FINANCIAL INNOVATIONS AND FINANCIAL PERFORMANCE OF MICROFINANCE INSTITUTIONS IN KENYA: A THEORETICAL REVIEW

Charles Odongo Omwanza
PhD Candidate and Part-time Lecturer, Kenyatta University, Nairobi, Kenya

Dr. Ambrose Jagongo
Senior Lecturer, School of Business, Kenyatta University, Nairobi Kenya

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ABSTRACT

Innovation is the process by which, firms master and implement design as well as the production of goods and services that are new to them. Innovations generally assume different forms such as product innovations, marketing innovations, micro MF, 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 Microfinance Institutions are adequately innovative in running their businesses given that they are faced by the challenge of limited growth and expansion. This independent study paper offers a background and theorizes on financial innovation and financial performance. The paper concludes that financial innovation affects financial performance. The paper indicates a need for empirical research to ascertain the nature and extent of relationship between financial innovation and financial performance of Microfinance institutions in Kenya.

Key Words: *financial innovation, financial performance, microfinance institutions*

INTRODUCTION

Financial innovation is defined as a way of developing as well as popularising new financial instruments, new financial technologies, markets, and institutions. Product innovations are characterised by new financial instruments whereas process innovations entail innovative ways of distributing financial products as well as pricing transactions (Lerner & Tufano,2011). Financial innovation constitutes new products, new production processes, new services as well as new organisational forms. Financial innovations drive financial performance of businesses. The origin of economic perspective considers innovation as an impetus to economic performance. This was credited to Schumpeter‘s (1934) work that supports innovation as a key contributor to economic literature. The author posits that the successful introduction of products, processes and organisational innovations, enables firms to supersede the existing industries as well as markets. Companies eventually grow to attain significant market share at the expense of the less innovative firms.

Despite the widely held perception that innovation and technological change are major drivers of economic growth that provides competitive edge to firms, most literature has focused on innovation in the manufacturing sector. Further, innovation in services remains under-researched by innovation analysts (Henderson & Pearson, 2011). Nonetheless, several studies have focused on the role of services innovation in general and financial services innovation in particular (Makini, 2010). The researches identify significant contribution of innovation in services to modern economies in relation to their employment output and inputs to other sectors of the economy. Compelling evidence is available that financial innovations yield returns to innovators and positively influence the entire economy (Lerner & Tufano, 2011). The benefits, according to

the authors, are realised when households are able to have investment and consumption choices on top of lowering the cost incurred in raising and deployment of funds. In agreement with Lerner and Tufano's (2011) findings, emerging financial innovations, particularly in mobile money have propelled Kenya to the global limelight and caused intellectual curiosity in the research arena. As a way of appreciating the context of the current study, these developments should be placed into proper perspective.

The application of electronic card payments systems has been adopted in Kenya, which comprise credit cards, debit cards, charge cards, prepaid cards as well as Automated Teller Machine (ATM) cards. Commercial banks as well as merchants have dominated the electronic payment card market for years. In Kenya, the introduction of mobile money in 2007 by leading mobile phone service provider, Safaricom, has dramatically shaped the electronic payment landscape in Kenya (CBK, 2015). Safaricom launched the world-acclaimed mobile money transfer service *M-Pesa* (Kiswahili word meaning mobile money) that has won several awards for its role in improving financial access and financial inclusion in the country. The model has been adopted by the other mobile phone service providers in the country as well as commercial banks, resulting in an unprecedented mobile money transaction growth in the country.

EIU (2012) report credits the mobile money services sector in Kenya as one of the most advanced in the world. Financial innovation has substantially reduced the cost of money transfer in Kenya and increased the rate of financial deepening and financial inclusion. Demirgüç-Kunt and Klapper (2012) opine that Kenya is Sub-Saharan Africa's regional leader in mobile money. The authors further gave credit that the emergence of mobile phones is key to the development of most electronic payment innovations. Al-Khouri (2014) reports that internet technology advancements and mobile phones subscriptions have led to the growth of electronic payments. These findings are in agreement with Ingenico (2012) on the significant role the mobile phone technology has contributed to the growth of electronic payments.

STATEMENT OF THE PROBLEM

The scope as well as the key role of financial innovation has made financial innovation a subject of major research interest. For example, Tufano (2003) posits that "...the activity of financial innovation is great; however, the literature on the topic is relatively small and spread out broadly among a number of fields. Tufano's (2003) statement highlights the large scope of financial innovation as well as the constraints that researchers have to contend with in studying this subject. However, several studies have explored users of financial innovations by focusing on three main areas, including the issuers of innovative securities, retail customers that apply innovative payment technologies, as well as financial institutions that adopt innovations and (Beck, Chen, Lin, & Song, 2014). Although several studies have been conducted on financial innovations, establish that the sources of financial innovations are not well known because of a lack of adequate empirical evidence despite their widely acknowledged economic importance. It

