EFFECT OF PRODUCT INNOVATION ON PERFORMANCE OF COMMERCIAL BANKS IN KENYA

MUIGAI EVANSON NJAGA

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DECLARATION

I the undersigned declare that this Research Project is my original work and has not been presented in any other University for academic credit.

Signature…………………………………… Date……………………………….

MUIGAI EVANSON NJAGA

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This research project has been submitted for examination with my approval as the University Supervisor.

Signature ………..…………………………….. Date……………………………….

Prof. Bitange Ndemo

Department of Business Administration

School of Business,

University of Nairobi

DEDICATION

I dedicate this research project paper to my family members for their love, support, patience, encouragement and understanding during my study. To my wife (Rose) she gave me the will and determination to complete my postgraduate studies

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Special thanks goes to my supervisor Professor Bitange Ndemo for his support, advice, guidance and his continuous evaluation and supervision of my work. I would also like to extend my gratitude to the administration of the University of Nairobi through the university's library and the library staff that enabled me to access the various materials used in compiling this work. Special attribute goes to my class members and friends who through their persistence assistance and hard work saw the achievement of this study. Last but not least, I would like to give my most special tributes to our almighty Lord for all His blessings.

ABSTRACT

The main purpose of this study was to establish the effect of product innovation on performance of Commercial Banks in Kenya. Specifically, the study was set to establish the effect of self-service account opening, saving innovation products, loans innovations product, and payments innovation products on the performance of Commercial Banks in Kenya. The study employed a descriptive survey design and targeted 42 Commercial Banks in Kenya. A questionnaire was used to collect primary data where secondary was collected from the financial statements. A statistical package for social sciences(SPSS Version 23.0) was used to analyze the data. From the analysis of the findings, it was established that product innovation was related to Performance of Commercial banks in Kenya. From the analysis of the findings, it was recommended that Commercial Banks to build capacity of their employees to undertake product innovation initiatives. Employees of these banks should be equipped with knowledge and skills in market research, innovation, business development and application of modern banking technology; that Commercial Banks should employ experts in international business law to handle legal issues related to copyright. Legal advisors in commercial banks should be excellent in tie ups and liaisons and can arrange for permits and product licenses; also the study recommended that Commercial banks should invest in a right technology, machines, and infrastructure that support new banking products and services. Thus, lack of a right kind of machinery can greatly hinder product innovation; further that the Commercial banks should test and experiment the product from ideation to production where experimentation, and testing should be followed throughout the development process.

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ABBREVIATIONS AND ACRONYMS

AIB	Allied Irish Banks
ANOVA	Analysis of Variance
BSC	Balance Score Card
CBK	Central Bank Of Kenya
DBR	Business Development Representative
M	Mean
NIM	Net Interest Margin
ROA	Return On Asset
ROE	Return On Equity
SD	Standard Deviation
SMEs	Small and Medium Enterprises
SPSS	Statistical Packages for Social Sciences

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

According to (Aghion, et al., 2005), the competitive global environment has brought many businesses to embrace innovation, which is important in running their daily activities. Thus, innovation is pertinent to apply a concentrated global competition, in swift changing information technologies and in a disjointed market. Hence, the development of innovation is determined by the strategy adopted (Miles and Snow, 2004). Scholars have come to recognize and appreciate innovation as very important factor, which enables companies in the creation of value, thus in the long run sustaining competitive advantage (Yilmaz, C., Alpkan, L., Ergun, E., 2005). Therefore, innovation can serves medium to create new business opportunities with new business with mechanisms exceptional in nature and control hence adding value to the organisation. Product innovation is critical in influencing the performance of the banking industry as reflected by improved market share and profitability of the respectful firm (Palmer and Kaplan, 2007). Thus, those companies have desired to be competitive in the market by growth capacities and maximize on the present opportunities, they have to adopt and embrace product innovation.

This study was guided by three thematic theories; they include Schumpeter innovation, financial intermediation and innovation diffusion Theories of innovation. Schumpeters' theory attempt to explain the influence of marketing innovations on the capitalist systems whereas Financial Intermediation Theory try to make as understand the intersection of innovation in the banking industry and how it affects the business of financial intermediation and innovation diffusion Theory explain how application of technology influence performance.

The Kenyan banking sector comprises those of commercial banks, companies that offer mortgages, micro finance institutions and bureaus from foreign countries. There exist forty-two Commercial Banks in the economy of Kenya. They facilitate flow and sharing of funds, mobilize savings and allocate credit across space and time. By doing so, they enable all the players in the economic growth cope with economic risks by pooling, sharing, hedging and pricing of financial resources. In spite of these fundamental roles that these commercial banks play in the Kenyan economic growth, they are operating in a highly regulated and liberalized environment. They are bombarded by the erratic technological evolution and global hyper competitiveness. To therefore thrive and survive in the dynamic and highly competitive environment, while keeping up with the ever-changing customer needs and priorities, the commercial banks have to adapt product innovation.

1.1.1. Product Innovation

This concept is defined as general or accepting ideas, processes, products and services which are relevant and critical for the organizational success (Garcia & Catantone, 2002). Hence, companies should understand product innovation in competitive markets because most of the business environments are uncertain and change now and then. Thus, those companies which do not take product innovation serious will be marginalized in the market (Han, Kim & Srivastava, 1998).

According to Vermon, (1966), quoted in Kulkarni, (2009) in his theory the product life cycle theory, a product goes through 5 stages in life where at some point unless modifications are done, the product becomes obsolete and irrelevant. It is important that businesses invest highly on market research programmes in order to identify changes in consumer needs as the product advances through its productive life. He argues that like any living being, products go through various stages in their productive lives from invention, maturity to decline stage forming a unique cycle in the product life. These stages are characterized by specific features which determine the length of time a product spends in one stage depending on the marketing strategies applied (Kulkarni, 2009).

1.1.2 Firm Performance

According to Machuki and Aosa, (2011) performances defined as those achievements an organisation receive on a certain set some criterion. It comprise of three areas of the outcome, which include product market financial and the shareholder return performance. This gives an indication of organisational effectiveness. Firm performances measured using of financial market measures, which include cash flower share, and market value. According to Kaplan and Norton (1996) using a Balance Score Card (BSC) is the ultimate measure of firm performance. The BSC entail the covering of domains of innovations, financials, internal processes and customer outcome. BSC is limited only as it focuses on specific companies thus making intercompany comparison impossible.

1.1.3 Commercial Banks

In Kenya there are 42 commercial banks, 15 micro finance institutions, 2 mortgage finance companies and 130 foreign exchange bureaus (CBK, 2012). The banking industry has in the recent past continued to record significant growth in assets, deposits, profitability and product offering. The growth has been punctuated by industry wide branch network expansion both in Kenya and regionally, automation of banking services and development of a wide array of customer centric products and increased competition following introduction of innovative products, services and new market entrants.

The main challenges facing the banking industry in Kenya include; global financial crisis that led to reduction in deposits, trade volumes and performance of assets, declining interest margins brought about by CBK's monetary policy interventions and new regulation especially with the passing of 2010 constitution. For instance smaller banks would face the challenges of increasing their minimum core capital to Ksh. 1 Billion by end of 2012 as regulated by the finance Act 2008. Stiff competition and reduction of the government borrowing has affected the banking industry in Kenya. Due to global and local trends the business environment keeps on evolving. Therefore, to remain competitive in the market, the sector has embraced innovation to enhance its performance.

1.2 Research Problem

The banking industry in Kenya needs innovation in its products to increase performance. With innovation tangible benefits and results are produced which leads to greater profit margins. Profits is maximized due customers are satisfied with the products thus competitiveness (Collerton, 2012). When the challenges associated with product innovation are minimized and mitigated, there is a continuous growth of an organization. In third world countries, specifically Kenya limited data support that product innovation can influence performance. Most studies which have been conducted emphasize on the relationship of innovation and performance in the manufacturing sector and little is done on the banking industry (Youtie& Roper, 2008).

Commercial banks in Kenya heavily operate in a regulated business environment which needs a uniform degree when it comes to disclosing of confidential information with regard to their financial position. Commercial banks need to adapt competency to increase their performance and also for surviving in the market. This is due that there have been a continuous change, stiff competition, changing of customer needs and demographics which has made the operating business environment turbulent. Therefore, it is against this backdrop banks have come to agree that conformity to convectional strategies can produce convectional results. Thus, to compete in the market, listed banks have embraced product innovation for survival and sustenance.

Several empirical researches have been done on innovation and firm performance. Wairi, (2013) studied factors influencing the adoption of agency banking innovation in the Kenyan commercial banks. The study revealed that the major factors were technology and resources which were used to influence agency banking.Bw aley, (2013) looked into the innovation strategies on the competitive advantage in the listed banks. The study revealed that innovation strategies impacted positively on competitive advantage among banks. Ngugi and Karina, (2013), did a study on the effect of innovation strategy on performance of Commercial banks in Kenya. The study revealed that the innovation strategies influenced the profitability of the listed banks in Kenya. The study concluded adoption of innovation influence performance to a greater extent.

None of the previous studies has dealt with the effect of product innovation on performance of Commercial banks in Kenya. Given the critical role the listed banks play in the Kenyan economy, they need to embrace product innovation in their daily activities to make them competitive in the market of operation. Therefore, it is against this background that the study arose to look into product innovation and performance of Commercial Banks of Kenya. The study sought answer the fundamental question on: what is the effect of product innovation on performance of Commercial Banks of Kenya?

1.3 Objective of the Study

This study was set to establish the effect of product innovation on performance of Commercial Banks of Kenya.

1.4 Value of the Study

The study is important as it will make us understand the concept of product innovation. This will provide with information to establish the underlying issues which can help in increasing performance of an organization. In addition, the study will be important as it will act as a catalyst in the exploring of the area of product innovation and performance. Also the study will provide information and literatures on other scholars and academicians who are studying the same concept. Further, the study will provide the information to students who want to study product innovation and performance.

The study is also paramount as it will provide information to the policy makers to help them in planning processes to improve their performance. Thus, this will enable policy makers to act from the informed point of view in matters of decision making. Further, the management of the listed banks who assist in day to day running of the business will use this information to make strategic decisions with the regard of customers in their firms.

Further, the study is important as it will of great benefit to the banks as the information gathered from the study will make them understand product innovation and its influence on performance. This will enable banks to formulate strategies and allocate resources in product development. The study will reveal the challenges associated with product innovation as a strategy and the way to be used to overcome them. The results from the study will enable banks re-engineer their strategies with regard to product innovation.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section reviewed literature on studies related to product innovation and performance. The chapter discussed the theoretical framework whereby theories underpinning the study were outlined, then product innovation and performance. In addition, empirical literature was look into the past studies, which have been conducted on the same concept and their gaps, and finally the conceptual framework was drawn to show graphically the relationship between the independent and dependent variables.

2.2 Theoretical Framework

The study was guided by three thematic theories. They include: Schumpeter Theory of Innovation, Financial Intermediation Theory and Innovation Diffusion Theory.

