FACTORS DETERMINING THE STRATEGIC ADOPTION OF DIGITAL BANKING
BY COMMERCIAL BANKS IN KENYA.

BY
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DECLARATION

I, the undersigned, do declare that this project is my original work and to the best of my knowledge has never been presented or submitted elsewhere else for academic credit.

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Signature: ………………………  Date: ………………………

LECTURER’S DECLARATION:

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

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DEDICATION

It is with sincere gratitude and appreciation that I dedicate this research project to my dear mother Cecilia Waema, my brother and sisters who have been a source of inspiration and determination in my life.
ACKNOWLEDGEMENT

First and foremost, I thank the Almighty God for giving me the strength, humility, patience, good health and courage to creatively come up with this dissertation.

I also acknowledge the UON library and school of Business for all the support they accorded me in line with my research and in particular I would like to thank my supervisor Dr. Justus Munyoki who gave me proper guidance and the much needed support while conducting this research. His effort made possible the completion of this project.

Special thanks go to my family and friends for their prayers and support.
ABSTRACT
The advancement in technology has provided an opportunity for financial service providers to introduce great innovations. The convergence of banking services with electronic technologies means that users are able to conduct banking services at any place and at any time through digital banking thus overcoming the challenges of distribution and use of banking services (Gu, Lee & Suh, 2009). The Kenyan banking industry is embracing digital technology with its due advantages. Internet banking in particular offers the traditional players in the financial services sector the opportunity to add a low cost distribution channel to their numerous different services. Internet banking also creates a threat to traditional banks’ market share as it neutralizes so many of their competitive advantages in having a traditional branch bank network and thus hesitance in its adoption. This research project therefore sought to gain insight on factors and challenges facing the strategic adoption of digital banking in Kenya. The research was guided by the research objectives. This research will be useful for financial institutions looking to adopt digital channels of banking giving them an insight on what to expect and how to tackle any arising issues. It will also form as a good basis for reference in related studies and surveys.

A descriptive survey design was adopted where a sample was selected from the targeted population. A semi-structured questionnaire was formed and was used to collect primary data relevant for this study. The primary data was collected from individuals from 43 commercial banks in Kenya. Collected data was sorted and coded appropriately in statistical package for social sciences (SPSS). Data analysis involved both qualitative and quantitative approaches where tables and charts were used. The interpretation of data analysed from this particular survey revealed that digital banking is desired among many in Kenya. The study also found that, the most used digital services in Kenya were ATM (Automated Transaction Machine) services, Debit cards, electronic funds transfers (EFTs) and mobile banking in descending order of popularity. It was also found that the use of internet banking and credit card is not as popular as the other services. Customers’ main sources of information were “bank employees’ and ‘respective employers’. It was established that “security concerns”, “digital banking cost of adoption” and “customer perception and preference” were the three major challenges hindering the strategic adoption of digital banking in Kenya. Amongst the recommendations of this study is that while designing digital Systems, customers needs should be put into consideration so that the focus is not too much on technology to the detriment of customer needs. It is also recommended that customers be educated on the digital banking platforms.
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CHAPTER ONE
INTRODUCTION

1.1 Background of the Study
Digital banking channels have steadily grown to become a standard offering of most banks. When a new innovation appears it attracts attention and the attention to the different channels of banking which is due in part to the rapid growth of e-commerce. Despite this attention very little is known of how the digital banking channels work e.g. internet banking, mobile banking, telephone banking, ATM banking, Electronic Funds Transfer e.t.c. Internet banking has been noted to be one channel within the electronic banking (e-banking) bundle (Luštšik, 2003), he defines e-banking as being a combination of the following platforms: Internet banking (or online banking), telephone banking, TV-based banking, mobile phone banking, and PC banking (or offline banking). Strategy has been defined as the pattern or plan that integrates an organization’s major goals, policies, and action sequences into a cohesive whole. A well-formulated strategy helps to marshal and allocate an organization’s resources into a unique and viable posture based on its relative internal competencies and shortcomings, anticipated changes in the environment, and contingent moves by intelligent opponents (Quinn, 1980).

This study focuses on the strategic adoption of digital banking by commercial banks in Kenya. The study will focus on use of behavioral theories like, the theory of reasoned action, theory of planned behaviour and diffusion of innovation model which will gives us a better understanding of the human behavior. The theory of reasoned action (Ajzen & fishbein, 1980) provides a model that has potential benefits for predicting the intention to perform a behaviour based on an individual’s attitudinal and normative beliefs provides a model that has potential benefits for predicting the intention to perform a behaviour based on an individual’s attitudinal and normative beliefs. Technology Acceptance Model (TAM) Venkatesh et. al., (2003) is an adaptation of the Theory of Reasoned Action (TRA) . TAM argues that perceived usefulness and perceived ease of use determine an individual's intention to use a system with intention to use serving as a mediator of actual system use. Lastly, Diffusion of Innovations model E.M. Rogers (1995) seeks to explain how innovations are taken up in a population. An innovation is an idea,
behaviour, or object that is perceived as new by its audience. These models have been widely used to evaluate a range of consumer. It is therefore essential for strategic managers to understand the human behaviour to be able to come up with products and services that will be adopted by the general public.

All banking institutions need strategic planning to have a smooth running of operations as well as attainment of visions through living their missions. The banking sector is seen as one very competitive industry due to the similarities in their products and services offered and it is therefore important they understand that they need to stand out and have an edge over its competitors. With the introduction of the digital banking channels, adoption of these channels by the target market has proved to be a challenge. This in turn calls for the formulation and implementation of different strategies by the banks to ensure successful adoption by the public. This is basically due to the fact that strategy formulation, analysis of alternative strategies, and strategic choice; although important; alone cannot ensure success (Pearce & Robinson, 1991).

1.1.1 The Concept of Strategy
Wheelen and Hunger (2008) have defined strategy as the comprehensive master plan that states how a corporation will achieve its mission and objectives. A strategy enables the corporation to maximize its competitive advantage while minimizing its competitive disadvantage. The typical business firm usually considers three types of strategy: corporate, business, and functional. Corporate strategy describes a company’s overall direction in terms of its general attitude toward growth and the management of its various businesses and product lines. Corporate strategies typically fit within the main categories of stability, growth, and downsizing. Business strategy usually occurs at the business unit or product level and emphasizes improvement of the competitive position of a corporation’s products or services in the specific industry or market segment served by that business unit. Functional strategies, on their part, emphasize the approach taken by a functional area to achieve corporate and business unit objectives and strategies by maximizing resource productivity. However, Business firms use all three types of strategy simultaneously.
Business strategy is defined as a company’s directional signals. Business strategies are the basic action decisions which blueprint management’s efforts toward achievement of its purposes. Such efforts involve key decisions for delegating company resources to business activities over both the short and the long term. Business strategies, therefore, are concerned with deciding on what kinds of products or services should be provided, the geographic coverage of the company, what its channels of distribution should be, how its product development would be undertaken, and how its markets will be captured, developed and maintained. Wheelen and Hunger (2008)

1.1.2 The Concept of Digital Banking

Digital banking/electronic banking is the use of electronic means to deliver banking services, mainly through the Internet. The term is also used to refer to ATMs, telephone banking, use of plastic money, mobile phone banking and electronic funds transfers. Digital Banking means that banking services such as services introduction, loan applications, account balance enquiry, funds transfer, statement request, chequebook requisition, debit and credit card requests and so forth are provided by the bank through digital means of banking. Digital banking has evolved into a one step service and information unit that promises great benefits to both banks and consumers.

