EFFECT OF DIGITAL BANKING STRATEGIES ON GROWTH OF COMMERCIAL BANKS IN KENYA: AT KENYA COMMERCIAL BANK

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DECLARATION

This research paper is my original work that has not been presented for a degree in any other University, for any other award and where other people's research was used, they have been fully acknowledged.

Signature ……………………………………………Date………………………………

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D61/87080/2016

This research project has been submitted for examination with my approval as university supervisor

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DEDICATION

This research project is dedicated to my parents who have taught me overtime that I can accomplish any task in life through concentration and self-drive.

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I would like to acknowledge the efforts of all those individuals whose contribution and assistance made the completion of this research project possible.

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ABBREVIATIONS AND ACRONYMS

KCB	Kenya commercial bank
CBK	Central Bank of Kenya
ICT	Information Commutation Technology
TAM	Technology acceptance model
UTAUT	Unified theory of acceptance and use of technology
SPSS	Statistical package for social sciences
IMF	International Monetary Fund

ABSTRACT

The aim of this study was to investigate effect of digital banking on growth of commercial banks in Kenya, at Kenya commercial bank. The study was addressed by the following objectives, the effect of internet subscription on the banks loan book, and the effect of mobile subscription on customer deposits and lastly what is the effect of branchless banking on the banks operational costs. The study adopted a descriptive case study research design as it sought to describe the characteristics related to digital banking and growth of commercial banks, estimate the influence and make predictions. The study targeted 200 branch managers of Kenya commercial banks in Kenya as at 31st December 2017 (KCB yearly report, 2017). The study adopted a census approach. Data collected was first coded as per the variables, then data entry done for every research tool filled. After this, descriptive statistics was carried out and presented in pie charts and frequency tables then interpreted to derive meaning with regards to the study objectives. Multiple regression analysis was used to measure the nature, magnitude and relationship among variables. From the regression analysis it can be observed that internet banking has an average effect on loan book, it is also certain that customers are quite aware and have the knowledge of how to use internet banking and are willing to embrace the technology. Despite these results, the study concludes that the technology is not widely accepted due to safety and security issues which respondents think affect customers greatly. Therefore, the uptake of this platform is greatly dependent in safety measures to avoid losses on the customer's side. Based on the information that was analyzed in regard to the study objectives, it is clear that mobile banking has empowered clients to access to supports whenever they need, and they additionally think of it as a financially savvy approach to give banking services to the unbanked. It likewise empowers the clients to save money on exchange cost. For the information investigation finished as to the target it very well may be reasoned that mobile banking penetration in commercial banks has been made easier by many Kenyans being owners of mobile phones. From the regression analysis there is over and above 50% significant influence of branchless banking on the banks operational cost. Digital banking has been a key significant aspect of the organization that has helped in monitoring and controlling bank cost. Despite this finding, there was an average consensus on the issue of whether digital banking has minimal maintenance and operating costs, since the cost of infrastructure might be high in some cases.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Information technology has become a powerful tool that is promoting growth and enhancing competitiveness in banks today (Kamel, 2005). Banking innovations have led to a revolution in banking, changing the industry which was one time quiescent to a vibrant enterprise (Anthony & Harry, 2015). This transformation has implications to the banking industry, currently dominated by commercial banks. Banks have continued to make investments in Information technology products as well as services such as telecommunication, consulting, software, training, hardware and lastly outsourcing (Bradley & Stewart, 2003). According to Korir (2014) some of the banking innovations that are forming part of the growth factors in commercial banks today include Branchless banking, internet banking and mobile banking.

The study was guided by the following theories: transaction cost approach, unified theory of acceptance and use of technology, and and technology acceptance model. Unified theory of acceptance and use of technology implies that the expected usefulness of a system, technology or innovation is anchored on performance expectancy and effort expectancy (Davis, Wang, & Lindridge, 2003). Technology acceptance model focuses basically on effects of perceptions in usefulness of technology as well as adoption intentions (Luarn, & Lin, 2005). Finally transaction cost approach suggests that the adoption of innovations more so in offering banking services, is all inclined towards reduction of cost of operations which serves as one of the most basic goal of any profit making organization.

Commercial banks in Kenya have improved innovation in all service platforms in order to gain a competitive advantage over their fellow banks (Kenya & Momanyi, 2015). Further, commercial banks in Kenya are still employing new innovative ways of doing business such as debit and credit cards, merchant business and agent banking business. These systems have helped banks to grow in terms of customer numbers, loan book, and customer deposits and profit after tax (Kenya & Momanyi, 2015)) .

The motivation of this study was to provide further knowledge on the area of digital banking and its effect on growth of commercial banks in Kenya. Through this study, managers and policy makers in the banking industry will be at an advantage point when making investment decisions regarding digital banking platforms. Therefore, the study investigated digital banking platforms and was able to analyze data which illustrated the effect of these platforms on growth at Kenya commercial bank.

1.1.1 Digital banking strategies

Strategy by an institution is basically a response concerned with making of choices among various investment options and ensuring that the choices made result in long term survival of the organization. Digital banking is one of the anchors of KCB business strategy. To attain this, institutions have to be unique in terms of products or services launched in the market since it will result in sustainable competitive advantage (KCB Annual Report, 2017).

Therefore, commercial banks are continuously faced with stiff competition and challenges from the environment hence the need for development of short term and long term strategies. In order to ensure survival in the banking industry, commercial banks need to study the internal and external environment, choose and implement strategies that will grow their books and customer base (CBK Report, 2015).

This research paper did an in depth study of digital banking strategies as a form of differentiation by commercial banks where investment in innovation and technology has led to development of new products or services in the industry. These innovations have led to growth of commercial banks. At Kenya commercial bank, digital banking strategies have been implemented through mobile banking, branchless banking and internet banking. Currently, the bank has invested in intelligent ATM machines which can accept deposits of up to one million shillings. The bank has re-engineered mobile banking platform to offer loans to farmers and small and medium enterprises. Further, through KCB Mpesa, the bank has been able to increase its customer base to close to 10 million customers (KCB Annual Report, 2017).

Therefore, this paper did an analysis of digital banking strategies and their effect on growth of commercial banks, at KCB. Through these strategies, the bank was able to growth the loan book, reduce operational costs and finally increase customer deposits. This has led to sustained competitive advantage of the institution and guaranteed going concern of the business even in the near future in addition to enabling the bank meet financial needs of the customer base hence improving their banking journey.

1.1.2 Digital Banking

By definition, digital banking is an end to end process where banks replace manual procedures by installation of automated software as solutions which will help reduce number of employee errors and increase speed as well as accuracy of processing customer transactions (Basel Committee on Banking Supervision). According to CBK banking reports, despite the fact that consumers are increasingly adopting the use of digital platforms to conduct their financial transactions, still there is a sign of stagnation due to lack of proper communication of features and benefits by banks. This has in turn affected growth opportunities for banks (Cuesta, Ruesta, Tuesta & Urbiola, 2015).

Currently, there are many issues and discussions around digital banking. Fintech, a new technology by many commercial banks has been incorporated in their operations as a cost differentiation strategy. This has led to a steady increase in non-branch transactions by customers who have since migrated to other channels and avoided banking halls (Central Bank of Kenya, 2011). Recently, commercial banks are investing in intelligent ATM machines which can receive deposits, hence reducing traffic in their banking halls. For banks to survive in this competitive business environment automation of processes through digital banking is critical. There are three major components of digital banking which include branchless banking, mobile banking and internet banking (Mutua, 2013).