2.1.1 Schumpeter Theory of Innovation

Joseph Schumpeter (Schumpeter, 1928) initiated Schumpeter's theory of innovation. Through his study, 'the Inability of Capitalism. in the late 1920s, Schumpeter attempted to understand the influence of marketing innovations on the capitalist system. After a scrutiny of the capitalist model, Schumpeter made an effort to identify companies that had the potential to innovate (Schumpeter, 1939). As a result, Schumpeter advanced a theory demonstrating that a company's capacity to innovate depended on its size (Laino, 2011). Originally, Schumpeter argued in favour of small scale companies insisting that they possessed the endowment to innovate by virtue of being flexible compared to large-scale companies that were likely to get captured in bureaucratic structures (Kaya, 2015).

Additionally, Schumpeter (1928) felt that entrepreneurs, taking positions as nonpartisan innovators or research and development (Rand D) directors in big companies, presented opportunities for changed benefits with their transformations (Kaya, 2015; Laino, 2011). Consequently, these situations, in turn make imitators get drawn to outstanding benefits resulting in a surge of transaction likely to impair benefit periphery for the transformation (Schumpeter, 1928). However, He came up with a new notion specifying that a particular economy could experience transformation before attaining a situation of balance. Schumpeter (1928) referred to these kinds of situations as Kondratiev cycles for they became vicious cycles in business.

Schumpeter's theory is critical in this study as it gave direction on reasons behind Banks innovations. Further, it provided an explanation on how findings relating to product innovation by commercial banks influence a given state of performance.

2.2.2 Financial Intermediation Theory

Financial intermediation theory dates back in the 1960s (Gurley & Shaw, 1960). Gurley and Shaw (1960) are known to have been the first to mention the term financial intermediation (Gurley & Shaw, 1960). The theory was further advanced in the 1970's (Akerlof, 1970; Spence, 1973; Rothschild & Stiglitz, 1976). Olonje (2014) defines financial intermediation as the procedure of providing an environment such as a bank where money granters and borrowers meet to transact money issues. Chimkono (2016) explains that the theory largely builds on the economics of imperfect information.

The major concept identified in intermediation theory is resource allocation that depends on perfect and complete markets. Complete perfect markets originate from the basic assumptions of the neoclassical model. But, the assumptions in this model lack competitive advantages since information therein is open to all participants in the market. The assumptions are however, not achievable in true sense because of diversified market imperfections such as asymmetric information. This kind of information increases transaction costs resulting in some businesses having a competitive advantage over others (Olonje, 2014).

The modern theory of financial intermediation plays several roles. These include influencing the economy and government policies targeting financial intermediaries (Mehra, et al., 2011). The theory demonstrates also the task of financial intermediaries in economy, the impact exercised by controls on monetary intercession, plus underscoring the work performed by the central bank in the control and management of monetary intercessions (Andries, 2009). Financial intermediaries have the potential to reduce information and transaction costs. They can as well support efficient functioning of markets, resulting in compelling large-scale outcomes.

This theory is critical in this study as it forms the basis for banks performance and the kind of model used to conduct the banking business. The theory was used to contextualize certain extent of performance in commercial banks. The theory helped in explaining where innovation intersects with banking and how it affects the business of financial intermediation.

2.2.3 Innovation Diffusion Theory

E.M Rodgers founded innovation diffusion theory in 1962. Zhang (2015) defines diffusion as the procedure through which updates regarding new discoveries stream among individuals in a certain period in a given social context. Rogers (1995) identified five user-perceived characteristics that regularly demonstrated to be factors contributing to the success of an IT innovation. These included relative advantage, compatibility, complexity, triability and observability.

The theory identifies five categories of innovation adopters. They include 'innovators' themselves – individuals who immerse themselves in the innovation and stand out of the crowd. They take the risk of attempting a unique innovation immediately they get to learn about it. They are never influenced otherwise since they believe in exploring new ways of doing things. The second group of innovators are known as 'early adopters. This category of people is known to have great interest in an innovation. They believe in change and have a mind set to embrace transformations without persuasion.

The third group is referred to as 'early majority'. Commonly known for taking a long time to adopt an innovation. This group of individuals/organizations will always want to witness results of an innovation before adoption. They are not creative and require persuasion in order to join a band of innovators. As for the fourth group, known as 'late majority', (Rogers, 1995; 2003) approach an innovation with lots of question marks. Individuals or organizations in 'late majority' feel uncertain about transformation and wait to observe numerous trials done on an innovation. The 'late majority' do not believe in change and can only embrace an innovation after it has been tried by the majority. Consequently, strategies that are likely to appeal to the 'late majority group' include provision of information on the number of people that have attempted to utilize the innovation and adopted it successfully. Lastly, the fifth group, referred to as 'laggards influenced and persuaded by family members, friends or colleagues to adopt an innovation but are usually sensitive on how to go about it.'Laggards' are normally confined in routine-like traditions, cultures and practices. They are afraid of changes and do not believe in existence of innovations.

This theory is very important in this study as it explains the acceptability of product innovation and its role during the process of product innovation in the banking industry.

2.3 Organisational Performance

The main objective of a bank is to perform well in critical areas defined by the banking industry. The main methods of measuring performance are working out the return on asset (ROA), return on equity (ROE) and net interest margin (NIM).

2.3.1 Return on Asset (ROA)

Return of assets (ROA) is the ratio of the net profit to the total assets of a bank (Ongore& Kusa, 2013; Petria, Capraru & Ihnatov, 2015). It demonstrates profit resulting from a bank's total assets and signifies whether there is efficiency in management or not. ROA is calculated as a ratio of the net profit to the total assets of the bank (European Central Bank, 2010) per year.

$$ROA = \text{net income}/\text{average total assets}$$

2.3.2 Return on Equity

Basically, return on equity (ROE) refers to end result profit realized by a bank's assets utilized in its strategies aimed at efficiency in management involving utilization of stakeholders' capital (Ongore& Kusa, 2013; Petria, Capraru&Ihnatov, 2015). ROE is computed as a ratio of the net income to the average total equity (European Central Bank, 2010).

ROE = net income/average total equity

2.3.3 Net Interest Margin (NIM)

One of the roles on financial institutions, including banks is to generate interest income as well as pay out interest to lenders such as deposits. The difference that results from the two stated operations relative to the amount of interest-earning assets is measured using net interest margin (NIM). NIM is therefore a critical tool that examines the consistence and management efficiency of a bank's internal activities. NIM plays a crucial aimed at enhancing a bank's role involving planning of resources (Saksonova, 2014). NIM is computed by dividing net interest income by total earnings assets (Ongore& Kusa, 2013).

NIM = net interest income/total earnings assets

2.4. Effects of Product Innovations on Firm Performance

The need to adjust the present system and status of the financial framework has resulted from the advancement and proliferation of financial markets (Mugane and Ondigo, 2016). Also, financial regulating mechanisms have been adjusted for the purpose of minimizing pressure on financial undertakings, for instance interest rate liberalization (Chimkono, 2016). Alam, Raza, and Akram (2011) alludes this to the need by commercial banks to be at par and not lag behind in competition. This has resulted in banks being performance driven (Alam, Raza, & Akram, 2011). Indeed, numerous reviews have focused attention to financial performance as an indication of a bank's performance. However, Aduda, Kiragu and Ndwiga (2016) specifies financial and bank's performance are different. The three authors explain that financial performance is just part of the many bank performance indicators (Kiragu & Ndwiga, 2016). Equity Bank Group (2016) mentions four major major indicators of its overall group performance. These include Customer Base, Loan Book, Profitability and Deposits. This study takes these variables as a measure of bank performance (Equity Bank Group, 2016).

2.5 Self Service Accounts Opening on Firm Performance

Brett and Marshall (2012) refer to self accounts opening as remote account opening or rather automated remote account opening process (Brett & Marshall, 2012). According to Adhiambo (2014), the day to day activities of the banking world are continously evolving and financial inclusion is getting roots. AIB Capital (2017) notes that the bank customer needs are continously evolving just as the world is, resulting in new ways of doing business that ought to be adopted.

Cytonn Investment (2017) notes that it is only Equity Bank in Kenya and among a few in the Sub-saharan Africa that has adopted this remote account opening product. The trend is also observed the world over. DBR Media (2015) notes that although majority of the banks have adopted online account operation, less than 20% have initiated the use of mobiles in account opening procedures. Equity Bank Group (2016) explains that this approach was taken to reach the ever changing needs of the customer. According to the Equity Bank Group, banking is not a mere place to be visited but a process to be involved in.

2.6 Savings Innovations Products on Firm Performance

Mazer, Ravichandar and Dyer (2017) conducted a research study in Tanzania. The study involved using reciprocative short message service (sms) to develop capacity of 'M-Pawa' customers on how to save and borrow responsibly. Mazer, Ravichandar and Dyer (2017) concluded that savings needed to be a greater part of dialogue. The findings indicated also that the lenders were likely to be overlooking the role of savings accounts in regard to supporting positive borrowing outcomes when they were offered on the same mobile facilities that customers used to access loans (Mazer, Ravichandar, & Dyer, 2017).

McKinsey and Company (2016) reported that two billion individuals as well as 200 million businesses in developing economies did not access savings and credit facilities. Even though, individuals and businesses with access paid heavily for minimal products (McKinsey & Company, 2016). Additionally, the Equity Bank Group (2016) observed that the swift emerging digital technologies provided the possibilities for financial services at minimal costs. These resulted in profitably, financial inclusion boost and extensive productivity gains across the economy (Equity Bank Group, 2016).

2.7 Loans Innovations Products on Firm Performance

Ndung'u, Morales and Ndirangu (2016) are of the view that high costs encountered by banks are partly due to financial services provided to the poor. According to Ndung'u and collegues, market divisions, low technological advancement and lack of formality, as well as not strong rules and laws do improve the liabilities of doing business.

Digital credit is one of the distingushed loan products in Kenya (Kaffenberger & Chege, 2016). It is premised on numerous models including mobile telephone applications, mobile money wallets, and payroll lending facilities (Kaffenberger & Chege, 2016). Others include service providers namely banks, mobile network operators, savings and credit cooperative organizations (Kaffenberger & Chege, 2016). These services do offer (relatively) small-value, short-term loans (Kaffenberger & Chege, 2016). Also, the services utilize mostly customers' mobile telephone data such as message records, telephone mobile money transaction history and social media data to determine a credit score and loan amount (Kaffenberger & Chege, 2016).

