot study.

3.6.1 Validity Test

Validity of a questionnaire refers to the extent to which it measures what it claims to measure (Mugenda&Mugenda, 2003). In other words, validity is the degree to which results obtained from the analysis of the data actually represents the phenomena under study. Content validity test was used by seeking the expert opinion of the University supervisor.

3.6.2 Reliability Test

Reliability is a measure of consistency of the research instrument (Kimberlin&Winterstein, 2008). Reliability was tested using the Cronbach alpha coefficient. The reliability threshold was alpha equal to or greater than 0.7.

3.7 Data Collection Procedure

The researcher obtained a formal letter from the University to introduce himself to the management of the MFIs from which respondents was drawn. This was followed by seeking the consent of the management of the afore-stated firms. The questionnaires was then issued to the sampled respondents through their respective management.

3.8 Data Processing and Analysis

The collected data was subjected to the relevant data cleaning, processing and analysis respectively. Data processing and analysis was facilitated by the use of the

Statistical Package for Social Sciences (SPSS) Version 24 software. Data analysis encompassed both descriptive statistics and inferential statistics. Descriptive statistical tools which included means, mode, standard deviations, and variance were used. On the other hand, inferential statistics was in form of Pearson's correlation coefficient and multiple regression analysis. The result of the analysis was presented in form of tables, charts, and graphs. The following regression model guided the study.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

Y	is	Performance
β_0	is	Constant
X_1	is	Institutional Innovation
X_2	is	Product Innovation
X_3	is	Process Innovation
ε	is	Error term
$\beta_1, \beta_2, \beta_3$	are	Regression coefficients of Independent variables.

The significance of the relationship between each of the three independent variables (institutional innovation, product innovation and process innovation) and performance of MFIs was determined using the f-test. The significance level was 0.05. The contribution of the financial innovations towards performance of MFIs under study was determined using the coefficient of determination (r^2).

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND INTERPRETATIONS

4.1 Introduction

This chapter presents the findings and interpretations of the results based on the objective of the study, which was to determine the effect of financial innovations on performance of microfinance institutions in Nakuru town, Kenya. Specifically, The study sought to find out effects of institutional, product and process innovation on performance of microfinance institutions in Nakuru town.

4.2 Response Rate

Response rate equals the number of people with whom semi-structured questionnaires were properly completed divided by the total number of people in the entire sample (Fowler, 2004). The study thus administered 70 questionnaires for data collection. However, 62 questionnaires were properly filled and returned. This represented 89percent overall successful response rates. Respondents were also assured of confidentiality of the information provided. Babbie (1990) suggested that a response rate of 50% is adequate 60% is good and 70% and above very good for analysis. This implies that 89percent response rate was very appropriate for data analysis.

4.3 Demographic Information

The demographic information presented is on the level of education, duration the respondents had been working in the industry and their organization.

4.3.1 Respondents' Highest Level of Education

The respondents were asked to indicate their highest level of education. The findings were as shown in Table 4.1.

Table 4. 1: Respondents' Highest Level of Education

	Frequency	Percentage
Bachelor Degree	29	47%
Diploma Education	19	30%
Post graduate	14	23%
Professional Education	0	0%
Total	62	100

From the findings, 47% of the respondents indicated that they had attained bachelor degree, 30% indicated that they had attained diploma education, 23% indicated that they had post graduate education while none of the respondents stated they had attained professional education as their highest level of education. This shows that majority of the respondents had attained bachelor degree as their highest level of education.

4.3.2 Duration Worked in the Microfinance Industry

The respondents were also asked to indicate the duration they had been working in with microfinance institutions. The findings we as presented in Table 4.2.

