FACTORS AFFECTING ADOPTION OF MOBILE BANKING BY COMMERCIAL BANKS IN KENYA

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DECLARATION

I hereby declare that this is my research proposal and has never been presented in any academic institution.

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 I acknowledge my parents for their continuous support and their quest and sacrifices to invest in my education. Special gratitude to my siblings, for your support and understanding through the late nights, the early mornings and busy weekends. Many thanks to my friends and acquaintances who helped me throughout this journey.

DEDICATION

I dedicate this work to my family for their tremendous support, love and care.

ABSTRACT

In Kenya, the corporate world is interlinked to support various service systems to support each other. The commercial banks work hand in hand with the telecommunication industry to enable the consumers to easily and quickly access their money whenever need arises. The use of mobile banking entails a wireless handset which is performed through the SMS or Mobile internet hence enabling the customer to choose the best suitably preferred access. Mobile banking in Kenya can be linked to telecommunication financial services; M-Pesa, Tkash and Airtel money. Financial institutions have had difficulties in offering banking services to the poor customers through the traditional banking means. Mobile banking has become a problem solver as they can transact at affordable charges at their own convenience regardless of their geographic location. The device possessed by a person determines the ability of conducting mobile banking and not the age, (Mac Gee, 2009). In Kenya, the customers with smart phone are likely to transact more through mobile banking because of the usability of the device unlike those using ordinary phones. The economic standards in Kenya tend to be below the poverty line hence less people have smart phones and thus affecting mobile banking. The regression found a positive interlinkage relationship between the mobile banking adoption and ease of use and whereas there is a negative relationship between adoption of mobile banking and customers' social influence. It was also revealed that financial accessibility had a positive relationship with adoption of mobile banking. Further the results shows that Risk perception had a positive relationship with adoption of mobile banking.

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ACRONYMS

BHC: Bank Holding Company

CBK: Central Bank of Kenya

CEO: Chief Executive Officer

KES: Kenya Shilling

NSE: Nairobi Securities Exchange

OECD: Organization for Economic Corporation

KCB: Kenya Commercial Bank

DTB: Diamond Trust Bank

DEFINITION OF KEY TERMS

Banking group: A licensed institution and its subsidiaries, non-operating holding companies and subsidiaries of non-operating holding companies

Bank Holding Company: A company that owns and has approved control over institution and whose activities are limited to holding investments in subsidiaries. Holds properties used by it members and ensures efficiency**.**

Mpesa – A mobile banking service that enables the registered users to send money through their mobile phones. "M" means mobile while "Pesa" means money

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CHAPTER ONE:

INTRODUCTION

1.1   Background of the Study

Gupta (2013) notes that the use of a digital mobile device connects mobile banking services and other financial institutions. There are several services that are rendered via mobile banking, these include; account balance enquiry, access to bank statement, withdrawal and deposit of cash, small loan services, instant notification for any transaction that happens in the account, among others. The global banking and payment industries have revolutionized mobile banking, providing existing clients with additional convenience and increasing the number of new clients registered by banks. The benefits and costs that are tagged along the provision of mobile banking technology controls the rate into which customers embrace and adopt this technology. According to Johnson et al. (2014), mobile banking is an advantage in creating a convincing and satisfying online customer experience from the perspective of the bank. The new customer experience increases sales and reduces operational costs to the bank.

Juniper Research (2009) noted that an added advantage from innovation and technology have led banks to make major mobile technology investments, creating smart telephone applications, such as remote checks, and educating customers. The mobile channel reduces transaction costs and increases customer engagement and retention. The effort of improving customers' experience in the banking industry, started years before with the introduction of ATM machines in 1969 by New York's Chemical Bank, then in mid 1990s internet banking evolved that allowed customers to access their own financial accounts by way of an internet empowered device or computer. The system did not grow as expected due to technological issues and built consumer trust. According to a report by KPMG (2015) dramatic changes have overtime showed up in the financial sector landscape in the world, first after commercial banks appreciated that reducing the hindrances to entry can increase retail accounts.