2.8 Payment Innovations Product on Firm Performance

Mobile financial services have been noted for the role they play in financial inclusion in developing countries (Francis, Blumenstock, & Robin, 2017). For instance, between 2011 and 2014, 700 million adults globally held accounts and the number of adults with no account dropped by 20 per cent to 2 billion. Further, it is reported that the number of mobile money accounts reached 411 million worldwid 2015 (Francis, Blumenstock, & Robin, 2017). Additionally, Francis, Blumenstock and Robin maintain that mobile money is currently available in 93 countries. Accordingly, use of mobile money transfers and payments is a preliminary step towards formal financial system (Francis, Blumenstock, & Robin, 2017). However, adoption, patronage and usage of financial innovation (adoption) are more determined by customer's acceptance than by the seller offerings (Morales & Ndirangu, 2016). Customers will want to examine the level of their risk exposure, actual and implied transactional costs, the 'carrot' (financial incentives) and associated benefits attached to each financial innovation product before deciding to use it or not (Morales & Ndirangu, 2016). In other words, fraud risks, financial incentives, turnaround time and transactional costs are taken into consideration before customers decide to adopt (Morales & Ndirangu, 2016). In the view of Abubarka and Tasmin (2012), the need to address customers' expectation for service delivery, credibility of the data machinery and competition in financial services resulted in innovation revolution (Zhang, 2015).

2.9 Empirical Literature

Several empirical reviews have been done with regard to product innovation and performance. A study by Atalay et al. (2013) covered innovation and performance of firms in the automotive supplier industry in Turkey. The study employed a questionnaire to collect the information from the 113 top management who were operating in the firms. A statistical packages for social sciences (SPSS) was employed for data analysis. According to the study results, it was revealed that technological innovation was related with performance of the studied automotive firms.

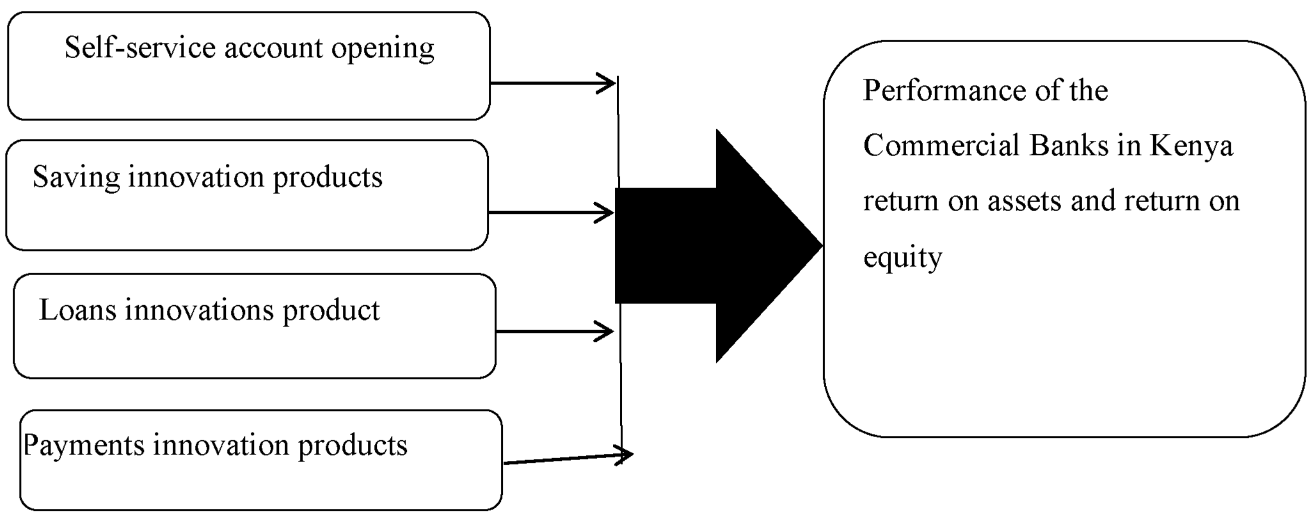
Onwumere, Onyebuand Aturuchi (2014) assessed organisational and marketing innovations on medium scale food wholesale in Abia State, Nigeria. The study used a sample of 50 companies, which were randomly selected. A questionnaire was used as the main data collection instrument. From the findings, it was found that the dominant innovation strategies adopted were price strategy, product approaches, continuous and improvement aspect of innovation. Thus, it was recommended that medium scale food wholesale should employ organisational marketing and innovation strategies to complement each other, in the responding of ever changing needs of customers in the food industry.

Mugo (2015) did a study to cover innovation and firm performance of Wine Industry in Kenya. The study employed a descriptive research design where it targeted five major wine companies. The study collected primary data by the use of a questionnaire. The data was analysed by using descriptive statistics where by regression was used to show the relationship between innovation and performance of the studied wine companies. The study results showed that market innovation provided with opportunities to the firms to market and sale their products using media channels, deal will complaints of customers and deliver products.

Njeri (2017) conducted a study on innovation strategy and performance of firms from the Kenyan Telecommunication industry. The study used Safaricom as the case study. A survey was employed as the research design and the target population was the customer service department. The study used 181 respondents as the sample size and employed a questionnaire as the main data collection instrument. The study used descriptive statistics, correlation analysis and regression analysis to analyse the collected data. From the study results, it was concluded that innovation strategies influenced performance of Telecommunication firms.

Nafula (2017) covered effect of innovation on firm competitiveness looking into the manufacturing SMEs in Nairobi County, Kenya. The study employed descriptive explanatory design and targeted manufacturing SMEs in Nairobi. The study used a sample of 284 enterprises. A semi-structured questionnaire was employed to collect primary data. Both descriptive and inferential statistics were employed for data analysis. The study results revealed that all the four types of innovation; Product, Process, Marketing and Organizational had positive effect on competitiveness. Thus, it was recommend that the government to implement innovations to increase competitiveness.

2.10 Conceptual Framework



Independent Variables **Independent Variable**

Figure 1: Conceptual Framework

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter is sub-divided into seven sections which include the research design, target population, data collection procedure, and data analysis.

3.2 Research Design

The study employed a descriptive survey design. This involves using a survey design as a strategy for collecting and analyzing data, which makes it possible for the researcher to gather information, summarize, present and interpret data for the purpose of classification. In the words of Bryman (2015), a research design provides a framework for the collection and analysis of data. A research design expresses both the structure of the research problem and the plan of investigation used to obtain empirical evidence on relations of the problem. Since the conditions or occurrences that this study intends to major in already exist or have occurred, relevant variables on this analysis will be selected. Guest (2013) points out that this method determines and reports the way things are such as public opinions and attitudes whereby a clear layout of pertinent and precise information on the study aspect and phenomenon are obtained and general conclusion drawn. The researcher used both primary and secondary data. Primary data was obtained by administering questionnaires and secondary data was obtained from journals and financial reports of the 42 commercial Banks in Kenya.

3.3 Target population

According to Saunders and Lewis (2014), this refers to the larger group to which one hopes to apply the findings of the study. In this case, the target population was all the 42 commercial banks Kenya (CBK, 2017).

3.4 Data collection

The study utilized questionnaires for data collection. The researcher intended to use the questionnaire to collect data from 2 top management personnel from each bank's head office; according to the researcher, this category of respondents is perceived to be the strategy formulators within these banks respectively. The questionnaire was developed based on the objectives of the study with closed ended questions. The closed-ended questions enabled the researcher to get the answers sought by the research questions with much ease. A likert scale of one to five was used to measure the degree of response in terms of strength or weaknesses.

3.5 Data Analysis

This study employed quantitative techniques in data analysis. The information collected was coded and entered into computer aid software a Statistical Packages for Social Sciences (SPSS Version 23.0). This was employed to run descriptive data to present frequency Tables in the specific research objectives. In addition, inferential statistics was applied to establish the association between independent and dependent variables. In addition, multiple regression analysis was conducted to establish the relationship between the product innovation and performance. Relationships may be non-linear, independent variables may be quantitative or qualitative and one can examine the effects of a single variable or multiple variables with or without the effects of other variables taken into account, (Cohen, West & Aiken, 2003). The regression model is as follows:

The multiple linear regression model is as shown below.

$Y = \beta 0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$

Where:

Y= Performance of commercial banks

X_1= Self-service account opening

X_2 = Saving innovation products

X_3= Loans innovations product

X4= Payments innovation products

The study used F-test to test for joint significance of all coefficients. The significance of the variables in the regression model was measured or determined by the p value; whereby, if the p value of the variable is 0.05 (5%) and below, then the variable was deemed significant while the p value co-efficient of the variable is above 0.05, then the relationship of the variables is deemed to be insignificant. The beta was explained whether the relationship between the dependent and the independent variable is high or low, positive or negative; this was revealed by the value of the beta coefficient.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the result obtained from the data collected, the interpretation of the results and the discussion of the study findings. The chapter has been organized in line with the objectives of the study which was to establish the effect of product innovation on the performance of Commercial Banks in Kenya.

Specifically, the study examined the influence of self-service account opening, saving innovation products, loans innovations product and payments innovation products on the performance of Commercial Banks in Kenya. The study issued questionnaires to 42 but 34 banks returned correctly filled questionnaires constituting a response rate of 80.95 percent.

4.1.1 Background Information

Table 4.1 presents the demographic information on the respondents. The information captured in the study include: Gender, Age, Position, Level of education, Years of service at the bank, years of service in the department or branch and the respondent's rating of the performance of Commercial Banks in Kenya.

Table 4.1: Background Information

		Frequency (N=34)	Percent
Gender	Male	21	61.1
	Female	13	38.9
Age	21-30	6	16.7
	31-40	8	22.2
	41-50	11	33.3
	Above 50	9	27.8
Position	Head of Department	8	22.2
	Department Manager	9	27.8
	Section Manager	17	50
Level of education	Bachelors' degree	19	55.6
	Masters' degree	15	44.4
Years of service at the bank	0-5 years	4	11.1
	6-10 years	11	33.3
	Over 10 years	19	55.6
Years of service in the department/branch	0-5 years	9	27.8
	6-10 years	13	38.9
	Over 10 years	11	33.3
Bank's performance	Excellent	8	22.2
	Very good	9	27.8
	Good	17	50

The study findings in Table 4.1 shows that majority of the respondents were male (61.1%) and female were 38.9 percent. The respondents were of different age groups with majority falling in the age bracket 41-50 (33.3%) followed by Above 50 years (27.8%), 31-40 (22.2%) and 21-30 (16.7%). The respondents held various positions in the banks as follows: section manager (50.0%), department manager (27.8%) and head of department (22.2%).

In regard to the level of education, majority of the respondents were bachelors' degree holders (55.6%) and 44.4 percent were masters' degree. The study findings on the duration of service indicated that majority of the respondents had worked at the banks for more than ten years (55.6%) while 33.3 and 11.1 percent had worked at the banks for durations of 6 to 10 years and five years and less respectively. The study established that majority of the respondents had worked at their departments or branches for durations of 6 to 10 year while 33.3 and 27.8 percent had worked at their departments or branches for durations of 6 to 10 years and five years and less respectively. The respondents were also asked to rate the performance of the banks and majority of indicated that the banks had good performance (50.0%) while 27.8 and 22.2 percent rated the banks performance as very good and excellent respectively.

4.2 Products Innovation Initiatives

The study sought to establish Products Innovation Initiatives at the Commercial Banks in Kenya and the challenges encountered in the introduction of new products. This section presents the findings of the study.