Table 4. 2: Duration Worked in the Microfinance Industry

Years	Frequency	Percentage
Less than 1 Years	22	35%
1-5 Years	19	30%
6-10 Years	14	23%
More than 10 Years	7	12%
Total	62	100

According to the findings, 35% of the respondents indicated that they had been working with microfinance institutions for less than 1 years, 30% stated they had been working with microfinance institutions for 1-5 years, 23% stated they had been working with microfinance institutions for 6-10 years while 12% stated they had been working with microfinance institutions for more than 10 years. This shows that majority of the respondents had been working with microfinance institutions for less than 1 years.

4.3.3 Duration Worked in the Current Organization

The respondents were also asked to indicate the duration the respondents had been working in their current organization. The findings were presented in Table 4.3.

Table 4. 3: Duration Worked in the Current Organization

Years	Frequency	Percentage
Less than Years	13	21
1-5 Years	31	49
6-10 Years	14	23
More than 10 Years	4	7
Total	62	100

According to the findings, 49% of the respondents indicated that they had been working in their current institutions for 1-5 years, 23% stated they had been working in their current institutions for 6-10 years, 21% stated they had been working in their current institutions for less than 1 years while 7% stated they had been working in their current institutions for more than 10 years This shows that majority of the respondents had been working in their current institutions for less than 1 years.

4.3 Descriptive Statistics

The study requested respondents to give opinions in regard to institutional, product and process innovation on performance of microfinance institutions.

4.3.1 Institutional Innovation on Performance of Microfinance Institution

The respondents were asked to indicate their level of agreement on the effect of institutional innovation on the performance of microfinance. The findings were as indicated in Table 4.4.

Table 4.4: Institutional Innovation on Performance of Microfinance Institution

	S.A	A	I	D	S D	Max	Min	Mean	Std
MFIs have a clear business structure.	16 (26)	29(47)	11 (17)	6 (10)	0 (0)	5	1	3.887	0.432
MFIs have adopted advanced technologies.	23 (37)	27(45)	8 (13)	3 (5)	0(0)	5	1	4.081	0.431
MFIs have partnered with various financial intermediaries.	35 (57)	23(37)	4 (6)	0(0)	0 (0)	5	1	4.500	0.393
MFIs are guided by a clear legal framework	24 (39)	27(44)	7 (11)	4 (6)	0 (0)	5	1	4.145	0.412
There is a supervisory framework that monitors MFIs	28(45)	23(37)	8 (13)	3 (5)	0 (0)	5	1	4.226	0.445

According to the findings, the respondents agreed that MFIs have a clear business structure with a mean of 3.887. They also indicated with a mean of 4.081 that MFIs have adopted advanced technologies. They further indicated with a mean of 4.500 that MFIs have partnered with various financial intermediaries. In addition, the

respondents indicated with a mean of 4.145 that MFIs are guided by a clear legal framework. Finally, the respondents indicated with a mean of 4.226 that there is a supervisory framework that monitors MFIs. The study is in line with Mugo, (2012) that Institutional innovations are characterized by technology. He further stated that MFIs enjoy economies of scale and more so, using technology enable the institutions to cut down costs and reduce interest rates.

4.3.2 Product Innovation on Performance of Microfinance Institution

The study assessed the views of the respondents concerning product innovation and performance of microfinance institutions. The pertinent findings are illustrated in Table 4.5

Table 4.5: Product Innovation on Performance of Microfinance Institution

	S	A	A	I	D	S	D	Max	Min	Mean	Std
MFIs develop new products quite regularly.	32(52)	24(39)	6	(9)	0	(0)	0(0)	5	1	4.419	0.374
MFIs offer improved products to their customers.	23(37)	19(31)	12	(19)	8	(13)	0(0)	5	1	3.919	0.387
MFIs offer high quality services.	27(44)	25(40)	4	(6)	6	(10)	0(0)	5	1	4.177	0.3654
The product performance is relatively high compared to other financial institutions.	23(37)	24(39)	6	(10)	9	(14)	0(0)	5	1	3.919	0.385
The products offered by MFIs are highly differentiated.	26(42)	24(39)	7	(11)	5	(8)	0(0)	5	1	4.145	0.398