This study focused on the effect of branchless banking, internet banking and mobile banking on growth of commercial banks. A change in either of the above variables by banks through investment was able to have positive impact on growth in deposits, loan book and customer base of commercial banks. Hence, investment in digital banking had a positive effect on the dependent variable in the study.

1.1.3 Growth of Commercial Banks in Kenya

The banking sector in Kenya is continuously evolving. Numerous economic challenges have been witnessed within the sector but the industry remains vibrant (Mecagni, Marchettini & Maino, 2015). The industry has grown tremendously occupying a focal spot in the economy of any country. These institutions play a very crucial role in Kenya as intermediaries of financial services (IMF country report, 2018). The industry has grown from 3 government owned banks to 43 banking institutions up to date.

This growth has been majorly attributed to different and evolving banking strategies that ease the way of doing business (World Bank, Kenya overview, 2017). Recently technological banking innovations have been at the forefront of service provision by financial institutions in Kenya today (CBK Report, 2015). Therefore, most commercial banks are focusing on cost management as a long term survival strategy in the largely dynamic banking environment.

The regulatory body of commercial banks in Kenya has been one of the supportive stake holders allowing banks to use innovative platforms. This has enhanced their financial service provision to customers at the same time enabling them to grow in the industry (IMF country report, 2018). The Central Bank of Kenya has had extraordinary influence on growth of commercial banks of Kenya through policies formulated to improve their sustainability, development and existence in the market (CBK, 2015). This study measured growth in terms of deposits, loan book and reduction in operational costs.

1.1.4 Kenya Commercial Bank

KCB offers financial services to the clients and it is head offices are situated in Kenya at Nairobi city. The central bank of Kenya which is the overall banking regulator has licensed the bank. The bank is the largest bank in the Kenya with over US$ 2.65 assets and enjoys the markets with more branches (200 branches) compared to other 44 licensed players in the sector. The bank was established in 1896 when the national bank of India opened its first branch in Mombasa (KCB Annual Report, 2017).

The merger of national and Grindlays bank National bank of India resulted to the development of National and Grindlays bank. The aims of this merger was to diversify the services and taking financial services to the Kenyans. The government later named the bank to Kenya commercial Bank Group in 1970 after gaining the major shareholder. This government shareholding has been reducing since then (KCB Annual Report, 2017).

KCB formally launched its Digital Banking platforms on 9th April 2016.The objective was tap into demand for financial products which was on the rise and untapped across the East African region and also grow with the Information technology trend. Initially, it used to provide products under retail banking as far back as 2007 within its branch network with a department located at Kencom House. The launch paved way for the full roll out of products under the proposition dubbed "(easy banking)" after getting all the necessary approvals from the regulator. The bank was aiming at diversification of its products through use of technology to enable it reach out to customers across East Africa who were not able to access conventional banking services. This was in line with the Bank's long term vision to diversify its products offering in the market (KCB Annual Report, 2017).

KCB has seen major changes from the time digital banking was introduced. There has been a reduction in staff numbers. In the year 2017 alone, the bank reduced staff numbers by more than 1200 as a cost cutting move. (KCB Annual Report, 2017). The bank has opened 16 new branches while reducing staff numbers. This is attributed to the positive effect of digital banking in automating most processes.

1.2 Research Problem

Digital banking is becoming a very important factor in trying to explain growth and development exhibited by banks in the current technological era. There is poor understanding about which drivers of innovation are relevant to studies. Secondly the research and empirical evidence on the impact of technology factors on growth and development of financial institutions is still wanting (Mabrouk & Mamoghli, 2010).

The Kenyan banking industry has been experiencing tremendous changes in their operations. This is due to the dynamics such as the ever changing customer needs, innovation, technological advancements and stiff competition (CBK, 2016). To tackle this market forces that threaten sustainability, growth and development, most banks have embarked on the adoption of innovative banking strategies and technologies including mobile banking, internet banking and branchless banking (Mbithi, 2013).

There are various research gaps which have been sighted from previous studies. Maiyo (2013) conducted a cross sectional study on how the growth of mobile banking has slowed down in the last three years. This is a gap in the methodology adopted by the researcher and this paper adopted a case study research approach.

Okibo and Wario (2014) had a gap in context of their research where they did not consider internet banking as a form of electronic banking. Khrawish and Al-sadi (2011) in their studies concluded that internet banking had least impact on bank growth. Ongare (2013), concluded that innovation had significant contribution to bank growth. This is a gap in findings and recommendations from different researchers contradict. This research paper addressed the gaps above.

Digital banking still remains a fictitious idea to many people. There have been reports of electronic banking system fraud cases being on an upward trend within Kenya. The emergence of digital banking has made an assumption to many minds that they have adopted online banking not understanding the differences.

The researcher therefore came up with relevant recommendations that can be used to create a better platform towards improving digital banking strategies. Therefore the critical question that is yet to be answered by existing literature is; what is the effect of digital banking on the growth of commercial banks in Kenya?

1.3 Objective of the Study

The objective of this study was to establish the effect of digital banking on the growth of commercial banks in Kenya.

1.4 Value of the Study

The study provided great value to practice through providing managers in the banking industry with useful cost cutting insights as they digitize their processes. This research paper was able to provide managers with insights to aid decision making process when selecting viable digital banking platforms to invest in by illustrating the significance of these platforms in their growth. The research paper is of importance to many bank managers who are yet to adopt fully all channels available currently through digital banking and how investing in these channels can significantly improve banks growth.

This research paper provided value to policy makers in the banking industry by recommending approval of the digital banking platforms already in place and illustrating their contribution in growth of the banking industry. The study provided evidence that is of important to policy makers as they create policies on digital banking in the banking industry. Through the findings, policy makers are now at an advantage point by understanding the emerging digital banking innovations hence have the ability to form policies that will be both beneficial to the banks and the economy at large.

This study provided value for theory through contributing further knowledge on this relatively new area of digital banking and its effects on growth of commercial banks in Kenya. Further, this study was able to provide assistance to other academicians as well as researchers with literature as they study digital banking. It provided great suggestions and recommendations for further research in this field and also materials which will now enable build up their research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Literature review can be defined as a review of existing literature which is documented that relates to the subject under investigation. This chapter entailed a review of existing literature on the subject under investigation. This was categorized into theoretical review of the study and empirical review respectively. Theoretical review analyzed existing theories that relate to the area of study. For each of these theories, this study gave a critique and justification on the relation to the area of study. In addition, the chapter also provided an empirical review of both international and local studies on the the effect of digital banking on the growth of commercial banks in Kenya.

2.2 Theoretical Foundations of the Study

Several theories exist pertaining to the concept of growth and impact of information technology on survival of organizations. Taking this into account, this research paper concentrated on three theories only. Their assumptions and justification of use in the study were incorporated. These theories are Unified theory of acceptance and use of technology (UTAUT), Technological acceptance model and Transaction cost economics theory. These theories were analyzed in the sections 2.2.1 to 2.2.3.

2.2.1 Transaction Cost Economics Theory

This theory was originally coined by Niehans (1989). The theory postulates that, cost reduction being one of the basic goals of any institution act as a driver for adoption of strategies that reduce operational costs. This model is the only one, among many technology models, that has proved to explain and predict the use of a system, and has been able to capture most attention of the information system community.