4.2.1 Product innovation at Commercial banks

The respondents were asked whether they were involved in products innovation at their bank in any manner. Figure 4.1 shows the findings of the study.

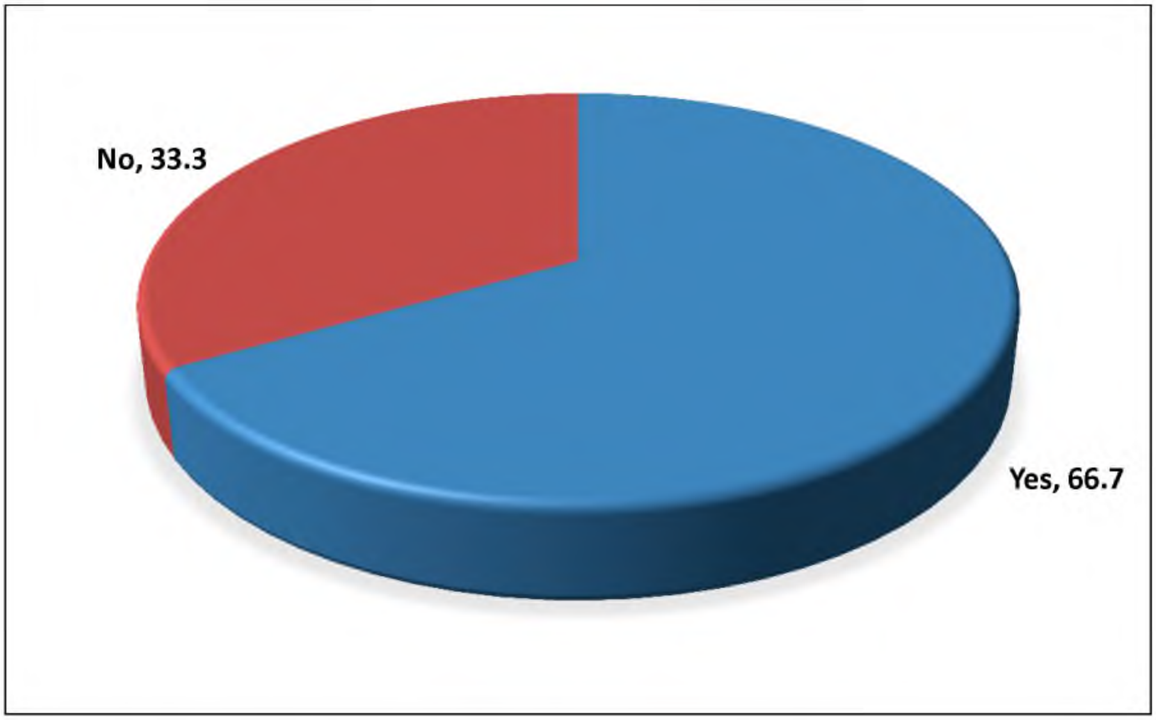


Figure 4.1: Respondents involvement in product innovation

From the study finding in Figure 4.1, majority of the respondents (66.7%) agreed that they were involved in product innovation at their banks. Conversely, 33.3 percent of the respondents stated that they were not involved in product innovation at their banks.

The study finding implies that many banks involve their employees in the product innovation initiatives. The products introduced included the expansion of digital and mobile banking platforms to include all the major service providers like Artel and Safaricom. The Equity bank introduced it own mobile banking service called Equitel which allowed customers to directly transact money from and to their account and other mobile money providers.

The study further sought to establish whether the banks had recently introduced new products in the financial year 2016/2017, the financial year preceding the study. Figure 4.1 shows the findings of the study.

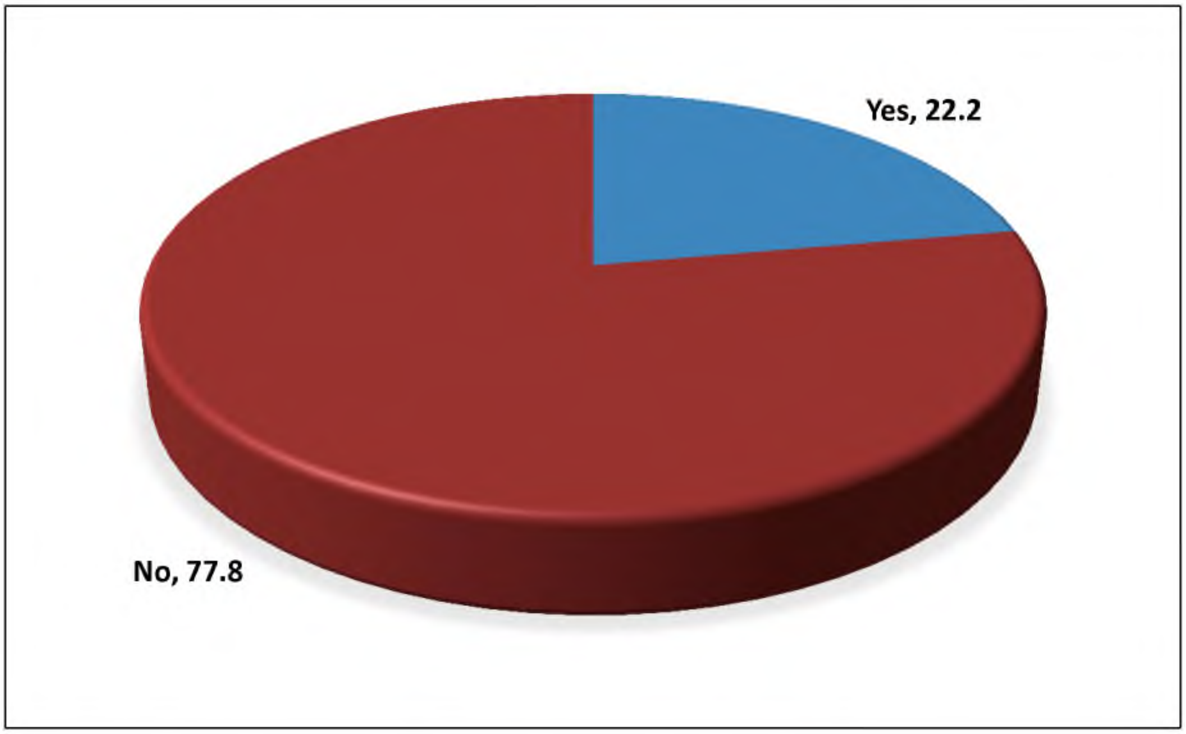


Figure 4.2: Recent introduction of new product in the 2016/2017

From the study finding in Figure 4.2, majority of the respondents (77.8%) stated that their banks had not introduced new products in the recent financial year 2016/2017 while 22.2 percent agreed that their banks had introduced new products in the year 2016/2017. The study findings imply that even though bank engages in product development, majority of the banks had not introduced new products in the recent financial year.

4.2.2 Challenges Encountered in the Introduction of New Products

The respondents were asked to indicate the challenges encountered by the banks during the introduction of new products. The respondents stated that it was not easy for the Kenyan banks to find locally skilled people to undertake high-tech product innovation indicatives. The banks had to outsource some product innovation initiatives to foreign firms.

Launching a new product requires thorough market research, surveys, meeting clients to understand their buying behaviour and preferences. Not many people are quite comfortable moving out in the field, talking to end-users to find out what type of product would be an instant hit among them. If such people are entrusted the responsibility of developing new product, it would be extremely difficult for the brand to find acceptance among target audience. The respondents stated that product innovation at the banks faced difficulty in obtaining clearance on copyrighted products and identification of the evolving customer needs.

4.3 Self-Service Accounts Opening

The respondents were asked to state the extent to which the banks had introduced and rolled out self-service accounts opening as a new innovation. Figure 4.3 shows the findings of the study.

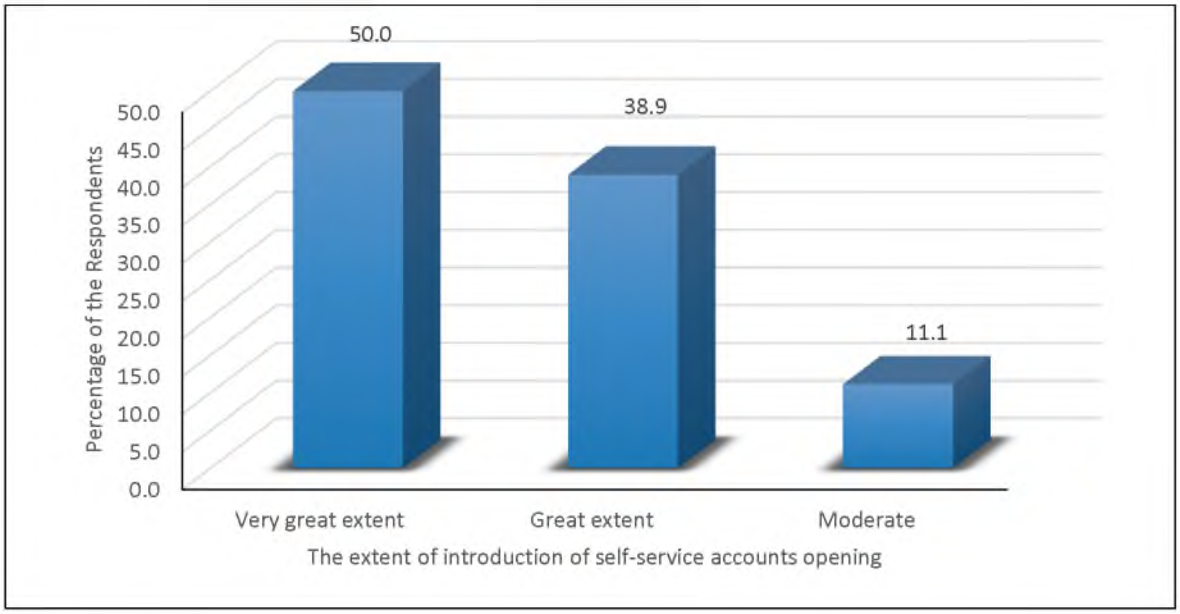


Figure 4.3: The extent of introduction of self-service accounts opening

From the study findings in Figure 4.1, majority of the respondents (50%) stated that the banks had introduced and rolled out self-service accounts opening as a new innovation to a very great extent. Moreover, 38.9 and 11.1 percent of the respondents stated that the banks had introduced and rolled out self-service accounts opening as a new innovation to great and moderate extents respectively.

The respondents were further asked to indicate the extent to which the self-service accounts opening positively affected monetary, non-monetary and total assets in your bank. Figure 4.4 shows the findings of the study.

