

**STRATEGIC BENEFITS AND CHALLENGES OF MOBILE
BANKING IN KENYAN COMMERCIAL BANKS**

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DECLARATION

This project is my original work and has not been presented for the award of a degree in this University or any other Institution of higher learning for examination.

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

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DEDICATION

This project is dedicated to my family members and to all those who participated in making its completion possible.

ACKNOWLEDGEMENT

Glory be to the Almighty God for giving me His grace, endurance and tenacity to complete this study. I am also truly indebted to all those who offered encouragement and advice as I worked on this project. It is therefore my pleasure to thank the many people who made this project possible.

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LIST OF ABBREVIATIONS/ACRONYMS

ATM:	Automated Teller Machine
ASCA:	Accumulating Savings and Credit Associations
CAK:	Communications Authority of Kenya
CBK:	Central Bank of Kenya
CCK:	Communication Commission of Kenya
DIT:	Diffusion Innovation Theory
E-commerce:	Electronic commerce
GSM:	Global System for Mobile communication
IT:	Information Technology
I&M:	Investments and Mortgages
KBA:	Kenya Bankers Association
M-money:	Mobile money
M-banking:	Mobile banking
MFI:	Micro Finance Institution
ROSCAS:	Rotating Savings and Credit Associations
USSD:	Unstructured Supplementary Services Data
SPSS:	Statistical Package for the Social Sciences
SACCO:	Savings And Credit Co-operative.

ABSTRACT

Firms need to be flexible and respond quickly to changes in the market and competition. Increasing domestic and global competition, economic downturn, rapidly changing market trends, and volatile financial markets have all added to the pressure on organizations to come up with effective responses to survive and succeed. The popularity of mobile technology strategy is experiencing explosive growth as traditional banking practice has been transformed, placing opportunities for banks to maximize their share in the market, gaining competitive edge and improving on their profitability. The main objective this study was to identify the strategic benefits and challenges of mobile banking in the Kenyan commercial banks. The study employed a descriptive survey as its research design. The target population was all the commercial banks in Kenya. The study made use of both primary and secondary data. The primary data was collected by use of questionnaires which were coded and edited using SPSS statistical package summarizing data through the use of mean, standard deviation and percentages. The secondary data for this study was obtained from sampled banks documented strategies. From the findings m-banking increases sales volume, reduces the cost of distribution, can be used as an image product, is a source of revenue and increases customer satisfaction. The main strategic challenges of m-banking in Kenyan commercial banks are; restructuring challenges, customer reluctance and cost challenges, system failure, network vulnerabilities, software defects and operating mistakes, processing error and data loss due to virus. The study was important because it will help in better understanding the opportunities in mobile banking services in Kenya, its transformation of the financial services and its contribution to the financial performance of banks in Kenya. The study was significant to users of mobile banking in gaining better understanding of the advantages and limitations they face through the use mobile banking.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In the modern business environment, firms need to be flexible and respond quickly to changes in the market and competition (Porter, 1996). These responses constitute of analyzing the situation and formulating a suitable strategy. Strategy refers to the machinery of the resources and activities of an organization to the environment in which it operates (Johnson & Scholes, 2002). According to Ansoff and McDonnell (1990), it is through Strategic management that a firm will be able to position and relate itself to the environment to ensure its continued success and also secure itself from surprises brought about by the changing environment. He further argues that this can be done by firstly, positioning of the firm through strategy and capability planning in its rightful competitiveness, and secondly, use of real time response through issue management and thirdly, Systematic management of resistance during strategic implementation.

There are various theories that tend to explain the concept of strategy. Evolutionary theory believes that only the fittest and adaptable will survive. It is important since it allows for variation and selection. The environment is considered turbulent and thus, an organization needs to develop a strategy in order to survive by adapting to its changing business environment. It is the market, not managers, which makes the important choices. Processualists view strategy as a pattern in a stream of actions and decisions which emerge as a result of pragmatic processes of forecasting, learning and compromise (Mintzberg, 1987). Proponents of this theory believe that strategy emerges, and may only be clearly defined after the event has occurred. Strategy is conceived out of action in response to current and anticipated events. Diffusion innovation theory is

considered as one of the most popular theories that have attempted to explore factors that affect an individual to adopt an innovation or a new technology. DIT is a theory that seeks to explain how, why, and at what rate new ideas and technology spread as a consequence diffusion processes result in the acceptance or penetration of a new idea, behavior, physical innovation or a strategy which improves business performance.

Commercial banks in Kenya are going through massive transformation efforts to cope with the constantly changing business environment. Increasing domestic and global competition, economic downturn, rapidly changing market trends, and volatile financial markets have all added to the pressure on organizations to come up with effective responses to survive and succeed. The role of banks in an economy is paramount because they execute monetary policies and provide means for facilitating payments for goods and services in the domestic and international trade (Shambe, 2003). The Kenyan banking industry has been expanding branch networking amid the introduction of branchless banking system. The annual reports of CBK clearly indicate that, branch network has been slowly expanding since 2002. By the end of December 2010, Kenya had a total branch network of 975, as compared to 486 branches in the period ended December 2002. The slow growth of branches can be attributed to the rapid rise of alternatives, which include electronic financial product through mobile phones (mobile banking) and Personal computers.

1.1.1 Concept of Strategy

According to Bateman and Zeithman (1993), a strategy is a pattern of actions and resource allocations designed to achieve the goals of the organization. The strategy an organization implements should be directed toward building strengths in areas that satisfy the wants and needs of consumers and other key actors in the organizations'

external environment. It therefore forms a comprehensive modern plan that states how the organization will achieve its mission and objectives, maximizes competitive advantage and minimizes competitive disadvantage.

There are different forms of strategy (Johnson & Scholes, 2002). Corporate level strategy is concerned with the overall scope of an organization and how value will be added to the business units of the organization. The second level is the business level strategy, which is about how to compete successfully in particular markets or how to provide best value services in the public services. The third level of strategy is at the operating end of the organization. The strategy therefore seeks to accommodate a strong external influence, while maintaining the organization status quo. In this scenario, strategic benefits and challenges occur via mobile banking which may cause changes in commercial banking. The execution of this strategy entails substantial changes in organization arrangements including staffing and structure.

1.1.2 Mobile Banking

Mobile banking can be defined as the ability to conduct bank transactions via a mobile device, or more broadly to conduct financial transactions via a mobile terminal (Drexelius & Herzig, 2001). This definition is a suitable working one as it includes not only basic services such as bank account statements and funds transfer but also electronic payment options as well as information based financial services (e.g. alerts on account limit or account balance, access to stock broking). Initially cellular phones were developed to improve communication from the earlier primitive forms of communications such as smoke and drums. Technology has greatly advanced playing a major role in improving the standards of service delivery in the financial institution sector. Due to the tremendous growth of the mobile phone industry most financial

institutions have ventured into the untapped opportunity and have partnered with mobile phone network providers to offer mobile banking services to their clients. This has thus enabled bank customers' access information relating to their accounts (Tiwari, Rajnish and Herstatt, 2007).

Mobile banking enables banks to offer their services in far-flung areas without investing money to build branches and hire additional staff. Banks are responding to this development by introducing mobile services which offers the following services; balance inquiry, funds transfer, bill payment, airtime purchase, loan application, account opening and sms alerts on credits and withdrawals. Mobile Banking also provides anywhere anytime access to banking services; push services to suggest transactions on an urgent basis, and; Face-to-face talks with the personal consultant via video telephony (Luber, 2004). Tiwari et al., (2007) mobile banking presents an opportunity for banks to retain their existing, technology-savvy customer base by offering value-added, innovative services and to attract new customers from corresponding sections of the society.

1.1.3 Banking Industry in Kenya

The banking industry in Kenya comprises of 43 commercial banks which are regulated and governed by the Companies Act, the Central Bank of Kenya (CBK) Act and the Banking Act. These Acts are used together with the prudential guidelines which Central bank of Kenya issues from time to time. In 1995 the exchange controls were lifted after the liberalization of banking in Kenya. Central Bank of Kenya is tasked with formulating and implementation of monetary and fiscal policies. Central bank is the lender of last resort in Kenya and is the banker to all other banks. The CBK ensures the

proper functioning of the Kenyan financial system, the liquidity in the country and the solvency of the Kenya shilling.

To address issues that affect the banking industry in Kenya, banks have come together and formed a forum under the Kenya Bankers Association. The main role of KBA is promoting member banks' interests in the financial sector particularly and the economy generally by engaging the government and sector regulator, Central Bank of Kenya (CBK).

As the umbrella body of the commercial banks licensed under the Banking Act, with a current membership of 43 banks, KBA has endeavored to reinforce a reputable and professional banking sector in a bid to best support Kenyans, who entrust their ambitions and hard-earned resources with its member banks.