The theory assumes that through use of technology an institution is able to enjoy the benefit of cost reduction because many waste processes get eliminated. Cost reduction allows banks to allocate excess funds to projects that may facilitate growth and development (Anthony & Harry, 2015). In transaction cost economics approach, the main area of concern is the unit of activity versus the transaction with customers.

Therefore the theory proposes alternatives to firms when it comes to deciding whether to invest in different innovative ideas or not despite the capital expenditure involved (Bakar & Ahmed, 2010).In the proposed study however, banks perceive the proponents of this theory and how they view remedies proposed by the theory. This may be wrong and problematic to the institutions due to assumptions and rationale on which it is based. Institutions therefore have their own individual interpretation of the theory depending on the changes in the environment.

A critique to this theory is that associations are not dismissible aspects for organizing efficient transactions when markets underperform. For organizations to actualize sustainable competitive advantage and ensure uniqueness in the market, managing operational costs is critical. Organizations have preferable instances for applying certain sorts of monetary exercises through a rationale that is quite opposite from that used in the market (Batiz-Lazo & Woldesenbet, 2006).

2.2.2 Unified Theory of Acceptance and Use of Technology (UTAUT)

The above theory was developed by Morris, Venkatesh, Davis (2003) who basically did a study of the previous theories on acceptance of technology and formed a unified theory. This theory was formed to explain user's intention to use an information technology system and what behaviors are observed after. The theory was formed through review and merger of various constructs of research done in eight previous models which had been employed to give an explanation of information systems usage behavior.

The theory assumed that there are four areas of predicting user's behavior which include social influence, perceived usefulness, performance expectancy and lastly effort expectancy. The model analysis a particular system which depending on the users age, previous experience, gender and voluntariness of use, they will have direct impact on user behavior and acceptance of technology. UTAUT implies that the expected usefulness of a system is anchored on performance expectancy and effort expectancy (Davis et al. 2003).

This study employed the use of the theory since it has been used in the following studies; Ross (2006) on his study on history of online banking and Okiro and Ndungu (2013) in their study on impact of mobile and internet banking on performance and growth financial institutions in Kenya. Venkatesh although criticizes the theory by stating that the validation tests have found that social influence do not have significant impact on acceptance of a system (Venkatesh et al. 2003).Employees as well as customers will easily accept a system on notion of expected outcomes from use and expected relative advantage of the system.

2.2.3 Technology Acceptance Model

The TAM model was developed by Davis 1989 and is ranked one of the most widely cited research in terms of prediction of adoption of information technology (Legris, Ingham and Collerette, 2003). For technology to be implemented successfully, users have to perceive that the new system will useful to them in terms of making their work easier. The model focuses basically on effects of perceptions in usefulness of technology as well as adoption intentions (Lin & Luarn, 2005).

The model made the following assumptions regarding user motivation factors; perceived ease of use, the perceived usefulness and lastly the attitude toward using a system. User attitude is a major factor in regards to whether a system will be accepted. This attitude is influenced by two doctrines; one is perceived usefulness and perceived ease of use. These two doctrines are hypothesized to be directly influenced by design characteristics of a system.

Justification of this theory is that, for new technology in banking to be a success, it requires acceptance of both employees and customers. Ease of implementation will be based on expected usefulness by users. Digital banking cannot succeed in organizations if there is resistance from users. For example, employees need motivation in order to cross sell and market digital banking platforms to customers while customers need an easy to use system in terms of features and navigation during use (Mbithi, 2013).

2.3 Empirical Review

DeYoung (2005) did a study in US of pure internet banks trying to establish growth and development. The study was able to establish that internet only banks recorded higher growth rate in terms of profits and growth of deposits compared to banks with branch network. This was consistent with the standard Internet banking model which was able to conclude that internet only banks as compared to traditional banks who had branch network were able to grow faster. Internet based banks had better economies of scale and hence were able to operate more efficiently and grow faster.

Aliyu and Tasmin (2007) did a study of performance of internet community banks between the years 1999 to 2001 and was able to observe improved growth of profits through an increase in revenues received from service charges and a further increase in transfers by customers to market deposit accounts of the banks. The study observed positive changes in growth of profitability of Internet community banks in United States between the periods 1999 to 2001. The study further observed minimal changes in the bank’s loan portfolio structure. In addition, the researchers were able to conclude that for banks which adopted internet banking, there was statistically significant increase in their profitability.

Khrawish and Al-sadi (2011) attempted to do a study on the impact of e-banking on banks in Jordan and their profitability between the periods (2000-2009). Their study was able to find out that there was minimal impact of e banking on return on equity but significant impact was noted on return on assets. For banks were able to apply e banking for a period of less than two years, significant impact on the return on assets was not noted. However, banks that invested in e banking for more than two years, for the sample tested, study still did not reveal significant changes in profitability after two years.

Njuru (2007), did research on various challenges in implementation of electronic banking strategy by commercial banks. The objective of this study was to establish challenges faced by banks in establishing and implementing strategies on electronic banking. The target of the researcher was commercial banks in Kenya. The study was able to find out that there exist various challenges in terms of implementation of electronic banking but banks have been able to strategize in order to address these challenges. The various challenges identified include slow adaptation by employees and customers, lack of senior management commitment, high initial capital and technological outlay required among others. The study concluded that there was an urgent need to consider internal as well as external environment when banks were implementing strategies on electronic banking. ATMs, post terminals and the usage of electronic banking components like mobile and internet banking. The research was done based on secondary data from commercial banks as well as CBK reports.

The conclusion of the study was that there exists a strong relationship between e banking and banks profitability since e banking has effect on profits recorded by commercial banks in Kenya. The significance test done by the researcher revealed that the influence of bank innovations on bank profits was statistically significant. This meant that the impact of bank innovations in the research was significant in terms of explaining the profitability of banks.

Okibo and Wario (2014) did an examination of effects of e banking on the customer base of Kenyan banks. The key variables in the study were ATM, card system as well as Electronic funds transfer. The conclusion of the study was that E banking enhanced the growth of customer numbers recorded by Kenyan banks. However, the researcher did not consider internet banking as a form of electronic banking and hence this left a gap in the study. This research paper considered internet banking as a variable under digital banking.

2.4 Summary of Literature Review

De Young 2005 on his study on internet banks and growth of customer deposits and growth of profits did observe that that internet only banks were able to grow faster than the traditional banks with a branch network. This was supported by Aliyu and Tasmin (2007) who observed that for banks that adopted internet banking, there was statistically significant improvement in bank profitability. Ongare (2013), did conclude in his study that bank innovations had significant influence in the growth in terms of profitability.

According to Okibo and Wario (2014) their observation was that internet banking was not considered as part of electronic banking, but other studies such as Ongare (2013) conducted a study on effect of systems in electronic banking on the financial performance recorded by banks. The significance test done by the researcher revealed that the influence of bank innovations on bank profits was statistically significant. Khrawish and Al-sadi (2011) in their studies concluded that internet banking had least impact on growth of banks.