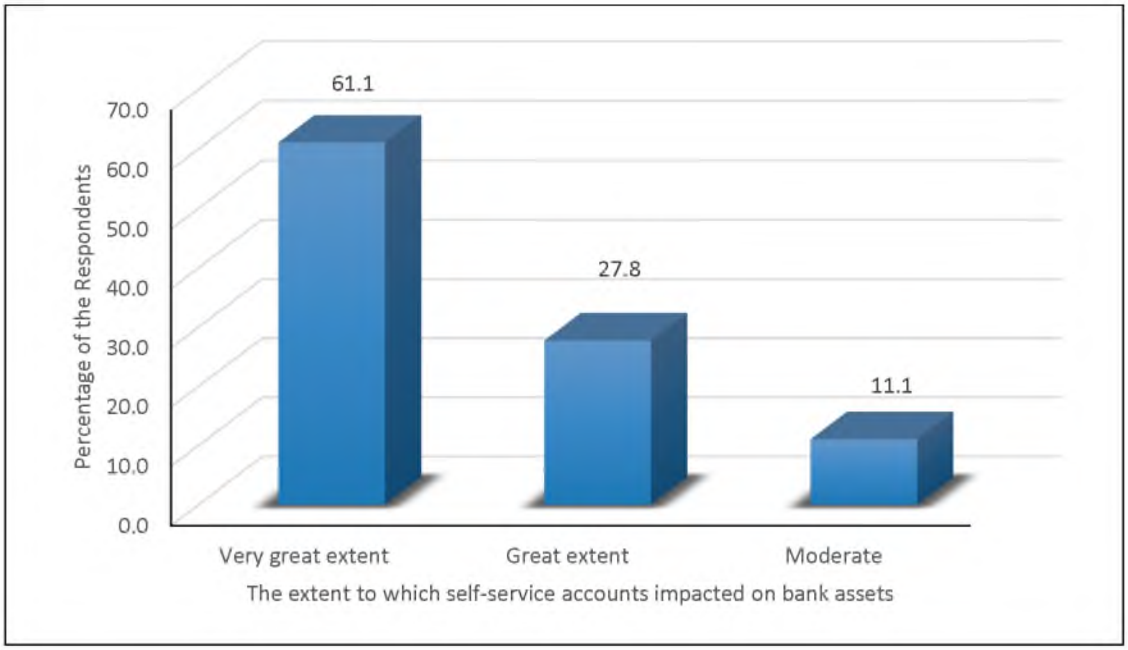


Figure 4.4: The extent to which self-service accounts impacted on bank assets

From the study findings in Figure 4.4, majority of the respondents (61.1%) stated self-service accounts opening had to a very great extent positively affected monetary, non-monetary and total assets at the Commercial Banks in Kenya. The study findings also indicated that 27.8 and 11.1 percent of the respondents stated that self-service accounts opening contributed to monetary, non-monetary and total assets at the banks to great and moderate extents respectively.

The respondents were further asked to rate the statements provided in Table 4. in regard to the impact of self-service accounts opening on Commercial Banks in Kenya. The response was rated on a 5-level Likert scale where:1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree. Table 4.2 shows the mean and standard deviation of the responses.

Table 4.2: The impact of self-service accounts opening on the Commercial Banks in Kenya

Statements	N	Mean	Std. Deviation
1. Reduces the cost of transaction processing	34	4.182	1.202
2. Reduces the need for tellers	34	4.308	1.131
3. Enhances retention of customers	34	4.359	1.006
4. Increases higher consumer satisfaction and loyalty	34	4.256	1.086
5. Improves sales (productivity)	34	4.017	1.143
6. Increases market share	34	4.028	0.994
7.Improves competitiveness through increased market share	34	4.056	1.071
8. Improves reputation through technology advancement	34	4.038	0.917
9. Attracts new customers to the Bank	34	4.076	0.936
10.Enhances organization performance	34	4.128	1.139

From the study findings in table 4.4, majority of the respondents agreed to the statements that self-service accounts opening reduced the cost of transaction processing (M=4.182, S.D=1.202), reduced the need for tellers (M=4.307, S.D=1.132), enhanced retention of customers(M=4.359, S.D=1.006) and increased higher consumer satisfaction and loyalty(M=4.256,S.D=1.086).

The study also established that self-service accounts opening greatly improved sales (M=4.018, S.D=1.143), increased market share(M=4.028, S.D=0.995), improved competitiveness through increased market share(M=4.056, S.D=1.071), improved reputation through technology advancement(M=4.039, S.D=0.918), attracted new customers to the bank(M=4.077, S.D=0.937) and enhanced organization performance(M=4.128, S.D=1.140).

4.4 Savings Product Innovation

The respondents were asked to state the extent to which the banks had incorporated innovation in the savings product. Figure 4.5 shows the findings of the study.

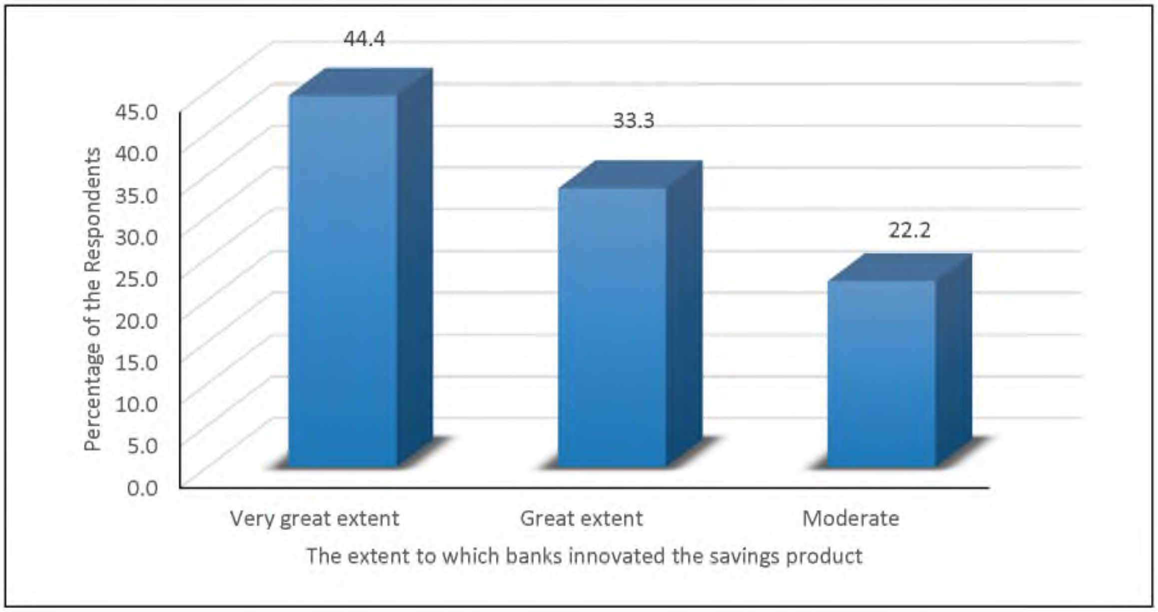


Figure 4.5: The extent to which banks innovated the savings product

From the study findings in Figure 4.1, majority of the respondents (44%) stated that the banks had incorporated innovation in the savings product to a very great extent while 33.3 and 22.2 percent had incorporated innovation in the savings product to great and moderate extents respectively.

The respondents were further asked to indicate the extent to which the savings product innovation contributed to monetary, non-monetary and total assets in your bank. Figure 4.6 shows the findings of the study.

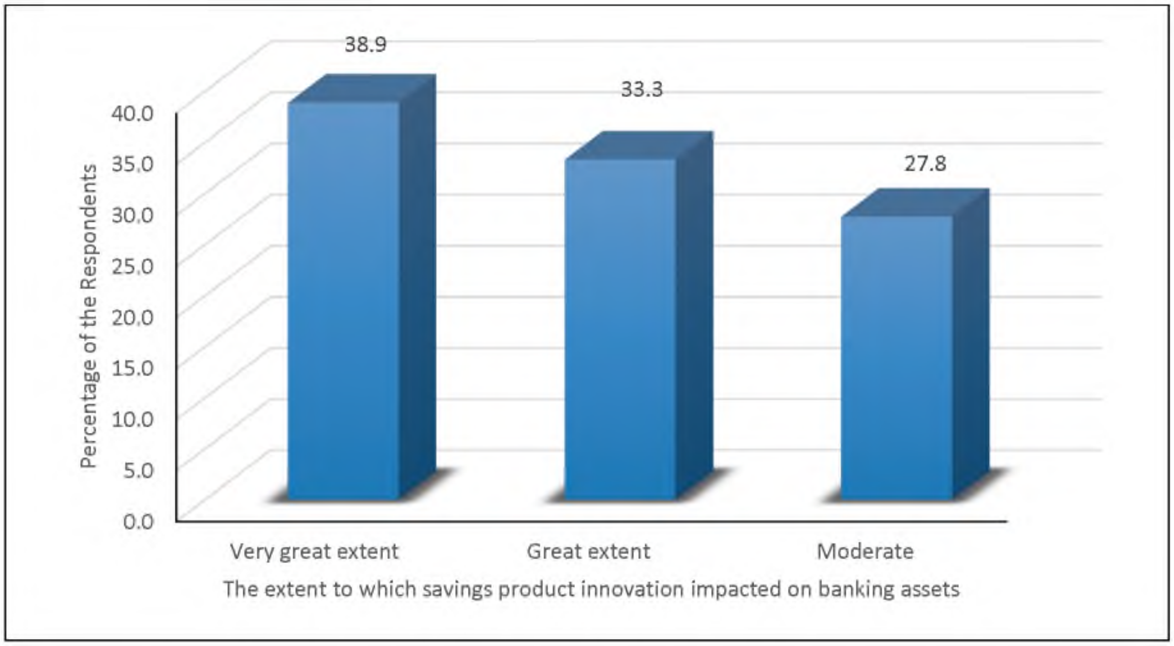


Figure 4.6: The extent to which savings product innovation impacted on banking assets

From the study findings in Figure 4.6, majority of the respondents (38.9%) stated that savings product innovation contributed to monetary, non-monetary and total assets at the Commercial Banks in Kenya. The study findings also indicated that 33.3 and 27.8 percent of the respondents stated that savings product innovation contributed to monetary, non-monetary and total assets at the banks to great and moderate extents respectively.

The respondents were further asked to rate the statements provided in Table 4. in regard to the impact of self-service accounts opening on the Commercial Banks in Kenya. The response was rated on a 5-level Likert scale where:1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree. Table 4.2 shows the mean and standard deviation of the responses.

The respondents were further asked to rate the statements in Table 4.3 in regard to the impact of savings product innovation in your Bank. Table 4.3 shows the mean and standard deviation of the responses.