Digital banking is set to overtake branch networks as the preferred access channel for how customers will interact with their bank by 2015, according to PwC’s report (2011), ‘The new digital tipping point’. There is evidence that banks are not responding quickly enough to develop a vital new source of revenue growth and that many are missing the digital innovations that are radically changing business models and redefining customer experiences in many business sectors. Price Water Cooper’s (PwC 2011) research found that customers are willing to pay for digital banking when they believe it offers convenience and value. For example, social media notifications, an e-wallet for loyalty cards and financial tools provided by banks, are seen as added value and could be charged to customers.

Digital communication is pervasive; from mobile phones to tablet computers, we are immersed in digital. Recent development of new digital features has led to issues such as improvements in
the user-experience design through interactive, game-like interfaces that are starting to merge the boundaries between the real and the virtual and bringing data to life through rich visualizations. Advances in mobile devices and networks, have also been witnessed providing new services such as enhanced digital security and the ability to access the Internet from anywhere. There has also been a rise of social media and collaboration tools, empowering customers and employees, and moving control of the ‘brand message’ from businesses to consumers. Innovation in digital analytics and predictive models, driving deeper insight into customers’ behaviour and enabling highly targeted and relevant treatment strategies to be executed through digital media and also new channel integration technologies, enabling a more seamless end-to-end experience for customers with their bank. The young generation is also seen to be fully embracing digital communication and is the customer group with whom banks need to establish customer primacy relationships. The advantage for a bank being the primary digital bank for its customers is increased share of wallet and higher revenue over time, based on a strong sense of customer loyalty and good customer service.

1.1.3 Adoption of Innovations in Kenyan Banks

Adoption has been explained as a decision to make full use of an innovation as the best course of action (Rogers, 1985). Adoption is the acceptance and continued use of a product, service or idea. According to Rodgers and shoemaker (1997), consumers go through a process of knowledge, persuasion, decision and confirmation before they are ready to adopt a product or service. Electronic banking is the newest delivery channel in many developed countries and there is a wide agreement that the new channel will have a significant impact on the bank market (Daniel, 1999). Internet banking offers the traditional players in the financial services sector the opportunity to add a low cost distribution channel to their numerous different services. Internet banking also creates a threat to traditional banks’ market share for it neutralizes so many of their competitive advantages in having a traditional branch bank network. (Nehmzow, 1997).
Kenyan banks have exponentially embraced the use of information and communication technologies in their service provision. They have invested huge amounts of money in implementing the self and virtual banking services with the objective of improving the quality of customer service. Some of the ICT-based products and services include the introduction of SMS banking, ATMs, Anywhere banking software’s, Core banking solution, Electronic clearing systems and direct debit among others. In mid 2005, Kenya’s banking Industry moved a milestone by introducing Real Time Gross and Settlement system (RTGS) which was renamed Kenya Electronic Payment and Settlement system (KEPSS). This will facilitate the inter-bank financial data transfer. The development of e-banking services is expected to decongest banking halls and reduce the incidences of long queues in banking halls. Digital– based financial services have made a significant contribution in covering the cost of offering financial services.

The banking industry has also over years continued to introduce a wide range of new products, prompted by increased competition, embracing ICT and enhanced customer needs. As a marketing strategy, the new products offered in this segment of market, continue to assume local development brand names to suit the domestic environment and targeting the larger segment of local customer base. It is however, important that the introduction of these products be accompanied with programs to broaden consumer horizon by enhancing their knowledge in the new and more innovative way of conducting banking business. (Nyangosi, 2009).

Continuous technology development, particularly information technology revolution of the last two decades of the 20th century has forced the banks to embrace digital banking as a strategy for their sustainable growth in an expanded competitive environment. Digital banking has made the financial transactions easier for the participants and has introduced wide range of financial products and services. This technology has changed the operations of many businesses, and has been becoming a powerful channel for business marketing and communication (American Banker, 2000). Wah (1999) argues that traditional banks will not disappear in the future. Instead, the new technology will put them on a new level in banking services. She concludes that even
traditional banks will benefit from this new technology, and the banks will be able to care for their customers in a more efficient, more productive and even more fun way.

1.1.4 The Banking Industry in Kenya

The Banking industry in Kenya is governed by the Companies Act, the Banking Act, the Central Bank of Kenya Act and the various prudential guidelines issued by the Central Bank of Kenya (CBK). The banking sector was liberalised in 1995 and exchange controls lifted. The CBK, which falls under the Minister for Finance docket, is responsible for formulating and implementing monetary policy and fostering the liquidity, solvency and proper functioning of the financial system.

For the quarter ended March 31st, 2013, the Kenyan banking sector comprised 43 commercial banks, 1 mortgage finance company, 8 deposit taking microfinance institutions, 7 representative offices of foreign banks, 108 foreign exchange bureaus and 2 credit reference bureaus. As at December 2008 there were 46 banking and non bank institutions, 15 micro finance institutions and 109 foreign exchange bureaus. The banks have come together under the Kenya Bankers Association (KBA), which serves as a lobby for the banking sector’s interests and also a forum to address issues affecting members. Over the last few years, the Banking sector in Kenya has continued to growth in assets, deposits, profitability and products offering. Players in this sector have recently experienced increased competition resulting from increased innovations among the players and new market entrants.

1.2 Research Problem

Digital banking as a new alternative way of meeting the customer’s needs continue to face challenges in its adoption. Some of the major challenges faced include: unfamiliar technology not well understood by its potential users, lack of enough capital for the banks to be able to adequately fund the various digital channels, security issues arising from fraud cases, as well as increased competition among the various banks. However more customers are turning to the
digital banking channels from the traditional banking channels. The increased adoption of digital banking has led to many Kenyan banks try to come up with products and services to meet the new found demand for their consumers.

Several studies focusing on the banking sector have been undertaken by different scholars for instance; Zheng and Zhong (2005) examined the trend in the internet revolutions that have set the Chinese banking sector in motion and the Factors which have influenced the adoption of Internet Banking in china. Meanwhile Ochieng (1998) did an analysis of factors considered important in the successful implementation of information systems: A case study of commercial banks in Kenya while Onyango (2004) examined the adoption and usage of ATMS installed by banks in Kenya and Otieno (2006) studied an investigation into internet banking technology adoption among Kenya Commercial Banks. Similarly, Nyangosi and Arora (2009) focused on the adoption of internet banking in Kenya, the perceived usefulness of mobile banking, analysis of the banking services provided by internet and mobile phone banking, the study revealed that ATM technology was the most available technology in user’s banks. Therefore internet banking was gained popularity and become vital in financial transaction events, Information Technology state is at initial stages and the study was useful to institutions planning to offer digital financial services especially internet banking and mobile banking to know the extent it can be used by customers and the services already in the market. Hellen (2011) on the other hand studied the response by commercial banks in Kenya to the introduction of mobile money transfer. In her study she found out that most of the banks have not adopted the mobile money transfer service though it was also clear from her research that banks could not afford to avoid the new innovation since it meant more penetration to the stiff market and growth for the bank as a whole.

From the above studies, it is clear that there exists knowledge gaps in this area that still seek to be addressed especially in the Kenyan banking industry. The study therefore seeks to establish the factors determining the strategic adoption of digital banking by commercial banks in Kenya.
The research will be guided by the following research question: What are the factors determining the strategic adoption of digital banking by commercial banks in Kenya.

1.3 Research Objectives
The following were the objectives of this study:

i. Establish the factors determining the strategic adoption of digital banking by Commercial Banks in Kenya

ii. Examine the challenges faced by Commercial Banks in Kenya on the strategic adoption of digital banking.