This observation by De Young, Ongare, Aliyu and Tasmin were later on opposed by Khrawish and Al-sadi (2011) who attempted to study the impact of e-banking on banks in Jordan and their profitability between the periods (2000-2009). Their study was able to find out that there was minimal impact of e banking on return on equity but significant impact was noted on return on assets. And the study did not reveal significant changes in profitability after two years. This difference in observations forms our research gap, and therefore the need to establish the effect digital banking which will include all the three platforms and how they affect growth of Kenya commercial banks.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter highlighted the method of research that was adopted in the study. Research methodology basically refers to the various steps that are needed to plan data that will be utilized in the analysis. It provides a frame work of how the study is to be carried out (Peffers, Tuunanen, Rothenberger & Chatterjee, 2007). Mathooko (2011) states that research methodology includes the research design, data collection procedures as well as data analysis to be applied in carrying out in the study. The above aspects were discussed in the sections below from section 3.2 to 3.5.

3.2 Research Design

Research design is the plan which directs how the research activities will be undertaken (Cooper & Schindler, 2003). There are various types of research designs which include exploratory, experimental and descriptive designs respectively. Descriptive design aims at describing characteristics of situations and association with others (Cooper & Schindler, 2003).

The study adopted a descriptivecase study research design and it described the characteristics related to digital banking and growth of commercial banks, estimated the influence and make predictions. Therefore, the design developed a plan on how the problem under investigation was solved. The design allowed the use of mixed approach where qualitative and quantitative data were required (Kothari, 2004).

3.3 Population of the Study

Population of study according to (Mugenda & Mugenda, 2003) is a collection of people or objects that share similar features which relate to the subject under investigation in the research which is being conducted. In this research paper, the population was employees who own growth of the business in KCB. Therefore, the paper concentrated on top management and any other staff who have information which relates to the subject of the study.

Target population in this study was the set of units which had were used to generalize the findings (Mugenda & Mugenda, 2003). The study targeted 200 branch managers of Kenya commercial banks in Kenya as at 31st December 2017 (KCB Yearly Report, 2017). The study adopted a census approach. Kothari postulates that when the study population is small a census approach is preferable.

3.4 Data Collection

Both secondary data as well as primary data was used. Primary data was collected through direct interviews especially with staff who had knowledge on digital banking. Quantitative secondary data was collected from KCB annual reports released between the years 2017 to 2019. The specific data provided on digital banking platforms and growth of commercial banks was used in the analysis.

A questionnaire is a research instrument used in gathering of data over a large sample (Kombo 2006).To collect primary data the researcher requested respondents including top management who play a critical role in implementation of digital banking to fill questionnaires. The data collected was analyzed to generate findings.

3.5 Data Analysis

According to Bless et al. (2008), data analysis can be summarized as the process of organizing, manipulating and interpreting data collected in the study. The analysis was able to derive information that was useful in the area of study. In this research paper, data was analyzed using statistical package for social sciences SPSS version 22 and presented through means, standard deviations and percentages in graphs and pie charts.

Data collected was first coded as per the variables in the study. Data entry was done for every research tool filled by the respondents. After this, descriptive statistics was carried out by the researcher and presented in pie charts and frequency tables then interpreted to derive meaning with regards to the study objective. Multiple regression analysis was used to measure the nature, magnitude and relationship among variables.

$$Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \varepsilon$$

Where:

Y = growth of commercial banks X1= Internet subscription X2 = Mobile subscription

X3 = Branchless banking α = intercept

β = slope ε = error term

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Presentation of Research Findings

This chapter presents the information processed from the data collected during the study on the effect of digital banking on growth of commercial banks in Kenyawi th focus to Kenya commercial. The research findings were presented through pie charts and tables. The study targeted 200 branch managers of Kenya commercial bank in Kenya as at 31st December 2017 (KCB yearly report, 2017).

4.1.1 Response Rate

In this research paper, a total of 200 questionnaires were administered and 142 questionnaires were returned for analysis. This represented a 71% response rate which according to Mugenda and Mugenda (2003), is excellent and sufficient for analysis. Table 4.1 below presents the findings.

Table 4. 1: Response Rate

Response Rate	**Branch managers**	**Percentage (%)**
Returned	142	71
Not Returned	58	29
Total Distributed	**200**	**100**

Source: Research data (2019)

4.1.2 Branch Rank

The rank of all branches was measured by average value of transactions of all branches. The following table gave a summary of the average transactions per year of branches that were studied. Branches are ranked into three categories which include small, medium and large. Table 4.2 below presents the results.

Table 4.2: Branch Rank

Average transactions Per year	Branch rank	Small branch	Medium branch	Large branch
2018 (Ksh. Millions)		15473.00	143847.71	364869.00
2019 (Ksh. Millions)		16136.00	172019.50	468841.00

Source: Research data (2019)

4.1.3 Percentage Usage of Digital Banking

To investigate the percentage of usage of digital banking services in branches, the study indicated that on average in 2018 mobile transactions were 42% while in 2019 they increased to 72%. Agency banking and internet banking in 2018 average was 33% while in 2019 transactions carried on agency and internet banking increased to 56%. The following table gave a summary of the average transactions per year of branches that were studied. Table 4.3 below presents the results.

Table 4.3: Percentage Usage of Digital Banking

Year	Mobile transactions	Agency and internet banking
2018 average percentage	42%	33 %
2019 average percentage	72%	56 %

Source: Research data (2019)

4.1.4 Major Reasons that Would Prevent Customers from Using Digital Banking

The results established that most of the respondents identified security issues at 52 % as the highest concern for customers when transacting on digital banking platforms. The second highest concern identified by respondents was lack of skill and knowledge at 16 %, the third highest concern was expensiveness which was at 14 %, the fourth concern identified by the respondents in regards to reasons why customers would avoid using digital banking was the fact that some of them were not convinced of the benefits that come with some of the platforms which was at 10 %, lastly the most least concern was the fact that some customers can get along without digital banking which was at 8 %.

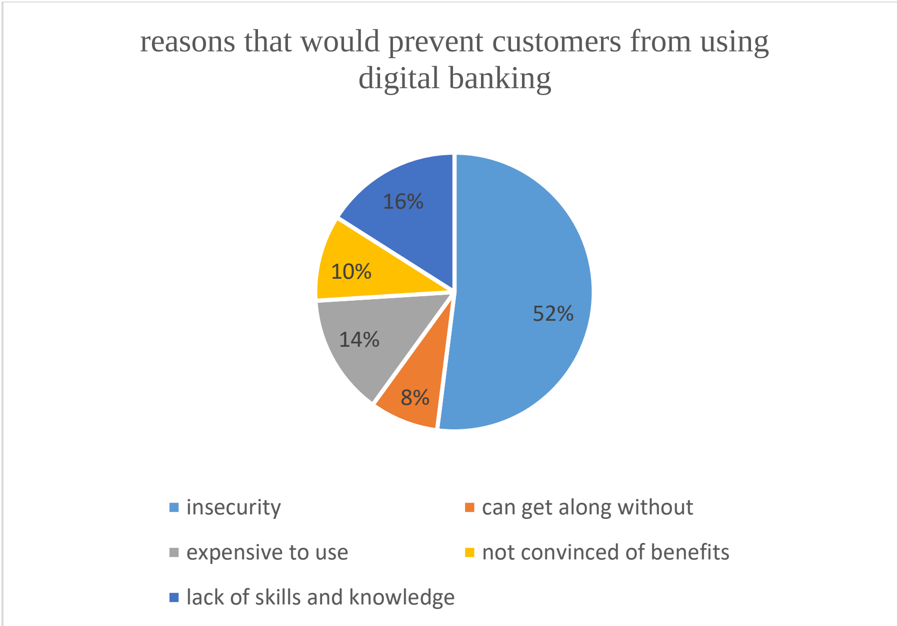

Figure 4.1: Reasons that Would Prevent Customers from Using Digital Banking

Source: Research data (2019)

4.2 Descriptive Statistics

The researcher employed descriptive research design and analysis was done using regression model and presented using tables and charts.