Table 4.3: The impact of savings production Commercial Banks in Kenya

Statements	N	Mean	Std. Deviation
1. Reduces the cost of transaction processing	34	4.156	1.071
2. Reduces the need for tellers	34	4.138	0.918
3. Enhances retention of customers	34	4.077	0.937
4. Increases higher consumer satisfaction and loyalty	34	4.129	1.140
5. Improves sales (productivity)	34	4.025	1.044
6. Increases market share	34	4.015	1.008
7.Improves competitiveness through increased market share	34	4.104	1.083
8. Improves reputation through technology advancement	34	4.192	1.057
9. Attracts new customers to the Bank	34	4.026	1.116
10.Enhances organization performance	34	4.019	0.986

From the study findings in table 4.3, majority of the respondents strongly agreed to the statements that self-service accounts opening reduced the cost of transaction processing (M=4.156, S.D=1.071), reduced the need for tellers (M=4.138, S.D=0.918), enhanced retention of customers (M=4.077, S.D=0.937) and increased higher consumer satisfaction and loyalty (M=4.129, S.D=1.140).

The study also established that self-service accounts opening greatly improved sales (M=4.025,S.D=1.044), increased market share(M=4.015, S.D=1.008), improved competitiveness through increased market share(M=4.104,S.D=1.083), improved reputation through technology advancement(M=4.192,S.D=1.057), attracted new customers to the bank(M=4.026,S.D=1.116) and enhanced organization performance(M=4.019, S.D=0.986).

4.5 Loans Product Innovation

The respondents were asked to state the extent to which the banks had incorporated innovation in the loans product. Figure 4.7 shows the findings of the study.

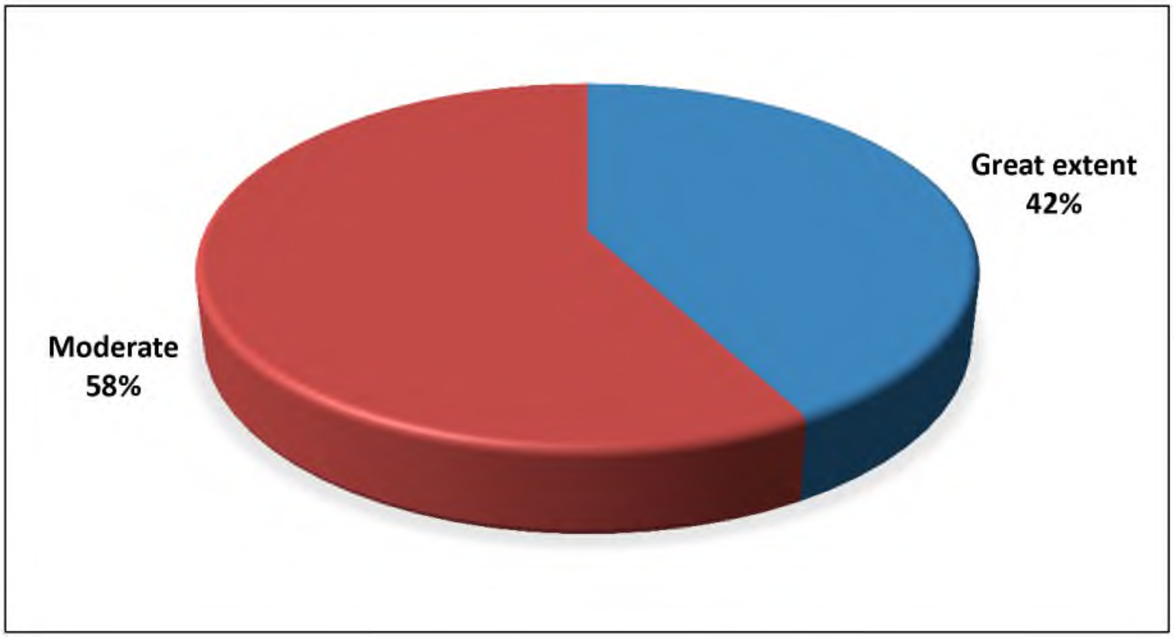


Figure 4.7: The extent to which banks innovated the loan product

From the study findings in Figure 4.7, majority of the respondents (58%) stated that the Commercial banks had incorporated innovation in the loan product to moderate extent and 42 percent stated that the banks had incorporated innovation in the loan product to a great extent.

The respondents were further asked to indicate the extent to which the loan product innovation contributed to monetary, non-monetary and total assets in your bank. Figure 4.8 shows the findings of the study.

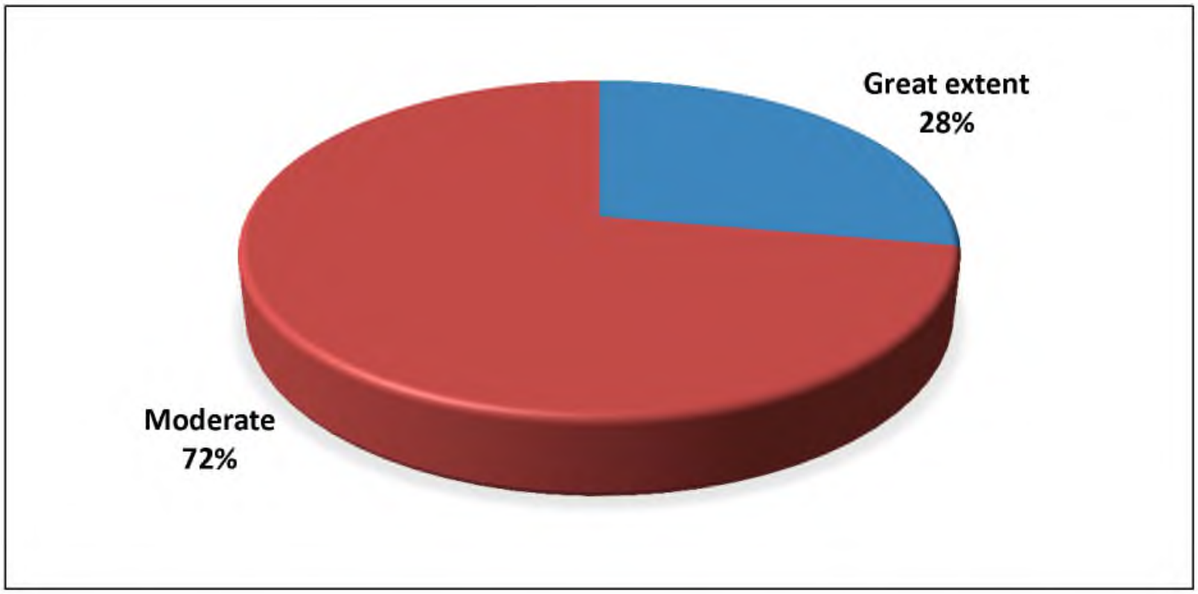


Figure 4.8: The extent to which loan product innovation impacted on banking assets

From the study findings in Figure 4.9, majority of the respondents (72%) stated that loan product innovation moderately contributed to monetary, non-monetary and total assets at the Commercial Banks in Kenya. The study findings also indicated that 28 percent of the respondents stated that loan product innovation greatly contributed to monetary, non-monetary and total assets at the banks.

The respondents were further asked to rate the statements provided in Table 4.4 in regard to the impact of loan production the Commercial Banks in Kenya. Table 4.4 shows the mean and standard deviation of the responses.

Table 4.4: The impact of loan product on the Commercial Banks in Kenya

Statements	N	Mean	Std. Deviation
1. Reduces the cost of transaction processing	34	3.492	1.241
2. Reduces the need for tellers	34	3.361	1.025
3. Enhances retention of customers	34	3.012	1.063
4. Increases higher consumer satisfaction and loyalty	34	3.179	1.041
5. Improves sales (productivity)	34	3.103	1.146
6. Increases market share	34	3.115	1.128
7.Improves competitiveness through increased market share	34	2.962	1.074
8. Improves reputation through technology advancement	34	3.205	1.144
9. Attracts new customers to the Bank	34	2.782	1.286
10.Enhances organization performance	34	3.231	0.867

From the study findings in table 4.4, majority of the respondents moderately agreed to the statements that loan products had reduced the cost of transaction processing (M=3.492, S.D=1.241), reduced the need for tellers (M=3.361, S.D=1.025), enhanced retention of customers (M=3.012, S.D=1.063) and increased higher consumer satisfaction and loyalty (M=3.179, S.D=1.041).

The study also established that loan products moderately improved sales (M=3.103,S.D=1.146), increased market share(M=3.115, S.D=1.128), improved competitiveness through increased market share(M=2.962, S.D=1.074), improved reputation through technology advancement(M=3.205, S.D=1.144), attracted new customers to the bank(M=2.782, S.D=1.286) and enhanced organization performance(M=3.231, S.D=0.867).

4.6 Pay Product Innovation

The respondents were asked to state the extent to which the banks had incorporated innovation in the pay product. Figure 4.5 shows the findings of the study.

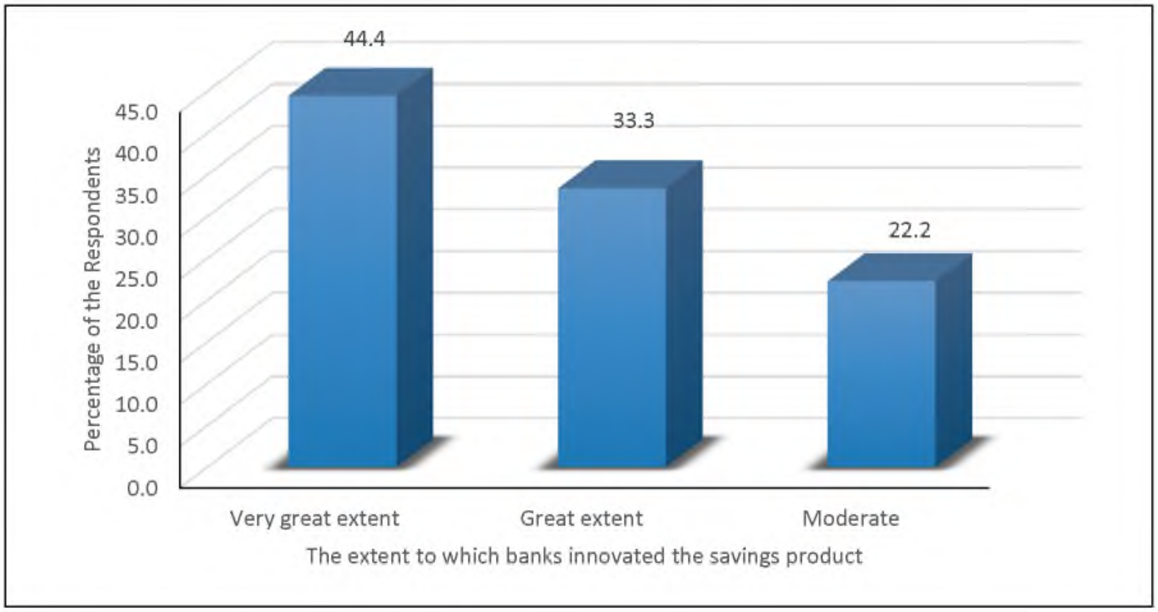


Figure 4.9: The extent to which banks innovated the pay product

From the study findings in Figure 4.1, majority of the respondents (44%) stated that the banks had incorporated innovation in the pay product to a very great extent while 33.3 and 22.2 percent had incorporated innovation in the pay product to great and moderate extents respectively.

