

**THE EFFECT OF FINANCIAL INNOVATION ON THE  
FINANCIAL PERFORMANCE OF MICRO-FINANCE  
INSTITUTIONS IN KENYA**

**BY: SYMON KOSIOM KETERE**

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**DECLARATION**

I declare that this research project is my original work and has not been submitted for any degree award in any university.

Signature ..... Date .....

**SYMON KOSIOM KETERE**

**D61/76051/2012**

This research project report has been submitted for award of degree of master of business administration with my approval as the University supervisor,

Signature ..... Date.....

**DR. JOSIAH ADUDA**

**Dean School of Business University Of Nairobi**

## **Dedication**

I dedicate this work to my loving wife and family

## **Acknowledgement**

I humbly acknowledge my loving wife and friends at the University of Nairobi for the assistance accorded through my degree course. I also wish to thank my Supervisor Dr. Josiah Aduda for the patience and great professionalism accorded during my research work. Am thankful for you all and may God Bless you in abundance.

## **Abstract**

Microfinance institutions play a vital role in the economic development of many developing countries through the provision of a wide range of financial products and services to the poor, low-income households and micro and small enterprises. This study investigated the factors that influence financial innovation in MFI's and its impact on financial performance in micro finance institutions in Kenya. The study focused on testing the effects of Financial Innovation on the Financial Performance of MFIs for the period 2008-2012. Primary data was collected through a questionnaire administered to the MFI's.

An analytical model was developed to determine the strength of the relationship between variables. Analysis of the data showed that new technology, expenditure in ICT, number of transactions in mobile banking and branch networks, had the greatest importance in influencing MFI innovation. Therefore, financial innovation and financial performance is positively related.

## **LIST OF ABBREVIATIONS**

CBK	_____	Central Bank of Kenya
DTM	_____	Deposit Taking Microfinance
DTP	_____	Deposit Taking Programme
MFI	_____	Microfinance Institutions
SASRA	_____	Sacco Societies Regulatory Authority
SME	_____	Small and Medium Enterprises
SMEP	_____	Micro Enterprise Programme DTP

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# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the study

Many organizations are agreeing that to grow, stay competitive and survive, they have to constantly change their strategies to meet new business demands and this explains the growth of interest in knowledge management (Maingi, et al 2013). Most studies have identified technology, leadership, strategy, and organizational culture as the enablers of performance. Those organizations that work as if their environment is still stable are not only losing competitive advantages, but are also facing huge financial losses (Mosoti & Masheka, 2010). According to Shariq (1997), we are entering into an era where the future will be essentially determined by our ability to wisely use knowledge, a precious global resource that is the embodiment of human intellectual capital and technology.

According to Obay, 2013 financial innovation refers to several phenomena. It includes new financial instruments, which are the objects of transactions, new financial markets, which are fields of transactions, and new media to effect transfers (Yumoto et al. 1986). While financial innovation is by no means a recent phenomenon of the most significant economic phenomena of last decades, it has exerted considerable influence on the workings of the financial system, the conduct of monetary policy in a number of countries and management of costs and risks by governments, financial institutions, and corporations.

Frame and White (2002) further states that financial innovation is something new that reduces costs, reduces risks or provides an improved product/service/instrument that better satisfies participants' demand within a financial system. Innovations can emerge due to technological changes, as well as a response to increased risk or to new regulations. There are four dimensions of looking at the financial innovation.

### **1.1.1 Financial Innovation**

Financial innovation can be defined as the act of creating and then popularizing new financial instruments as well as new financial technologies, institutions and markets. It includes institutional, product and process innovation. Policymakers in developing countries have long recognized the importance of providing financial services to the poor and near-poor.

The global ‘microcredit’ movement that has emerged in the last decade contrasts with earlier credit programs in being more demand-driven, charging higher interest rates, controlling costs, and emphasizing savings mobilization as a prerequisite for sustainable credit provision [Otero & Rhyne, 1994; Morduch, 1999].

With respect to the implications of the recent wave of innovations for the stability of the financial system, several points of concern are often mentioned. They include an over-leveraging of the capital, the apparent under-pricing of new instruments, the scope for undue concentration of risks, and the possibility that the apparent liquidity of marketable securities could prove illusory under adverse circumstances. (European Investment Bank, 1988). In specific case of the banking industry where microfinance institutions are included, it has been claimed that the adoption and diffusion of financial innovation has allowed banks to operate on much thinner margins of safety (Obay, 2013).

Innovation always changes the status quo, but some innovations cause greater disruption than others. In the most severe cases, radical innovations fundamentally change society and spawn further generations of innovation. At the other end of the spectrum, incremental innovations help to differentiate a company from its competitors and, for the consumer, offer a constant round of useful improvements to existing products, processes and services, as well as to reductions in real prices. (Wyman, 2012).

### **1.1.2 Financial Performance**

Accounting principles are useful tools in executing and improving a successful practice management plan. In today's competitive environment, evaluating the financial performance is crucial for companies in manufacturing sector. The analysis of financial performance reflects the financial position of the company, the level of the competitiveness in the same sector, and a thorough knowledge about the cost and profit centers within the firm (Mohammad and Malek 2012).

The rising intensity of worldwide business competition on the other hand has led corporations to use different types of performance assessment tools for evaluating their financial situation. Generally, performance evaluation of the firms is conducted within the context of financial analysis. As the financial performance has a broad concept, including economic growth, return, and productivity, using the financial ratios in the performance assessment can be appropriate for companies and their counterparts. (Mohammad and Malek 2012).

The basic accounting information derived from financial reports does not indicate whether gained profit is sufficient or not; or are assets being used proficiently? Is the overall productivity efficient? Do the financial problems exist within the business? To answer such questions, ratio analysis is usually performed in which required data are extracted from income statements and balance sheets. (Mohammad and Malek 2012).

### **1.1.3 Financial Innovation and Financial Performance**

Innovation is recognized as the critical source of economic growth and of improvements in social welfare. It is given much of the credit for the rise in living standards since the 18th century and policymakers, almost universally, see innovation as a vital lever for creating employment and raising productivity. The power of innovation derives from its combination with investment and competition. Innovation initially benefits the innovator and investment magnifies the returns. Competition then helps to distribute the benefits of innovation more widely across society, driving down prices and making new products and services widely available.

Financial innovations are used by banks as formidable strategic variables to outstrip the competition and have become an essential means for the bank to improve its performance and to maintain its effectiveness on the market. This stimulates the interest in studying the relationship between financial innovations and banking performance. In a highly turbulent environment, a successful innovation creating a unique competitive position can give a bank a competitive advantage and lead to a superior financial performance (Roberts and Amit, 2003). This can only be maintained by ceaseless innovation and improvement of the product and the process (Porter, 2004).