1.4 Value of the Study
This study aims at enriching the knowledge and understanding of the factors determining strategic adoption of digital banking by commercial banks in Kenya. The research will be useful in other banks looking to adopt digital channels of banking giving them an insight on what to expect and how to tackle any arising issues.

The study will also provide a source of literature for academicians and other researchers studying the digital banking world. It will form basis for further research therefore providing suggestions for further research in the area of digital banking and also provide material to build their research.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction
This chapter covers an overview of related literature on the strategic factors determining the adoption of digital banking will be highlighted, while aiming to building a theoretical framework for the research problem. Benefits and challenges faced by both commercial banks and customers will also be discussed.

2.2 Theoretical Foundation
Organizations will continue to invest in Information Technology in the hope that it will improve their business process and increase their productivity. However, for technologies to improve productivity, they must be accepted by intended users (Venkatesh et al., 2003). Venkatesh et al., (2003) note that research in understanding user acceptance of new technology has resulted in several theoretical models with roots in information systems, psychology and sociology.

The theory of reasoned action is a model for the prediction of behavioral intention, spanning predictions of attitude and predictions of behavior. The subsequent separation of behavioral intention from behavior allows for explanation of limiting factors on attitudinal influence (Ajzen, 1980). The theory of reasoned action posits that individual behavior is driven by behavioral intentions where behavioural intentions are a function of an individual's attitude toward the behaviour and subjective norms surrounding the performance of the behaviour. Attitude toward the behavior is defined as the individual's positive or negative feelings about performing a behaviour. It is determined through an assessment of one's beliefs regarding the consequences arising from a behavior and an evaluation of the desirability of these consequences. Formally, overall attitude can be assessed as the sum of the individual consequence x desirability assessments for all expected consequences of the behavior. Subjective norm is defined as an individual's perception of whether people important to the individual think the behavior should be performed. The contribution of the opinion of any given referent is weighted by the
motivation that an individual has to comply with the wishes of that referent. Hence, overall subjective norm can be expressed as the sum of the individual perception x motivation assessments for all relevant referents. The model has some limitations including a significant risk of confounding between attitudes and norms since attitudes can often be reframed as norms and vice versa. A second limitation is the assumption that when someone forms an intention to act, they will be free to act without limitation. In practice, constraints such as limited ability, time, environmental or organisational limits, and unconscious habits will limit the freedom to act. The theory of planned behavior (TPB) attempts to resolve this limitation.

Technology Acceptance Model (TAM) is an adaptation of the Theory of Reasoned Action (TRA) to the field of IS. TAM argues that perceived usefulness and perceived ease of use determine an individual's intention to use a system with intention to use serving as a mediator of actual system use. Perceived usefulness is also seen as being directly impacted by perceived ease of use. Researchers have simplified TAM by removing the attitude construct found in TRA from the current specification (Venkatesh et. al., 2003). Attempts to extend TAM have generally taken one of three approaches: by introducing factors from related models, by introducing additional or alternative belief factors, and by examining antecedents and moderators of perceived usefulness and perceived ease of use (Wixom and Todd, 2005). TRA and TAM, both of which have strong behavioural elements, assume that when someone forms an intention to act, that they will be free to act without limitation. In practice constraints such as limited ability, time, environmental or organisational limits, and unconscious habits will limit the freedom to act.

The diffusion of innovation model research was done as early as 1903 by the French sociologist Gabriel Tarde who plotted the original S-shaped diffusion curve. Tardes' 1903 S-shaped curve is of current importance because "most innovations have an S-shaped rate of adoption" (Rogers, 1995). The diffusion research centers on the conditions which increase or decrease the likelihood that a new idea, product, or practice will be adopted by members of a given culture. Diffusion of innovation theory predicts that media as well as interpersonal contacts provide information and influence opinion and judgment. Studying how innovation occurs, E.M. Rogers (1995) argued
that it consists of four stages: invention, diffusion (or communication) through the social system, time and consequences. The information flows through networks. The nature of networks and the roles opinion leaders play in them determine the likelihood that the innovation will be adopted. Innovation diffusion research has attempted to explain the variables that influence how and why users adopt a new information medium, such as the Internet. Opinion leaders exert influence on audience behavior via their personal contact, but additional intermediaries called change agents and gatekeepers are also included in the process of diffusion. Five adopter categories are: innovators, early adopters, early majority, late majority, and laggards. These categories follow a standard deviation-curve, very little innovators adopt the innovation in the beginning (2.5%), early adopters making up for 13.5% a short time later, the early majority 34%, the late majority 34% and after some time finally the laggards make up for 16%.

This theory states that diffusion is the “process by which an innovation is communicated through certain channels over a period of time among the members of a social system”. An innovation is “an idea, practice, or object that is perceived to be new by an individual or other unit of adoption”. “Communication is a process in which participants create and share information with one another to reach a mutual understanding” (Rogers, 1995). Diffusion research has focused on five elements one of them being the characteristics of an innovation which may influence its adoption; the decision-making process that occurs when individuals consider adopting a new idea, product or practice; the characteristics of individuals that make them likely to adopt an innovation; the consequences for individuals and society of adopting an innovation and finally communication channels used in the adoption process.

2.2.1 Strategic Adoption of Innovations in Banking
It has been proved that electronic banking channel is the cheapest delivery channel for banking products once established (Sathye, 1999; Robinson, 2000). Some of these channels include: ATM (Automatic Teller Machine), Telephone banking, Mobile banking, Internet banking, Credit card, Debit card etc. Digital banking also allows banks to reach a whole new market/ Customer Base, because there are no geographic boundaries with the digital means. Banks can become
more efficient than they already are by providing various digital channels access for their customers. The electronic means bring about an almost paper less system and enable banks to be eco-friendly. Superior Customer Service and Satisfaction experience is afforded to the customer by availing have a full range of services to them e.g. online banking, SMS banking, mobile banking, ATM banking but it also allows them some services not offered at any of the branches. The customer gets to conduct his banking needs on the go or at the comfort of his/her computer at home or in the office. With more better and faster options a bank will surely be able to create better customer relations and satisfaction.

Digital banking is seen to improve the image of the banks for it a digitally compliant bank seems more state of the art to a customer. A customer may not subscribe to the different digital channels but would feel proud to be associated with a bank that is adopting state of the art systems. Digital banking is the future of banking and all the customer should be encouraged to get on board. Customer can save time, money since it is cheaper and get convenient banking all by adopting these digital channels.

2.2.2 Challenges Faced in Adoption of Digital Banking

Commercial banks in Kenya face unique competitive strategic challenges arising principally from their operations. They all offer similar products and services and the only way for one to get an edge is to be innovative and differentiate its products and services. One of the major challenges facing commercial banks as they endeavour to go digital would be the security of digital banking. Security is the foundation of digital banking and security extends from the bank’s hardware to the user’s device – whether a PC/Mac at home, an iPad or the newest Smartphone. In all cases, digital banking must employ robust security technologies which protect the communication, user information and the bank’s IT infrastructure which is still a challenge to some of our Kenyan banks. Sathye (1999) used internet access as one of the factors affecting the adoption of Internet Banking. Without a proper internet connection the use of electronic banking is not possible. E-banking is a relatively new banking distribution channel in Kenya and it is at the early stages of growth and development and that banks had only partially adopted e-banking
as a strategy. Security was seen to be the most important attribute that could drive attitudes towards the adoption of e-banking. Munyoki and Eva (2011)

Another challenge the Kenyan banking market is facing is demystifying the digital world and educating their potential users on how it works and the benefits the users would derive from its adoption. Most Kenyans to this date do not understand nor trust the different digital channels of banking like online banking, mobile banking, telephone banking, private banking or even using of touch screen ATMS. It is therefore up to the banks to demystify these channels and make the potential users understand how they make day to day life easier and also feel safe enough to embrace them. Moreover, Sathye (1999) notes that low awareness of Internet Banking is a critical factor in causing customers not to adopt internet banking. Educated individuals are however seen to have a more positive attitude toward technology and it is easier for them to adopt these digital channels. Higher educated customers such as university graduates are more comfortable in using technology. A reason for this is that education is often positively correlated with an individual’s level of Internet literacy (Burke, 2002).