The respondents were further asked to indicate the extent to which the pay product innovation contributed to monetary, non-monetary and total assets in your bank. Figure 4.6 shows the findings of the study.

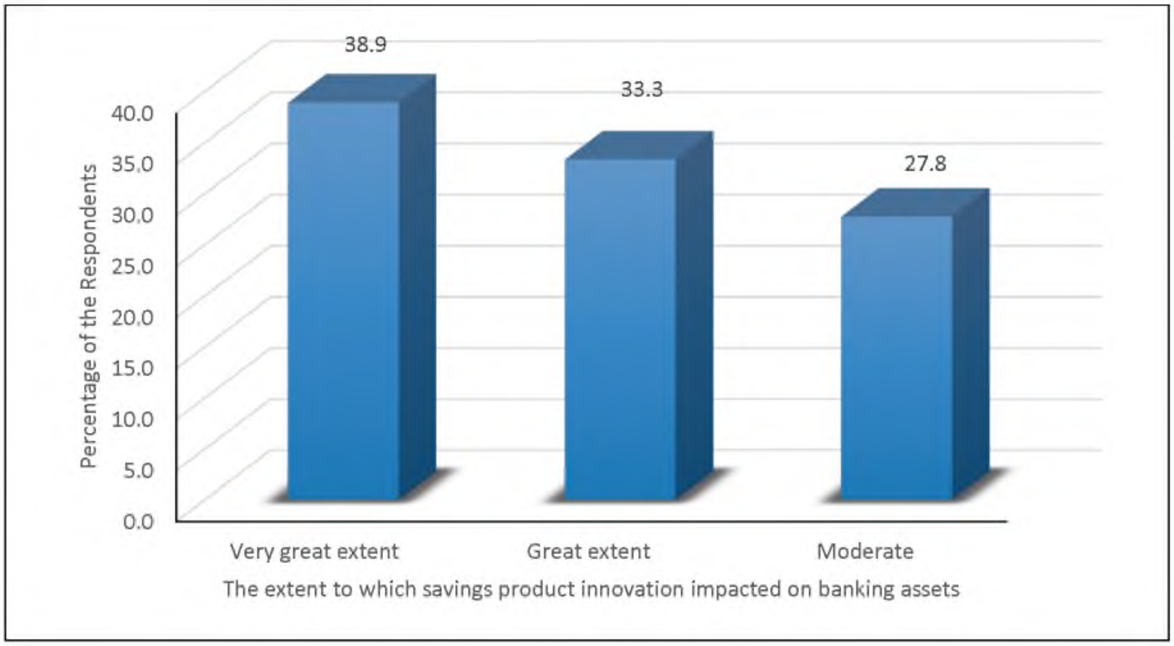


Figure 4.10: The extent to which pay product innovation impacted on banking assets

From the study findings in Figure 4.6, majority of the respondents (38.9%) stated that pay product innovation contributed to monetary, non-monetary and total assets at the commercial banks in kenya. The study findings also indicated that 33.3 and 27.8 percent of the respondents stated that savings product innovation contributed to monetary, non-monetary and total assets at the banks to great and moderate extents respectively.

The respondents were further asked to rate the statements provided in Table 4.5 in regard to the impact of pay production the Commercial Banks in Kenya. Table 4.5 shows the mean and standard deviation of the responses.

Table 4.5: The impact of savings product on the Commercial Banks in Kenya

Statements	N	Mean	Std. Deviation
1. Reduces the cost of transaction processing	34	4.101	1.027
2. Reduces the need for tellers	34	4.133	1.242
3. Enhances retention of customers	34	4.141	0.956
4. Increases higher consumer satisfaction and loyalty	34	4.097	0.998
5. Improves sales (productivity)	34	4.083	1.050
6. Increases market share	34	4.295	0.927
7.Improves competitiveness through increased market share	34	4.192	0.898
8. Improves reputation through technology advancement	34	4.051	0.878
9. Attracts new customers to the Bank	34	4.180	1.137
10.Enhances organization performance	34	4.046	1.091

From the study findings in table 4.5, majority of the respondents strongly agreed to the statements that pay products reduced the cost of transaction processing(M=4.101, S.D=1.027), reduced the need for tellers(M=4.133,S1.242), enhanced retention of customers(M=4.143, S.D=0.956) and increased higher consumer satisfaction and loyalty(M=4.097, S. D=0.998).

The respondents also greatly agreed to the statements that pay products improved sales (M=4.083, S.D=1.050), increased market share(M=4.295, S.D=0.927), improved competitiveness through increased market share(M=4.192, S.D=0.898), improved reputation through technology advancement(M=4.051, S.D=0.878), attracted new customers to the bank(M=4.180, S.D=1.137) and enhanced organization performance(M=4.046, S.D=1.091).

4.7 Financial Performance Indicators

The study established the financial performance indicators in Table 4.6 for the financial year 2016/2017.

Table 4.6: Financial Performance Indicators

Indicators	Mean Value
Annual income from operations (Billion KSh.)	2.3
Profit after tax (Billion KSh.)	0.6
Return on Assets	8.6
Return on Equity	13.5
Share price	25.75
Percentage growth in revenue	0.64
Percentage growth in customers	0.28
Percentage customers retained at the bank	0.25
Percentage reduction in transaction costs	0.16

The study findings in Table 4.6 the mean for various financial indicators captured in the study were as follows: annual income from operations 2.3 Billion KSh, profit after tax 0.6 Billion KSh, return on assets 8.6 percent, return on equity 13.5 percent and share price KSh25.75. The study findings also show a 0.64 percentage growth in revenue, 0.28-percentage growth in customers, 0.25 percentage customers retained at the bank and 0.16-percentage reduction in transaction costs.

The respondents stated that some of the milestones that the bank had accomplished since they started implementing innovations based on self-service accounts opening, savings, loans and pay products were the expansion of digital payments platforms, enhanced communication with customers via mobile phones. The efficiency and enhanced security in the digital transactions encourages more customers to adopt digital payments in partnership with mobile money transfer platforms such as Mpesa and Airtel money.

4.8 Regression Analysis

Multivariate regression analysis was used to determine the relationship between the dependent and independent variables. The following sections discuss the model summary, analysis of variance and regression coefficients.

4.8.1 Model Summary

Table 4.7 shows the R Square value for the regression model indicating the composite effect of the independent variable on the dependent variable.

Table 4.7: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.842[a]	.709	.687	115.362

a. Predictors: (Constant), Pay product, Self-service account, Savings product, Loan product

The coefficient of determination (the percentage variation in the dependent variable being explained by the changes in the independent variables) R Square in the study is 0.709(Table 4.7). Therefore, the predictor variables (pay product, self-service account, savings product, loan product) explain 70.9% of the observed change in the performance of Commercial Banks in Kenya.

4.8.2 Analysis of Variance

Table 4.8 shows the Analysis of Variance (ANOVA) using F statistics in order to determine the fitness of the regression model adopted by the study.

Table 4.8: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	77169.197	4	19292.299	24.1773	.006[b]
1	Residual	23140.621	29	797.952		
	Total	100309.818	33			

a. Dependent Variable: Performance

b. Predictors: (Constant), Pay product, Self-service account, Savings product, Loan product

From the analysis of variance in Table 4.8, the value of F-calculated 24.1773 and the probability value was 0.006, which was less than 0.05, indicated that the model term was significant at the 95% level of confidence. Therefore, the study rejected the null hypothesis that *all of the regression coefficients are equal to zero*. Instead, the study concluded that none of the regression coefficients are equal to zero thus the model was fit for analysis. The regression model was therefore fit for data analysis.

4.8.3 Regression Coefficients

Table 4.9 shows the regression coefficients, t statistics and the corresponding probability values (sig.)

Table 4.9: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1981.829	617.657		3.209	.002
	Self-service account	69.862	31.487	.169	2.219	.031
	Savings product	266.821	28.082	.756	9.502	.000
	Loan product	356.869	71.704	.389	4.977	.000
	Pay product	11.156	4.961	.177	2.249	.029

a. Dependent Variable: Performance

The constant β_o= 1981.829in Table 4.9 shows that if all the independent variables (pay product, self-service account, savings product, loan product) are valued at zero, the dependent variable (the performance of Commercial Banks in Kenya) would be rated at 1981.829.

The regression coefficient shows that a unit change in tself-service account causes a change of magnitude 69.862in the performance of Commercial Banks in Kenya. Similarly, unit changes in savings product, loan product and pay product caused changes of magnitudes 266.821, 356.869, 11.156 in the performance of Commercial Banks in Kenya. The magnitude of the regression coefficients also show that the performance of Commercial Banks in Kenya was greatly influenced by loan product(356.869) followed by savings product(266.821), self-service account (69.862) and pay product (11.156) respectively.

All the regression coefficients were positive indication directs proportionality between the dependent and the independent variables. Therefore, the performance of Commercial Banks in Kenya increased proportionately with the increase in pay product, self-service account, savings product and loan product).

The probability (p) or significance (sig.) values for the t-statistics shows the significance of the relationship between independent and dependent variables. The level of confidence was set at 95% (0.05). Therefore, the probability values show that the performance of Commercial Banks in Kenya was significantly influenced by pay product ($p=0.029$), self-service account($p=0.031$), savings product($p=0.000$) and loan product($p=0.000$).

4.9 Discussion

The main objective of this study was to establish the effect of product innovation on performance of commercial banks in Kenya. This study was propounded by three thematic theories which included the Schumpeter innovation, financial intermediation and innovation diffusion Theories of innovation. Schumpeter Theory of Innovation was introduced in 1928 and it explained the influence of marketing innovations on the capitalist systems whereas Financial Intermediation Theory try to make as understand the intersection of innovation in the banking industry and how it affects the business of financial intermediation and innovation diffusion Theory explained how application of technology influence performance. Thus, all the three theories explained on how product innovation can be used to influence performance of commercial banks in Kenya.

The study established that the performance of Commercial Banks in Kenya was significantly influenced by pay product, self-service account, savings product and loan product. The study findings revealed that product innovation reduced the cost of transaction processing, reduced the need for tellers, enhanced retention of customers and increased higher consumer satisfaction and loyalty. Product innovation also improved sales or productivity, increased market share, improved competitiveness through increased market share, improved reputation through technology advancement and attracted new customers to the bank.

The self accounts services ebnable custoers to carry out their transactions without visting the banks. Similarly DBR Media (2015) notes that although majority of the banks have adopted online account operation and initiated the use of mobiles in account opening procedures. The study findings also indicated that innovation in the savings accounts improved the performance of Commercial Banks in Kenya. The study findings are in agreemenet with Mazer, Ravichandar and Dyer (2017) who estabvlished that savings needed to be a greater part of dialogue. The lenders were likely to be overlooking the role of savings accounts in regard to supporting positive borrowing outcomes when they were offered on the same mobile facilities that customers used to access loans.