4.2.1 Internet Subscription Influence on Growth of Banks Loan Book

The findings of the study established that most respondents disagreed that customers felt safe while conducting money transactions through internet banking (50.7%), most respondents were of the opinion that customers don't view banks as secure in terms of providing services through internet platforms (32.4%). The respondents were in agreement that internet banking as an outreach tool has led to the increase of customer loans. Throughout the branches, (38%) is the percentage increase.

In regards to whether internet banking has been a key significant tool for marketing bank loan products, most of the respondents were in agreement (36%). Most of the respondents disagreed that being able to access bank services and transact via internet banking reduces the interest rate one has to pay (57%). Lastly all respondents strongly agreed that the overall banks loan book has shown a great improvement through the introduction of internet banking (47.2%). The results were presented in Table 4.4.

Table 4.4: Internet Subscription Influence on Growth of Banks Loan Book

Internet subscription	**SD**	**D**	**N**	**A**	**SA**
	%	**%**	**%**	**%**	**%**
I feel safe conducting financial transactions through the internet	12.7	50.7	4.2	17.6	14.8
My bank is secure in terms of service provision through internet	14.8	32.4	7.7	29.6	15.5
Internet banking has led to increase of loans to customers	9.9	15.5	2.8	33.8	38.0
Internet banking is a key channel for marketing the bank loan products	8.5	18.3	4.2	32.4	36.6
Internet banking is able to provide simple loan interest	42.3	57.7	1.4	0.0	0.0
Internet banking has led to more growth of loan book than our previous traditional delivery channels	4.2	3.5	6.3	38.7	47.2

Source: Research data (2019)

Aliyu and Tasmin (2007) did a study of performance of internet community banks between the years 1999 to 2001 and was able to observe improved growth of profits through an increase in the revenues collected from service charges and a further increase in transfers by customers to market deposit accounts of the banks. The study further observed little there were no change in loan portfolio in the banks. In addition, the study found that for banks that adopted internet banking, there was a statistically significant improvement in the profitability of banks.

Khrawish and Al-sadi (2011) did attempt to do a study on the impact of e-banking on banks in Jordan and their profitability between the periods (2000-2009). Their study was able to find out that there was minimal impact of e banking on return on equity but significant impact was noted on return on assets. For banks that applied e banking for less than two years, there was no significant impact on return on assets. However, banks that invested in e banking for more than two years, for the sample tested, study still did not reveal significant changes in profitability after two years

4.2.2 Mobile Subscription Influence on Growth of Customer Deposits

In regards to the influence of mobile subscriptions on the growth of customer deposits, the results of the study indicated that most respondents were in complete agreement that mobile service providers have affordable costs of sending of receiving money, hence improving customer deposits (64.1%). Secondly most of the respondents agreed that the number of customers has greatly increased which was directly linked to mobile banking (71.1%). The respondents were in agreement (59.2%) that corporate customers are attracted banks due to channels used in our mobile banking service delivery.

Most of the respondents also agreed that the low cost of transacting through m-banking has greatly improved the rate at which customer deposits are growing (76.8%), respondents also strongly agreed that, since mobile phones act as tools of communication, they have helped to improve communication between customers and banks (70.4%). Lastly (80.3%) of the respondents agreed that KCB bank is able to make additional business from customers through growth in deposits which is as a result of mobile banking . The results are shown in the table below.

Table 4.5: Mobile Subscription Influence on Growth of Customer Deposits

Mobile subscriptions	**SD %**	**D %**	**N %**	**A %**	**SA %**
I think mobile service providers have affordable cost of sending or receiving money, hence improving customer deposits	0	7.0	2.1	64.1	26.8
Mobile banking has enabled the bank to recruit more customers	0	4.2	5.6	71.1	19.0
Our service delivery channel for mobile banking attracts corporate customers	0	13.4	4.9	59.2	22.5
I think the cost of subscription is low hence improving customer deposits through m-banking	0	0.0	8.5	76.8	14.8
mobile banking platform has improved or eased communication with customers	0	0.0	3.5	26.1	70.4
Mobile banking has attracted additional business received from customers in addition to deposit maintenance	0	0.0	4.9	80.3	14.8

Source: Research data (2019)

Njuru (2007), did research on the various experienced by commercial banks in implementationof electronic banking strategies.The objective of this study was to establish challenges faced by banks in establishing and implementing strategies on electronic banking. The study was able to find out that there exist various challenges in implementing electronic banking but banks have been able to strategize in order to address these challenges.

The various challenges identified include slow adaptation by employees and customers. Further, lack of senior management commitment, high initial capital and technological outlay required among others. The study concluded that there needs to be both an internal as well as external environmental consideration when implementing digital banking strategy.

4.2.3 Branchless Banking Effect on Operational Cost

The study lastly sought to establish the effect of branchless banking on operational costs of the bank. The findings of the study showed that respondents agreed that branchless banking has greatly cut on costs in the human resource department of the organization (65.5%), the respondents also agreed that introduction of branchless banking has greatly reduced the costs incurred on stationary and printing costs (57.7%).

Thirdly respondents agreed that digital banking has been a key significant aspect of the organization that has helped in monitoring and controlling bank cost (69%), on the issue of whether digital banking has minimal maintenance and operating costs, the respondents agreed on average (47.2%) since the cost of infrastructure might be high in some cases. Lastly respondents were in agreement that digital banking has greatly influenced the growth of customers from the diaspora through services such as M-pesa which now has gone international (39.4%).

Table 4.6: Branchless Banking Effect on Operational Cost

Statement	SD 1 %	D 2 %	N 3 %	A 4 %	SA 5 %

Branchless banking has helped to reduce HR costs	0.0	3.5	4.2	65.5	26.8
Branchless banking has helped to reduced stationery and printing costs.	8.5	12.0	2.8	57.7	19.0
Digital banking has been key in monitoring bank costs	0.0	0.0	7.7	69.0	23.2
Digital banking has minimal operating and maintenance costs.	9.2	14.8	3.5	47.2	25.4
Digital banking is key in recruiting Diaspora customers in cost effective manner	7.7	16.9	4.9	39.4	31.0

Source: Research data (2019)

4.2.4 Criteria for Considering Digital Banking

The figure below shows the criteria that respondents thought customers consider most before deciding whether to use digital banking or not. The most significant factors identified included convenience, trust in bank, security, risk and cost. Security was identified as the most significant at 35% while trust in bank was the least at 8 %.