According to Alam et al firm performance is a multidimensional construct that consists of four elements, that is Customer-focused performance, including customer satisfaction, and product or service performance; financial and market performance, including revenue, profits, market position, cash-to-cash cycle time, and earnings per share; human resource performance, including employee satisfaction; and organizational effectiveness, including time to market, level of innovation, and production and supply chain flexibility.

#### **1.1.4 Micro Finance Institutions in Kenya**

According to Gonzalez & Rosenberg, 2006 microfinance is often defined as financial services for poor and low-income clients. In practice, the term is often used more narrowly, referring to services delivered by self-described (MFIs) who usually use techniques developed over the last three decades to make and manage tiny uncollateralized loans. These techniques include group lending and liability, pre-loan savings requirements that test clients' willingness and ability to make regular payments, graduated loan sizes, and most importantly an implicit guarantee of quick access to future loans if present loans are repaid promptly.

Microfinance institutions are well positioned to provide savings services to low-income clients. Over the past two decades, these institutions have developed effective and efficient means for providing credit (Gudz, 1999). Groups are used to reduce transaction costs and substitute for collateral. Application processes are simplified to

accommodate clients with minimum education. Gudz, 1999 further states that fewer resources, however, have been devoted to developing similar innovative and efficient savings services.

In a report by Kenya Agribusiness and Agro industry Alliance (2013), there are currently eight Deposit-taking MFIs. The Narok County DTMs are; Kenya Women Finance Trust DTM Limited, Faulu Kenya DTM Limited, Small and Micro Enterprise Programme DTP (SMEP), Rafiki DTM Limited and Remu DTM Limited. In addition, given that the study is aimed at assessing the relationship between financial innovation and financial performance of MFI in Narok County, the research will be limited to Narok County only for the period 2008-2013.

## **1.2 Research Problem**

The concept of financial innovation is critical as it spurs the growth of MFIs in Kenya. Innovation is the arrival of a new or better product and/or a process that lowers the cost of producing existing financial services. Innovation embraces the firm that is the first to introduce it and the subsequent spread to others (Heffernan & Fu 2008). Micro financing institutions have in a large extent helped the development of the Kenyan rural community and continue serving the rural people by transforming them into community based micro-credit units. On the other hand development practitioners and policy makers have as well identified efficient microfinance services as important for a variety of reasons; helping the poor manage their risks, build their assets, enhance their income earning capacity, be able to develop small enterprises to generate income, this has a direct positive impact on poverty alleviation and specific economic indicators such as nutrition status, women empowerment and children schooling.

Although innovation has been a critical part of the financial landscape over the past few centuries, its determinants remain poorly understood. In a review article, Frame and White (2004) identify 39 related empirical studies but most focus on the “back end” of innovation processes, looking at issues such as the way they are diffused, the

characteristics of firms that adopt them, consequences for firm performance and social welfare.

Currently, the large finance sector has widened and deepened through the development of better products and efficient services by the financial institutions in Kenya. In the study of innovation and growth of MFIs in India by Panda and Mohanty (2004) found out that product innovations are different and specific to MFIs, but all focus on one feature: they are all geared toward providing a wider range of financial products and intermediation options. These innovations are the launching pad and competitive advantage for MFIs. Also local scholars have not linked the financial performance of MFI with their respective innovation strategies. These include Chege (2008) who analyzed a case of the common strategies applied by Equity Bank, which did not identify the trend of MFIs innovation over time. Akello (2001) who looked at factors that influence financial innovation in MFIs and its impact on financial performance in micro finance institutions in Kenya, he specifically looked on the product innovation and organizational innovation and Njeri (2013) in her study of establishing the relationship between financial innovation and financial performance of Deposit taking SACCOs in Nairobi County and specifically looked on the process innovation.

Apparently, the above scholars did not analyze how financial innovation by MFIs relates to the performance and how these affect the performance indicators. Therefore, this research study attempts to answer the following research question; What are the financial innovations adopted by the Micro Finance Institutions (MFIs) in Narok County and do they affect their performance?

### **1.3 Objective of the study**

The objective of the study is to determine the effect of Financial Innovation on the Financial Performance of Micro Finance Institutions in Kenya.

## **1.4 Value of the Study**

The study will be helpful to researchers and academicians who seek to develop theories on financial innovations which will help them understand the relationships that exist between financial innovations and financial performance of microfinance institutions. This will help them in understanding how financial innovation affects the overall performance of the MFIs.

The research findings on the other hand will aid managers to make precise decisions regarding the selection of the best innovations at various developmental stages of the Microfinance institutions. Furthermore the research will shed light on the product, process and organizational innovations and the performance of Micro Finance Institutions in Narok County.

Also the research will provide useful information to the regulators regarding innovations and its effects on the financial inclusion and Deeping and hence provide a clear framework on supervision and regulation of micro finance institutions ( MFIs). Also will benefit the policy makers in creation of conducive environment to encourage innovations at different levels in the MFIs sector.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter will focus on the theoretical part and empirical evidence of financial innovation. The first sections review the theories of financial innovation, empirical evidences from past studies in a chapter summary later.

### **2.2 Theories of Financial Innovation**

Different scholars have looked at financial innovation in different studies and contexts, in their studies they have analyzed different variables which have ended up emergence of different theories of financial innovation.

#### **2.2.1 Traditional Theory of Financial Innovation**

This theory was stipulated by Sundbo in 1997, where he suggested two paradigms based on the causal patterns, namely Technology – economic paradigm and entrepreneur paradigm based on two different models of innovation process. Technology – economic paradigm emphasizes on the technological development as the core of the innovation process which was pegged on the random technology advancements. The technology-economic paradigm may be the most adequate in explaining technological innovations. However, they are rare in services, which are characterized by non-technological products. Some technological innovations are taking place within services, such as process innovations.

The underlying premise of theory of constraints is that organizations can be measured and controlled by variations on three measures: throughput, operational expense, and inventory. Throughput is the rate at which the system generates money through sales. Inventory is all the money that the system has invested in purchasing things which it intends to sell. Operational expense is all the money the system spends in order to turn inventory into throughput.

Before the goal itself can be reached, necessary conditions must first be met. These typically include safety, quality, legal obligations, etc. For most businesses, the goal itself is to make money. However, for many organizations and non-profit businesses, making money is a necessary condition for pursuing the goal. Whether it is the goal or a necessary condition, understanding how to make sound financial decisions based on throughput, inventory, and operating expense is a critical requirement.

### **2.2.2 Service management Theory**

According to Normann, (1991) service management emphasizes serving the individual customers thus the logic within this theoretical framework is that the front worker in the service firm may create a new, specific solution to a customer's problem which might not be repeated.

As firms increase their revenue and sales, they can invest more in activities that improve the attractiveness of their solutions. Most products or services can be differentiated from those of competitors through enhanced features, functionality, reliability, and suitability to the current and latent needs of the customers. (Parasuraman, Zeithamel, Berry, 1985).