According to CBK (2007) a survey conducted by the banking division of the Central Bank of Kenya in 2007 revealed the following aspects ranging from product usage to challenges in gaining access to financial services. Only 19 percent of Kenyans are banked and thus have formal access to financial services through commercial banks, building societies and Post Bank, and an additional 8 percent are served by SACCOs and MFIs and 35 percent depend primarily on informal financial services such as ROSCAs (Rotating Savings and Credit Associations) and ASCAs (Accumulating Savings and Credit Associations). The study also revealed that access to financial services varies across the country and is highest in Nairobi, which has the greatest number of bank branches (194 out of 443).

Kenyan banks have been diversifying their product offering to other areas like bank assurance, mortgages and investment banking. This form of diversification is not unique to Kenya as it has been practiced in other countries like United Kingdom (Howcroft

2005). Commercial Banks in Kenya have also ventured into agency banking and mobile banking in a bid to capture a wider market and offer convenience in banking. Banks have invested heavily in technology that facilitate operations in their communication networks, ATMS, and offer m-banking services among others.

Generally, the Kenya banking industry is more stable than it has ever been with 17 percent core capital/deposit; with improved solvency of 8 percent as required by CBK and liquidity margin far beyond 20 percent which is the total required reserve with most banks having 40 percent or more in the reserves. The future of the industry looks promising with financial and legal sector restructuring (CBK, 2014). Nevertheless, Kenya's banking sector has been evolving quite fast and adapting to the challenges in its environment which include a poor and declining economy, cyclical interest rates, high incidence of nonperforming loans, changes in the regulatory environment and a fluid and volatile political environment.

1.1.4 Commercial Banks and Mobile Banking in Kenya

The banking industry in Kenya is regulated by the Central Bank of Kenya (CBK) Act Cap 491 and the Banking Act Cap 488. These Acts are intended primarily to facilitate the development and maintenance of a sound monetary policy (Muithya 2013). The industry comprises of financial institutions, among them commercial banks. Others are either non-bank financial institutions or mortgage finance companies. Currently there are 43 licensed commercial banks in Kenya (CBK, 2014).

The CBK and the Communications Authority of Kenya (formerly CCK) have allowed service providers to offer mobile money services as there appears to be no reprieve. Currently with the number of mobile subscribers having reached 31.8 million, many banks want a share of this large market hence majority are embracing mobile banking

technology (CAK, 2014). The current mobile banking using mobile money services like M-pesa, Zap and Yucash have been established to cater for money transfer needs (Omwansa, 2009). M-money providers have partnered with commercial banks such as Equity Bank, Commercial Bank of Africa Bank, Kenya Commercial Bank, Barclays Bank, Standard Chartered Bank and Co-operative Bank to offer mobile based financial products that aim to reach the unbanked.

Standard Chartered in 2009 launched its mobile banking in seven markets in Africa. In the Kenyan market it offers a number of services on a unique, user-friendly platform called Unstructured Supplementary Services Data (USSD) and is only available on GSM carrier networks which enable customers to access banking in real time, anywhere in the world, through their mobile phones. Barclays bank's m-banking platform is known as 'hello money'. It allows customers to carry their bank in their mobile and access banking services anytime/anywhere on the move. Co-operative bank have launched the M-co-op cash mobile banking service that allows one to pay fees, apply and pay for a loan, buy sell or transfer shares, sms alerts on credits and withdrawals. Equity bank on the other hand has its own m-banking platform known as Eazzy 24/7 and recently launched a Mobile Virtual Network Operator (MVNO) which is a platform bigger than mobile money. In partnership with Airtel, Equity will utilize Airtel's excess capacity to deliver MVNO services as a strategic position to capture significant share of East Africa's growth using a simple and shared prosperity model.

1.1.5 Strategic Benefits of Mobile Banking

The biggest benefit of mobile banking for consumers is that you have more control of your money, internet connections are not everywhere but there is always a mobile connection wherever you go (Dyke, 2009). Prior literature also suggests that mobile

technology can benefit organizations by enabling better customer services (Quinn & Baily, 2004), providing superior product quality (Bakos & Treacy, 2006), and creating competitive advantages (Griffiths & Finlay, 2004). Mobile banking for banks enables them to offer their services in far-flung areas without investing money to build branches and hire additional staff. Banks are responding to this development by introducing mobile services which offers the following benefits; decrease costs and risks and increase revenue and flexibility.

The intangible benefits of mobile banking on business processes and relationships include better customer services (Anderson, Banker & Ravindran 2003), increased knowledge about customers, improved coordination with partners (Buhalis, 2004; Mukhopadhyay *et al.*, 1995), superior product quality and competitive advantages (Griffiths & Finlay, 2004) Competitive advantage usually takes the form of a banks' cost position or product differentiation In this regard, mobile banking may help increase the customer satisfaction through; streamlining of business processes to increase efficiency; while serving as a source of revenue. Lastly, mobile banking is also used as an image product to gain strategic advantages. A bank may hope to win or retain a positive image amongst technology-savvy sections of the society and strengthen the brand-reputation of being innovative and visionary (Georgi & Pinkl, 2005).

1.1.6 Strategic Challenges of Mobile Banking

Mobile banking is associated with various challenges in its usage in banks. The strategic challenges identified from the literature are classified as technological, managerial, and business related. The continuing evolution and adoption of mobile banking requires that banks overcome challenges and potential roadblocks most of which can be mitigated by taking a disciplined and focused approach.

For banks to achieve the strategy of dealing with challenges, they first need to educate their customers of the benefits of mobile banking and make sure they differentiate themselves from other competing solutions, such as account aggregation services by providing advanced features. They also need to create software applications that support multiple mobile operating systems (including iOS4, Android, BlackBerry OS, Windows Mobile, and Symbian), multiple form factors (smartphones, iPads, and tablet computers), multiple telecommunication standards, which can be easily upgraded to support new features and advancements (Melville et al., 2004).

In addition, Karsch (2004) noted that banks will need to integrate their existing bank platforms including core banking, customer relationship management, and payment hubs with mobile banking solutions. Banks will also need to manage a multitude of partners, such as telecommunication providers, social media outlets, data analytics providers, retailers, payment networks, mobile device manufacturers, and many other stakeholders. Banks will further require to foster retail relationships to push mobile payment solutions to merchants and educate them on the benefits of installing terminals at the point of sale to enable customers to pay with mobile phones equipped with near field communications chips.

1.2 Research Problem

The popularity of mobile technology strategy is experiencing explosive growth as traditional banking practice has been transformed, placing opportunities for banks to maximize their share in the market, gaining competitive edge and improving on their profitability. The changes in the banking industry external environment have been so rapid, unpredictable, uncertain and discontinuous, thereby complicating management decision on how to remain competitive. This calls for strategic leadership that will

allow for management of change, innovation, and information technology to tap on the opportunities in the environment and deal with the challenges therein more effectively (Bryson, 1995).

According to Tan and Teo, (2000) for proper implementation of mobile banking, banks should ensure that all necessary infrastructures, workforce, and banking functions are in place and working at maximum efficiency. By so doing banks will incur low costs, grow revenue, reduce risks and achieve operational efficiency while their customers will be able to faster communicate, enjoy lower costs, lower risks and convenience. On other hand, Christopher et al., (2006) asserts that consumers are expected to have basic knowledge and mobile internet availability which impacts on the willingness to use this facility. Adoption of mobile banking also poses some challenges to bank such as operational challenges which arises from fraud, processing errors, system disruptions, or other unanticipated events resulting in the institution's inability to deliver products or services.

From the foregoing background literature, (Aosa, 1992, Ndungu, 2010, CBK Annual report, 2010), the commercial banking sector in Kenya has become more visibly competitive. Each bank has developed a strategy unique to its corporate culture, but all of these banks have the same desire to be the customer's number one choice for their banking products and services. The commercial banking industry in Kenya has been in a state of constant change that due to economic liberalization, competition has become stiff, forcing commercial banks to conform to the changing economic environment.

The Kenyan banking industry is facing challenges including: stiff competition among the existing banks as they offer substitute products and offer loaning services at different rates. Microfinance (MFI) and savings and credit societies (SACCO)

institutions are emerging key players in delivery of financial services. In addition the entrance into the industry of such players as insurance agencies, cheque cashing services and mobile money services continue to toughen the competition. Commercial banks may have billions at their disposal but most of this goes to big corporates and high net worth clients while majority of Kenyans remain excluded with very few holding bank accounts. As a result majority of the commercial banks in Kenya have begun to offer banking services through mobile banking that has seen them get strategic benefits although they face some challenges.

Some studies have been undertaken on adoption and usage of mobile banking. For instance, Kaminda (2006) focused on factors affecting adoption of m-banking by Customers. The study found out that there is a negative significant relationship between perceived risk and mobile banking adoption. The research findings provide several important implications for banks, service developers, and software engineer with better strategic insights to design and implement mobile banking services to yield higher consumer acceptance towards mobile banking in Kenya.