is evidenced from the studies of Lerner and Tufano (2011) and White's (2014) that the major challenge to empirical studies on financial innovations has been the deficiency of research data. Further, to remedy the challenges of a lack of data, innovation studies have used patents as proxies for innovation in general. Nonetheless, Beck, Chen, Lin, and Song (2014) contend that financial services industry rarely utilises patents as is the case with manufacturing and that in any case, patents are unavailable in most jurisdictions like the European Union. Beck, Chen, Lin, and Song (2014) further assert that most of the current studies have taken a case study method, paying attention specific innovations. Studies using a case study approach comprise new forms of financial securities (Grinblatt & Longstaff, 2000; Henderson & Pearson, 2011), internet-only banking (DeYoung, Lang, & Nolle, 2007), the introduction of credit scoring techniques (Akhavein, Frame, & White, 2005), and firm innovation in emerging markets and the role of finance, governance, and competition (Ayyagari, Demirgüç-Kunt, & Maksimovic, 2012). Most studies in developed economies have concentrated on financial innovation drivers in general. For example, Allen and Gale (1999) and Tufano (2003) provide evidence that financial innovations, specifically securities are largely driven by information asymmetries in financial markets. Studies such as Merton (1989) and Madan and Soubra (1991) have associated the desire to reduce transaction costs to the development of financial innovations. Although these studies have made significant progress at establishing the drivers of financial innovations, their main focus has been on financial instruments or products in developed and emerging economies. Nonetheless, the emergence of branchless banking models of financial innovations has shifted research focus to the developments in developing countries in general such as Kenya. These studies have followed a consistent pattern of giving descriptive statistics on the financial innovations in Kenya but the studies lack empirical analysis. In order to explain the relationship between financial innovations and financial performance, a number of studies have been conducted in Kenya. For example, Makini (2010) studies the relationship between financial innovation and financial performance of commercial banks in Kenya. The study applies descriptive survey with questionnaires used to gather data as well as reports descriptive statistics as the only results from the study. A similar approach has been adopted by Mwando (2013) in studying the contribution of agency banking to financial performance of nine commercial banks in Kenya. The study applies descriptive survey with questionnaires sent to 36 respondents in the banks under study and finds that regulation has resulted in the growth in agency banking. It further establishes that agency banking has enabled commercial banks to reduce transaction costs. Nonetheless, none of the reviewed studies has taken a holistic approach to the study of financial innovation and its influence on financial performance of microfinance institutions (MFIs). These studies and others to be explored in the literature review have left knowledge gaps in the field of financial innovations, specifically in Kenya's microfinance institutions (MFIs) that the current study intends to address.

THEORETICAL FRAMEWORK

Diffusion Innovation Theory

The theory of diffusion innovation was put forward by E.M. Rodgers in 1962. The theory sought to explain the manner in which financial innovations and ideas across the populations in a society through market or non-market channels or just through an organization (Rogers, 1995). The innovations are passed from one person or entity to another through the process of diffusion. Accordingly, the members of the society tend to adopt new innovations with a view of making informed decisions.

Innovations are very instrumental in the attainment of development and sustainability and therefore should be adopted by firms to enhance financial performance of organizations. Through technological development and network effect, new financial innovations diffuse to other competing organizations (Tidd, 2006). The theory opines that a technological development or a new product is not adopted by all individuals and firms at the same time, but it spreads over time. Upon introduction, the product is marketed to gain larger market share. Other individuals and firms later adopt the technology sequentially. The more a product has network effect, the more the innovation is adopted and the lesser the competing products in an industry. This would lead to cost reduction and more profitability and hence the better the financial performance.

Economic Value-added Theory

Every financial innovation has value attached to it. The reason for investing and introducing a new innovation is to increase value and the sources of such value. Economic value added measures the performance of an organization that focuses more on the creation of value to its shareholders rather than the accounting profits. According to this theory, financial innovations indicate the profitability of a firm as well as the performance of the management (Vernon &Hayami, 1984). Therefore, business organizations are truly profitable when they are able to create high return to their owners (shareholders) and enable them hedge against financial risks. A positive economic value added indicates an improvement in the return to the shareholders while a negative value indicate a decrease in the returns. Returns to shareholders is related to the profits and hence the financial performance of organizations.

Contestable Markets Theory

The theory of contestable markets was put forward by Baumol. A market is said to be contestable when the costs of entry or exit does not exist, that is, zero (Rosli, & Sidek, 2013). This means that technological development and innovations are readily available to other firms. Therefore, new innovations are readily embraced by competing firms since there are no costs to its adoption. The freedom of adoption of the new technology and innovations encourages

competition and efficiency and discourages anti-competitive behaviours. The innovations leader must devise strategies to remain the market leader to avoid the effects of new entrants that emanates from such behaviours as hit and run.

EMPIRICAL LITERATURE REVIEW

Process Innovation and Financial Performance

Process innovation has a positive effect on total quality management in the organization. A study completed by Lopez-Mielgo, Montes-Peon and Vazquez-Ordas (2009) posit that process innovation besides 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.

A study conducted by 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.

According to 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).