Zeithamel et al argue that the difference between customer expectations and actual service provided cannot be managed directly but only through other “gaps”, or discrepancies, between expectations and performance that occur in organizations. There is always a discrepancy between attractiveness and perceived attractiveness. But nevertheless, the attractiveness has a positive impact on the perceived attractiveness. Higher perceived attractiveness leads to higher market share boosting sales and revenue and enabling companies to invest more money in quality.

### **2.2.3 Financial Constraints Theory**

The Theory of Constraints is the name given to a series of decision making techniques first created by Dr. Eliyahu M. Goldratt beginning around 1980 and later applied and augmented by a number of others. The Theory of Constraints has been applied to production planning, production control, project management, supply chain management, accounting and performance measurement, and other areas of business

as well as such not-for-profit facilities as hospitals and military depots. It has also been applied to decision making in educational settings.

Because of problems of asymmetric information, agents are constrained in their ability to command current resources by more than simply their subjective evaluation of some intertemporal budget constraint. There is a system of monetary-financial institutions whose purpose is to deal with these informational problems and to regulate individuals' current spending—their exercise of 'effective demand'. Money is part of this system of regulation. The finance constraint theory leaves implicitly with precisely the deep structure that the liquidity preference theory leaves implicit. The function of money is central rather than its value as an asset.

### **2.3 Determinants of Financial Development of MFIS**

Many microfinance institutions are currently not self-sustaining, and both theoretical and empirical work suggest that the economic and financial environment in which they operate is an important factor in their ability to reach this goal, furthering the mission of outreach to the poor (Armendariz & Morduch, 2004). He also argued that MFIs cannot provide effective financial intermediation without a "well-functioning regulatory framework" in the country. Woller and Woodworth (2001) cited many impact studies and conclude that governments must "create a macroeconomic environment characterized by stable growth, low inflation, and fiscal discipline." They further suggested that poor macroeconomic, regulatory and trade policies will undermine the viability of small business owners and the MFIs that support them. Supporting their views Crabb (2008) also strongly argued that the economic environment of the host country strongly influences the sustainability of a microfinance program. He argued that since MFIs support entrepreneurs, their success is dependent on the degree of economic freedom provided these entrepreneurs. Therefore, he suggested that countries with greater levels of economic freedom should have more successful entrepreneurs and more sustainable MFIs. He emphasized on ten factors that affect economic freedom such as, trade policy, fiscal burden of government, government intervention in the economy, monetary policy, capital flows and foreign investment, banking & finance, wages and prices, property rights, regulation and informal market activity.

Furthermore the level of income is another crucial factor. Westley (2005) states that regions with higher levels of income have less developed microfinance sectors. He

proffers two reasons. Firstly, micro-entrepreneurs with higher incomes have more opportunities to self-finance through savings. Secondly, they may benefit more easily from informal finance through family and friends, as well as from formal finance. Traditionally, microfinance focuses on the poor excluded clients, so microfinance should be reaching more clients in regions that are poor.

## **2.4 Empirical Studies**

The number of researchers dealt with the subject of information technology and its impact on business organizations from several different directions, Wingers and Albert (2000) by their study entitled that Three Essays on the impact of information technology on the organization of companies were results of the study showed that IT coupled with the direction towards small-sized companies in traditional industries and with the direction toward large-sized companies in information-based industries. Also, the study conducted by Hitt, (1997) entitled economic analysis of information technology and regulation, the results were showed that organizations that using these systems to achieve higher levels of investment returns in information technology, and showed that IT is associated with increased productivity in dimensional range.

Akello (2011) in assessing the Determinants of financial innovation and its impact on financial performance of microfinance institutions in Nairobi Kenya, he studied 16 MFIs registered by the CBK and used conceptual model to show factors influencing financial innovation in MFI,s and its impact on financial performance and an analytical model to determine the strength of the relationship between variables. Analysis of the data confirmed that new technology, macroeconomic conditions (e.g. interest rates, inflation), demand for financial services and client's ability to use innovation, cost reduction, increase in financial risk, had the greatest importance in influencing MFI innovation. Financial innovation and financial performance is positively related.

The study by Arsyad (2005) used both financial and nonfinancial performance metrics in the measurement of performance of village credit institutions and the determinant factors in Bali province Indonesia. The findings reported that institutional

environment both formal and informal affect the performance of microfinance institutions. The study by Godquin (2004) provides evidences on performance of MFIs in terms of loan repayments in Bangladesh. This study focused on impact of group lending, technology, nonfinancial services and dynamic incentives on repayment performance. The results of the study show that, provision of nonfinancial services through technology had a positive impact on repayment performance. The results also shows that, MFIs in the country were allocating larger loans to borrowers as the age of their borrowing group increases while group homogeneity has an impact on repayment performance.

Mugo (2012) in his study of the effect of financial innovation on the growth of micro-finance institutions in Kenya studied 34 registered MFIs by the CBK by the year 2012. The research findings showed that most Micro Finance Institutions (MFIs) have innovated new services like mobile banking, business accounts, SME loans, school fee loans, financial trainings and partnerships. Other Micro Finance Institutions (MFIs) have networked their offices, opened new branches and innovated new products in a bid to grow their firms. Besides, there was strong positive correlation between financial growth and reason like addressing clients' needs, clients' retention and reducing transaction time. The research concluded that financial innovation by MFIs lead to an aggregate growth of firm in various dimensions like number of products, market share, loan sales and the overall profitability.

Lerner (2002) estimates a “financial patent production function” for 25 leading investment banks and 30 universities in the US during three six-year time intervals: 1980-1985, 1986-1991, and 1992-1997. The results show that the patenting activity of US investment banks is positively related to their size and the extent of their indirect academic ties. He also looks at financial patenting by 348 faculty members at well-known finance departments of these universities between 1971 and 2000. He found no link between patents and finance-related research or the number of academics in a department.

Lerner (2006) investigates the origins of innovation by 15,309 US financial service firms between 1990 and 2002, using Wall Street Journal articles as an innovation indicator. The analysis focuses on the nature of the financial institutions that

undertake the innovations. He estimates both pool and random effects panel data models under different specifications (e.g. negative binomial, Poisson). He finds that smaller firms account for a disproportionate share of the innovations, as do less profitable firms though their profitability increases significantly in subsequent years. Older, less leveraged firms and those located in regions with more financial innovation are more innovative. Firms filing patent applications are found to be significantly older and less leveraged, though the dominance of less profitable firms and local spillover effects is no longer apparent.

Omondi (2013) in assessing the effects of Technological Innovations on the financial performance of the Micro Finance Institutions in Kenya with a sample of 54 Micro finance institutions where 20 were interviewed randomly using appropriate scientific methods. He used Descriptive statistics, cross tabulation and case referencing to determine the relationships. It considered variables such as Effect of technological innovations on the target group, How technology improves staff performance, Technological Changes in organizations. Technological adoption in all departments and how legislation affects implementation of technology. The findings showed that there was a positive relationship between technological innovations and financial performance of MFIs in Kenya.