According to the findings, the respondents indicated with a mean of 4.419 that MFIs develop new products quite regularly. The respondents further indicated with a mean of 3.919 that MFIs offer improved products to their customers. Also, they indicated with a mean of 4.177 that MFIs offer high quality services. Further they indicated with a mean of 3.919 that the product performance is relatively high compared to other financial institutions. The respondents finally indicated with a mean of 4.145 that the products offered by MFIs are highly differentiated. This is in line with Sidek (2013) observations that product innovation indeed significantly influences firm performance.

4.3.3 Process Innovation on Performance of Microfinance Institution

The opinions of the respondents in relation to process innovation on performance of microfinance institutions are outlined in Table 4.6.

Table 4.6: Process Innovation on Performance of Microfinance Institution

	S	A	I	D	SD	Max	Min	Mean	Std	
MFIs have a well-articulated process design.	31	(50)	19(31)	7(11)	5(8)	0(0)	5	1	4.226	0.387
MFIs have enacted changes in provision of services.	34	(55)	26(42)	2(3)	0(0)	0(0)	5	1	4.516	0.465
MFIs have adopted a cost effective process of operations.	41	(66)	21(34)	0(0)	0(0)	0(0)	5	1	4.532	0.384
The delivery process in MFIs is up to date.	32	(52)	30(48)	0(0)	0(0)	0(0)	5	1	4.387	0.378
MFIs have automated their service delivery.	28	(45)	31(50)	3(5)	0(0)	0(0)	5	1	4.403	0.432

According to the findings, the respondents indicated with a mean of 4.226 that MFIs have a well-articulated process design. They also indicated with a mean of 4.516 that

MFIs have enacted changes in provision of services. They further indicated with a mean of 4.532 that MFIs have adopted a cost effective process of operations. In addition, the respondents indicated with a mean of 4.387 that the delivery process in MFIs is up to date. Finally, the respondents indicated with a mean of 4.403 that MFIs have automated their service delivery. The study agree with Mabrouk and Mamoghli (2010) who states that if process innovation is continued and new technologies are introduced then innovative banks continue to earn high profits.

4.3.4 Performance

Lastly, the respondents were asked to indicate their level of agreement or disagreement regarding performance of microfinance institution. Table 4.7 illustrates the findings.

Table 4. 7: Performance

	S	A	I	D	S	D	Max	Min	Mean	Std
MFIs enjoys high profits.	29(47)	21(34)	8(13)	4(6)	0(0)	0(0)	5	1	4.210	0.345
MFIs have recorded increased return on assets over the past financial year.	31(50)	19(31)	9(15)	3(5)	0(0)	0(0)	5	1	4.258	0.435
MFIs have advanced more cumulative loans over the last year compared to previous years.	27(44)	33(53)	2(3)	0(0)	0(0)	0(0)	5	1	4.403	0.356
MFIs have continued to record decreasing non-performing loans.	23(37)	27(44)	10(16)	2(3)	0(0)	0(0)	5	1	4.177	0.357
MFIs enjoy high return on investment.	31(50)	28(45)	3(5)	0(0)	0(0)	0(0)	5	1	4.500	0.384
MFIs realize high return on equity.	32(52)	28(45)	2(3)	0(0)	0(0)	0(0)	5	1	4.484	0.361

According to the findings, the respondents indicated with a mean of 4.210 that MFIs enjoys high profits. They also indicated with a mean of 4.258 that MFIs have recorded

increased return on assets over the past financial year. They further indicated with a mean of 4.403 that MFIs have advanced more cumulative loans over the last year compared to previous years. In addition, the respondents indicated with a mean of 4.177 that MFIs have continued to record decreasing non-performing loans. The findings also revealed that MFIs enjoy high return on investment with a mean 4.500. Finally, the respondents indicated with a mean of 4.484 that MFIs realize high return on equity.