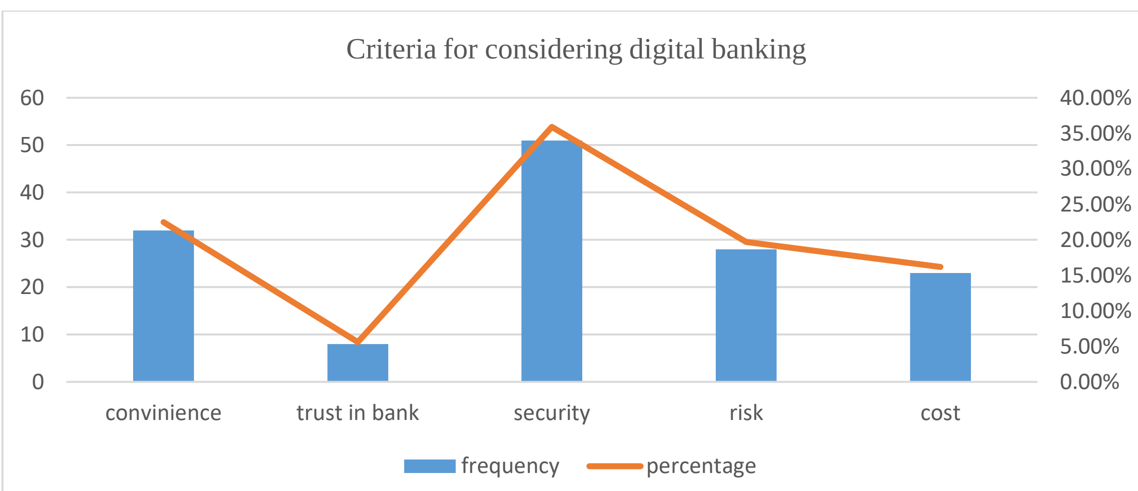

Figure 4.2: Criteria for Considering Digital Banking

Source: Research data (2019)

4.3 Regression Results

The study conducted a cross-sectional OLS multiple regression on the selected independent variables over the period 31st December 2017 - 2019 and results of financial performance.

4.3.1 Analysis and Interpretation

A multiple linear regression analysis was performed this aimed at establishing a linear relationship between the dependent variable and the independent variables. Table 4.7 shows a model summary table which was used to test for the goodness of fit of the model.

Table 4.7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.824[a]	0.679	0.662	0.18526

a. Predictors: (Constant), Internet subscription, mobile subscription, branchless banking

Source: research Data (2019)

The results in Table 4.7 shows that the independent variables explained 66.2% of the variation in growth of the bank as indicated by a coefficient of determination (R^2) value of 0.662. An ANOVA was also performed to test for the significance of the whole model. The results were presented in Table 4.8.

Table 4.8: Analysis of variance (ANOVA)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4.142	3	1.381	40.233	.000[b]
	Residual	1.956	57	.034		
	Total	6.099	60			

a. Dependent Variable: Growth of commercial bank
b. Predictors: (Constant), Internet subscription, Mobile subscription, branchless banking

Source: Research Data (2019)

The results in Table 4.8 revealed that the model significantly predicted growth of Kenya commercial bank, *F*=40233; *p*= <0.0001. Table 4.9 showed the model coefficient Table.

Table 4. 9: Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.180	.387		.466	.643
	Internet subscription	.541	.166	.403	4.473	.000
	Mobile subscriptions	.897	.176	.686	1.688	.047
	Branchless banking	.726	.120	.504	5.226	.000

a. Dependent Variable: Growth of commercial bank

Source: Research Data (2019)

The results in Table 4.9 revealed that internet subscription, mobile subscription and branchless banking significantly predicted growth of Kenya commercial bank at 5% level of significance. This was indicated by significant p-values ($p = < 0.001$, 0.047 and 0.001 respectively).

The model from Table 4.9 was as follows:

$$\mathbf{Y = 0.180 + 0.541\ X_1 + 0.897\ X_2 + 0.726\ X_3}$$

Where **Y** = growth of commercial bank, $\mathbf{X_1}$ = Internet subscription, $\mathbf{X_2}$ = mobile subscription, $\mathbf{X_3}$ = branchless banking

The model indicated that a unit increase in internet subscription increased growth of Kenya commercial bank by 0.541 units; a unit increase in mobile subscription increased growth of Kenya commercial bank by 0.897 units while a unit increase in branchless banking increased growth of Kenya commercial bank by 0.726 units

4.4 Discussion of Results and Findings

The research findings will be discussed below. This was based on results from the analysis above. This will be based on the independent variables influence on dependent variable as per results from the analysis done above. Suggestions will be given based on research findings.

4.4.1 Internet Subscription Influence on Banks Loan Book

The study established that most respondents had the knowledge of internet banking but were skeptical in its usage due to safety that is not guaranteed by the bank. Njuru (2007) established that there are various challenges that come with internet banking. The various challenges identified by Njuru (2007) include safety and security issues which led to slow adaptation by employees and customers. The study also established that most the number of loan customers averagely increased due to internet banking. The respondents highly thought that the banks performance through loan products has barely changed over the two years as a result of internet banking. However, banks that invested in e banking for more than two years, for the sample tested, study still did not reveal significant changes in profitability after two years. Aliyu and Tasmin (2007) in their study further observed little or no changes in the loan portfolio mix of the banks.

The respondents established that internet banking contributed to the growth of the bank's loan book which was significant in improving the banks performance. Increasing loan products for the bank means an improvement on profitability and growth. According to DeYoung (2005) the study was able to establish that internet only banks recorded higher growth rate in terms of profits and growth of deposits compared to banks with branch network.

The study also established that respondents were in agreement that the criteria's used by customers to decide which platform to use were highly based on security and convenience. Most customers will choose digital banking first if it's safe and secondly if it's convenient for them in terms of use and accessibility. This is according to the Technology Acceptance Model developed by Davis 1989 and is ranked one of the most widely cited research in terms of prediction of adoption of information technology (Legris, Ingham & Collerette, 2003). For technology to be implemented successfully, users have to perceive that the new system will useful to them in terms of making their work easier. The model focuses basically on effects of perceptions in usefulness of technology as well as adoption intentions (Lin & Luarn, 2005).

According to Korir (2014) some of the banking innovations that are forming part of the growth factors in commercial banks today include Branchless banking, internet banking and mobile banking (Chau & Lai, 2003). Lastly mobile banking is the simple use of telecommunication gadgets such as mobile phones to engage in financial transactions (Kimani, 2016; Anthony & Harry, 2015).

Unified theory of acceptance and use of technology implies that the expected usefulness of a system, technology or innovation is anchored on performance expectancy and effort expectancy (Davis et al., 2003). Technology acceptance model focuses basically on effects of perceptions in usefulness of technology as well as adoption intentions (Lin & Luarn, 2005). Finally, transaction cost approach suggests that the adoption of innovations more so in offering banking services, is all inclined towards reduction of cost of operations which serves as one of the most basic goal of any profit making organization.

Commercial banks in Kenya have improved innovation in all service platforms in order to gain a competitive advantage over their fellow banks (Daphine, 2015). Further, commercial banks in Kenya are still employing new innovative ways of doing business such as debit and credit cards, merchant business and agent banking business. These systems have helped banks to grow in terms of customer numbers, loan book, and customer deposits and profit after tax. Banks in Kenya are also recruiting more agents across the country to ensure customers can be served at nearest location to their homes or offices conveniently (Daphine, 2015) .

4.4.2 Mobile Subscription influence on Customer Deposits

The study intended to establish the effect of mobile subscriptions on the banks customer deposits. The respondents were in strong agreement that customers have easy access to bank products offered through mobile banking. The respondents also established that through the use of mobile banking as a digital banking platform, customer deposits have been on the rise with a significant growth rate. This implies that the banks performance in the short and long run would improve by increasing its profitability and growth of banks.