Njeri (2012) while testing the effects of financial innovation on the financial performance of deposit taking Sacco's in Nairobi County, she sampled 44 deposit taking Sacco's in Nairobi County. Secondary data on performance was sourced from the Sacco's annual financial reports and Sacco Societies Regulatory Authority (SASRA) supervisory reports for the period 2008 to 2012. This Study established that Sacco's have started embracing the use of money transfer services such as M-pesa, Airtel money, Orange Money and Yu cash, but they were yet to link them with their back office financial databases. The study concluded that there is a positive relationship between technology and financial performance of SACCOs in Nairobi County.

Kimaru (2013) in studying the types of diversification in the Kenyan microfinance market and how they relate to performance and to establish the effect of non interest based diversification on the financial performance of MFI's for the period 2008-2012.

He used a descriptive survey design and relied on secondary data collected from the financial statements, news bulletins and websites of Central Bank of Kenya (CBK) and Deposit Taking Microfinance Institutions. The research findings indicated that the diversification indicator, Return on Assets (R.O.A) indicator and Return on Equity (R.O.E) indicator were on a growth pace for the period and diversification of products and services of the DTMs explained 62.11% on the financial performance of the DTMS.

Malhotra and Singh (2009) in assessing the impact of internet banking in India and discussed its implications for the Indian banking industry. Particularly, they seemed to examine the impact of Internet banking on banks' performance and risk. Using information drawn from the survey of 85 scheduled commercial bank's websites, during the period of June 2007, the results show that nearly 57 percent of the Indian commercial banks are providing transactional Internet banking services. The univariate analysis indicates that Internet banks are larger banks and have better operating efficiency ratios and profitability as compared to non-Internet banks. Internet banks rely more heavily on core deposits for funding than non-Internet banks do. However, the multiple regression results revealed that the profitability and offering of Internet banking does not have any significant association, on the other hand, Internet banking has a significant and negative association with risk profile of the banks.

Kingori(2003) in assessing the behaviour and extent of influence on money velocity in Kenya by real and monetary factors in the period 1992:1 to 2002:12 which was a major financial reforms period in the economy. He used four velocity functions which included currency in circulation, narrow money, broad money and extended broad money. The study also determined the stability of the Kenyan velocity functions. Using the cointegration and error correction models, the study established long-run relationship and short run dynamics The study's found out that that the short run money velocity is highly influenced by financial innovations and the exchange market. The real interest rates also influence the income velocity although at a lesser significance, while the expected inflation rates are insignificant determinants. There is an inverse relationship between income velocity and real

per capita income. The velocity function is also found to be stable. The broad money velocity is found to be the ideal function for monetary policy.

Heffernan et al(2008) in their working paper on Financial Innovation in the UK surveyed over 1100 British financial firms to ascertain the determinants of financial innovation and their sales success using Logit and generalized Tobit models. The study found out that the likelihood of financial innovation rises with the size of financial firms, employee education, greater expenditure on research and development, the availability of finance, and the extent to which firms cooperate with each other. R&D, cooperation, and appropriability are the main variables driving the success of financial innovation, measured by the percentage share of innovations sold. Firms in London/the south have a significantly greater tendency to innovate, though Scotland also does well. Stock broking, fund management and related activities are more innovative than firms in the financial intermediation and pension/insurance sectors.

Sichei and Kamau (2012) estimated the demand for money functions in Kenya. The specific objective of the study was to use newest data to ascertain the stability of the estimated relationship. Using cointegrated vector auto regression (VAR) analysis for the quarterly data of the period between 1997:4 to 2011:2, the study found out that demand for the different monetary aggregates are affected to varying degrees by changes in real GDP, nominal Treasury bill rate, nominal exchange rates and nominal foreign interest rate. The findings also indicated that the demand for the different monetary aggregates was unstable implying that the current monetary policy framework based on stable and predictable demand for money was inappropriate. This study found out that financial innovation is key in the financial deepening in the Kenyan economy.

Goddard et al (2007) in their survey of European banking also emphasize the transition process the European Banking is in towards the Single European Banking Market. They mention the importance of technological change especially ATMs, EFTs and internet banking on the banks' performance and profitability. Altunbas et al (1999) and Casu et al (2004) also provide evidence respectively for cost reduction and productivity gains as a result of technological change for European Union banks.

Polatoglu and Ekin (2001) show that Internet-banking lowers operational costs while increasing customer satisfaction and retention in the Turkish retail banking sector.

## **2.5 Summary of Literature Review**

This chapter has shown that there has been a substantial change in banking technologies and delivery of services and products in the last three decades. Although much has been learned about the characteristics of users and adopters of financial innovations and the welfare implications, how and why financial innovations are initially developed, little is known about the implications of the innovations on the innovator's financial performance. In the review of the literature it indicates that financial innovation is wide spread in the industrialized countries and it is taking its root in the developing world with the main aim of poverty reduction. . Innovation can be an enormously positive force in Africa, however in order to reap the benefits of innovation towards poverty reduction.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter discusses the research methodology used for the study. The research methodology explained the research design that was used, population to be studied, sample design of the population, data collection tools and procedures and data analysis.

### **3.2 Research design**

The study used descriptive research design in collecting the data from the respondents. According to Kraemer (1991) survey research has three distinguishing features; used in the quantitative aspect of a given population which involves examining the relationship among variables, subjective and uses a selected portion of the population which can be generalized. The approach will be appropriate for the study for it aimed at measuring the relationship between variables hence it was possible to collect data from a large population and in a cost effective way.

### **3.3 Population of study**

The target population covered 8 Microfinance Institutions in Kenya.

### **3.4 Sample design**

The study used a representative sample of 8 microfinance's which will be selected from the group using a random sampling technique.

### **3.5 Data Collection**

Data was collected from primary sources of the finance and operations departments of the sampled microfinance's in Kenya. A structured questionnaire was administered to the microfinance top level managers. The likert scale questionnaire was also incorporated to help in standardizing and quantifying the responses from the respondents.

### 3.6 Data analysis

Data collected through questionnaire method was cleaned to reduce biases, increase the precision and achieve consistency. Statistical package for social scientist (SPSS) data analysis program will be utilized to generate inferential and descriptive statistics to produce charts, graphs and percentages from the respondents to establish the relative importance and weight for each variable.

#### 3.6.1 Analytical model

An analytical model of a linear multiple regression equation of the form shown below will be developed.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e_1$$

Y=Financial Performance

X1=Branch network

X2=Expenditure in ICT

X3=Number of transactions in mobile banking

X4=Number of ATMs installed

E = error

The financial performance of the MFI was measured by way of having computation of the means of the variables for the years from 2008 to 2012 and to find the relative rate of growth in comparison with the MFIs capacity to innovate. The independent variable was measured using the number of ATMs installed, number of mobile banking transactions and branch network.