Sachombe (2015) states that despite the increased innovation and technological advancement by banks, the rate of adoption by the customers has been influenced or hindered by several factors. Factors that may also influence mobile banking adoption in Kenya include social cultural factors,

the accessibility of the mobile banking system, the bank's level of technical advancements and the level of bank innovation. Holak & Lehmann (1990) are of the opinion that implementation of new innovation is like implementation of change which is faced with hurdles and open opposition.

People prefer working with what they are accustomed to and fear changes that would bring about uncertainties. That is why the use of mobile banking is being opposed by customers ' quotas. It is also easy to use in comfort in your premises. Mobile banking has become a thing of the past with challenges from queuing on branches to going for long distances to reach bank facilities. This survey helps us to understand how these variables impact mobile banking in Kenya.

1.1.1 Adoption of Mobile Banking by Customers

Even though the development of mobile banking systems has had significant investments, studies on its use have shown potential users are not using their digital services as regularly as expected (Luarn & Lin, 2005). Gartner (2007) indicates that the penetration level of mobile banking only amounts to approximately 1 to 5% of the target population. In order to justify investments and operational expenses, the number of clients that developed mobile banking systems needs to be significantly improved from the standpoint of banks (Crabbe et al, 2009). Therefore, marketing managers should consider the determinants of user acceptance in mobile banking to return the initial cost of investment.

Kenya Bankers Association (2014) explains how mobile banking has been instrumental in enhancing financial inclusion in Kenya's banking industry. Mobile banking adoption has experienced categorical adoption of the technology. Commercial banks have increased their investment on mobile banking by creating mobile banking accounts that are safe and designed to meet the needs of their target clients. On the other hand, customers have different and varying attitude towards embracing mobile banking. There are customers who find it difficult to use, others are concerned of the safety of the use of the entire system while others are not able to access and use mobile phones that can support mobile banking. Conducting bank facilities, stocking market transactions and accounts administration up to provision of the access of customized information are provided by mobile banking. Customers are therefore allowed to access their bank accounts through short messaging services (SMS), internet and smart phone applications (mobile apps).

The mobile networks that offer mobile banking services in Kenya are M-pesa that is offered by Safaricom company, Yu-cash offered by Essar, Orange money offered by Orange and Airtel money that is supplied by Airtel. In its entirety the mobile network in Kenya commands a market size of about 17million users that transfer about Ksh. 2 billion daily of which M-pesa moves the highest amount since it has the highest number of users at 14 milion. Mobile banking partners with commercial banks to boost and penetrate the large population of unbanked customers namely; Cooperative Bank, Commercial Bank of Africa, Equity Bank, among others (Kenya Bankers Association, 2014).

In Kenya the mobile banking giant remains to be M-pesa service owned by Safaricom which has acquired a customer base of 20.7 million in 2017, revenue from mobile data at Ksh 38.4 billion, data usage per customer grew to 56% with 90% of that data consumed through mobile bundles. It has acquired over 100,000 Lipa na M-Pesa merchants. The company also issued 3 (micro) loans every second through its banks' partners CBA (M-Shwari) and KCB's M-Pesa. Other innovations in the sector include Mobile Pay Ltd that was launched by Tangaza service and operates on all the mobile phone providers, a mobile payment platform by Family Bank to enable easy, convenient and fast payment of rent by tenants, launch of mobile apps that run on both android and ios phones among others (Bankelele, 2018).

1.1.2 Factors Affecting Adoption of Mobile Banking by Customers

Kazi and Mannan (2013) developed factors that influence mobile banking adoption. They stated them as social and cultural influence, perceived usefulness, perceived risk, and perceived ease of use. They found out that social influence was the greatest in impacting the influence of mobile banking adoption. On the other hand, Kimanyi and Ndung'u (2009) found out that the availability of cheaper and ease of access to mobile banking was a major driving force on the reason people embraced mobile banking. From these studies it is clear that several researchers have realized the determiners of the adoption of mobile banking as social and cultural influence, perceived risk and perceived usefulness.

Kenya has a wide variety of social and cultural practices, a good population still protect and preserve these practices if a study conducted by Njoroge (2001) is anything to be accepted.