The respondents also established that due to digital banking transactions done through mobile phones, the bank has been able to improve its customer base even to corporates. The people in the diaspora have also been tapped. The bank is also conveniently able to market its product to customers and also communicate easily with its customers.

These findings are also supported by two theories that is technology acceptance model theory and Unified Theory of Acceptance and Use of Technology. According to Unified Theory of Acceptance and Use of Technology developed by Morris, Venkatesh, Davis1(2003) assumes that there are four areas of predicting user's behavior which include social impact, saw value, execution hope and lastly effort expectancy. The model analysis a particular system which depending on the users age, previous experience, gender and voluntariness of use, they will have direct impact on user behavior and acceptance of technology (Davis et al., 2003).

Njuru (2007), did research on the various experienced by commercial banks in implementationof electronic banking strategies.The objective of this study was to establish challenges faced by banks in establishing and implementing strategies on electronic banking. The study was able to find out that there exist various challenges in implementing electronic banking but banks have been able to strategize in order to address these challenges. The various challenges identified include slow adaptation by employees and customers, lack of senior management commitment, high initial capital and technological outlay required among others. The study concluded that there needs to be both an internal as well as external environmental consideration when implementing electronic banking strategy.

4.4.3 Branchless Banking Effect on Operational Cost

The study lastly sought to establish the effect of branchless banking on operational costs of the bank. The findings of the study showed that respondents agreed that branchless banking has greatly cut on costs in the human resource department of the organization, the respondents also agreed that introduction of branchless banking has greatly reduced the costs incurred on stationary and printing costs. According to Anthony & Harry, (2015) through use of technology an institution is able to enjoy the benefit of cost reduction because many waste processes get eliminated. Cost reduction allows banks to allocate excess funds to projects that may facilitate growth and development.

The respondents established that digital banking has been a key significant aspect of the organization that has helped in monitoring and controlling bank cost. There was an average consensus on the issue of whether digital banking has minimal maintenance and operating costs, since the cost of infrastructure might be high in some cases. Lastly respondents were in agreement that digital banking has greatly influenced the growth of customers from the diaspora through services such as mpesa which now has gone international. These findings are supported by the economic transaction cost theory by Niehans (1989).

The theory postulates that, cost reduction being one of the basic goals of any institution act as a driver for adoption of strategies that reduce operational costs. This model is the only one, among many technology models, that has proved to explain and predict the use of a system, and has been able to capture most attention of the information system community. (Bakar & Ahmed, 2010) proposed alternatives to firms when it comes to deciding whether to invest in different innovative ideas or not despite the capital expenditure involved.

In the proposed study however, banks perceive the proponents of this theory and how they view remedies proposed by the theory. This may be wrong and problematic to the institutions due to assumptions and rationale on which it is based. Institutions therefore have their own individual interpretation of the theory depending on the changes in the environment. For organizations to actualize sustainable competitive advantage and ensure uniqueness in the market, managing operational costs is critical. Organizations have preferable instances for applying certain sorts of monetary exercises through a rationale that is quite opposite from that used in the market (Batiz-Lazo & Woldesenbet, 2006).

CHAPTER FIVE

SUMMARY, RECOMMENDATIONS AND CONCLUSION

5.1 Introduction

In this chapter the findings of study are discussed with regard to the reviewed literature and conclusions are drawn with recommendations being made at the end. The chapter has subsections divided into discussion, conclusions, recommendation In addition, recommendations for further studies are also highlighted.

5.2 Summary of Findings

From the investigation of the examination it was set up that the vast majority of the respondents concurred that most customers were aware of digital banking services. Further, customers had the ability and the knowledge of how to use various platforms offered under digital banking. The study revealed that most customers would embrace digital banking to serve their needs.

It was also established that most of the respondents were in a position to encourage all of its customers to adopt the use of digital banking services. Despite the small issues that come with such platforms, respondents had the ability to migrate customers to digital platforms. Most respondents agreed that the criteria that most customers use to decide which digital platform to use was security.

From the examination led, it was built up that most the respondents concurred that web banking, which was one of the factors under computerized banking, isn't that well known and not broadly utilized by most clients. The respondents unequivocally felt that most clients maintain a strategic distance from utilization of web banking because of security gives that emerge on such systems. The respondents averagely concurred that the quantity of credit clients has expanded through web banking, they likewise averagely concurred that through web banking the bank has had the option to showcase its items to clients and that the banks advance book has expanded even to clients in the diaspora. In any case, they firmly differ that the bank doesn't offer low loan costs for any item used any clients through web banking.

From the analysis it was established that mobile banking is the most preferred platform under digital banking by customers for engaging in any banking transaction. The respondents agreed that the cost of transacting using mobile phones was very affordable to customers, they also agreed that the overall number of customers and corporate customers in branches has greatly increased due to the convenience provided via mobile subscriptions. It was strongly agreed that lack of charges on deposits has greatly influenced customers to make deposits through m-banking. Respondents also strongly agreed that, since mobile phones act as tools of communication, they have helped to improve communication between customers and banks.

The study lastly sought to establish the effect of branchless banking as a platform under digital banking, on operational costs of the bank. The findings of the study showed that respondents agreed that branchless banking has greatly cut on costs in the human resource department of the organization, the respondents also agreed that introduction of branchless banking has greatly reduced the costs incurred on stationary and printing costs. The respondents established that digital banking has been a key significant aspect of the organization that has helped in monitoring and controlling bank cost. There was an average consensus on the issue of whether digital banking has minimal maintenance and operating costs, since the cost of infrastructure might be high in some cases.

5.3 Conclusion

From the regression analysis it can be observed that internet banking, which is one of the variables of digital banking, has an average effect on growth of KCB loan book, it is also certain that customers are quite aware and have the knowledge of how to use internet banking and are willing to embrace the technology. Despite these results, the study concludes that the technology is not widely accepted due to safety and security issues which respondents think affect customers greatly. Therefore, the uptake of this platform is greatly dependent in safety measures to avoid losses on the customer’s side.

From the findings of this research paper, mobile banking platforms, which form part of digital banking strategies, have improved access of funds by respective bank customers at their convenience and in a cost effective way. This has provided banking services to the unbanked. It also enables the users to save transaction cost. Digital banking penetration in commercial banks has been made easier by many Kenyans being owners of mobile phones.

From the regression analysis there is over and above 50% significant influence of branchless banking on the banks operational cost. Digital banking has been a key significant aspect of the organization that has helped in monitoring and controlling bank cost. Despite this finding, there was an average consensus on the issue of whether digital banking has minimal maintenance and operating costs, since the cost of infrastructure might be high in some cases.

5.4 Recommendations

The study recommends that policy makers need to review and approve cost effective digital banking infrastructure that enhance and promote performance digital banking platforms while at the same time minding the initial capital outlay costs that may affect the banks bottom line in the long run. The study recommends that the government needs to organize create good plans to support the development of civilian technology innovation and also do its part to improve the economic growth and development.

Through the research findings, it was identified that security and safety are the main concerns for customers when it comes to transacting via internet platforms which was one of the variables of digital banking. Despite the knowledge of utilization of this platform the study recommends that the bank needs to first provide safety measures on both ends to boost confidence in customers, the bank should also educate customers on the benefit associated with the use of digital banking platforms.