Abishua (2010) dealt with strategic responses used by Equity Bank to compete in the Kenyan banking industry. The study found that Equity Bank uses the following strategies to respond to competition in the banking industry: product offering diversification, branch and regional expansion, relationship marketing, financing, customer-care, innovation, and information technology strategies. The study found Equity Bank to be a very adaptive bank with a versatile reactionary mechanism to exploit any emerging gaps in the banking industry. Magutu et al., (2011) studied E-commerce products and services in the banking industry, adoption and usage. As a result, 10 critical factors were established as the best practices which include: improved

customer service, reduced number of customers in the banking hall, reduced operating costs and increased market share. The challenges faced in the adoption of e-commerce products and services include compatibility with existing legacy systems, cost of implementation and security concerns ranked high, ensuring desired levels of security and privacy. Unreliable telecommunication as well as lack of legislation governing e-commerce transactions rated highly.

These researchers have positively shed some light on mobile banking usage and the factors which determine its adoption. However they did little research on the Strategic benefits and challenges of mobile banking in the Kenyan commercial banks to enable them to continuously re-engineer while strategically positioning themselves to take advantage of the opportunities in mobile banking and at the same time deal with the challenges therein. So far there is no known enough research which deals with this topic that is under study. This study therefore seeks to fill the gap guided by the following research question: What are the various strategic benefits that are associated with mobile banking in Kenyan commercial banks? What are the strategic challenges facing mobile banking in Kenyan commercial banks?

1.3 Research Objective

The main objective of this study is to identify the strategic benefits and challenges of mobile banking in the Kenyan commercial banks.

1.4 Value of the Study

The findings of this study will enrich existing knowledge and hence will be of interest to both researchers and academicians who seek to explore and carry out further investigations. It will provide a basis for further research.

The study is important because it will contribute to better understanding of the changes in mobile banking services in Kenya and its transformation of the financial services and its contribution to the financial performance of banks in Kenya.

The study will enable banks and the users of mobile banking gain better understanding of the limitations they face and have better knowledge of the strategies to employ in coping with mobile banking.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The literature review gives the theoretical review of mobile banking, gives the background explanations of the elements of the research work of mobile banking services, the strategic benefits and challenges of mobile banking usage.

2.2 Theoretical Review

The theoretical review explains the theories of mobile banking which include evolutionary theory, Processual Theory and the Diffusion of Innovation theory.

2.2.1 Evolutionary Theory

Evolutionary theorists believe that only the fittest and adaptable will survive. They consider it important to allow for variation and selection. It is drawn from the theory of organic evolution Darwinism. The environment is considered turbulent and thus, an organization survives by adapting to its changing business environment. It is the market, not managers, which makes the important choices. Rational future-oriented planning is often irrelevant and successful strategies only emerge as the process of natural selection delivers its verdict unlike the classical approach. An organization must develop efficient and effective practices that optimize its resources, capabilities, and competences to enable it to adapt to its environment. Organization-environment fit is achieved through prudent and continuous environmental analysis and organizational learning. The evolution of such organizations systems therefore, is inconstant and also difficult to predict. Small disturbances multiply, long-term planning is impossible, stable equilibrium is not reached and dramatic change can occur unexpectedly (Levy, 1994; Stacey, 1996).

Evolutionists believe that organizations should allow for variation and selection. A large enough population with sufficient variety should be encouraged, as there is a greater chance of succeeding in increasing an organizations suitability and adaptation to the environment. In Evolutionary Theory, an IT strategy requires a delicate balance, in which sufficient variety is sought to match the technological and business variety in the prevailing business environment. It should be neither too much nor too little. An optimal match ensures best IT solution to business problems. Over-reliance on single technologies, applications and methods may lead to an inability to cope with adaptive forces inside and outside the organization. On the other hand, excessive variety can lead to a non-optimum organization. Information systems flourish in an amenable organizational environment (Ward & Griffiths 1996).

2.2.2 Processual Theory

Processualists view strategy as a pattern in a stream of actions and decisions which emerge as a result of pragmatic processes of forecasting, learning and compromise (Mintzberg, 1987). Proponents of this theory believe that strategy emerges, and may only be clearly defined after the event has occurred. Strategy is conceived out of action in response to current and anticipated events. The Approach was laid by American Carnegie School (Cyert & March, 1963). It focused on the complexity within an organization. They argue that rational long-term planning is ineffectual due to unpredictable behaviour of people and unpredictable business environment unlike classicists. They believed that human nature is flawed and organizations and markets are wrought with confusion and mess.

According to Cyert and March (1963) people are too different in their interests, limited in their understanding, wandering in their attention, and careless in their actions to unite around and then carry through a perfectly calculated plan. When more than one view point involved in strategic process, members of the organization bargain between themselves to arrive at a set of goals that is acceptable to them all. Proponents of processual theory focus on the interactions amongst context, culture and process within the organization. Mobile banking strategy influenced by a processual view should take into account issues of context, culture and process.

The processual view recognizes that, although in each organization IT strategy may differ, general patterns can emerge. Adjustments may be incremental and are made in a manner which is sensitive to the organization business environment. Alignment results from internal shared culture, rather from specific applications or uses of IT. Both the internal and external context as well as historical context is important. Organizational process must be geared towards providing competitive advantage.

2.2.3 The Diffusion of Innovation Theory

Diffusion innovation theory could be considered as one of the most popular theories that have attempted to explore factors that affect an individual to adopt an innovation or a new technology. DIT is a theory that seeks to explain how, why, and at what rate new ideas and technology spread as a consequence diffusion processes result in the acceptance or penetration of a new idea, behavior, or physical innovation. Rogers (2003) identified several attributes of an innovation that are key influences on adoption behavior. According to Rogers (2003) these attributes are relative advantage, complexity, compatibility, trialability and observability.

A number of previous studies have examined these factors in adoption and diffusion of Internet-based technologies and have consistently concluded these attributes, particularly those of relative advantage, ease of use, and compatibility, as the most frequently salient factors for adoption of Internet and mobile technologies for example, Koenig-Lewis et al. (2010); Liu & Li (2010); Papies & Clement (2008). Relative advantage refers to the degree to which an innovation is perceived as providing more benefits than its predecessor (Moore & Benbasat, 1991). Past research has found that relative advantage of an innovation is positively related to the rate of adoption (Moore & Benbasat 1991). Research suggests that when user perceives relative advantage or usefulness of a new technology over an old one, they tend to adopt it (McCloskey 2006). In the context of mobile banking adoption, benefits such as immediacy, convenience and affordability to customers have been reported (Lin, 2011). Therefore, it is hypothesized that, when customers perceive distinct advantages offered by mobile banking, they are more likely to adopt it.

2.3 Strategic Benefits of Mobile Banking

2.3.1 Increasing Sales Volume

A favorable reputation of the firm's logistical capacities may help generate additional orders. Mobile Banking can contribute to achieve this goal by providing anywhere anytime access to banking services; push services to suggest transactions on an urgent basis, and; Face-to-face talks with the personal consultant via video telephony (Luber, 2004). For instance, *ING Postbank* of Netherlands launched in the year 2001 a scheme to boost its sales volume. Every new customer who deposited €450 in a savings account was provided with a mobile telephone worth €150. Within 6 weeks more than 500,000 new customers and over €225 millions in deposits could be acquired. More importantly,

97% of these new customers became regular users of Mobile Banking and remained with the bank (Karsch, 2004).

2.3.2 Increasing Customer Satisfaction

Mobile Banking may help increase the customer satisfaction through; Streamlining of business processes to increase efficiency; More attention and better consulting for customers due to automation of routine processes; Innovative “anywhere, anytime” services customized for individual preferences and current geographic location of the customer provide value-added to the customer while the collected data can be utilized to create customer profiles. Increased customer satisfaction can help reduce the customer attrition rate (Luber, 2004).

2.3.3 Source of Revenue

Mobile Banking can also serve as a source of revenue. Mobile services can be offered on a premium basis. The price, in this case, should be reasonable enough so that customers are willing to pay them but at the same time they should be from a financial point of view higher than the costs incurred by the bank. Additional revenues can be generated by offering innovative, premium services to existing customers and attracting new customers by offering innovative services. New customers in this case contribute to revenue generation not only by utilizing mobile services but also by using other conventional distribution channels.

2.3.4 Mobile Banking as Image Product

Mobile Banking can be also used as an image product to gain strategic advantages. A bank may hope to win or retain a positive image amongst technology-savvy sections of the society and strengthen the brand-reputation of being innovative and visionary (Georgi and Pinkl, 2005). The image of being a technology leader can help the bank

win customers looking for modern products and services and at the same time help it retain its own existing base of technology-savvy customers, some of whom otherwise might have switched to other banks while looking for such a product. Further, the bank can profit from an early-mover advantage by actively shaping technological standards that are based on one's own strengths.