While most banks have a multichannel strategy, few have the resources to execute. Most Kenyan banks indicate they have a digital strategy, yet only a few report as having the budget or dedicated multichannel teams to support executing the strategy. Without dedicated resources, multichannel will remain a pipe dream. This being because the population of the unbanked in Kenya is a sizable one thus making it hard for the banks to garner enough users for their digital channel enough for the banks to break even. Customers’ demographic characteristics such as age gender, income and educational level on their attitude towards different banking technologies and individual acceptance of new technology. Literature shows that there is a strong relationship between age and the acceptance of new technologies. PwC research (2011) reveals that the Young Generation is fully embracing digital communication and is the customer group with whom banks need to establish customer primacy relationships.
2.3 Factors influencing adoption of digital banking

Accessibility to the digital channels of banking is a very big adoption factor here. Those customers who feel that having no access is an unimportant reason have listed security concerns and lack of trying possibilities as most important. In the long run banks can save on money by not paying for tellers or for managing branches. Plus, it's cheaper to make transactions over the digital means.

Customer Base and efficiency- electronic banking allows banks to reach a whole new market-and a well off one too, because there are no geographic boundaries in such channels. Electronic banking also provides a level playing field for small banks who want to add to their customer base Banks can become more efficient than they already are by providing digital channels access for their customers. For instance Internet banking provides the bank with an almost paper less system and a very efficient one since everything is done at the comfort of the customer’s computer.

Customer Service and Satisfaction- Digital channels of banking not only allow the customer to have a full range of services available to them but it also allows them some services not offered at any of the branches. The person does not have to go to a branch where that service may or may not be offer. A person can print of information, forms, and applications via the Internet and be able to search for instead of waiting in line and asking a teller. With more better and faster options a bank will surely be able to create better customer relations and satisfaction. A bank seems more state of the art to a customer if they offer digital banking e.g. Internet banking, mobile banking, ATM banking, agency banking. A person may not want to use digital channels provided by his/her bank but having the service available gives a person the feeling that their bank is on the cutting image.

The future of banking is here with us today and every bank should endeavour to get on board as many customers as possible. Banks cannot afford to avoid this new digital channel of banking since it means more penetration to the stiff market and growth for the bank as a whole.
CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction
This chapter discusses the research design that would be used for the study. The chapter presents the research design, the population, data collection method, instruments and data analysis.

3.2. Research Design
A descriptive research was adopted for the purpose of this research. Descriptive survey is preferred as it portrays an accurate profile of persons, events or situations (Saunders and Thornhill 2007). Saunders et al., (2007) note that the descriptive survey is preferred as it portrays an accurate profile of persons, events or situations. Most importantly, the study aim is to provide reliable and accurate statistical data which represents the actual current situation of the population.

3.3. Population of the Study
The population of the study comprised of all the commercial banks in Kenya. There are 43 licensed commercial banks and mortgage finance companies by the Central bank of Kenya. These consist of both locally and foreign owned commercial banks. (www.centralbank.go.ke). These banks formed the population relevant for conducting this study. The list of the banks is attached as appendix I.

3.4. Data Collection
Primary data was collected using self-administered questionnaires. The data that the research collected is both quantitative and qualitative data from the category questions that sought to get the respondents response to questions on the variables. The questionnaire used was structured with multiple choice questions (closed ended) and unstructured (open ended) on the variables under study and will be administered through “drop and pick later” method; which enabled respondents dedicate some time convenient to themselves to fill in the questionnaires correctly. The questionnaires were collected 5 days after being dropped. The questionnaires were
administered to the Bank officials who were either at the top level or middle level management of the Bank.

3.5. Data Analysis
Data analysis enabled the researcher to clarify problems, identify alternatives and provide a sense of direction Ngau and Kumssa (2004). Both qualitative and quantitative data were analysed. Quantitative data collected was analyzed using descriptive statistics such as mean, mode and standard deviations will be used. The data was analyzed thematically and coded to give rise to major topic from which summary reports was be compiled. It was then presented in form of tables and bar charts. The analyzed data lead to drawing conclusions and recommendations for banks to act accordingly.
CHAPTER FOUR
DATA ANALYSIS AND INTERPRETATION

4.1 INTRODUCTION

This chapter gives the data analysis and interpretation of the results on factors determining the strategic adoption of digital banking by commercial banks in Kenya. The semi-structured questionnaires formulated for the research were given to 43 respondents, all of whom returned filled questionnaires that were later coded and entered into statistical packages for social scientists (SPSS). Data analysis was done using SPSS and Microsoft excel.

4.2 Demographic Analysis

Demographic data captured in the study included gender of respondents, age and length of continuous service. Respondents were asked to indicate their gender.

Of the 43 respondents, 18 respondents (41.9%) were males and 25 respondents (58.1%) were females.

The respondents were asked to indicate their age and the results are shown in figure 4.1

<table>
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<th>Table 4.1: Age of respondents</th>
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<td><strong>Frequency</strong></td>
</tr>
<tr>
<td>Under 30 years</td>
</tr>
<tr>
<td>31 – 40 years</td>
</tr>
<tr>
<td>41 – 50 years</td>
</tr>
<tr>
<td>Over 50 years</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

Most of the respondents were of the age group 41 – 50 years, where 17 individuals (39.5%) indicated to be of this particular age group. 11 respondents (25.6%) were of the age group 31 – 40
years and 9 respondents (20.9%) were either 30 years or younger. Only 6 respondents (14%) were 50 years or older. This result is as shown in the table 4.1 below.

The respondents were asked to indicate their length of continuous service at the bank. The results are shown in figure 4.2

**Table 4.2: Length of continuous service**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 2 years</td>
<td>8</td>
<td>18.6</td>
<td>18.6</td>
</tr>
<tr>
<td>2 - 5 years</td>
<td>7</td>
<td>16.3</td>
<td>34.9</td>
</tr>
<tr>
<td>6 - 10 years</td>
<td>17</td>
<td>39.5</td>
<td>74.4</td>
</tr>
<tr>
<td>Over 10 years</td>
<td>11</td>
<td>25.6</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Length of continuous service at the bank is an important variable as it directly relates to the knowledge the respondent knows about the bank and its services. As such, this variable was captured through the questionnaire and the results of data analysis showed that 17 respondents (39.5%) had worked continuously for 6 – 10 years, 11 respondents (25.6%) had worked continuously for over 10 years while 34.9 % had worked with the bank continuously for less than 5 years – 8 respondents (18.6%) having worked for less than 2 years. This is as shown in table 4.2 below.