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These practices inhibit adoption of change and new ways of undertaking different activities. Some customers do not trust that carrying transactions using mobile phone is safe enough. They prefer the old system of undertaking transactions, that is, physically in the bank. Illiteracy among the old generation also makes it difficult for the elderly to undertake their bank transactions while the young people would find it easier to use than queuing for long hours in the banks (Sachombe, 2017).

1.1.3 Banking Industry in Kenya

Mobile banking adoption is viewed by banks as a significant part of the economic growth, both regional and national. Mobile banking improves the various distribution channels normally utilized by a bank in its delivery of services. In order to establish the success of a distribution channel, the bank looks on whether the channel increases its sales volume, reduces its costs of distribution and increases customer satisfaction. With these three objectives obtained, then the bank strongly adopted the distribution channel. The commercial banks are also required to ensure that they have the relevant infrastructure in order to attract customers to use the facilities. Banks that have not invested in mobile banking infrastructure are prone to cyber-crimes, lack of proper fire walls that make it susceptible to fraud, increased down time and operational errors all reduce the rate of adoption of mobile banking. This study therefore looked at all these multifaceted factors namely; accessibility to mobile banking infrastructure, level of innovation by the bank and level of technology adopted by the bank (Kenya Bankers Association, 2014).

The mobile banking industry is a rapidly growing industry in Kenya. Mobile telephone technologies and offering quick and efficient services are being adopted by most banks in the world. With the prevalence of customers having mobile phones, mobile banking use has been employed (Kenya's Information and Communication Policy, 2011). Mobile banking has been utilized by several banks including the Co-operative Bank, the National Bank, Kenyan Commercial Bank and Equity Bank.

However, a relatively small number of bank clients adopting and actively using banks ' mobile banking services remain (Kenya Information and Communication Policy, 2011). The aim for a comparably low use rate can be found in system limitations, compared to the uncertainties surrounding the security of wireless transitions as well as internet banking (Luarn & Lin, 2004) (minor screens and keypads, slower speeds). Even with the availability of technology and

required applications for mobile banking, global usage rates remain quite low. The banking sector therefore needs to assess the determinants influencing the customer intent to utilize mobile banking in order to broaden customer acceptance. There is overwhelming evidence by various researches on the success story of mobile banking in Kenya. Every bank in Kenya therefore has produced every effort to ensure that it embraces mobile banking (m-banking) as one of its channels. The adoption of these channels therefore solely depends on the customers. This research therefore investigated these factors that determine the adoption of mobile banking by Kenyan customers (Ndumba & Muturi, 2014).

1.2 Research Problem

Internet connectivity demand has risen during the last 20 years and the behavior pattern of customers in their connection to financial institutions and in their buying and selling guidelines for banking products has changed. It enhanced cutting of costs and serve unbanked customers; maintaining the competitive advantage and customized accessibility increase. banks have therefore focused on implementing mobile banking financial services. The theory of technology acceptability, which connects people's views, attitudes and purpose, can predict technology acceptability and rejection according to Davis (1989). However, Mathieson (2004) points out that only in order to study user acceptance technology is it inadequate to depend upon both concepts of perceived usefulness and perceived ease of use.

In comparison to the mobile phone transfer offered by mobile operators (Lule, Omwanz & Waema, 2012) Kenya mobile banking is still extremely low. Contrary to mobile money transfers, M-banking rights in saved assets, credit background and loan access are carried out by operators of mobile network operators. In spite of the enormous advantages mobile banking is still in its earliest stages and the banking sector must also take into account its unbanked customer.

Mobile banking studies have been conducted and have come out with interesting and definitely different results. Wamai and Kandiri (2015) sought to know the determinants of mobile banking adoption in Micro finance institutions in Nairobi County Kenya. The 210 randomly selected customers showed that mobile banking software is both considered to be beneficial and perceived as having a positive relationship and is positively affected. Both perceived transaction cost and risk with mobile technology adoption were revealed to have a negative correlation.