2.3.5 Reducing Costs of Distribution

Due to increased competition a distribution channel must organize business processes efficiently so as to reduce distribution costs. This pressure can be coped with by rationalizing organizational structures to increase productivity. Mobile Banking can contribute to achieve this goal since the manual collection, processing, transmission and archiving of data by bank employees in branch offices is substituted, as in the Internet-based banking, by automated processes.

2.4 Strategic Challenges of Mobile banking

Mobile banking is associated with the following challenges in its usage in banks. The strategic challenges identified from the literature are classified as technological, managerial, and business related.

2.4.1 Technological Challenges

Technological challenges are related to the acquisition, installation and maintenance of the necessary hardware and software. These challenges are technological and security risks that organizations face through threats from hackers and data loss occasioned by things like viruses (Koved et al., 2001). Technology risks are the risks that are associated with systems failures, processing errors, software defects, operating mistakes, hardware breakdowns, capacity inadequacies, network vulnerabilities, control weaknesses, security shortcomings, malicious attacks, hacking incidents, fraudulent

actions, and inadequate recovery capabilities (Supervisory and Regulatory Guidelines, 2006).

Consumers associate security risk with the loss of bank account or credit account numbers, passwords, etc., which can result to loss of money. Customers tend to purchase only if they perceive that credit card and other sensitive information is safe. Several studies including Schultz et al. (2001) suggest that security measures that are inconvenient for users may weaken mobile banking prospect, for example because of lack of user acceptance or outright resistance. Banks that use mobile banking have to constantly update their software and hardware to make sure that compatibility issues and increased knowledge of security systems do not increase their security risks.

2.4.2 Managerial Challenges

Managerial challenges include people and organizational issues; the people in the organization may resist adoption of the new technology as they may fear that it would lead to loss of jobs. They may also be reluctant to adopt new methods as they may fear change. Another thing to consider is that, you may need to restructure the organization and this may be a challenge in itself (Hoffman et al. 1999; Feeny 2000). Obtaining senior management backing: every major activity in the organization needs to have management support. If the management does not support the e-commerce project, it means that the project will lack the necessary resources and is thus bound to fail (Feeny, 2000).

2.4.3 Business Challenges

Business challenges include customer service where the bank will lose the personalized service that it offered its customers. When this personal feel is lost, customer loyalty may be reduced or entirely lost (Whinston et al. 1997; Alter, 1999; Lee, 2001). Customers' old habits; customers may stick with the old habits and may not be ready to adopt change. They may even lack trust for the new technology and hence your e-commerce system may be underutilized (Schwartz, 1999).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter covers the following sub-topics which relate to how the project was carried out. These include, the research design used to conduct the study, the population, data collection methods and the analysis of data in order to generate the findings of the research.

3.2 Research Design

The study employed a descriptive survey as its research design. Surveys are useful in describing the characteristics of a large population. Additionally, high reliability is easy to obtain by presenting all subjects with a standardized stimulus which ensures that observer subjectivity is greatly eliminated (Mugenda & Mugenda, 2008). This design was preferred because very large samples are feasible, making the results statistically significant even when analyzing multiple variables. The survey was appropriate, as it sought to ascertain the strategic benefits and challenges of mobile banking in Kenyan commercial banks.

3.3 Population

This refers to the target population from where the data was collected. In this study the target population were the commercial banks in Kenya which are 43 in number (CBK, 2014).

3.4 Data Collection

The study made use of both primary and secondary data. The primary data was collected by use of questionnaires as the primary instrument of data collection. The questionnaire was semi-structured; consisting of both open and close-ended questions.

The structured questions helped the researcher to get specific information while the non-structured questions helped the respondent express his or her opinion. The questionnaire contained three sections. Section A involved the demographic traits of respondents and the Organization information; Section B entailed status of M-banking in banks, section C strategic benefits of M- banking, while section D entailed strategic challenges of M-banking.

The respondents were one Strategic manager, one IT manager, and one Operations manager from each bank making a sample size of 129 respondents. The preference for a questionnaire was based on the fact that respondents are able to complete it without help, anonymously, and it is cheaper and quicker than other methods while reaching out to a larger sample (Bryman, 2008; Cohen, Manion, and Morrison, 2007). The secondary data for this study was obtained from the sampled banks documented strategies in relation to the strategic benefits and challenges of mobile banking. This data was used to supplement information gathered from the questionnaires hence helped to put the study in the right context.

3.5 Data Analysis

The questionnaires was administered through drop and pick method. The researcher made sure they had been properly completed and for consistency in responses. The questionnaires were designed such that it was easy to see if respondents were consistent in their answers. The study used a combination of various techniques of data analysis to determine an overall picture of the variables in the population. As soon as collection of data was finalized, and compiled, it was classified and analyzed to determine its validity. The questionnaires were coded and edited for completeness using SPSS statistical package. A range of descriptive statistical measures was also used. These

measures included the mean and standard deviation and percentages. Graphs, tables, and charts were used exclusively to display the findings.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the analysis and findings of the study as set out in the research methodology. The chapter also brings out the discussion of the study. This study targeted 129 respondents; questionnaires were dropped and picked to all targeted respondents. A total of 110 respondents fully filled and returned the questionnaires. This constituted 85% response rate which is satisfactory and can be used in drawing conclusions. Analysis of data was by use of frequency tables and figures which uses percentages, mean and standard deviation in presenting data.

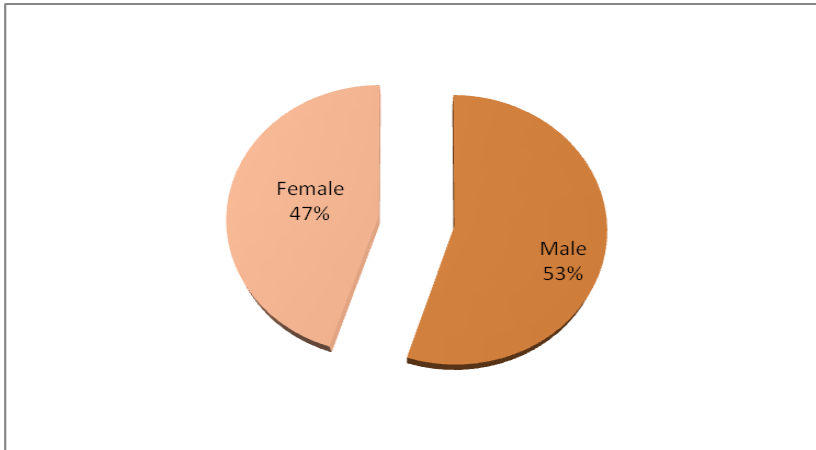
4.2 Demographic Data

The researcher collected primary data from respondents who were one Strategic manager, one IT manager and one Operation manager from each of the 43 Kenyan commercial banks. These are the people who are fully conversant with the strategic direction of the banks, are aware of what it takes to achieve these goals and have relevant experience in the benefits and challenges of mobile banking both the internally and externally. Most of them had participated in the banks' strategy formulation and implementation of the mobile platform and have more than 5 years of experience which is good enough for them to be able to familiarize themselves with how mobile banking works in a bank.

4.2.1 Gender of the Respondents

The study sought to determine the gender distribution of the respondents across the various departments in Kenyan commercial banks. The responses are as summarized in Figure 4.1.

Figure 4.1: Gender Composition of the Respondents



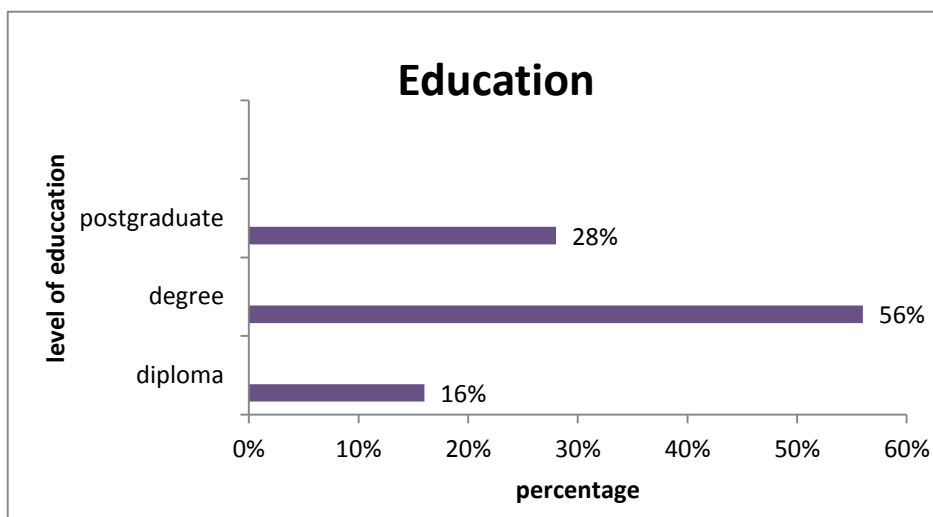
Source: Research Data

As shown in Figure 4.1, majority (53%) of the respondents were male while the rest (47%) were female. This shows a fair gender distribution in Kenyan commercial banks.