A different but related variable to the length of continuous service was also captured in the questionnaire as an open-ended question relating to the positions respondents held at their respective work stations. Although a good number of respondents did not respond to this optional variable, Most of the responses received indicated that they held managerial positions in the respective banks. This is evident through the length of continuous service as shown in table 4.2. This speaks to the amount of experience that the respondents have in the banking industry which proves to be beneficial for this research.
4.3 Adoption of Digital Banking

Specific variables of interest were posed as questions or statements in the questionnaire and the responses analyzed below. The respondents were asked to indicate whether digital banking services were vital, essential or desirable. The results are shown in figure 4.3

Table 4.3: Digital banking as a new system of delivering banking services

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vital</td>
<td>11</td>
<td>25.6</td>
<td>25.6</td>
<td>25.6</td>
</tr>
<tr>
<td>Essential</td>
<td>10</td>
<td>23.3</td>
<td>23.3</td>
<td>48.8</td>
</tr>
<tr>
<td>Desirable</td>
<td>16</td>
<td>37.2</td>
<td>37.2</td>
<td>86.0</td>
</tr>
<tr>
<td>Cannot say exactly</td>
<td>6</td>
<td>14.0</td>
<td>14.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

A question to gain insight on how digital banking is viewed in terms of necessity was formulated and the responses were stunning. While 6 respondents (14 %) out of the 43 respondents did not know exactly how to rate digital banking as a new system of delivering banking services; Most of the respondents (16 respondents: 37.2%) thought it desirable, 11 respondents (25.6%) and 10 respondents (23.3%) regarded digital banking as a new system of delivering banking services as being Vital and Essential respectively. From this analysis, it is clear that digital banking is desirable. Table 4.3 below presents this result.

Digital banking as a delivery channel is not seen as vital or essential from the feedback we got from our respondents. It is however viewed as desirable delivery channel. This shows that there is still more room for growth for this channel and banks have to ensure their customers embrace these digital channels of banking to enable growth in the industry as a whole.
The respondents were asked to indicate the type of digital banking services that were offered by their banks. The results are as shown in table 4.4 below.

Table 4.4: Digital banking service as provided by banks

<table>
<thead>
<tr>
<th>Service at the bank</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATM BANKING</td>
<td>43</td>
<td>100</td>
</tr>
<tr>
<td>TELEPHONE BANKING</td>
<td>29</td>
<td>67.44</td>
</tr>
<tr>
<td>CREDIT CARDS</td>
<td>14</td>
<td>32.56</td>
</tr>
<tr>
<td>DEBIT CARDS</td>
<td>43</td>
<td>100</td>
</tr>
<tr>
<td>MOBILE BANKING</td>
<td>31</td>
<td>72.09</td>
</tr>
<tr>
<td>EFTs (Electronic Transfers)</td>
<td>36</td>
<td>83.72</td>
</tr>
<tr>
<td>INTERNET BANKING</td>
<td>15</td>
<td>34.88</td>
</tr>
</tbody>
</table>

7 digital services were identified and included in the questionnaire as variables. From the analysis of these digital banking services; 100% of the bank’s respondents had ATM Banking and Debit card services, 36 respondents (83.72%) had the EFT’s, 31 respondents (72.09%) had mobile banking services and 29 (67.44%) reportedly had telephone banking services in usage. Among the least used service were internet banking and credit cards where 15 respondents (34.88%) and 14 respondents (32.56%) respectively out of the total 43 reported its usage. This information is summarized in the table 4.4 below.

ATM Banking was seen to be the most used digital banking service this may be being due to the fact that it was one of the early digital banking channels to be launched by many banks over a decade ago. The use of debit cards is also seen to be popular also due to its early introduction to the market. The use of internet banking and credit cards is at 34.88% and 32.56% respectively which is seen to be the lowest in terms of its usage in the market. Many Kenyan consumers do not understand credit cards and this makes them shun away from embracing the product and enjoying the benefits that come with using a credit card. Security has been a major concern when
it comes to internet banking, many consumer feel it is not safe enough to transact online and that their online accounts can be easily hacked into and thus tend to shun away from this service. The respondents were asked to indicate the channels through which their customers get to know about digital banking. The results are as shown below in figure 4.5

Table 4.5: Channels through which customers know of digital banking

<table>
<thead>
<tr>
<th>Channels through which customers know of digital banking services</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Through Banking Officials</td>
<td>43</td>
<td>100</td>
</tr>
<tr>
<td>Advertisement in Print Media</td>
<td>27</td>
<td>62.79</td>
</tr>
<tr>
<td>Television and Radio Advertisement</td>
<td>21</td>
<td>48.84</td>
</tr>
<tr>
<td>On-line Advertisement</td>
<td>14</td>
<td>32.56</td>
</tr>
<tr>
<td>Through their Employers</td>
<td>41</td>
<td>95.35</td>
</tr>
<tr>
<td>Any other (specified)</td>
<td>8</td>
<td>18.60</td>
</tr>
</tbody>
</table>

There are several sources of information through which individuals can know of the various banking services. According to this study, information relating to digital banking services was mostly gained through “banking officials” and “their employers” at 100% and 95.35% respectively. Respondents also heard of digital banking services via “print media” at 62.79% (27 respondents), television and radio advertisement at 48.84% (21 respondents), on-line advertisement at 32.56% (14 respondents) and 18.6% (8 respondents) specified other sources. Among the other specified responses by respondents were: the use of road shows and social media. This is as shown in table 4.5 below.

Banks mostly use their bank officials and employees to let their consumers know about the various digital banking channels that they offer. The use of print media and television and radio is also seen to be a popular way of letting consumers in on the different digital services offered by the banks. Of late banks are seen to be using online advertisement more to let their consumers know about their digital products and of late the social media has also presented a very
good platform for banks to launch their digital products and also educate the general public of the benefits of embracing such products.

### 4.4 Challenges Facing the Adoption of Digital Banking Technologies

On a likert scale of 1 – 5; 1 implying strongly agree, 3 being neutral or to a modest extent and 5 meaning strongly disagree; 8 statements relating to the factors and challenges facing the adoption of digital banking were submitted to the respondents for opinions.

The responses received from with respect to the statements can be summarized as in the frequency table 4.6 below.

**Table 4.6: Frequency table for the statements on challenges**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The cost of adopting digital banking technologies is Very high</td>
<td>16</td>
<td>12</td>
<td>2</td>
<td>8</td>
<td>5</td>
<td>2.41</td>
<td>1</td>
<td>1.45</td>
</tr>
<tr>
<td>Traditional banking still remains the best option for our clients</td>
<td>15</td>
<td>10</td>
<td>9</td>
<td>4</td>
<td>5</td>
<td>2.40</td>
<td>1</td>
<td>1.365</td>
</tr>
<tr>
<td>The services are simply too expensive for the lower end customers</td>
<td>6</td>
<td>7</td>
<td>10</td>
<td>13</td>
<td>7</td>
<td>3.19</td>
<td>4</td>
<td>1.296</td>
</tr>
<tr>
<td>No difference in profitability as when compared to Branch banking</td>
<td>5</td>
<td>8</td>
<td>10</td>
<td>9</td>
<td>11</td>
<td>3.30</td>
<td>5</td>
<td>1.355</td>
</tr>
<tr>
<td>Most customers prefer Face to face banking</td>
<td>16</td>
<td>11</td>
<td>9</td>
<td>7</td>
<td>0</td>
<td>2.16</td>
<td>1</td>
<td>1.111</td>
</tr>
<tr>
<td>Most of the customers do not know how to use and are not aware of some digital banking services provided by the banks</td>
<td>9</td>
<td>10</td>
<td>13</td>
<td>9</td>
<td>2</td>
<td>2.65</td>
<td>3</td>
<td>1.173</td>
</tr>
<tr>
<td>Security concerns is a discouraging factor in using digital banking channels</td>
<td>20</td>
<td>12</td>
<td>7</td>
<td>4</td>
<td>0</td>
<td>1.88</td>
<td>1</td>
<td>1.005</td>
</tr>
<tr>
<td>Digital banking will be adopted by most customers in the next 5 years</td>
<td>8</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>5</td>
<td>2.86</td>
<td>2*</td>
<td>1.302</td>
</tr>
</tbody>
</table>

[1 – Strongly agree; 2 – Agree; 3 – Modest extent; 4 – Disagree; 5 – Strongly Disagree]

* Imply several modes exist for that statement – the least being shown
From the analysis of the data and as summarized in table 4.6 with regards to the first statement relating to cost of adopting digital banking. Most of the respondents (16 respondents out of 43) strongly agreed that the cost of adopting digital banking technologies is very high, in fact the modal value was 1 implying strongly agreed and the mean value for this statement is 2.41 with a standard deviation of 1.45 as a measure of dispersion. 12 respondents agreed, 2 were neutral while 8 and 5 respondents disagreed and strongly disagreed on the cost of E-banking technologies being very high. This information is diagrammatically presented in the bar chart below (Figure 4.1).