4.4 Inferential Findings

Using correlation analysis, the study established the relationship between performance, institutional innovation, product innovation and process innovation.

4.4.1 Effect of Institutional Innovation on Performance

The relationship between institutional innovation and performance of microfinance institutions in Nakuru town was determined. Table 4.8 shows the results of correlation analysis.

Table 4.8: Institutional Innovation on Performance

		Performance
Institutional	Pearson Correlation	.112**
innovation	Sig. (2-tailed)	.021
	N	62

** . Correlation is significant at the 0.21 level (2-tailed).

According to the findings, there is a positive association between institutional innovation and performance of microfinance institutions in Nakuru town. This is shown by a correlation coefficient of 0.112 and a p-value of 0.021. The p-value is less than 0.05 and hence the association was significant. According to Lin & Chen, (2007) there is a relationship between innovation and performance. The findings also agree

with Rezazadeh (2013) who states that organizational innovations enhance sales in the enterprises.

4.4.2 Product Innovation on Performance

The study determined how product innovation on performance of microfinance institutions in Nakuru town. The relationship between the two study variables was ascertained. Table 4.9 displays the results.

Table 4.9: Product Innovation on Performance

		Performance
Product Innovation	Pearson Correlation	.462**
	Sig. (2-tailed)	.001
	N	62

** . Correlation is significant at the 0.01 level (2-tailed).

The findings indicated that there is significant association between product innovation on performance of microfinance institutions in Nakuru town. This is shown by a correlation coefficient of 0.462 and a p-value of 0.001. The P-value is less than 0.05. The study is in agreement with Jacobson (2010) who established that product innovation in firms have positive and significant impact on organizational performance. Sidek (2013) also observed that product innovation indeed significantly influences firm performance

4.4.3 Process Innovation on Performance

The study further evaluated how process innovation on performance of microfinance institutions in Nakuru town. The outcome of the analysis is shown in Table 4.10

Table 4.10: Process Innovation on Performance

		Performance
Profit Margin	Pearson Correlation	.303**
	Sig. (2-tailed)	.007
	N	62

** . Correlation is significant at the 0.01 level (2-tailed).

The study established that there is a positive significant association between process innovations on performance of microfinance institutions in Nakuru town. This is shown by a correlation coefficient of 0.303 and a p-value of 0.007. The p-value is less than 0.05. The study is in line with Vazquez-Ordas (2009) who found out that process innovation has a positive effect on total quality management in the organization. Wei (2005) on the other hand established that process innovations result to general increase in customer satisfaction and improve firms' market share.

4.4.4 Regression Analysis for Overall Model

The study evaluated how the financial innovation under study (institutional innovation, product innovation and process innovation) influenced performance of microfinance institutions in Nakuru town. Using multiple regression analysis and Analysis of Variance (ANOVA), the combined effect of institutional innovation, product innovation and process innovation on performance of microfinance institutions was established.

The R-Squared is the proportion of variance in the dependent variable which can be explained by the independent variables. The R-squared in this study was 0.672, which shows that the three independent variables (institutional innovation, product innovation and process innovation) can explain 67.2% of performance of microfinance institutions while other factors explain 32.8 %.

Table 4.11: Model Summary

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	0.7563	0.67199	0.52761	2.56741

The analysis of variance in this study was used to determine whether the model was a good fit for the data. From the findings, the p-value was 0.000 which is less than the conventional 0.05 and hence the model was good in predicting how the three independent variables (institutional innovation, product innovation and process innovation) influence performance of microfinance institutions.

Table 4.12: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.7930	4	5.9483	67.1956	0.000
	Residual	14.4290	163	0.0885		
	Total	38.2220	167			

Further, the F-calculated (67.1956) was more than the P(0.05) which shows that the model was fit in predicting the influence of the independent variables on the dependent variable. Table 4.10 shows the overall significant test results for the hypothesized research model.