4.2.2 Level of Education

The respondents were asked to indicate their level of education choosing from diploma, degree and postgraduate. The findings are presented in Figure 4.2.

Figure 4.2: Education Level



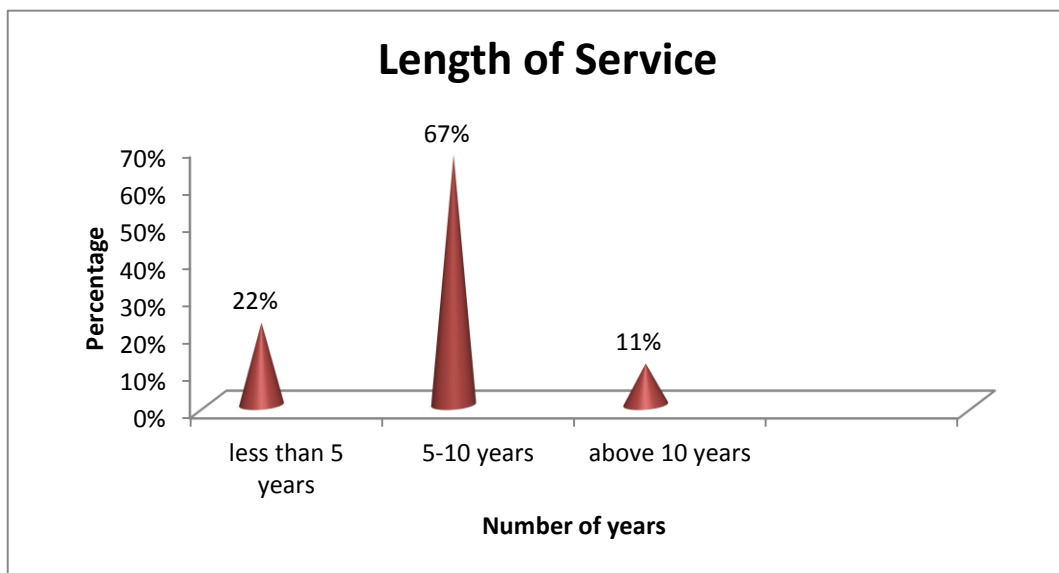
Source: Research Data

From the findings in Figure 4.2, 56% of the respondents had a degree followed by 28% who had a postgraduate while the rest (16%) had a diploma. This shows that the targeted group were quite knowledgeable in interpreting the data as well as giving relevant information on M-Banking.

4.2.3 Length of Service in the Bank

The respondents were required to indicate their length of service at their respective banks. The question was relevant since it would interpret the knowledge that one had on m-banking service hence able to tell the benefits as well as the challenges of the same. The response is summarized in Figure 4.3.

Figure 4.3: Length of Service



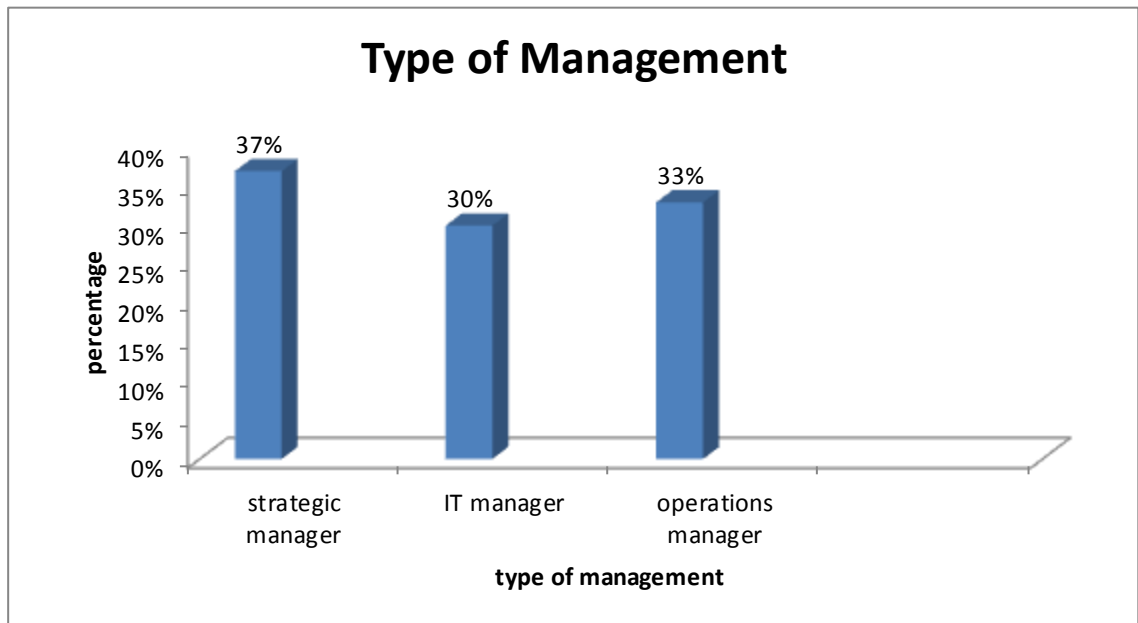
Source: Research Data

From the findings in Figure 4.3 majority (67%) of the respondents indicated to have been in service between 5-10 years, those that had been in service for less than 5 years were 22% while the rest (11%) were in service for more than 10 years. Working in the bank for more than 5 years is satisfactory to help the respondents familiarize themselves with the benefits and the challenges of M-banking hence giving reliable data.

4.2.4 Type of Management

The study aimed at getting the type of management of the respondents. The response is as shown in Figure 4.4.

Figure 4.4: Type of Management



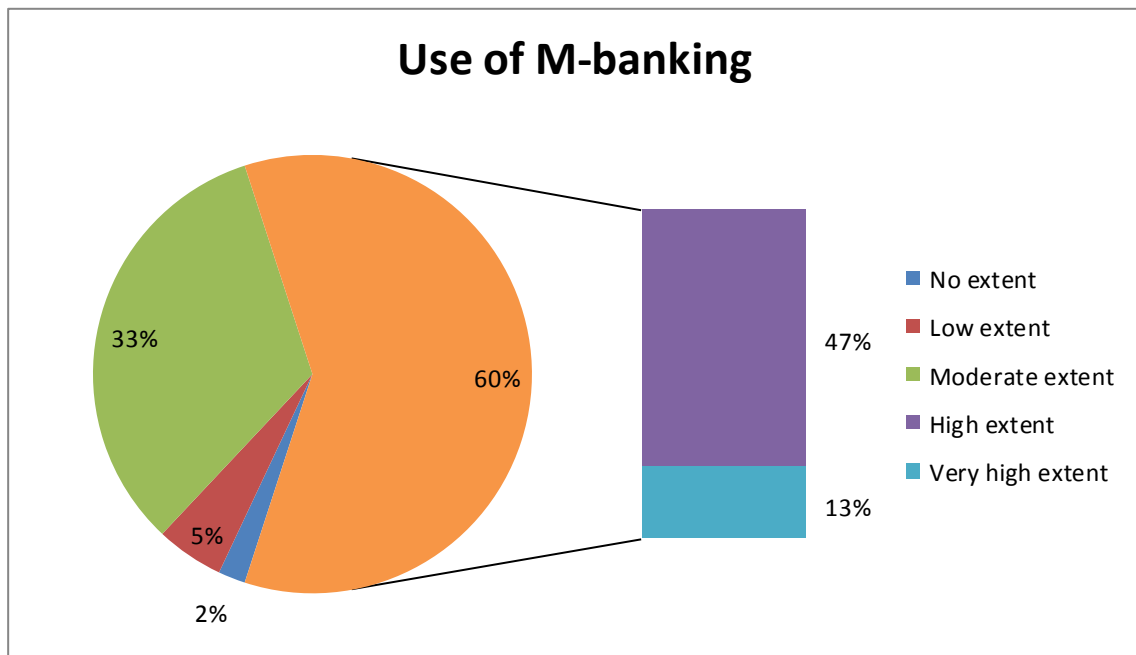
Source: Research Data

From the findings in Figure 4.4 the highest percentage 37% were strategic managers, 33% operations managers while 30% were IT managers. The managers were evenly distributed and therefore balanced data was recorded on strategic benefits and challenges of M-banking.