Significance of innovation variables as predictors of financial performance was tested. The significance of the overall model in explaining performance through the independent variables will be measured through the f-test. The analyzed data was then presented using tables, graphs and pie charts.

### **3.7 Data Validity and Reliability**

Face and content validity of the questionnaire was tested whereby face validity is in relation to the misunderstanding or misinterpretation of the questions in the questionnaire. This will be checked by employing the pre-testing method. Content validity on the other hand refers to the capacity of the instrument to provide adequate coverage of the topic. Adequate preparation of the instruments under the guidance of the supervisors, expert opinion and pre-testing of open ended questions will help in establishing content validity.

## CHAPTER FOUR: DATA ANALYSIS

### 4.1 Introduction

The chapter presents an analysis of the data collected from 9 respondents from 12 Microfinance Institutions out of the 9 Micro Finance Institutions who returned the filled questionnaire given out to them. This represents 75% response rate which is actually a good representative of the targeted population. Data analysis and the report of the findings were done using descriptive statistics in the form of tables, frequencies and percentages. The independent variable was Financial Innovation and the dependent variable was Financial Performance.

### 4.2 Demographic characteristics of the respondents

Two questions were used to assess the respondent's background characteristic, one asked about the name and the position held in the organization. The second characteristic is disuse below.

#### 4.2.1 Position held in the organization

**Table 4.1: Position held in the organization**

<b>Position Held in the organization</b>	<b>Frequency (f)</b>	<b>Percentage</b>
Assistant Accountants	2	22.2%
Financial and Administration Officers	2	22.2%
Customer Care	2	22.3%
Financial Manager	1	11.1%
No response	2	22.2%
<b>Total</b>	<b>9</b>	<b>100%</b>

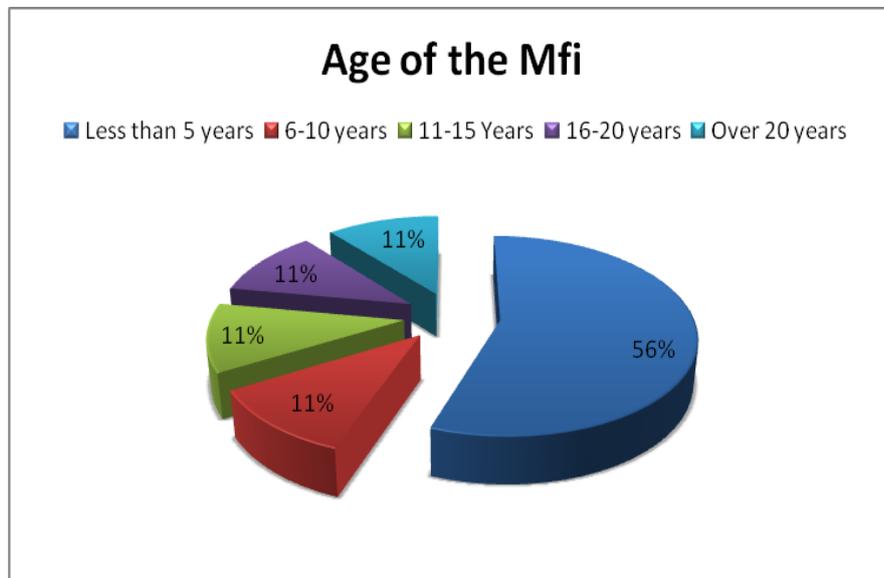
**Source: Research findings**

Table 1 which contains the results of the data analysis on the respondents' job designation which shows that 2 (22.2%) of them were assistant accountants, 2 (22.2%) financial and administrative officers, 2 (22.3%) customer care representatives 1(11.1%) were financial managers and 2 (22.2%) did not respond. Though there existed a variation in their positions held, each of them worked in a vital department of their respective MFIs and was therefore capable of providing accurate information required for this study.

#### 4.2.2 Firms age and category

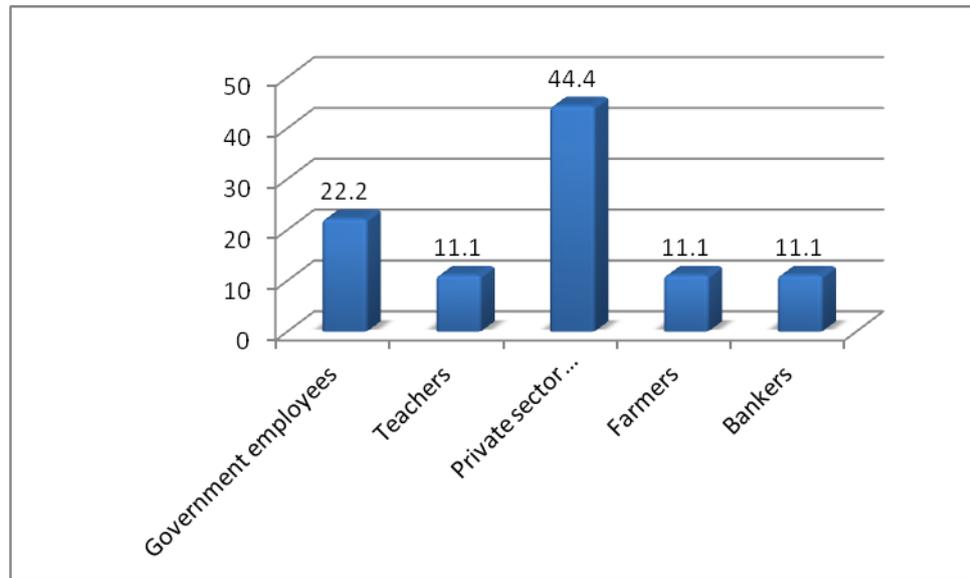
The research findings indicated that out of the 9 firms sampled, 7 (77.8%) were autonomous and the remaining 2 (22.2%) were affiliates of other institutions which could have influenced the innovation. Further, figure 2 show that only 5 (56 %) and between 6-10 years, 11-15 years, 16-29 years, over 20 years 11% respectively.

**Figure 4.1: Age of the MFI**



Consequently, figure 3 shows majority of the MFIs target population to be private sector employees at 44.4 %, government employees at 22.2% , teachers, farmers, and individual bankers at 11.1 % respectively.