**Figure 4.1: cost of adopting digital banking**
Figure 4.2: Traditional banking is the best option for clients

Respondents were also asked on how they felt about traditional banking as compared to digital banking technologies. The results are shown in the information bar chart presented below.

![Bar chart showing respondent opinions on traditional banking]

Of the 43 respondents in this study, 35 respondents in general agreed that traditional banking still remains the best option for clients – among these 15 strongly agreed and 10 agreed. 9 respondents were neutral, 4 respondents disagreed and 5 respondents strongly disagreed on traditional banking being the best banking option. The measures of central tendency mean and mode were: 2.40 and 1 respectively; with a standard deviation of 1.365.
Customers have varied information needs as well as different satisfaction levels. What might be good and affordable for a particular group of customers might actually be the exact opposite for another group of customers. Although the mean value for this variable is 3.19 with a standard deviation of 1.296 indicating some neutrality; digital banking services and their adoption is not considered too expensive for the lower-end customers based on the responses received from the 43 respondents in this study. This is evident since the mode value is 4 (disagree) and only 13 respondents (30.23%) either agreed (16.28%) or strongly agreed (13.95%), 10 respondents (23.26%) were neutral, 13 respondents (30.23%) disagreed and 7 respondents (16.28%) strongly disagreed.
Figure 4.4: No difference in profitability levels

The respondents were asked to indicate whether there was a difference in profitability levels in adoption of digital banking as compared to branch banking. The results are shown in figure 4.4 below.

![Bar chart showing responses to the question of whether there is a difference in profitability levels. Strongly Agree: 5 (11.63%), Agree: 8 (18.60%), Neutral: 10 (23.26%), Disagree: 9 (20.93%), Strongly Disagree: 11 (25.58%).]

The use of technology influences profitability levels. This is also the case with the adoption of digital banking and thus the need to know how digital banking profitability level is as compared to traditional banking methods.

Although most of the respondents (46.51%) in this study seemed to disagree or strongly disagree with the idea that there is no difference in profitability as when compared to traditional or branch banking, a good number of respondents (30.2%) either agreed or strongly agreed. To be precise 5 respondents (11.63%) strongly agreed, 8 (18.60%) agreed, 10 (23.26%) were neutral, 9 respondents (20.93%) disagreed and most at 25.58% (11 respondents) strongly disagreed. The
mode category, mean and standard deviation were: ‘strongly Disagree’, 3.30 and 1.355 respectively.

**Figure 4.5: Most customers prefer face to face banking.**

Respondents in this study were asked if they most preferred face to face banking as compared to other banking methods. All the 43 respondents gave their responses with regards to this variable. This result is displayed in figure 4.5 below

![Bar chart showing frequency distribution of responses](image)

From the frequency table 4.5 providing a summary of responses as received from respondents. It is clear that none of the respondents strongly disagree that face to face banking is the most preferred banking criterion. Most of the respondents strongly agreed that most customers prefer face to face banking which was also the mode category with the modal value being 1. The mean value (central tendency measure) and standard deviation (dispersion measure) in this case were 2.16 and 1.111 respectively. Only 7 respondents (16.28%) disagreed, 9 respondents (20.93%) were neutral, 11 respondents (25.58%) agreed and 16 respondents (37.21%) strongly agreed with the statement.
Figure 4.6: Most customers do not know how to use and are not aware of digital banking services.

The respondents were asked to indicate whether most consumers know how to use and are aware of digital banking services provided by the various banks. The results are shown in the bar chart below: figure 4.6

It is quite a challenge when products are developed and most of the targeted market remains aware of the product or service developed. It is also important to consider whether the customers who are aware of the products/services developed know how to use the developments to their advantage. This is a case that digital banking is susceptible to and thus was important to ask whether customers know how to and are aware of digital banking services or products. All the 43 respondents gave their opinion on a likert scale. Although 13 respondents (30.23%) chose the neutral category (3) and thus the modal category, most of the respondents (44.19%) either chose ‘strongly agree’ or ‘agree’ as compared to the 25.58% that chose either ‘disagree’ or ‘strongly disagree’. It is also evident that the mean for this category is 2.65 with a standard deviation of 1.173.
From the central tendency measure: mean we deduce that a good number agrees with the statement that most customers do not know how to use and are not aware of digital banking services.

**Figure 4.7: security concern a discouraging factor for digital banking**

The respondents were asked to indicate whether security was seen as a discouraging factor in using digital banking channels. Figure 4.7 presents this information on security concern by the respondents according to their opinions in this study.
The respondents were asked if security concern is a discouraging factor for digital banking. The respondents indicated that they are concerned with the security framework in digital banking as 20 respondents (46.51%) strongly agreed and 12 respondents (27.91%) agreed that ‘security concern is seen to be one of the discouraging factors in using electronic/digital banking channels’. 7 respondents (16.28%) were neutral and 4 respondents (9.3%) disagreed with the statement. It is important to note that none of the respondents strongly disagreed with this statement.

Security is seen to be the most discouraging factor in the use of digital banking channels and many of the consumers are afraid to adopt these channels due to the fear of e.g. their internet account being hacked, their credit cards being stolen and used to make fraudulent purchases etc. The burden is thus on the banks to ensure that their digital channels are as secure as possible so as to make the customer feel safe and comfortable enough to adopt these channels. Once the security of these systems are catered for there will be a mass adoption of the digital channels by the general public.

Banks should seek to build customers’ confidence by presenting the security used in both technical and non technical terms and outlining the procedure and information on how to cope with problems if they do occur. They should also provide clear and comprehensive instructions on how to use the digital products so as to ensure complete safety at all times. The will demystify these channels and make it easier for the banks to introduce more and more products to the customers since they will be ready to adopt them for they will be educated on how to use them.

Figure 4. 8: Digital banking will be fully adopted by most customers in the next 5 years
The respondents were asked to indicate whether in their opinion digital banking will be fully adopted by most consumers in the next 5yrs. The results are shown in the figure 4.8 below.

The prospects of digital banking adoption were also considered. The respondents were asked whether digital banking will be fully adopted by most customers in the next 5 years. The responses received indicated a sense of neutrality amongst. An equal percentage of respondents (10 respondents; 23.26%) agreed, were neutral and the same percentage also disagreed. 8 respondents (18.6%) and 5 respondents (11.63%) were strongly agreeing and strongly disagreeing respectively. A tri-modal case was observed with Agree, Neutral and Disagree have an equal number of frequency and thus the mode categories. The mean value was 2.86 with a standard deviation of 1.302.
4.5 Discussion of findings

It is clear from the data analysed in the study that the adoption of digital banking as a channel of banking has brought a lot of challenges to the banking industry in Kenya. Digital banking has introduced new technologies that have made the banking industry to experience radical change. From the study it is seen that most of the customers still prefer traditional banking compared to digital banking with security being the biggest discouraging factor in them fully adopting digital means of banking. Kenya being a developing country most people are seen not to be very conversant with technology and the study also shows that most of the customers do not know how to use and are not aware of some of the digital banking services provided by the banks. This kind of ignorance on the customers poses a big challenge in regards to the adoption of these digital channels of banking.

