Financial Innovation as an Alternative Delivery Channel and Financial Performance of Listed Commercial Banks in Kenya

Justus Nderitu Maina
Co-operative university of kenya

Peter Ndwiga
The Co-operative University of Kenya

Financial Innovation as an Alternative Delivery Channel and Financial Performance of Listed Commercial Banks in Kenya

Peter Musangi Ndwiga*[1] Justus Nderitu Maina[2]
1.Lecturer, School of Business & Economics, The Co-operative University of Kenya, Nairobi, Kenya, P.O Box 1957-60200, Meru-Kenya
2.School of Business, Karatina University, Karatina, Kenya

Abstract
The study aimed at assessing the effect of product innovation and process innovation on financial performance of listed commercial banks in Kenya. Data was collected using Qualtrics Survey Software with which online questionnaires were administered to the respondents. Collected data was analyzed using descriptive statistics and inferential statistics. The study concludes that financial innovation and financial performance are indeed correlated. However, it's only process innovation that has a significant relationship with financial performance while product innovation showed no significant relationship. The researcher recommended that commercial banks should invest more on process innovation strategies and less on product innovation.

1. INTRODUCTION

Alternative delivery channels are the channels that expand the reach of financial services beyond the conventional bank branch channel. This has been facilitated by the emergence of financial innovation and the consumer expectations (Lake, Niehaus, Mudiri, Campbell, Bull, & Biallas, 2015). Financial innovation refers to creation of a new financial system or financial instrument that assists in solving financial problems. It is viewed as one of the way of improving a firm's competitive advantage and productivity (Laeven, Levine, & Michalopoulos, 2012). Ho (2006) depicts financial innovation as the engineering of financial products, systems, processes or institutions to reduce costs and risks and offer improved financial services to meet financial system participants' needs. Globally financial system has experienced changes in their role of financial intermediary and commercial banks have not been left behind. In promotion of financial inclusion and financial intermediation Kenya banking system in the recent past has experienced major financial innovation as an alternative delivery channels (Saxena, 2009). This has created new opportunities for the financial system participants and increased new sector players which have fostered unique competitive position which can lead to a superior performance (Ignazio, 2007).

Direct and indirect alternative banking delivery channels has been used by Kenyan Banks to offer financial services to their clients. Direct channels are those owned by the bank or have main control over. There are two kinds of direct channels. Location-based direct channels are those that have a physical presence such as branches, kiosks, roaming vans, and business units, while remotely-based do not have the physical presence such as internet, call centers, and Interactive Voice Response. The remote channels lack face-to-face contact between the institution and the client; an essential concern when attending to low-income segments and gaining their trust. On the other hand, indirect channels are those that the financial institution does not wholly control. Usually this means that the bank needs to engage in some sort of partnership with a third party. Examples include issuing a Mastercard prepaid card, working with a mobile operator to aid mobile banking and deploying ATMs, or leveraging a retailer as part of a banking agent program (Saxena, 2009).The commonly used alternative delivery channels by the 43 commercial banks in Kenya are the financially innovated products (ATM, E-wallets) and processes (Mobile banking, agency banking and internet banking) (Lake, Niehaus, Mudiri, Campbell, Bull, & Biallas, 2015).

Financial innovation as an alternative delivery channel has increased the users of banking services to 38 percent and contributed to the financial inclusion of 75.3 percent of Kenyans (Finaccess, 2016). It has also brought much banking sector changes and transformation as clients have access to efficient, convenient, affordable and quick services in banking. In spite of this financial innovation has increased the existing commercial banks risks; information theft (42%), regulatory breaches (25%), money laundering (51%) (Kroll, 2016) and non-performing loans (9.2%) (CBK, 2016).This threatens the financial system soundness and can lead to financial crisis as witnessed during the global financial crisis of 2007/8. Additionally it acts a hindrance to the achievement of sustainable development goal 9 on industry, innovation and infrastructure (UnitedNations, 2015). In the long run the Kenyan GDP growth rate of 5.8 percent would be threatened and unemployment in the financial system would increase (CBK, 2016) hence economic instability.

However, existing researchers globally are in disagreement in their findings on the relationship between financial innovation as an alternative delivery channel and commercial banks financial performance. For example, Sujud and Hashem (2017) andCherotich, Sang, Shisia, and Mutung'u (2015) found that there is a significant positive effect of financial innovations on financial performance. Nevertheless, Mugane and Ondigo

(2016) and Antonnet (2014) were in contrast. In the post global financial crisis researchers have not agreed on the effect of financial innovation on financial performance. Mendoza, Quadrini, and Rios-Rull (2009) stated that financial innovation is thought to have remarkable potential for the diversification and efficient risk management that foster financial performance. In disparity, Johnson and Kwak (2012) and Piazza (2010) indicated that financial innovation can destroy the financial system as seen in the deepest and most prolonged economic crisis since the Great Depression. Thus, the need for the research.