**Figure 4.2: MFIs Target Population**

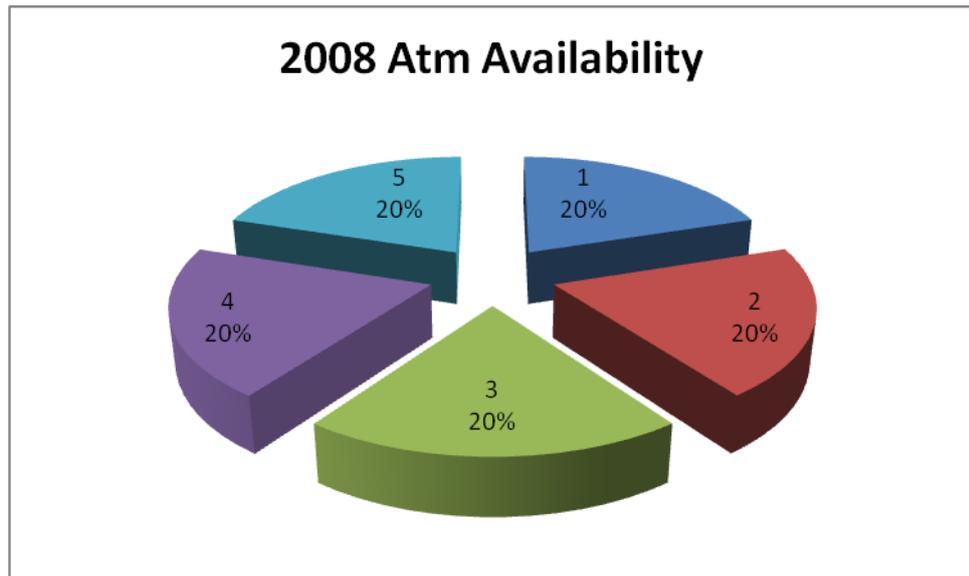


### **4.3 Results of Respondents' views based on the research objectives**

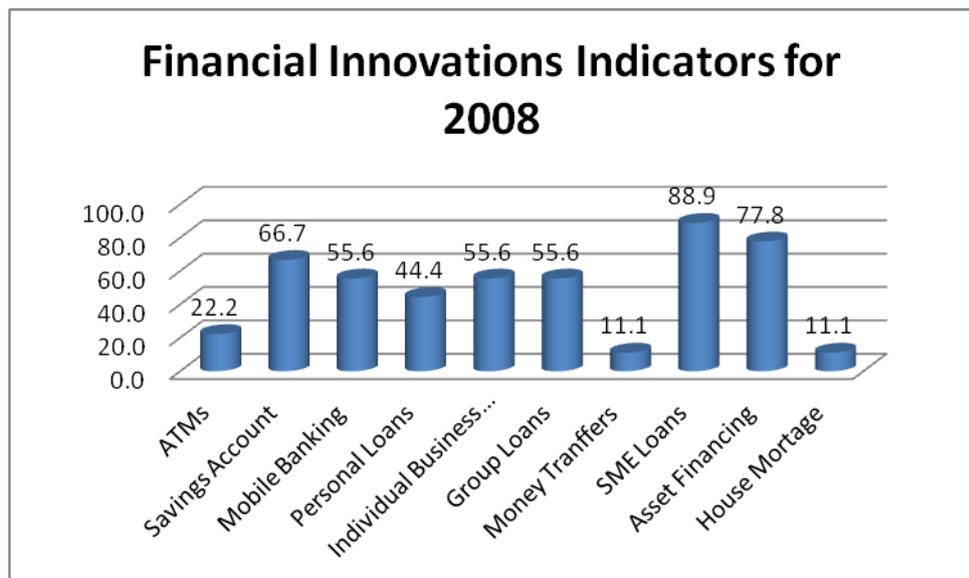
#### **4.3.1 The financial innovations adopted by Micro Finance Institutions (MFIs) in Kenya**

About 10 statements were used to assess the respondents' view on financial innovations that the MFIs use in Kenya. They inquired about the availability of the innovation items and the different kind of product that they offer and new products that they had developed in the last 5 years as part of the innovation process.

**Figure 4.3: 2008 ATM Availability**

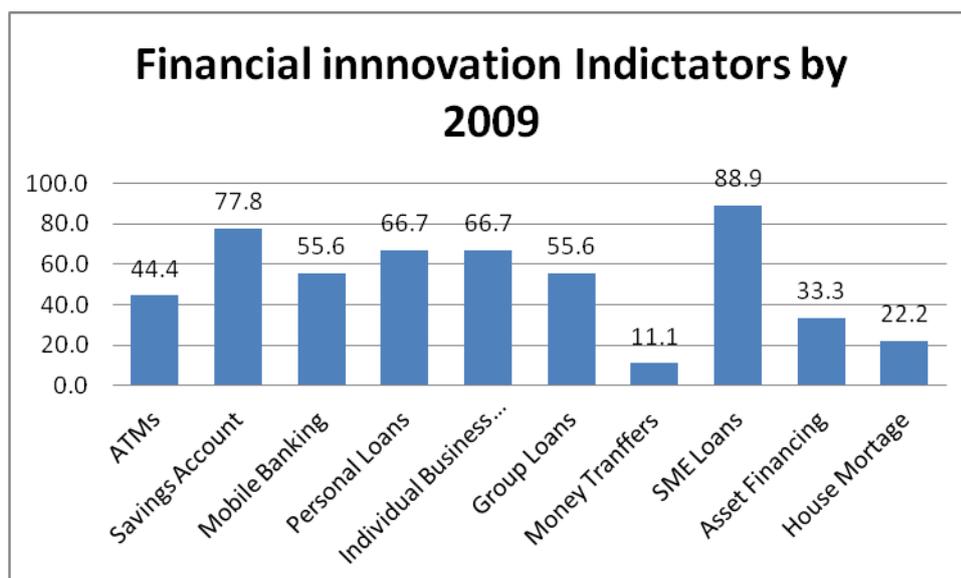


**Figure 4: Financial Innovations Indicators for 2008**



Results from the analysis show that most of the MFIs had SME loans item and at least 22.2 % had ATMs as shown in the figure 4 , most of the MFIs have subscribed to Sacco Link ATMS and would access their money through ATMS of other well established Commercial Banks in the Country.

**Figure 5: Financial Innovation indicators by 2009**



Results from figure 5 above shows the changes in trends toward the products of innovation within the MFIs whereby savings account and SME loans taking the highest percentages at 77.8% and 88.9 % respectively. The money transfer service is at the lowest at 11.1 percentages. This may be attributed to the high ICT investment needed for the infrastructure of the service.