Table 4.13: Regression Coefficients

	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	6.797	2.024		3.358	0.000
Institutional innovation	0.454	0.091	0.345	4.989	0.000
Product innovation	0.213	0.085	0.198	2.506	0.021
Process innovation	0.385	0.120	0.235	3.208	0.000

The interpretations of the findings indicated the following regression model.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Therefore,

$$Y = 6.767 + 0.454X_1 + 0.213X_2 + 0.385X_3$$

From the findings, there is a positive significant relationship between institutional innovation and performance of microfinance institutions in Nakuru town as shown by a regression coefficient of 0.454. The p-value (0.000) was less than the significance level (0.05), hence the relationship was significant. The results also indicate that there is a positive relationship between product innovation and performance of microfinance institutions in Nakuru town as shown by a regression coefficient of 0.235. The relationship was found to be significant as the p-value (0.021) was less than the significance level (0.05). Lastly, the results show that there is a positive significant relationship between process innovation and performance of microfinance institutions in Nakuru town as shown by a regression coefficient of 0.385. This relationship was significant as the p-value (0.000) was less than the significance level (0.05).

Out of the three factors investigated, Institutional innovation and Process innovation were the most important since to generate one unit of performance, 0.454 units of institutional innovation and 0.385 units of process innovation must be increased. Therefore Micro finance institutions firms ought to focus more on institutional innovation and process innovation.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a detailed summary of the major findings of the actual study; it then draws conclusions and discusses implications emanating from these findings. Finally, it makes some recommendations and suggestions on areas of further study.

5.2 Summary of Major Findings

The study findings are summarized and presented in this section. The summary captures both the descriptive and inferential findings.

5.2.1 Institutional Innovation on performance

MFIs have a clear business structure; MFIs have also adopted advanced technologies and also guided by a clear legal framework. The study further established that organizational and institutional innovation significantly and positively influences firm performance. It can therefore be suggested that performance of microfinance institutions can be driven by institutional innovativeness.

5.2.2 Product Innovation on Performance

Regarding the effect of product innovation on performance, it emerged from the results that MFIs develop new products quite regularly. MFIs also offer improved products to their customers and also offer high quality services

5.2.3 Process Innovation on Performance.

The results on how process innovation on performance revealed that MFIs have a well-articulated process design, In addition MFIs also have enacted changes in provision of services, MFIs also have adopted a cost effective process of operations. Process innovations result to general increase in customer satisfaction and improve

firms' market share. Profitability may reduce as innovations become more widely adopted and used by competitor

5.3 Conclusions

From the findings the researcher concluded that there is a supervisory framework that monitors MFIs. Some of the innovations observed by MFIs in mobile banking include partnerships, financial trainings, branch networking and opening up new branches. It is also concluded that innovations can be a source of competitive advantage if a firm understands customer needs, competitors' actions and technological development and act accordingly to stay at par with rivals. Organizational innovation positively enhances business performance when they examined organizational innovation, transformational leadership, knowledge management, organizational learning and organizational performance in Malaysian companies.

In relation to the second objective, it can be concluded that product performance is relatively high compared to other financial institutions. Products offered by MFIs are also highly differentiated. Product innovations dimensions in terms of new products, improved products, and quality products largely and positively influence firm performance. Innovation enhances firm performance by strategically placing a firm in the market

On the third objective, it can be concluded that the delivery process in MFIs is up to date. MFIs have automated their service delivery. Process innovation besides enhancing speed and quality result to flexibility and cost efficiency. Process enhances speed and quality result to flexibility and cost efficiency

5.4 Recommendations

In the light of the foregoing findings, the study recommends that in-order to enhance firm performance the management of microfinance ought to focus on the firm activities aligned towards renewing routines, procedures and processes in an innovative manner in a firm. This will positively improve the performance of microfinance. The study also recommended that MFIs ought to develop unique micro MFIS products and other loan and service product in order to meet the rising demands of the poor and the marginalized who cannot afford the current packages offered by the institutions.