There should be an inward and outer natural thought while actualizing computerized banking procedures by supervisors. Maiyo (2013) end from his examination was that commission and charges produced from credit and check cards and versatile banking significantly affects returns on resources while expenses earned from web banking and expenses of introducing and keeping up the web banking stage has insignificant impact on the arrival on resources recorded by different business banks in Kenya.

Suggestion to managers in business banks would be that clients should be urged to utilization of advanced financial stages as it will empower them get to their assets whenever they need, and it additionally a practical method to give banking administrations to the unbanked. There exists a solid connection between computerized banking and banks development since it positively affects development recorded by business banks in Kenya. The hugeness test done by the scientist uncovered that the impact of computerized depending on development of business banks was factually noteworthy in clarifying development of business banks. Advanced banking improved the development of client base in Kenyan business banks.

5.5 Limitations of the Study

The study had a number of limitations. These include lack of previous research studies in this area. Digital banking is a sum of internet, branchless banking and mobile banking. Previous studies concentrated on individual variables only. This made a limitation in terms of availability of previous research done on digital banking.

The other limitation of the study was access to people. It was difficult to get access to the branch managers and have them fill out the questionnaire. Some of the respondents could not adequately answer the questionnaire since it involved a few technical questions and figures which they could not easily respond to.

5.6 Suggestions for Further Research

The study looked at the effect of digital banking on the growth of commercial banks specifically at Kenya commercial bank. The study recommends a similar research to be conducted on digital banking in other commercial banks in Kenya. This will allow comparability of findings and coming up with a general conclusion on this relatively new area of study.

Based on the findings of this study on the issue of security impacting or slowing down uptake of digital banking on one of the variables (internet banking) was not expected. Therefore, recommendation to build upon this discovery would be welcome. Therefore, this study would suggest further detailed research on how safety of the platforms affect uptake of digital banking.

As banks take advantage of digital banking strategies as a unique channel for expansion and growth of business, the industry is also faced with continuous changes in the environment. Banks have had to change their structure through innovative use of digital banking in order to achieve cost reduction in their lending and also enable them expand to other geographical markets that have been isolated. While digital banking has grown rapidly, there is not enough evidence of its impact on the growth of banks, particularly within the Kenyan banking industry. The study suggested that further evidence be gathered across other commercial banks on its impact on their growth.

This research paper only considered digital banking strategies as having an effect on growth of commercial banks. The study was done at Kenya commercial bank. The researcher would suggest that studies be done which will consider other factors which would have an effect on growth of commercial banks in Kenya. The model summary only answered 67.9% meaning there are other factors amounting to 32.1% that have not been considered and therefore future research can consider other factors to fill that gap.

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APPENDICES

Appendix I: Letter of Introduction

UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS

Telephone: 020-8095398
Telegrams: "Varsity", Nairobi
Telex: 22095 Varsities

Tel: 020 8095398
Nairobi, Kenya

DATE: ....

TO WHOM IT MAY CONCERN

The bearer of this letter Anthony Muthuri Kirimi of Registration Number D61/87050/2016 is a Master of Business Administration (MBA) student of the University of Nairobi.

He/she is required to submit as part of his/her coursework assessment a research project report.
We would, therefore, appreciate if you assist him/her by allowing him/her to collect data within your organization for the research.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organization on request.

Thank you.

UNIVERSITY OF NAIROBI SCHOOL OF BUSINESS 15 NOV 2017 P.O. Box 30197 - 00100 NAIROBI

for **PROF. JAMES NJIHIA**
DEAN, SCHOOL OF BUSINESS

Appendix II: Questionnaire

This questionnaire aims at obtaining data which will be used in conducting an academic research on: Effect of digital banking on growth of commercial banks, at Kenya Commercial Bank.

SECTION A: Respondents / Organization profile

1. What is your branch/unit name?

………………………………………………………………………………………

2. What is the branch rank?

Small branch [ ] medium branch [ ] Large branch [ ]

3. How many customers are subscribed to digital banking services in your branch?

………………………………………………………………………………………

4. What is the percentage of use of digital banking services compared to other services in your branch?

……………………………………………………………………………………

5. How often do customers use m-banking in your branch/unit?

i. Daily [ ]

ii. Once a week [ ]

iii. Once a Month [ ]

iv. Other [ ]

6. What are the major reasons that would prevent customers from using mobile banking? (Check all that apply)

i. Fear transactions not secure [ ]

ii. Can get along without [ ]

iii. Expensive to use [ ]

iv. Not convinced of the benefits [ ]

v. Lack of the necessary skills and knowledge. [ ]

vi. None

7. Select the criteria that is very important to you in considering mobile banking

i. Convenience [ ]

ii. Trust in bank [ ]

iii. Security [ ]

iv. Risk [ ]

v. Cost [ ]

SECTION B: Internet subscription influence on the growth of banks loan book (relative advantage, safety)

8. Kindly provide your opinion to what extent you agree or disagree with the statements using the scale 1 to 5:

5 = Strongly Agree (SA), 4 = Agree (A), 3 = Neutral (N), 2 = Disagree (D), 1 = Strongly Disagree (SD)

Statement	SD 1	D 2	N 3	A 4	SA 5
I feel safe conducting financial transactions through the internet					
My bank is secure in terms of service provision through internet					
Internet banking has led to increase of loa ns to customers					
Internet banking is a key channel for mark eting the bank loan products					
Internet banking is able to provide simple loan interest					
Internet banking has led to more growth of loan book than our previous traditional delivery channels					

Is security one of the main reasons that would prevent customers in your unit from transacting through mobile banking?

Yes ( )

No ( )

If yes explain why…………………………………………………………………...

SECTION C: Mobile subscriptions influence on growth of customer deposits (Funds transfer charges, Service payment**)**

9. Kindly provide your opinion to what extent you agree or disagree with the statements using the scale 1 to 5:

5 = Strongly Agree (SA), 4 = Agree (A), 3 = Neutral (N),

2 = Disagree (D), 1 = Strongly Disagree (SD)

Statement	SD 1	D 2	N 3	A 4	SA 5
I think mobile service providers have affordable cost of sending or receiving money, hence improving customer deposits					
Mobile banking has enabled the bank to recrui t more customers					
Our service delivery channel for mobile banking attracts corporate customers					
I think the cost of subscription is low hence improving customer deposits through m-banking					
mobile banking platform has improved or eased communication with customers					
Mobile banking has attracted additional business received from customers in addition to deposit maintenance					

How much do you get charged when you transact on your mobile phone

0-50. ( )

51 – 100 ( )

100 – 150 ( )

SECTION D: Branchless banking effect on operational costs (accessibility, ease of use)

10. Kindly provide your opinion to what extent you agree or disagree with the statements using the scale 1 to 5:

5 = Strongly Agree (SA), 4 = Agree (A), 3 = Neutral (N), 2 = Disagree (D), 1 = Strongly Disagree (SD)

Select the criteria that is very important to you in considering digital banking

- Convenience [ ]
- Trust in bank [ ]
- Security [ ]
- Risk [ ]
- Cost [ ]

11. Kindly share any recommendations or suggestions you would have in relation to digital banking effect on growth of commercial banks in Kenya.

Thank you for completing this questionnaire and assisting me in my research.

Kind Regards