4.2.5 Extent of Use of M-Banking

The study sought to find out the extent of use of mobile banking in Kenyan commercial banks. The response is as indicated in Figure 4.5.

Figure 4.5: Use of M-Banking



Source: Research Data

From the findings shown in Figure 4.5, 47% of the respondents indicated the use of m-banking to a high extent, 33% indicated use in a moderate extent, 13% for a very high extent, 3% for low extent and 2% for no extent. It is therefore clear that m-banking is highly used in Kenyan commercial banks.

4.3 Status of M-Banking in Commercial Banks

4.3.1 How M-Banking works in Kenyan commercial banks

The study intended to find out the way M-banking worked in Kenyan commercial banks. The respondents were required to state their level of agreement with the statements given on a scale of 1-5 with 1=Strongly Disagree 2=Disagree 3=Uncertain 4=Agree 5=Strongly Agree. The findings are presented in Table 4.1.

Table 4.1: How M-Banking Works in Kenyan Commercial Banks

	Mean	STD
One can access M-banking services any time 24 hours	4.93	0.004
One can deposit or withdraw money using the mobile phone	4.23	0.123
M-banking technology requires continuous maintenance and system checks	4.43	0.618
M-banking is more preferred to use over ATM machines	3.02	0.032
Payment of bills can be made through M-banking technology	4.17	0.067
M-banking is not as complicated as people may think. understand	3.06	0.241
M-banking is one way of coping with the ever changing customer expectations	4.14	0.482
M-banking increase customer access to the banking services as well as convenience	4.02	0.298
The bank has the ability to keep customers M-banking transaction confidential	4.19	0.107

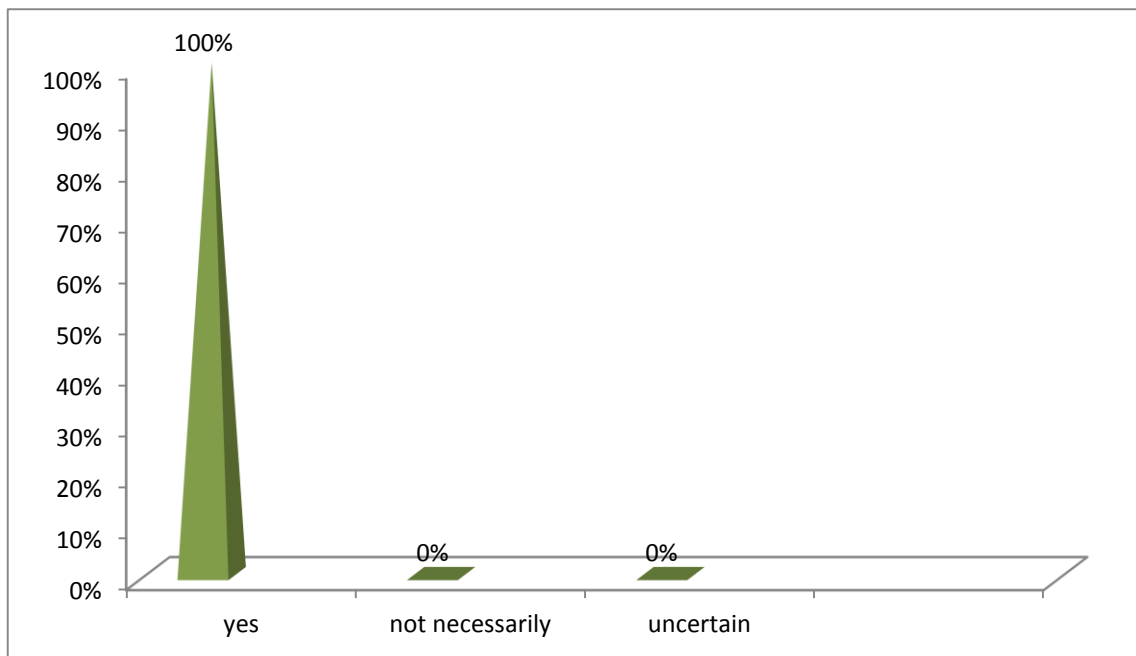
Source: Research Data

From the findings the respondents strongly agreed (4.93) that one could access m-banking services anytime 24 hour. They agreed (4.43) that m-banking technology required continuous maintenance and system checks. They also agreed (4.23) that one could deposit or withdraw money using the mobile phone. A mean of 4.19 further indicated that they agreed that the bank had the ability to keep customers m-banking transaction confidential. A further mean of 4.14 indicated that they agreed that M-banking was one way of coping with the ever changing customer expectations. Also they agreed that m-banking increased customer access to the banking services as well as convenience as given by a mean of 4.02. They were however undecided as to whether m-banking was as hard as people thought with a mean of 3.06. Also they were undecided whether M-banking was more preferred to use over ATM machines as portrayed by a mean of 3.02.

4.3.2 Registration

The study sought to find out whether one needed to register with the bank in order to access the m-banking services. The response is given in Figure 4.6.

Figure 4.6: Registration



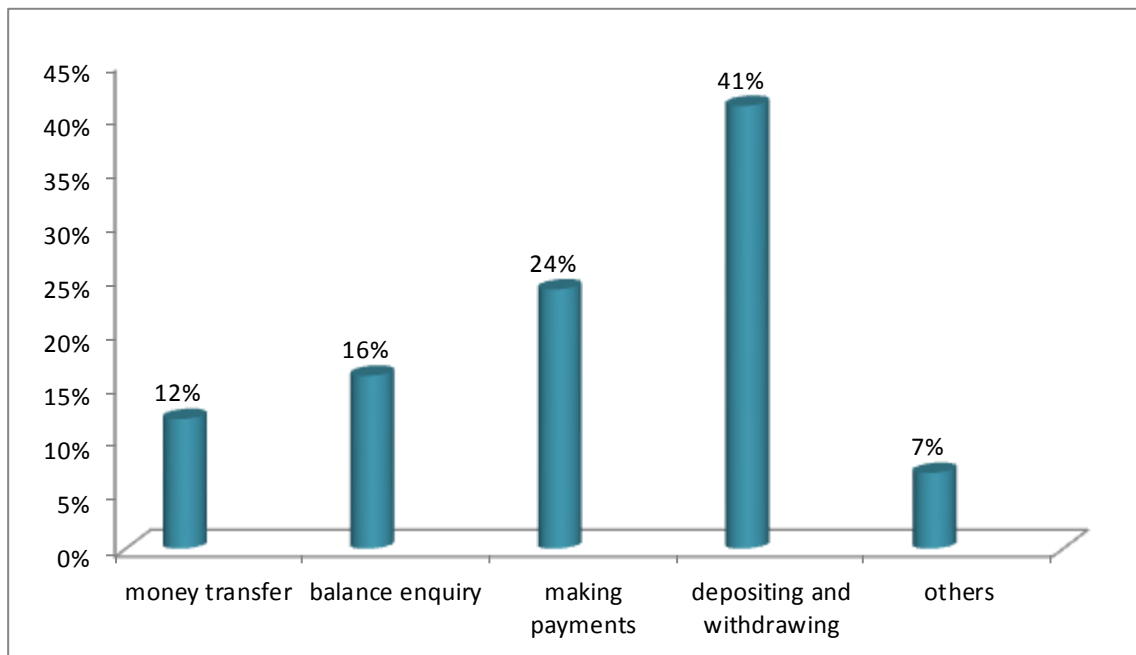
Source: Research Data

From the findings 100% respondents indicated that one is required to register in order to access the m-banking services. This is to show that the process is well monitored and that in case of a hitch the technicians were in a good scrutiny position.

4.3.3 Use of M-Banking Service

The study aimed at finding out the main use of M-banking service in various commercial banks in Kenya. The response is as indicated in Figure 4.7.

Figure 4.7: Use of M-Banking Service



Source: Research Data

From the findings the highest usage (41%) was on depositing and withdrawing followed by 24% on making payments, 16% on enquiry and 12% on money transfer while the rest (7%) was on others. The respondents highlighted the following activities to include others; buying airtime, taking loans and getting alerts.

4.4 Strategic Benefits of M-Banking

The study sought to determine the extent of agreement on the strategic benefits of M-banking in Kenyan commercial banks. The response is summarized in Table 4.2.

Table 4.2: Strategic Benefits of M-Banking

	Mean	STD
Mobile banking increases sales volume	3.73	0.129
Increases customer satisfaction	4.31	0.207
M-banking is a great source of revenue for banks	4.01	0.618
M-banking can be also used as an image product to gain strategic advantages	4.05	0.062
M-banking reduces the cost of distribution	4.17	0.307

Source: Research Data

Mobile banking increases customer, satisfaction reduces the cost of distribution, can be used as an image product to gain strategic advantages, is a great source of revenue for banks and it increases sales volume. This is aptly demonstrated by a mean of 4.31, 4.17, 4.05, 4.01 and 3.73 respectively.