The study established that innovation on the loans improved the performance of Commercial Banks in Kenya. Digital credit is one of the distingushed loan products in Kenya. It is premised on numerous models including mobile telephone applications, mobile money wallets, and payroll lending facilities. The study findings are in agreemenet with Kaffenberger and Chege (2016) who stated that these services do offer small-value, short-term loans.

The Commercial Banks in Kenya have innovated paymenet methods by adopting the mobile banking. This enables customers to convenietly cartry out trsactions using mole phones. Mobile financial services play a major role in enhancing financial inclusion of many Kenyans. The study findings are in agreemenet with Francis, Blumenstock and Robin (2017) who established that the use of mobile money transfers and payments is a preliminary step towards formal financial system.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings from chapter four, and also gives conclusions and recommendations of the study based on the objective of the study to establish the effect of product innovation on the performance of Commercial Banks in Kenya. The chapter summarizes the findings of the study on the influence of self-service account opening, saving innovation products, loans innovations product and payments innovation products on the performance of Commercial Banks in Kenya.

5.2 Summary

The background information indicated that majority of the respondents were male (61.1%). The respondents were of different age groups with majority falling in the age bracket 41-50 (33.3%) majority were section manager (50.0%). In regard to the level of education, majority of the respondents were bachelors' degree holders (55.6%). The study findings on the duration of service indicated that majority of the respondents had worked at the banks for more than ten years (55.6%) and had worked at their departments or branches for durations of 6 to10 year.

The study established that product innovation had statistically significant effect on the performance of Commercial Banks in Kenya. The study established that the performance of Commercial Banks in Kenya was significantly influenced by pay product ($p=0.029$), self-service account ($p=0.031$), savings product ($p=0.000$) and loan product ($p=0.000$).

The study established that product innovation in products such as pay product, self-service account, savings product and loan productreduced the cost of transaction processing, reduced the need for tellers, enhanced retention of customers and increased higher consumer satisfaction and loyalty. Product innovation also improved sales or productivity, increased market share, improved competitiveness through increased market share, improved reputation through technology advancement and attracted new customers to the bank.

5.3 Conclusion

The study concludes that product innovation had statistically significant effect on the performance of Commercial Banks in Kenya. The study established that product innovation in products such as pay product, self-service account, savings product and loan product reduced the cost of transaction processing, reduced the need for tellers, enhanced retention of customers and increased higher consumer satisfaction and loyalty. Product innovation also improved sales or productivity, increased market share, improved competitiveness through increased market share, improved reputation through technology advancement and attracted new customers to the bank.

The study concludes that product the success of new product development depends on how effectively you plan. But what matters the most is how well you have researched and brainstormed the ideas that comprehend to needs of the target audience. Moreover, the coordination among teams and vigilance throughout the development phase will also play a key role in success. It will not only address the systematic approach to the new product process but also unifies the team efforts throughout the process.

5.4 Recommendations for Policy Development

The study recommends that banksneed to build capacity of the employees to undertake product innovation initiatives. Employees should be equipped with knowledge and skills in market research, innovation, business development and application of modern banking technology

The study recommends that banks should employ experts in international business law to handle legal issues related to copyright. Legal advisors in banks should be excellent in tie-ups and liaisons and can arrange for permits and product licenses.

The study recommends that banks should invest right technology, machines, and infrastructure that support new banking products and services. Lack of the right kind of machinery can greatly hinder product innovation.

The study recommends that all through the development of new products, banks should test and experiment the product from ideation to production. Research, experimentation, and testing should be followed throughout the development process.

5.5 Recommendations for further study

The study recommends further study on the nexus between interoperability of mobile money platforms and the ease of adoption of mobile banking in Kenya.

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APPENDIXES

Appendix I: Research Questionnaire

SECTION A: Background Information

Please tick (v) the most appropriate information about yourself.

1. Your gender: Male [ ] Female [ ]
2. Age (Years): 21-30 [ ] 31-40 [ ] 41-50 [ ] Above 50 [ ]
3. Position: Head of Department [ ] Department Manager [ ] Section Manager [ ]
4. Your highest level of education: O Level [ ] A Level [ ] Bachelors' degree [ ] Masters' degree [ ]
5. Years of service at the bank: 0-5 years [ ] 6-10 years [ ] over 10 years [ ]
6. Years of service in this department/branch: 0-5 years [ ] 6-10 years [ ] over 10 years [ ]
7. How do you rate your Bank's performance?

   Excellent [ ] Good [ ] Very good [ ] Poor [ ]

SECTION B: Products Innovation Initiatives

8. Are you involved in products innovation at your bank in any manner?

   Yes [ ] No [ ]

9. If Yes, in which ways?

   ……………………………………………………………………………………………

   ……………………………………………………………………………………………

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10. Did your bank introduce new products in the year 2016/2017?

Yes [ ] No [ ]

11. If yes, please list them.

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12. What challenges does your bank encounter when introducing new products?

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SECTION C: Self-Service Accounts Opening

13. To what extent has your Bank introduced self-service accounts opening as a new innovation?

Very great extent [ ] Great extent [ ] Moderate [ ] Little extent [ ]

No extent [ ]

14. To what extent has self-service accounts opening positively affected monetary, non-monetary and total assets in your bank?

Very great extent [ ] Great extent [ ] Moderate [ ] Little extent [ ]

No extent [ ]

15. Kindly rate the statements provided below in regard to the impact of self-service accounts opening in your Bank. Use 5-level Likert scale for your rating by ticking: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree

Statements	**1**	**2**	**3**	**4**	**5**
1. Reduces the cost of transaction processing					
2. Reduces the need for tellers					
3. Enhances retention of customers					
4. Increases higher consumer satisfaction and loyalty					
5. Improves sales (productivity)					
6. Increases market share					
7. Improves competitiveness through increased market share					
8. Improves reputation through technology advancement					
9. Attracts new customers to the Bank					
10. Enhances organization performance					

SECTION D: Savings Product Innovation

16. To what extent has your Bank incorporated innovation in the Savings Product?

    Very great extent [ ] Great extent [ ] Moderate [ ] Little extent [ ]

    No extent [ ]

17. To what extent has savings product innovation contributed to monetary, non-monetary and total assets in your bank?

    Very great extent [ ] Great extent [ ] Moderate [ ] Little extent [ ]

    No extent [ ]

18. Kindly rate the statements provided below in regard to the impact of savings product innovation in your Bank. Use 5-level Likert scale for your rating by ticking: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree

Statements	**1**	**2**	**3**	**4**	**5**
1. Reduces the cost of transaction processing					
2. Reduces the need for tellers					
3. Enhances retention of customers					
4. Increases higher consumer satisfaction and loyalty					
5. Improves sales (productivity)					
6. Increases market share					
7. Improves competitiveness through increased market share					

8. Improves reputation through technology advancement					
9. Attracts new customers to the Bank					
10. Enhances organization performance					

SECTION E: Loans Product Innovation

19. To what extent has your Bank incorporated innovation in the Loans product?

Very great extent [ ] Great extent [ ] Moderate [ ] Little extent [ ]

No extent [ ]

20. To what extent has loans product innovation positively impacted on monetary, non-monetary and total assets in your bank?

Very great extent [ ] Great extent [ ] Moderate [ ] Little extent [ ]

No extent [ ]

21. Kindly rate the statements provided below in regard to the impact of loans product innovation in your Bank. Use 5-level Likert scale for your rating by ticking : 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree

Statements	1	2	3	4	5
1. Reduces the cost of transaction processing					
2. Reduces the need for tellers					
3. Enhances retention of customers					
4. Increases higher consumer satisfaction and loyalty					
5. Improves sales (productivity)					
6. Increases market share					
7. Improves competitiveness through increased market share					
8. Improves reputation through technology advancement					
9. Attracts new customers to the Bank					
10. Enhances organization performance					

SECTION F: Pay Product Innovation

22. To what extent has your Bank incorporated innovation in the Pay product?

Very great extent [ ] Great extent [ ] Moderate [ ] Little extent [ ]

No extent [ ]

23. To what extent has pay product innovation positively impacted on monetary, non-monetary and total assets in your bank?

Very great extent [ ] Great extent [ ] Moderate [ ] Little extent [ ]

No extent [ ]

24. Kindly rate the statements provided below in regard to the impact of pay product innovation in your Bank. Use 5-level Likert scale for your rating by ticking: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree

Statements	**1**	**2**	**3**	**4**	**5**
1. Reduces the cost of transaction processing					
2. Reduces the need for tellers					
3. Enhances retention of customers					
4. Increases higher consumer satisfaction and loyalty					
5. Improves sales (productivity)					
6. Increases market share					
7. Improves competitiveness through increased market share					
8. Improves reputation through technology advancement					
9. Attracts new customers to the Bank					
10. Enhances organization performance					

SECTION G: Financial Performance Indicators

25. The following are financial performance indicators. Please provide figures for the year 2017.

	INDICATORS	2017
1.	Annual income from operations	
2.	Profit per employee	
3.	Profit per account	
4.	Return on Assets	
5.	Return on Equity (RoE)	
6.	Share price	
7.	Percentage growth in revenue	
8.	Percentage growth in customers	
9.	Percentage customers retained at the bank	
10.	Percentage reduction in transaction costs	

26. What are some of the milestones that your bank has accomplished since you started implementing innovations based on self-service accounts opening, savings, loans and pay products?

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27. What are some of the challenges your bank has faced in implementing the products stated in Q. 26?

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28. Any other comments/suggestions?

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Thank you for your participation

Appendix V: List of Commercial Banks in Kenya as at 31stthdecember 2018

1. ABC Bank (Kenya
2. Bank of Africa
3. Bank of Baroda
4. Bank of India
5. Barclays Bank of Kenya
6. Chase Bank Kenya (In Receivership)
7. Citibank
8. Commercial Bank of Africa
9. Consolidated Bank of Kenya
10. Cooperative Bank of Kenya
11. Credit Bank
12. Development Bank of Kenya
13. Diamond Trust Bank
14. Dubai Islamic Bank
15. Ecobank Kenya
16. Equity Bank
17. Family Bank
18. First Community Bank
19. Guaranty Trust Bank Kenya
20. Guardian Bank
21. Gulf African Bank
22. Habib Bank AG Zurich
23. Housing Finance Company of Kenya
24. I&M Bank
25. Imperial Bank Kenya (In receivership)
26. Jamii Bora Bank
27. Kenya Commercial Bank
28. Mayfair Bank
29. Middle East Bank Kenya
30. National Bank of Kenya
31. NIC Bank[16]
32. Oriental Commercial Bank
33. Paramount Universal Bank
34. Prime Bank (Kenya)
35. SBM Bank Kenya Limited
36. Sidian Bank
37. Spire Bank
38. Stanbic Bank Kenya
39. Standard Chartered Kenya
40. Trans National Bank Kenya
41. United Bank for Africa

42. Victoria Commercial Bank

Source (Central Bank of Kenya, 2018)