Digital banking as new platform of banking has increased competitiveness in the banking sector with the banks that do not have the technology being less competitive and pushed out of the market with time. Many banks are stretching themselves thin as they endeavour to be come up with more technologically advanced products and banking solutions for their customers while still factoring in the element of adoption by their consumers; therefore banks cannot afford to ignore this new channel of banking since it is seen to be the future of banking.

The statement digital banking will be adopted by most customers in the next 5 years indicated a sense of neutrality amongst our respondents. This goes to show that the Kenyan banking industry has a lot of potential and all banks should exploit this potential to their advantage since there is a big chance that the digital channels of banking will be fully adopted by the customers in the near future.
CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction
In this chapter summary of the findings, conclusion and appropriate recommendation are made. Attention to policy makers may be drawn and suggestions for further research areas cited.

5.2 Summary of the Findings
The evaluation of the results obtained after the analysis of data is discussed in this section vis-à-vis the objectives of this study. This study focused on the strategic adoption of digital banking by commercial banks in Kenya. The study sought to understand digital banking in commercial banks by specifically looking into the factors determining their strategic adoption and the challenges as faced by these banks in their effort to adopt the same.

The study had a total of 43 respondents. Although there were hesitations by some of the respondents to participate in this study – the use of the ‘research ethics letter’ provided by the school gave all respondents, the assurance that the study was purely for academic purposes and thus all the respondents answered the questionnaires. Upon receipt of answered questionnaires, the researcher performed data cleaning and noted that none of the questionnaires had gross error to necessitate disqualification from study - perhaps an indication that the respondents understood the questions.

The response rate for this study was 100% with all the questionnaires returned being included in the data analysis. Most of the respondents were females while the rest were males. Other demographic information collected and analysed were age and length of continuous service by respondents. Most respondents were found to be middle age. On the other variable, most of the respondents in this study were in managerial positions and were cited to have worked continuously in the different banks for a long time. Their experience in the industry proved to be a great resource for this study.
In order to gain insight on how digital banking is viewed in terms of necessity, a variable question was formulated and the responses were stunning. While a few respondents did not know exactly how to rate digital banking as a new system of delivering banking services; the bulk of the respondents in this study thought it desirable, and the rest regarded digital banking as a new system of delivering banking services as being either vital or essential. From the study it was clear that digital banking is seen to be a desirable service by most of the commercial banks in Kenya. This may be strongly attributed to the advantages that both the customers and the banks will derive from its usage.

Digital banking services usage was captured in the analysis and it can be noted that most of the commercial banks in Kenya use ATM Banking and Debit card services. The other services like Electronic Funds Transfers, Mobile banking, telephone banking, internet banking and credit cards were not viewed as very popular among customers but were still being used by some customers. According to this study, information relating to digital banking services was mostly gained through banking officials and their employers. The banks are also seen to use print media, television and radio advertisement, on-line advertisement and specified other sources like the use of road shows and social media e.g. facebook, twitter and linked in to let their customer know of the various digital channels offered by the bank.

The opinion of the respondents on the challenges facing digital banking among commercial banks in Kenya was evident with the greatest challenges among the ones posed by the researcher being: security concern. Most customers do not know that these digital platforms are secure enough for them to transact on without them being exposed to fraudsters and hackers. Apart from this, most customers prefer face to face banking where they walk into a banking hall and transact over the counter this therefore means that traditional banking remains the best option for clients. With many customers still preferring traditional face to face banking over the new digital banking this means that the cost of adopting digital banking will be high since it will take a lot to onboard such customers. On the other hand the respondents in this study over ruled the idea that “the digital services are simply too expensive for the lower-end customers” and that “There is no
difference between digital banking and branch banking in profitability levels”; the modes for this two variables were 4 implying ‘disagree’ and 5 implying ‘strongly disagree’. Among the challenges that stroke the respondents as having moderate effect were the idea that “most of the customers do not know how to use and are not aware of some digital banking services provided by the banks” and that “digital banking will be fully adopted by most customers in the next five years” which had 3 mode values (trimodal), that is, 2 (Agree), 3 (neutral) and 4 (disagree). This simply implies that a good number of the population is literate of the digital banking services and products and at the same time also imply that there is general neutrality on the future generation having fully adopted digital banking.

5.3 Conclusions

The Kenyan economy has been experiencing consistent growth over the last few years. There has been rapid development in infrastructural and business front over the past decade. Digital banking has come into the picture owing to the increased use of internet and other electronic channels.

This study was undertaken to create a better understanding of the prospects and challenges concerning the strategic adoption of digital banking by commercial banks in Kenya. The findings of this study offer insight into digital banking, its strategic adoption and the challenges as faced by commercial banks in Kenya in promoting digital banking. This study took both qualitative and quantitative approach in assessing various factors which should be utilized to formulate good promotional strategies in enhancing the use of digital banking among the clientele of commercial banks specifically in Kenya.

The study results indicate that digital banking is desired and that it is achievable given time. The ability to access digital services such as: ATMs (automated transaction machines), Debit cards, electronic funds transfers (EFTs), mobile banking, internet banking and other digital services is continuously in adoption by most banks. The commercial banks in Kenya already have strategies in place to facilitate the adoption of digital banking – this is because amongst the various sources
of information regarding digital banking; Bank officials and employers had high frequency. A second-tier of digital banking opportunities includes reports for potentially fraudulent behavior, which reflect some of the security concerns around digital banking and market information. Commercial banks are continuously competing for market and thus the need for a sophisticated system that assures customers of great service and easens “work-load and cost” for the bank. Undeniable, internet banking has come to stay and offers so many prospects for growth and development for the banking industry, Sathye (2000). Amongst the challenges found to be hindering the strategic adoption of digital banking was ‘Security concern’ by the ‘cost of adopting digital banking services’. This means that the technology used must be secure and at the same time, convenient to deploy and cost effective. Customers’ perception towards digital banking also needs to be changed as this study clearly reveals that ‘traditional banking still remains the best option for bank clients’ and that ‘customers prefer face to face banking’.

The plea for lower cost also exists as suggested by the responses and it is believed that, this will make digital banking more attractive. It should not be assumed that customers know of the various digital banking services and thus the need for digital services marketing and awareness education by the commercial banks. In general, technical issues and security standards, regulatory and supervisory issues, and business and legal issues were found to be the main factors that affect the strategic implementation of digital banking in Kenya.
5.4 Recommendations
5.4.1 Recommendations with Policy Implications

The findings of this study have implication for the strategic adoption of digital banking. Research and development (R & D) associated with digital banking systems involves investment of millions of shillings. It is therefore important to ensure that bank and its clients derive optimum benefit from this new form of banking. In order to achieve this, the following suggestions are made.

It is recommended that more innovative ways of satisfying customers profitably should be employed to ensure a better delivery of service and increase the bank’s profitability, that is digital services pricing should be affordable. Banks can be more focused on the development of self efficacy. Compeau and Higgins (1995), defined self efficacy as the belief that one has the ability and capability to perform a particular test. In the context of digital banking, this would imply confidence in judgment and ability to use digital banking. Banks should organise training on digital banking applications.