**Figure 6: Financial Innovation Indicators for 2010**

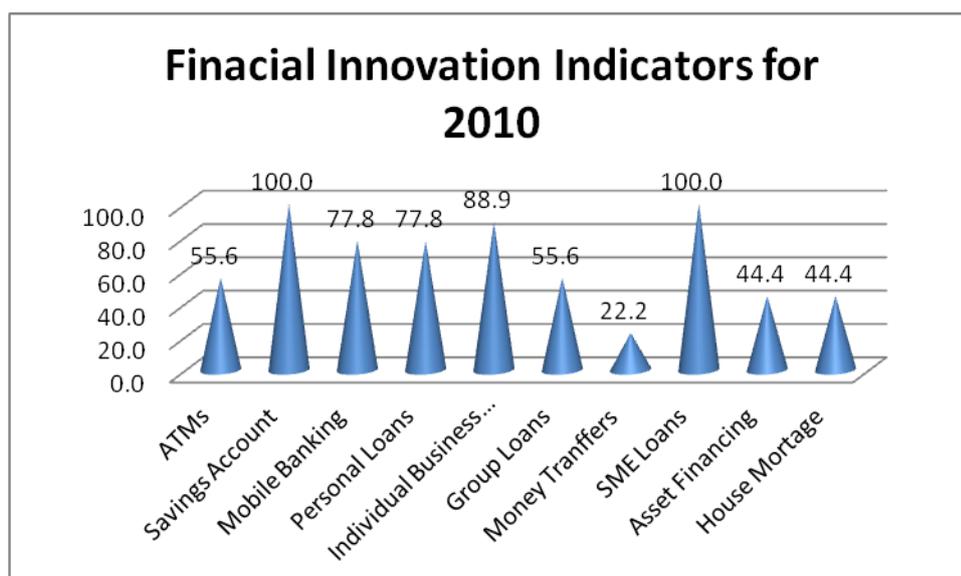
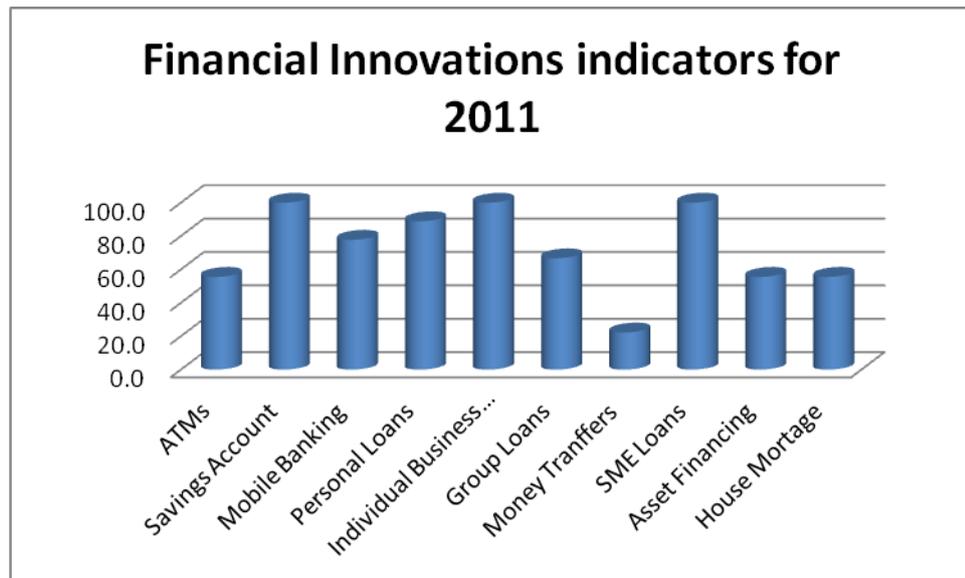


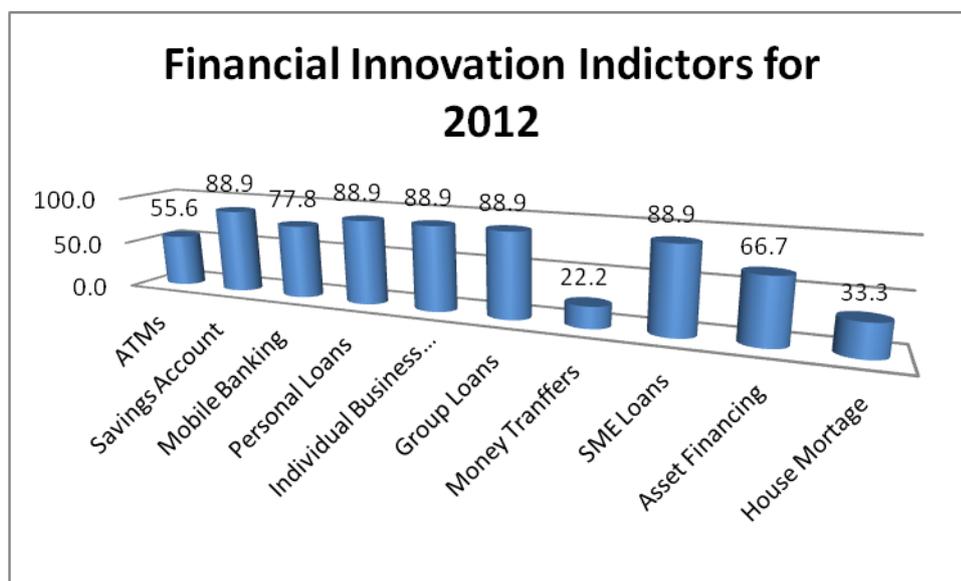
Figure 7 below shows a relatively balanced innovation indicators of the financial innovation series, most of the MFI are adopting the mobile banking services and money transfer services. Also of keen interest are savings accounts which have gone up from the previous year.

**Figure 7: Financial Innovations Indicators for 2011**



From figure 8 below the innovative products for the last year of the study shows that among the initiated products, mobile banking was the highest gainer moving from 55% in 2008 to 77.8% in the year 2012. However, within the same period asset financing came down from 77.8% in the year 2008 to 66.7% in the year 2012.

**Figure 8: Financial Innovation Indicators for 2012**



From the above figure 8, the finds show that there is a positive growth in the number of ATSm owned by the MFIs at 55.6 %. This indicate the innovation effect on the growth and performanace of the MFIs in kenya. Futher, the results of analysis of the products offered in 2011 and 2012 showed that all products registered a positive growth index.

#### **4.3.2 How innovation does affect the financial performance of Micro Finance Institutions in Kenya**

A number of items were used to assess the effects of financial innovations on the growth of MFIs in Kenya. They include performance indicators over a period of five years and the expenditure in ICT for the same period among others.

##### **4.3.2.1 Performance variable**

To determine the effects of performance variables on Microfinance Institutions (MFIs), respondents were required to score against 7 items which included number of branches, expenditure in ICT, number of ATMs, number of customers, financial performance and operational costs for the period 2008 to 2012. A summative summary of their responses is represented in Table 8 below.

From Table 8 above there is a summative summary of effects of financial innovations on the financial performance variables, it is evident that the innovations positively affects the Micro Finance institutions performance. The results show that a number of mobile banking transactions grew over the period of and a high percentage of expenditure on ICT by the MFIs, also on the other hand the financial performance of the MFIs grew positively in correlation with the increase in ICT expenditure.

f	2009	f	2010	f	2011	f	2012
0-10	55.6%	0-10	77%	0-10	55%	0-10	33%
0-1 M	77%	0-1 M	44%	0-1 M	44%	0-1 M	44%
0-50,000	22%	0-50,000	33%	0-50,000	55%	0-50,000	88%
0-10	55%	0-10	60%	0-10	66%	0-10	76%
0-10000	45%	0-10000	50%	0-10000	44%	0-10000	68%
0-10 M	44%	0-10 M	55%	0-10 M	68%	0-10 M	76%
0-10 M	34%	0-10 M	36%	0-10 M	38%	0-10 M	42%

#### 4.4 Financial innovations adopted by MFIs

From the research findings, the MFIs have embraced financial innovation with at least 80% having developed an innovative way of serving the customers for example Mobile banking. The findings in Table 8 also indicate that the majority of financial institutions have opened more than 1 branch in the during the study period. Most MFIs offered mobile banking services (77.0%), group loans (33.3%), and individual business loans (23.3%), among other products as in Table 8. In addition, in the last five years most MFIs preferred innovating products like mobile banking (43.3%) followed by SME loans (13.3%) among others, all of which played a significant role in the growth of the MFIs in Kenya. A number of MFI on the other hand have a Sacco link system which enables them to access the financial services from a number

for ATMs from partner Commercial Banks which gives their customers an alternative in case they are out of their operations reach.