The respondents specified other strategic advantages to include; Mobile banking offers banks several opportunities for increasing revenues. These include monetizing the value of customer analytics, delivering greater real-time access to products and services, and conducting targeted marketing campaigns based upon the knowledge of consumer preferences that banks collect. M-banking expands distribution and coverage models; Mobile banking gives banks the potential to expand beyond their geographical footprint as well as ability to cross-sell and up-sell products to existing customers. Monetizing the value of customer analytics; Delivering greater real-time access to products and services; Mobile banking could provide bank customers with the ability to compare options at time and place of purchase. Offering discounts and purchasing incentives to bank customers; Opportunities for revenue growth; Conducting targeted marketing campaigns; banks could leverage the mobile banking interface as a real-time, tailored

advertising engine by using behavioral analytics they compile to develop campaigns tailored to customers' shopping preferences. M-banking dramatically reduces the cost of delivering financial services. M-banking reduces the cost of basic banking services to customers.

The main benefit from the bank customers' point of view is significant saving of time by the automation of banking services processing and introduction of an easy maintenance tool for managing customer's money. Reduced costs in accessing and using the banking services. Increased comfort and timesaving, transactions can be made 24 hours a day, without requiring the physical interaction with the bank. Quick and continuous access to information as banks will have easier access to information as they can check on multiple accounts at the click of a button. Better cash management as it facilitates speed up cash cycle and increases efficiency of business processes as large variety of cash management instruments are available on Internet sites of Estonian banks. Reduced costs in availing and using the various banking products and services. Convenience such that all the banking transactions can be performed from the comfort of the home or office or from the place a customer wants to. The response of the medium is very fast; therefore customers can actually wait till the last minute before concluding a fund transfer.

4.5 Strategic Challenges of M-Banking

The study sought to find out the extent of occurrence of the main challenges experienced in Kenyan commercial banks. The respondents were to indicate on a scale of 1-5 with 1=Not At All 2=Little Extent 3=Moderate Extent 4=Great Extent 5=Very Great Extent. The response is given in Table 4.3.

Table 4.3: Strategic Challenges of M-Banking

	Mean	STD
System failure and processing error	3.02	0.024
Inadequate recovery capabilities	2.23	0.123
Software defects and operating mistakes	3.43	0.618
Security risks through malicious attacks, hacking incidents	2.12	1.032
Data loss caused by things such as viruses	3.17	0.067
Network vulnerabilities and fraudulent actions	3.56	0.241
Staff resisting adoption of the new technology due to fear of loss of jobs	1.92	0.298
Staff are reluctant to adopt new methods as they fear change	1.79	0.007
Restructuring challenges in the bank	4.11	0.381
Need for staff to have the relevant technological expertise to	3.25	0.103
Reluctance of customers to adopt change	4.13	0.673
Cost challenges associated with legal requirements (non-conformance with laws, rules, regulations, or prescribed	4.21	0.622
Cost challenges associated with high implementation cost of	3.74	0.402

Source: Research Data

Cost challenges associated with legal requirements (non-conformance with laws, rules, regulations, or prescribed practices) were experienced by the banks to a great extent evident by a mean of 4.21. Reluctance of customers to adopt change also occurred to a great extent (4.13). Restructuring challenges in the bank occurred to a great extent as portrayed by a mean of 4.11. Cost challenges associated with high implementation cost of both infrastructure and technology installations were also experienced to a great extent as given by a mean of 3.74. Network vulnerabilities and fraudulent actions also occurred as demonstrated by a mean of 3.56. Other challenges that occurred in the Kenyan commercial banks to a moderate extent were software defects and operating mistakes (3.43), need for staff to have the relevant technological expertise to assess

potential changes in risks (3.25), data loss caused by things such as viruses (3.17) and system failure and processing error (3.02). Challenges that were found to occur to a less extent included inadequate recovery capabilities (2.23), security risks through malicious attacks, hacking incidents (2.12), staff resisting adoption of the new technology due to fear of loss of jobs (1.92) and staff being reluctant to adopt new methods as they fear change (1.79). The main challenges were those associated with cost followed by the technological challenges. Managerial challenges rarely affected the operations of m-banking.

4.6 Discussion

From the finding the use of m-banking in Kenyan commercial banks is on the rise as customers can access the service on a 24 hour basis. The findings further found out that m-banking helped cope with customers' expectations as it kept the transaction confidential. The findings also revealed that m-banking increased customer access to banking services. Tiwari, Rajnish and Herstatt (2007) indicated that due to the tremendous growth of the mobile phone industry most financial institutions have ventured into the untapped opportunity and have partnered with mobile phone network providers to offer mobile banking services to their clients. This has thus enabled bank customers' access information relating to their accounts.

From the findings, some of the strategic benefits of mobile banking include; offering banks several opportunities for increasing revenues. These include monetizing the value of customer analytics, delivering greater real-time access to products and services, and conducting targeted marketing campaigns based upon the knowledge of consumer preferences that banks collect. M-banking expands distribution and coverage models; Mobile banking gives banks the potential to expand beyond their geographical footprint

as well as ability to cross-sell and up-sell products to existing customers. Monetizing the value of customer analytics; Delivering greater real-time access to products and services; Mobile banking could provide bank customers with the ability to compare options at time and place of purchase. According to Anderson, Banker & Ravindran (2003), the intangible benefits of mobile banking on business processes and relationships include better customer services, increased knowledge about customers, improved coordination with partners (Buhalis, 2004; Mukhopadhyay *et al.*, 1995), superior product quality and competitive advantages (Griffiths & Finlay, 2004). Competitive advantage usually takes the form of a banks' cost position or product differentiation. A bank may hope to win or retain a positive image amongst technology-savvy sections of the society and strengthen the brand-reputation of being innovative and visionary (Georgi & Pinkl, 2005).

The main benefit from the bank customers' point of view is significant saving of time by the automation of banking services processing and introduction of an easy maintenance tool for managing customer's money. Reduced costs in accessing and using the banking services. Increased comfort and timesaving, transactions can be made 24 hours a day, without requiring the physical interaction with the bank. The biggest benefit of mobile banking for consumers as indicated by Dyke, (2009) is that a customer has more control of their money, internet connections are not everywhere but there is always a mobile connection. Quick and continuous access to information as banks will have easier access to information as they can check on multiple accounts at the click of a button.

From the findings the main strategic challenges of m-banking in Kenyan commercial banks are; restructuring challenges, customer reluctance and cost challenges. Others included system failure, network vulnerabilities, software defects and operating mistakes, system failure and processing error and data loss due to virus. From the findings the main challenges were those associated with cost followed by the technological challenges. Managerial challenges rarely affected the operations of m-banking. Karsch (2004) noted that banks will need to integrate their existing bank platforms including core banking, customer relationship management, and payment hubs with mobile banking solutions. Banks will also need to manage a multitude of partners, such as telecommunication providers, social media outlets, data analytics providers, retailers, payment networks, mobile device manufacturers, and many other stakeholders. Schultz et al. (2001) also suggest that security measures that are inconvenient for users may weaken mobile banking prospect, for example because of lack of user acceptance or outright resistance.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the data findings on strategic benefits and challenges of mobile banking in Kenyan commercial banks, the conclusions and recommendations are drawn here to. This chapter also suggests areas that need further research and also highlights the limitations of the study.

5.2 Summary

From the finding the use of m-banking in Kenyan commercial banks is on the rise as customers can access the service on a 24 hour basis. From the findings also m-banking requires continuous maintenance. The findings further found out that m-banking helped cope with customers' expectations as it kept the transaction confidential. The findings also revealed that m-banking increased customer access to banking services.

From the findings it is clear that one needed to be registered for them to access m-banking services in Kenyan commercial banks. The M-banking services provided by the banks ranges from money transfer, balance enquiry, making payments, depositing and withdrawing, buying airtime and taking loans, payment of bills. The study found out that the services were evenly used therefore familiar and beneficial to the customers. From the findings m-banking increases sales volume, reduces the cost of distribution, can be used as an image product, is a source of revenue and increases customer satisfaction.

From the findings the main strategic challenges of m-banking in Kenyan commercial banks are; restructuring challenges, customer reluctance and cost challenges. Others included system failure, network vulnerabilities, software defects and operating

mistakes, system failure and processing error and data loss due to virus. From the findings the main challenges were those associated with cost followed by the technological challenges. Managerial challenges rarely affected the operations of m-banking.

5.3 Conclusion

The study concludes that due to the ever changing environment in which banks operate, and demand for quick and fast service by customers, all banks have adopted mobile banking as one of the strategic focus. This is because from the study it is clear that mobile banking has greater benefits to the banks as well as to its customers.