Kariuki (2010) conducted a study on the relationship between financial engineering and performance of commercial banks in Kenya. 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.

Institutional Innovation and Financial Performance

According to Fame and Lawrence (2001), 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. 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.

Lin and Chen (2007) observe that there is a relationship between innovation and performance. 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 establishes that organizational innovation or institutional innovation among various types of innovation significantly and positively influences 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.

Mugo (2012) 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. Institutional innovations are characterized by entrepreneurship, leadership, ownership, governance, as well as technology.

Product Innovation and Financial Performance

Erickson and Jacobson (2010) observe that 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. The authors state 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.

Walker (2004) 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 (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.

Kojo (2013) posits that 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.

Financial Innovation and Financial Performance

Musyoka (2013) examined the relationship between financial innovation and performance of insurance companies in Kenya. The indicated 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 it was limited to the insurance sector.

Njeri (2014) studied 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.

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.

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.

Atieno (2014) conducted a study 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.

Imali (2013) completed a study on the determinants of performance of MFIs. 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.

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.

Koech and Makori (2014) completed a study on the effect of innovation orientation on performance of commercial banks was put into perspective. 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.

SUMMARY OF REVIEWED LITERATURE

The diffusion of innovation theory sought to explain the manner in which financial innovations and ideas across the populations in a society through market or non-market channels or just through an organization. It was noted that innovations are very instrumental in the attainment of development and sustainability and therefore should be adopted by firms to enhance financial performance of organizations. Studies established that through technological development and network effect, new financial innovations diffuse to other competing organizations. The theory opines that a technological development or a new product is not adopted by all individuals and firms at the same time, but it spreads over time. Upon introduction, the product is marketed to gain larger market share. Other individuals and firms later adopt the technology sequentially. The more a product has network effect, the more the innovation is adopted and the lesser the competing products in an industry. This would lead to cost reduction and more profitability and hence the better the financial performance. It has been noted that diffusion of innovation positively influences financial performance.

Economic valued added theory holds that every financial innovation has value attached to it. It has been identified that the reason for investing and introducing a new innovation is to increase value and the sources of such value. Studies show that economic value added measures the performance of an organization that focuses more on the creation of value to its shareholders rather than the accounting profits. The theory asserts that financial innovations indicate the profitability of a firm as well as the performance of the management. Since the economic value added theory is a measure of a firm's performance, it 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.

The theory of contestable markets holds that a market is contestable when the costs of entry or exit does not exist, that is, zero. It has been noted that technological development and innovations are readily available to other firms. The theory posits that new innovations are readily embraced by competing firms since there are no costs to its adoption. The freedom of adoption of the new technology and innovations encourages competition and efficiency and discourages anti-competitive behaviours. It has been identified competitive efficiency positively leads to better performance.

The review 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.

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.

Regarding 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 of 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.

RESEARCH METHODOLOGY

The study recommends a descriptive research design. The target population comprises of all employees of microfinance institutions (MFIs) in Kenya currently registered with Association of Microfinance (AMF-Kenya) and the accessible population is 8,789 employees currently working with registered MFIs in Kenya (AMF-Kenya, 2019). Sample of 369 respondents is drawn from the study population by the use of stratified random sampling method. The study proposes the use of a questionnaire to gather primary data while a data collection sheet can be used to collect secondary data on financial performance of MFIs. A pilot study can be done before the actual study to establish validity and reliability of research instruments. Content validity is used to ascertain the validity of the questionnaire instruments. Cronbach alpha co-efficient can be used to test reliability of the instrument. Statistical Package for Social Sciences (SPSS) aids data processing and analysis. Descriptive and inferential statistics is applied in data analysis. Descriptive statistics, including means, mode, variance as well as mode. Multiple regression analysis and Pearson's correlation analyses comprise inferential statistics. The results obtained from the analysis can be presented in form of tables, graphs, and charts.

DISCUSSION

Study on influence of financial innovation on financial performance of microfinance institutions (MFIs) in Kenya shows a direct positive link. Several financial innovations have been identified to have positive effect on financial performance of MFIs. Financial innovations comprise, product, process, and institutional innovations. Inferential statistics shows that a positive association exists between these financial innovations and financial performance of microfinance institutions.

Product innovation is imperative to better performance of MFIs as it helps them stay competitive in the marketplace. It is therefore crucial for MFIs to continuously engage themselves in providing new products that satisfy customers' needs. Continuous innovation gives microfinance institutions ideal platform to grow their revenue streams, thus better performance of MFIs is strongly based on their innovativeness.

CONCLUSIONS

The reviewed literature depicts a strong evidence of the financial innovation and financial performance of microfinance institutions in Kenya. However, the reviewed literature depicted the existence of methodological and contextual gaps. Therefore, there is need to carry out an empirical research to ascertain the nature and magnitude of the effect of financial innovations on the financial performance.

RECOMMENDATIONS

The reviewed literature underpins the significance of financial innovations in the financial performance of microfinance institutions. However, the limited study carried out in this topic has left in the field of financial innovations and more so in the Kenya's microfinance institutions.

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