Due to the difficulty customers encounter when using electronic banking applications, proper marketing is proposed to the banking institutions. The marketing criterion should be directed in informing the clients and potential customers of the services and how these services work. The benefits derived from digital banking should be made known to attract its usage. It is therefore recommended that the bank increase and propagate awareness of electronic banking services.

Consequently the banks are requested to carry out awareness and promotion campaigns to educate clients and create awareness of digital banking dealings, advantages and feasibility through reducing time, effort and reducing cost for achieving distinctive and competitive position. Digital banking platforms should be designed by well qualified and experienced professions. Bank Management should also consider training bank’s employees on digital banking business so as to achieve the desired objectives. On the other hand, universities and academic institutions should teach courses that have direct relation with digital world, electronic software for banking and financial institutions.
Customer accessibility to digital services should be enhanced. For example, ATMs must be set up at Third Party Sites in thereby reducing long queues at banking halls. All the banks should be cautious of the security of their networks to prevent unauthorized access by employees, customers and criminals as well. Secure digital platforms can be achieved by liaising with communication bureau in Kenya: CCK (communications commission of Kenya) and using encrypted messaging systems. Ensuring that customers’ expectations are met is a key route to achieving organizational objectives. An important means of ensuring this is by taking advantage of the opportunities offered by technology.

Systems designed must take the changing needs of sophisticated Customers in to consideration so that the focus is not too much on technology to the detriment of customer needs. Designers of such systems must also bear in mind regulatory issues the process in order not breach them.

Government needs to ensure that the cost of telecommunications, hardware and software are made affordable, which will involve examining existing taxes, import duties among other policies. New technology and changes in the banking laws can produce change. Therefore, there is the need for the government to remove barriers to innovation, including regulatory barriers to pave way for rapid development of the electronic or digital banking systems in Kenya.
5.4.2 Suggestion for Future Research

Digital banking and technology involved is new in Kenya. This study generally looked into the adoption of digital banking by the commercial banks in Kenya. As such there are other factors relating to digital banking that can be reviewed individually, say, demographic characteristics (age, place of residence, education level among other) and adoption of digital banking.

Future research can also focus on digital banking for corporate and trading companies as one entity and consider digital banking and personal banking as another different entity. This will definitely reveal who earns more: “is digital banking more beneficial to personal clients or corporate clients (companies)?” and “how does it influence corporate customers decision making”

Research focusing on the financial benefits derived from digital banking is also viable. This will involve comparative analysis of the audited financial statements before and after the adoption of digital banking. Information and Computer programming research should be carried out with the aim of reducing associated risks: security concerns of the bank and customers. This will definitely involve computer architects and programmers.

5.4.3 Limitations of the study

The study encountered several limitations. The research was rather broad given the time constrains of collecting data and developing the final report. Some of the respondents were suspicious that the information given out would leak to unauthorized persons or competitors and thus either took too much time to give their response or were unwilling to answer. The time frame available for the study was also limited, denying the research the opportunity to effectively follow up on questions that were not comprehensively answered.
REFERENCES


APPENDICES

APPENDIX 1: LIST OF BANKS IN KENYA

1. ABC Bank (Kenya)
2. Bank of Africa
3. Bank of Baroda
4. Bank of India
5. Barclays Bank
6. CFC Stanbic Bank
7. Chase Bank (Kenya)
8. Citibank
9. Commercial Bank of Africa
10. Consolidated Bank of Kenya
11. Cooperative Bank of Kenya
12. Credit Bank
14. Diamond Trust Bank
15. Dubai Bank Kenya
16. Ecobank
17. Equatorial Commercial Bank
18. Equity Bank
19. Family Bank
20. Fidelity Commercial Bank Limited
21. Fina Bank
22. First Community Bank
22. Giro Commercial Bank
23. Guardian Bank
24. Gulf African Bank
25. Habib Bank
26. Habib Bank AG Zurich
27. I&M Bank
28. Imperial Bank Kenya
29. Jamii Bora Bank
30. Kenya Commercial Bank
31. K-Rep Bank
32. Middle East Bank Kenya
33. National Bank of Kenya
34. NIC Bank
35. Oriental Commercial Bank
36. Paramount Universal Bank
37. Prime Bank (Kenya)
38. Standard Chartered Kenya
39. Trans National Bank Kenya
40. United Bank for Africa
41. Victoria Commercial Bank
42. FirstRand Bank
43. Bank of China
APPENDIX II: QUESTIONNAIRE

SECTION A: DEMOGRAPHIC AND RESPONDENTS PROFILE

1. Name of the bank

2. What is your designation in the bank

3. Gender: Male ( ) Female ( )

4. What is your age bracket
   a) Under 30 years ( )
   b) 31-40 years ( )
   c) 41-50 years ( )
   d) Over 50 years ( )

5. Length of continuous service within the organization
   a) Less than two years ( )
   b) 2-5 years ( )
   c) 6-10 years ( )
   d) Over 10 years ( )

SECTION B: ADOPTION OF DIGITAL BANKING

6) In general, what do you feel about Digital Banking as a new system of delivering banking services?
   a) Vital ( )
b) Essential ( )

c) Desirable ( )

d) Cannot say exactly ( )

Any other (Please specify)

7) Which of the following Digital banking services are provided by your bank?

Tick inside the box if service is provided.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>a) ATM banking</td>
<td></td>
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<tr>
<td>b) Telephone banking</td>
<td></td>
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<tr>
<td>c) Credit Cards</td>
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<tr>
<td>d) Debit Cards</td>
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<tr>
<td>e) Mobile banking</td>
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<tr>
<td>f) P.C. banking</td>
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<tr>
<td>g) Electronic transfers (EFTs)</td>
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<tr>
<td>h) Internet banking</td>
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</tbody>
</table>

8) How do you let your customers know about Digital banking services you provide? (Tick applicable one(s))

a) Through bank officials ( )

b) Advertisement in Print Media ( )

c) Television and Radio Advertisement ( )

d) On line Advertisement ( )

e) Through their employers ( )

f) Any other (Please specify) ( )
Indicate your level of Agreement on the following statements by ticking the appropriate number using the key given below: 1= strongly agree  2= Agree  3=Neutral  4 = Disagree 5= strongly Disagree

8) In your own opinion what are the challenges facing the adoption of E-banking technologies? (Please give your opinion to the following statements in the appropriate column.)

<table>
<thead>
<tr>
<th>NO.</th>
<th>STATEMENT</th>
<th>Strongly agree (1)</th>
<th>Agree(2)</th>
<th>Neutral(3)</th>
<th>Disagree(4)</th>
<th>Strongly Disagree (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The cost of adopting is very high</td>
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<td>2</td>
<td>Traditional banking still remains the best option for our clients</td>
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<td>3</td>
<td>The services are simply too expensive for the lower end customers</td>
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<tr>
<td>4</td>
<td>No difference in profitability as when compared to branch banking</td>
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<tr>
<td>5</td>
<td>Most customers prefer face to face banking</td>
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<td>6</td>
<td>Most of the customers do not know how to use and are not aware of some Digital banking services provided by the banks.</td>
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<td>7</td>
<td>Security concerns is seen to be one of the discouraging factors in using digital banking channels</td>
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<td>8</td>
<td>Customers fear using digital channels since electronic crimes are increasing greatly.</td>
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</tbody>
</table>
DATE: 21 Oct 2013

TO WHOM IT MAY CONCERN

The bearer of this letter, JOSEPHINE NGINA MUSTOKE,
Registration No. D611607912011,
is a bona fide continuing student in the Master of Business Administration (MBA) degree program in this University.

He/she is required to submit as part of his/her coursework assessment a research project report on a management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate your assistance to enable him/her collect data in your organization.

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

Thank you.

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