The study concludes that sustained introduction of mobile based banking services, tend to complement existing services thus those without access to physical banks can conveniently access banking services from the comfort of their homes, offices, etc. These services are money transfer, paying bills, balance enquiry, making payments, depositing and withdrawing, buying airtime and taking loans. The study concludes that all the services provided by the banks are common with the users.

The study also concludes that one of the benefits that banks experience when using m-banking is increased customer satisfaction. This is because customers can access their accounts whenever, from anywhere, and they get involved more, thus creating relationships with banks. Other benefits are increase in sales volume, reduced cost of distribution, being an image product and as a source of revenue. With all these benefits banks can obtain success on the financial market. To realize the full benefits afforded by M-banking it's imperative to move beyond the traditional and limited approaches and instead explore innovative and value oriented application.

The study further concludes that m-banking is a difficult business and banks face a lot of challenges. The Kenyan commercial banks are mainly faced with cost challenges such as operation cost as well as restructuring challenges. The study further concludes that technological costs such as system failure, network vulnerabilities, software defects and operating mistakes, system failure and processing error and data loss due to virus are also experienced by Kenyan commercial banks as they operate m-banking services. Other challenges are business challenges such as legal requirements, competition from telecommunication companies and acceptance of technology use by customers. The continuing evolution and adoption of mobile banking requires that banks overcome challenges and potential roadblocks most of which can be mitigated by taking a disciplined and focused approach. As is the case with many emerging markets, the speed of change is rapid, and banks must be prepared to adapt accordingly.

5.4 Recommendations

The study recommends that Kenyan commercial banks should provide their customers with convenience, meaning offering service through several distribution channels (ATM, Internet, physical branches) and have more functions available online. The study further recommends that banks and third-party developers create software applications that support multiple mobile operating systems, multiple form factors (smartphones, iPads, and tablet computers), multiple telecommunication standards, and can be easily upgraded to support new features and advancements.

The study recommends that banks need to integrate their existing bank platforms including core banking, customer relationship management, and payment hubs with mobile banking solutions as it will help in significantly reduce the cost of manual operation. Banks also need to manage the challenges that come as result of adoption of

the mobile banking technology by investing in stable systems with minimal errors, thorough training of staff to manage the systems, managing a multitude of partners, such as telecommunication providers, social media outlets, data analytics providers, retailers, payment networks, mobile device manufacturers, and many other stakeholders. The study also recommends on the need for banks to educate their customers of the benefits of mobile banking and make sure they differentiate themselves from other competing solutions, such as account aggregation services by providing advanced features.

5.5 Limitations of the Study

This research had the following limitation;

The unwillingness of the respondents to give the right response was a great limitation in the study. The respondents were suspicious that such a study could expose their competitive advantage to their competitors who may have access to this thesis. This was in spite of the assurance given to them that the study findings were purely meant for academic purposes and were to be kept confidential.

5.6 Recommendations for Further Research

A comparative study is recommended on strategic benefits and challenges of e-banking in commercial banks.

A study on strategic benefits and challenges on m-banking may be recommended across countries in East Africa for comparative purposes.

A study can also be undertaken to determine factors affecting mobile banking usage in Kenyan commercial banks. Finally a study on the flexibility of the core banking systems in adapting to change can also be done.

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APPENDICES

Appendix I: Questionnaire

SECTION A: BACKGROUND INFORMATION

1. Gender

Male

Female

2 Level of education

Diploma

Degree

Postgraduate

3 How long have you been working in the bank?

Less than 5 years

5-10 years

Above 10 years

4 Which department do you work?

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5 To what extent does the bank use mobile banking?

No extent

Low extent

Moderate extent

High extent

Very high extent

SECTION B: STATUS OF M-BANKING IN BANKS

6 The following statements are intended to evaluate how mobile banking works in commercial banks in Kenya. Tick as appropriate to show the extent to which you agree with the statements 1=Strongly Disagree 2=Disagree 3=Uncertain 4=Agree 5=Strongly Agree

	1	2	3	4	5
One can access M-banking services any time 24 hours					
One can deposit or withdraw money using the mobile phone					
M-banking technology requires continuous maintenance and system checks					

M-banking is more preferred to use of ATMs machine					
Payment of bills can be made through M-banking technology					
M-banking is not a complicated as people may think, is easy to understand					
M-banking is one way of coping with the ever changing customer expectations					
M-banking increase customer access to the banking services as well as convenience					
The bank has the ability to keep customers M-banking transaction confidential					

7 One needs to register with the bank to access these services?

Yes []

Not necessarily []

Uncertain []

8 M-Banking service in your bank is mainly used for?

Money transfer across Account []

Balance inquires []

Making payments (utility bills) []

Depositing & Withdrawing, []

Others []

Specify.....

9 Comment on the M-banking effect on the financial performance in your bank

.....
.....
.....

SECTION C: STRATEGIC BENEFITS OF M-BANKING

The following are the main benefits of mobile banking in many commercial banks in Kenya. To what extent do you agree with the statements? 1=Strongly Disagree 2=Disagree 3=Uncertain 4=Agree 5=Strongly Agree

	1	2	3	4	5
Mobile banking increases sales volume					
Increases customer satisfaction					
M-banking is a great source of revenue for banks					
M-banking can be also used as an image product to gain strategic advantages					
M-banking reduces the cost of distribution					

10 What would you say are the strategic benefits of mobile banking in your bank?

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SECTION D: STRATEGIC CHALLENGES OF M-BANKING

The following are the main challenges experienced in many commercial banks in Kenya. To what extent do they occur in your bank? 1=Not At All 2=Little Extent 3=Moderate Extent 4=Great Extent 5=Very Great Extent

	1	2	3	4	5
Technological Challenges					
System failure and processing error					
Inadequate recovery capabilities					
Software defects and operating mistakes					
Security risks through malicious attacks, hacking incidents					
Data loss caused by things such as viruses					
Network vulnerabilities and fraudulent actions					
Managerial Challenges					
Staff resisting adoption of the new technology due to fear of loss of jobs					
Staff are reluctant to adopt new methods as they fear change					
Restructuring challenges in the bank					
Need for staff to have the relevant technological expertise to assess potential changes in risks					
Business Challenges					
Reluctance of customers to adopt change.					
Cost challenges associated with legal requirements (non-conformance with laws, rules, regulations, or prescribed practices)					
Cost challenges associated with high implementation cost of both infrastructure and technology installation.					

11 What would you say are the strategic challenges of mobile banking in your bank?

.....

.....

.....

Appendix II: Commercial Banks in Kenya

COMMERCIAL BANKS IN KENYA	
1	African Banking Corporation Ltd.
2	Bank of Africa Kenya Ltd.
3	Bank of Baroda (K) Ltd.
4	Barclays Bank of Kenya Ltd.
5	Bank of India
6	CFC Stanbic Bank Ltd.
7	Chase Bank (K) Ltd.
8	Citibank N.A Kenya
9	Commercial Bank of Africa Ltd.
10	Consolidated Bank of Kenya Ltd.
11	Co-operative Bank of Kenya Ltd.
12	Credit Bank Ltd.
13	Development Bank of Kenya Ltd.
14	Diamond Trust Bank Kenya Ltd.
15	Dubai Bank Kenya Ltd.
16	Ecobank Kenya Ltd
17	Equatorial Commercial Bank Ltd.
18	Equity Bank Ltd.
19	Family Bank Limited
20	Fidelity Commercial Bank Ltd
21	Fina Bank Ltd
22	First community Bank Limited
23	Giro Commercial Bank Ltd.

24	Guardian Bank Ltd
25	Gulf African Bank Limited
26	Habib Bank A.G Zurich
27	Habib Bank Ltd.
28	Imperial Bank Ltd
29	I & M Bank Ltd
30	Jamii Bora Bank Limited.
31	Kenya Commercial Bank Ltd
32	K-Rep Bank Ltd
33	Middle East Bank (K) Ltd
34	National Bank of Kenya Ltd
35	NIC Bank Ltd
36	Oriental Commercial Bank Ltd
37	Paramount Universal Bank Ltd
38	Prime Bank Ltd
39	Standard Chartered Bank Kenya Ltd
40	Trans-National Bank Ltd
41	UBA Kenya Bank Limited
42	Victoria Commercial Bank Ltd
43	Faulu bank

Source: Central Bank of Kenya (2014)

Appendix III: Introduction Letter



UNIVERSITY OF NAIROBI SCHOOL OF BUSINESS MBA PROGRAMME

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Nairobi, Kenya

DATE 28/08/2014

TO WHOM IT MAY CONCERN

The bearer of this letter MILKA MANALI


Registration No. DG1/80031/2012

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.


PATRICK NYABUTO
MBA ADMINISTRATOR
SCHOOL OF BUSINESS