It is also important that in order to enhance profitability MFIs should focus more on process innovation, like mobile banking this will have a significant relationship to performance of MFIs.

5.5 Suggestion for Further Studies

More studies should be done on; competitive strategies effects on performance of microfinance institutions in Nakuru County, Further studies should also be conducted on factors affecting strategic planning among microfinance institutions in Nakuru County. A study should also be conducted to determine challenges faced by MFIs in implementation of fraud control measures.

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APPENDICES

APPENDIX I: LETTER OF INTRODUCTION

Dear respondent,

RE: REGUEST FOR INFORMATION

I am an MBA (Finance Option) student at Jomo Kenyatta University of Agriculture and Technology. I am currently undertaking a research study titled: “*Effect of financial innovations on performance of microfinance institutions in Nakuru town, Kenya.*”

I kindly request you to provide the required information to the best of your knowledge; the information provided will be treated in a confidential manner and will only be used for academic purpose. I kindly request you to fill in the questionnaire that is accompanied by this letter.

The questionnaires are intended to collect information for academic purpose only. Confidentiality of the information acquired will be adhered to.

Thank you

Yours faithfully,

Martin Kabiro

KimaniMaina

Student

Dr.

Supervisor

APPENDIX II: RESEARCH QUESTIONNAIRE

This questionnaire is an integral part of a study titled: “*Effect of financial innovations on performance of microfinance institutions in Nakuru town, Kenya.*”

You are kindly requested to give precise and honest information. Please fill in the required information in the spaces provides by placing a tick (√) where appropriate.

Section A: Respondents' Background Information

1. What are your highest academic qualifications?

Diploma () Post Graduate Degree ()

Bachelors Degree () Professional Certificate ()

2. How long have you been working with microfinance institutions?

Less than 1 year () 6-10 years ()

1 - 5 years () More than 10 years ()

3. How long have you worked with the current microfinance institution?

Less than 1 year () 6-10 years ()

1 - 5 years () More than 10 years ()

In the following sections the responses should be on a 5-point Likert scale where 1:

Strongly Disagree, 2: Disagree, 3: Indifferent, 4: Agree, and 5: Strongly Agree.

Section B: Institutional Innovation

	Strongly Agree 5	Agree 4	Indifferent 3	Disagree 2	Strongly Disagree 1
1. MFIs have a clear business structure.					
2. MFIs have adopted advanced technologies.					
3. MFIs have partnered with various financial intermediaries.					
4. MFIs are guided by a clear legal framework.					
5. There is a supervisory framework that monitors MFIs.					

Section C: Product Innovation

	Strongly Agree 5	Agree 4	Indifferent 3	Disagree 2	Strongly Disagree 1
1. MFIs develop new products quite regularly.					
2. MFIs offer improved products to their customers.					
3. MFIs offer high quality services.					
4. The product performance is relatively high compared to other financial institutions.					
5. The products offered by MFIs are highly differentiated.					

Section D: Process Innovation

	Strongly Agree 5	Agree 4	Indifferent 3	Disagree 2	Strongly Disagree 1
1. MFIs have a well-articulated process design.					
2. MFIs have enacted changes in provision of services.					
3. MFIs have adopted a cost effective process of operations.					
4. The delivery process in MFIs is up to date.					
5. MFIs have automated their service delivery.					

Section E: Performance

	Strongly Agree 5	Agree 4	Indifferent 3	Disagree 2	Strongly Disagree 1
1. MFIs enjoys high profits.					
2. MFIs have recorded increased return on assets over the past financial year.					
3. MFIs have advanced more cumulative loans over the last year compared to previous years.					
4. MFIs have continued to record decreasing non-performing loans.					
5. MFIs enjoy high return on investment.					
6. MFIs realize high return on equity.					

Thank you.