1.1 Specific Objectives

1. To determine the effect of product innovation on financial performance of commercial banks in Kenya
2. To determine the effect of process innovation on financial performance of commercial banks in Kenya

1.2 Research Hypothesis

1. There is no significant relationship between product innovation and financial performance of commercial banks in Kenya
2. There is no significant relationship between process innovation and financial performance of commercial banks in Kenya

2. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Constraint-Induced Financial Innovation Theory

The constrained-induced financial innovation theory was developed by Silber (1983). The theory stated that the main motive for embracing financial innovation in a firm is to improve its financial position. However, in the process of improving financial performance a firm faces some constraints like external handicaps such as policy and internal handicaps such as organizational management. The constraints not only give an assurance on the stability of the management they reduce the competence of any financial institution. Thus, financial institutions struggle towards removing or lessening or casting the constraints off through financial innovation (Silber, 1983). Commercial banks which operate in a market with more constraints have the greatest inducement of embracing financial innovation that assist in boosting their financial performance because of reduction in operational costs (Lerner, 2006). Additionally, commercial banks that do not embrace financial innovation are deemed to fail (Johnson & Kwak, 2012).

2.1.2 Transaction Cost Innovation Theory

The transaction cost innovation theory was established by Niehans (1983) who was of the view that the main reason for financial innovation is transaction cost reduction and earning benefits. Financial innovation is catalysed by technology advancement which cause transaction cost to reduce and better financial performance. Commercial banks just like other firms face the challenges of increasing transaction costs that threaten sustainability. As a result, they embark on invention of methods that can reduce transaction costs (Muia, 2013). This theory is therefore significant to this study as it will assist the researcher in articulating the relationship between financial innovations and financial performance of commercial in Kenya as a result of transaction cost reduction measures and earning profits.

2.2 Empirical Review

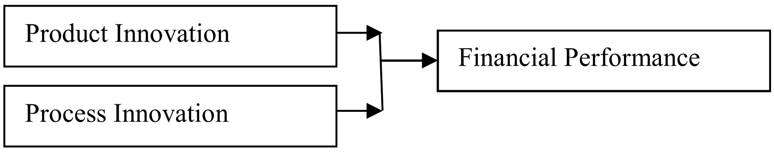
Sujud and Hashem (2017) conducted a study on the effect of bank innovations on profitability and return on assets of commercial banks in Lebanon. The aim of this study was to study bank innovations in the field of mobile banking, debit and credit cards, automated machines, internet banking, point of sale terminals and electronic funds transfer. Data was collected through a research questionnaire. The results revealed that there is a significant positive effect of bank innovations on profitability and return on assets of Lebanese commercial. In conclusion the study noted that bank innovations in banking sector are a process of better financial performance. Thus, this process of performance should be seen as a continuous process that satisfies both banks and customers.

Mugane and Ondigo (2016) carried out a research on the effect of financial innovation on financial performance of commercial banks in Kenya. Financial innovation was measured in terms of product innovation and service innovation while return on asset measured financial performance. Exploratory research design was adopted and data collected from the 43 commercial banks using primary data. A negative and significant relationship between product innovation and financial performance was shown by the regression results. Additionally, the results revealed that a positive and significant relationship between service innovation and financial performance exists. The study recommended for a low operational cost product innovation and service innovation so as to maintain a better financial performance.

Antonnet (2014) did a study on product innovation and its effects on financial performance of commercial banks in Kenya. The study focused on the effect of core products innovation, formal product innovation and augmented product innovation on financial performance of commercial banks. Explanatory research design was adopted where 106 senior and branch managers from nine commercial banks formed the respondents. Research questionnaires, face-to-face interviews and secondary data obtained from 2013 audited annual financial statements of commercial banks were utilized to collect data. The multiple regression results revealed a negative relationship between product innovation and the financial performance of commercial banks in Kenya. The study recommended for a similar research in order to establish other useful findings that this study may have been unable to determine.

Cherotich, Sang, Shisia, and Mutung'u (2015) the objective of this study was to establish the effect of financial innovations on financial performance of commercial banks in Kenya. The study relied on secondary data where all the 44 commercial banks were used as source of data. The findings from regression analysis revealed that there is a strong relationship between financial innovations and financial performance. In conclusion financial innovations were found to positively affect financial performance. Since financial innovation leads to improved financial performance the study recommended that financial innovation information should be availed to regulatory and advisory bodies for guidance on adoption of innovativeness. Commercial banks were also advised to create financial innovation enabled environment in order to create a market share so as to improve their financial performance.