#### **4.5 Effects of innovation on financial growth**

The research findings proved that financial innovation contributed to the better performance of MFIs and a number of clients acquisition. Apparently the above innovations have contributed immensely to the performance of micro financial industry at large. The research links the financial performance to specific innovations like mobile banking transactions and increase of ATMs network.

Finally, the research findings show that there is strong positive correlation between financial innovation and financial performance at (+ 0.776), Mobile bank transactions at (+0.66).

## **CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **5.0 Introduction**

This chapter summarized the research findings on financial innovations adopted, its effect on the growth, recommendation for policy and practice and lastly the suggested areas for further research.

### **5.1 Summary of findings**

This study was carried out to establish to test the relationship between Financial Liberalization and price stability in Kenya. The study's objective was to establish the relationship between Financial Liberalization and price stability in Kenya. This chapter vividly explains the summary of findings for the project's objective: Seeking to comprehensively determine the relationship between financial liberalization and Price Stability in Kenya.

As clearly highlighted in Chapter one of the Project, the Chapter also captures conclusions, recommendations made anchored on findings and suggestions on concepts that need to be researched in relation to the phenomenon of Financial Liberalization and Price Stability.

From the foregoing summary, it can be concluded that the financial innovations has a strong positive correlation with Financial Performance of MFIs and also a strong positive correlation with Mobile Banking transactions. Therefore the research encourages the MFI industry to adopt the financial innovation to promote their Financial Performance and customer satisfaction with an increase in customer volumes.

On the other hand financial innovation presents more convenience, efficiency and security to commercial banks customers resulting to more demand for the new innovations. Demand for traditional payment systems reduces as customers switch to the more effective and convenient payment systems such as mobile banking. This will greatly increase the banks revenues if taken into consideration.

## **5.2 Recommendations for policy and practice**

Based on the findings of the study, financial innovation greatly contributes to the Financial Performance MFIs and should be employed by firms whose objective is to grow financially in depth and width. The research recommends a well strategized innovation process preceded by a market research to ascertain the market needs and competition trend.

From the study findings it is recommended that MFIs as well as the regulatory bodies should strive to innovate for better and cheaper ways of serving customers with shorter transaction turnaround times.

Government through the financial sector regulatory authorities, should encourage MFIs to engage in financial innovation but at the same time closely regulating such developments to assure on the integrity of more so the payment systems and reduction of operational costs.

## **5.3 Limitations of the study**

The study focused on the concept of financial innovation as a key contributor to MFIs Financial Performance although there are other factors that contribute to MFIs growth whose effect could not be disaggregated from that of financial innovation.

On the other had the finance industry is very competitive thus many respondents had fear of disclosing some pertinent information for example financial performance index and operational costs indexes. This took a lot of time to gather the required data whereby the researcher assumed the data given was correct and accurate.

Financial innovation on the other hand is diverse and cannot be generalized, the study focused only on the mobile banking transactions, branch network and the number of ATMs the MFIs have. This may not give a clear relationship of innovation and Financial Performance as there are other MFI who do not use mobile banking and use Sacco Link for easy access of ATMS service from well established commercial banks. There are other innovative indicators which may contribute to the Financial

Performance of MFI and not studied in this research for example internet banking did not look at the MFI listed on the Nairobi Securities exchange.

#### **5.4 Suggestions for further research**

This study should further be developed to include more variables than the few that are covered in this study. Also, more detailed studies should be done to determine what other major variables affect corporate liquidity of MFIs.

Further study on the topic should be done to establish what needs to be done to ensure customer satisfaction on MFIs for profitability and improved operations. MFIs should adopt segmentation of clients in assessing their credit worthiness because the market is heterogeneous in terms of customers need.

The researcher hopes that findings will contribute to the existing body of knowledge and form a basis for further research. The study recommends other researchers to look into other factors that may positively affect the financial performance of microfinance's for example monetary policy and its effects on the performance of MFIs.

Further the research focused on MFIs which are not listed at the NSE is recommend to other researchers to look at the Listed MFI and how innovation affects their financial performance. More research should be done n the internet banking and its effect on the financial performance of the MFIs in Kenya. This will help understand if the perception of internet security is well understood by the MFIs.

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## **APPENDIX I: QUESTIONNAIRE COVER LETTER**

September 2014,

Dear Respondent,

### **Re: MBA Research Project:**

This questionnaire is designed to gather data/information pertaining to financial innovation in the Micro Finance Institutions in Kenya for academic purpose only.

The study is being carried out for Finance project paper as a partial fulfillment of the Degree of Masters in Business Administration at the University of Nairobi.

Your responses shall be treated with maximum confidentiality and in no instance name will be mentioned in my report. Your cooperation is be highly appreciated and if you need a copy of the finds please do so by making a request.

Yours Sincerely,

Symon Ketere

MBA student

University of Nairobi

## APPENDIX II: QUESTIONNAIRE

### PART A: DEMOGRAPHIC DATA

1. Name of the Microfinance institution

.....

2. Personal details of Respondent

a. Name of the respondent (Optional).....

b. Position held in the organization.....

3. Who are your target customers?

a. Government employees

b. Teachers

c. Private Sector employees

d. Farmers

e. Students

Others (please specify).....

4. For how long has your MFI operated in Kenya?

Less than 5 years

6-10 years

11-15 years

16-20 years

Over 20 years

## PART B: FINANCIAL INNOVATION

5. The following Table show different kind of products, kindly indicate whether these products were available or not in your MFI in the years shown.

Categories/Years	2008	2009	2010	2011	2012
ATM					
Mobile banking					
Saving account					
Personal loans					
Individual business loans					
Group loans					
Money transfers services					
SME loans					
Asset financing loans					
House mortgage					

6. The following table indicate different kinds of innovation items which your MFI has been implementing over the stipulated period please fill in the required information.

Item /Year	2008	2009	2010	2011	2012
Number of ATMs					
Expenditure in ICT					
Number of Transactions in Mobile Banking					
Number of Branches					
Number of customers					
Financial Performance( Gross Profit)					
Operational Costs					