2.3 Conceptual Framework



Independent variables Dependent variable

3. RESEARCH METHODOLOGY

The study adopted a cross sectional survey research design to assess and analyse the effects of financial innovation on financial performance of listed commercial banks in Kenya. The respondents consisted of all the 11 financial managers of the listed commercial banks in Kenya. Data was collected using Qualtrics Survey Software with which online questionnaires were administered to the respondents by the researcher. Primary data was collected using closed ended questions which gave the respondent limited and pre-determined response option to choose from. Secondary data was collected from annual report of the listed commercial bank for the period 2009 to 2016. This is the post global financial crisis period. Collected data was analyzed using descriptive statistics. Inferential statistics was also used to find the effect of the independent variables (product innovation and process innovation) on the dependent variable (financial performance). A mathematical model describing the relationship between independent variables and dependent variable was formulated based on the regression coefficient. The logistic regression is expressed as: $FP= \beta 0 + \beta 1PDI + \beta 2PCI + \varepsilon$ Where, FP is the dependent variable (financial performance), $\beta 0$ is the intercept PDI =Independent variable product innovation. PCI =Independent variable process innovation and ε is the error term.

4. RESEARCH RESULTS

4.1 Descriptive Findings and Discussions

This section exemplifies descriptive results in respect of the objectives of the study. The study sought to determine the effect of product and process innovation on financial performance of listed commercial banks in Kenya.

The first objective was to determine the effect of financial innovation on financial performance of listed commercial banks in Kenya. The results indicated that the commercial banks had introduced the various innovated products since they offered differentiated accounts and debit cards to their clients. In addition 91% and 55% of the respondents indicated that the listed commercial bank did offer credit cards and prepaid cards respectively. The use of these innovated products was found to increase the amounts of deposits and credits offered by the listed commercial banks as indicated by 100% of the respondents. It was also established that the commercial banks innovative products had ability to attract more clients with diverse necessities and also maintain client loyalty. Moreover, majority of the respondents (73%) were in agreement that the return on equity of the listed commercial banks had improved due to product innovation adopted.

The second objective of the study was to determine the effect of process innovation on financial performance of listed commercial banks in Kenya. The listed commercial banks in Kenya has adopted varied platform for delivering their services with 100% of the respondents indicating that they operate mobile and online banking while 64% operate agency banking. On the level of usage by the clients, majority of the respondents (100%) revealed that mobile banking was the highly used followed by agency banking and the least used was online banking. In addition, majority of the respondents (55%) were in agreement that the return on equity of the listed commercial banks had improved due to process innovation adopted. From the annual reports of the listed commercial banks from 2009 to 2016 it was evident that they have been paying dividends. The dividends paying rate for majority of the commercial banks (82%) has been increasing at a declining rate and few (18%) increasing at an increasing rate.

4.2 Inferential Statistics

This section portrays the outcome of the correlation and regression analysis carried out in the study to assess the nature of the relationship between product innovation, process innovation and financial performance.

Table 4.1: Regression Statistics

r	0.70
R Square	0.50
Adjusted R Square	0.37
Standard Error	0.74
Observations	11

The value of adjusted R^2 is 0.37 indicating that process innovation and product innovation explains 37% of financial innovation as an alternative delivery channel effects on financial performance of listed commercial banks. Therefore, further research should be conducted to investigate the other effects (73%) of financial innovation as an alternative delivery channel on financial performance. The correlation coefficient (r=70%, α = 0.05) shown in Table 4.1 indicates that there is a positive significant relationship between the independent variables (product innovation and process innovation) and dependent variable (financial performance).

Table 4.2: Analysis of Variance (ANOVA)

	Degree of freedom	Sum of squares	Mean square	F	Significance F
Regression	2	4.32	2.16	3.93	0.000
Residual	8	4.40	0.55		
Total	10	8.73			

The findings on the analysis of variance presented in Table 4.2 shows that F-calculated is 3.93 and significance value of 0.000. The significance value is less than the significance value of 5%. Additionally, the F-calculated (3.93) is greater that the F-table at 5% (2.32). Thus, this model is significant in forecasting the relationship between financial innovation as an alternative delivery channel and financial performance of listed commercial banks.

Table 4.3: Regression Coefficients

	Coefficients	Standard Error	P-value
Intercept	1.5688	0.6779	0.0494
Product innovation	-0.3303	0.3892	0.4208
Process innovation	0.8257	0.3481	0.0451

The regression analysis established the equation: FP =1.5688-0.3303PDI+0.8257PCI. This means that an increase in one unit of product innovation would lead to a decrease in financial innovation by 0.3303 while an increase in one unit of process innovation would lead to a increase in financial innovation by 0.8257. In assessing the significance of each independent variable on the dependent variable, the researcher established that there exists no significant relationship between product innovation and financial performance since the P value was less than 5%. The result concurs with research of Antonnet (2014) on product innovation and its effects on financial performance of commercial banks in Kenya. However, it is in contrary to Mugane and Ondigo (2016) who found that there exist a significant relationship between product innovation and financial performance. Conversely, the researcher found out that there exist a significant relationship between process innovation and financial performance as P value was less than 5%. This is in agreement with the study by Sujud and Hashem (2017) on the effect of bank innovation on profitability and return on assets of commercial banks in Lebanon.

5. CONCLUSIONS

The study concludes that financial innovation and financial performance are indeed correlated. However, it's only process innovation that has a significant relationship with financial performance while product innovation showed no significant relationship. The listed commercial banks portrayed a high investment on innovation which assisted in reducing the operation costs, improve customer service and loyalty and also increase clients' deposits and credits.

6. RECOMMENDATIONS

Commercial banks should continue to invest in new and promising process innovation strategies to continue realizing the benefits that accrue from it e.g. improved customer satisfaction and operational costs reduction.

This will caution the commercial banks from financial distress or bankruptcy as they will be financially sustainable.

The commercial banks should invest in advertising their process innovation strategies so as to attract more clients thus reducing the unbanked population in the country.

Commercial banks should revisit their innovated product so as to find out if they really assist in improving their financial performance. The loss making products should be done away with to avoid holding on to products that are liabilities to the banks.

REFERENCE

Antonnet, A. J. (2014). *The effect of product innovation on financial performance of commercial banks in kenya.* Nairobi: University of Nairobi.

CBK. (2016). *Bank Supervision Annual Report.* Nairobi: Central Bank of Kenya.

Cherotich, K. M., Sang, W., Shisia, A., & Mutung'u, C. (2015). Financial innovation and financial performance of commercial banks in Kenya. *International Journal of Economics, Commerce and Management* , 1242-1265.

Finaccess. (2016). *2016 FinAccess Household Survey.* Nairobi: Central Bank of Kenya.

Ho, N. H. (2006). *Financial Innovation and Its Impact on Central-Bank Policies.* Monetary Authority of Macao.

Ignazio, V. (2007). Financial Deepening and Monetary Policy Transmission Mechanism. *BIS Review* .

Johnson, S., & Kwak, J. (2012). *Is Financial Innovation Good for the Economy?' in J. Lerner and S. Stern (eds.).* Chicago: University of Chicago Press.

Kroll. (2016). *Global Fraud Report.* New York: Economist Intelligence Unit.

Laeven, L., Levine, R., & Michalopoulos, S. (2012). *Financial Innovation and Endogenous Growth.*

Lake, A., Niehaus, C., Mudiri, J. L., Campbell, L., Bull, G., & Biallas, M. (2015). *Alternative delivery channels and technology.* Sub-Saharan Africa: International Finance Co- oporation - World Bank Group.

Lerner, J. (2006). The New Financial Thing: The Origins of Financial Innovations. *Journal of Financial Economics* , 223-255.

Mendoza, E., Quadrini, V., & Rios-Rull, V. (2009). Financial Integration, Financial Development, and Global Imbalances. *Journal of Political Economy* , 371-416.

Mugane, C., & Ondigo, H. (2016). The Effect of financial innovations on the financial performance of commercial banks in Kenya. *International Journal of Finance and Accounting* , 16-29.

Muia, A. M. (2013). *The relationship between financial innovation and growth in profitability of Islamic Banking in Kenya.* Nairobi: University of Nairobi.

Niehans, J. (1983). Financial Innovation. Multinational Banking and Monetary Policy. *Journal of banking and Finance* , 537-551.

Piazza, R. (2010). *Financial innovation and risk, the role of information.* IMF.

Saxena, A. (2009). Accelerating Financial Inclusion through innovative channels. *Insight* .

Silber, W. (1983). The Process of Financial Innovation. *American Economic Review Papers and Proceedings* , 89-95.

Sujud, H., & Hashem, B. (2017). Effect of Bank Innovations on Profitability and Return on Assets (ROA) of Commercial Banks in Lebanon. *International Journal of Economics and Finance* , 35-50.

United Nations. (2015). Sustainable Development Goals. Geneva.