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Okiro and Ndung'u (2013) examined the impact of the internet and mobile banking systems on the various financial institutions in Kenya. They found that a cash withdrawal was the most prevalent mobile banking transaction and the least was the purchase of goods. On the other hand, Kazi and Mannan (2013) delved into determinants that cause an effect on the implementation of banking services via mobile in Pakistan, perceived risk, perceived ease of use and perceived usefulness significantly determine adoption of banking via mobile in Pakistan.

These studies approach the research question from different perspective in form of methodology and research design. They also have different scope and as such they all give different results from their respective studies. The studies were also carried out some times back and as such various things have changed since then; individual preferences, perception might have changed and loyalty to a certain regime might have shifted as well. This creates a research gap and hence the factors that determine adoption of mobile banking by customers in Kenya which includes perceived ease of use, usefulness perceived, perceived threat, and social impact was sought. The study sought to answer the following question: What are the factors affecting adoption of mobile banking by customers of banks in Kenya?

1.3 Research Objectives

The objective of the study is to identify the factors which affect mobile banking adoption in Kenya by bank customers.

1.4 Research Questions

What are the factors that affect Kenya's customers ' mobile banking adoption?

1.5 Value of the study

We will appreciate the fact that mobile banking stands as an innovation that has come due to improved technology. The study would be very important to innovators as it will help in understanding the challenges that affect adoption of mobile banking technology. This research will also aid the commercial banks management as they understand how mobile banking services are currently operating as a competitive tool as well as the factors that have led to their customer acceptance.

The regulator (Central Bank of Kenya) and the government will also find this study to be of great importance. It will help them in developing strategies and generating regulatory policies depending on whether the government or the regulator would like to encourage or discourage the adoption of new innovations in the industry. They will get to understand what has contributed to either adoption or failure to adopt new technology in the banking sector. The study will also give future researchers value. The research contributed to the knowledge body and Set the foundation for future mobile banking researchers and academics.

CHAPTER TWO:
LITERATURE REVIEW

2.1 Introduction

The theoretical reviews, review of the independent variables of the study, empirical studies that are made up of both local and international studies, conceptual framework and finally summary and conclusions of the chapter are discussed in this chapter.

2.2 Theoretical Reviews

Diverse theories have risen with development of new technology, innovation and adoption of the same technology in the organizations. It is evident that new technology has brought about change that has received both approval and objections at equal measure. Theorists have tried to explain how innovation has been used to enhance business and organization performance. They have also tried to explain ways in which organizations should position themselves in order to maximize value through innovation. Other theories try to explain how innovation and new technology relates to factors of production in an organization such as labour among others. This study acts either to strengthen these theories or critique the theories depending on the results and conclusions of this study.

2.2.1 Innovation Diffusion Theory

Innovation Diffusion theory was first brought to light by Rogers (1962), when he tried to illustrate how, when and at what level new technology and innovative ideas spread across a social system. The theory focused on innovations contrary to prior belief where people focused on change. He is of the opinion that it is not people who changes but the innovations themselves change in order to satisfy the needs better. Innovation is not seen from the aspect of changes in individuals but from the aspect of reinvention of products so that they satisfy people's needs in a better way. He also explained diffusion as a way of communicating these innovations in a certain way through channels to members of a social system. Innovation diffusion theory therefore focuses on how new ideas or innovations are spread from one society to another, or from one part to the other as members of the society derive benefits from the innovations when they adopt these innovations (Wani & Ali, 2015).

Further, the theory posits that adopting a new idea, product or behaviour is never simultaneous. Some people who are apt to the technology or the idea will first adopt it and then communicate to the others who are less apt to it; the spread then enhances innovation to take place. In the society there are people who adopt to a new technology faster than others do. Studies have shown that people who adopt to new technology faster than others have different characteristics than those who adopt to it later on. It therefore becomes paramount for champions of new innovations and ideas to understand their target group so as to record success in enhancing adoption of the new innovation or idea (Wani & Ali, 2015).

2.2.2 Financial Intermediation Theory

Financial intermediation theory states that in an economy where there are both surplus units and deficits units, intermediation plays the role of moving the surplus units to the part of the economy with deficit. The resources are transferred to the sector of the economy that most deserves the resources. Nonetheless, the transition should be carried out in the most cost-effective way to minimize operating costs and maximize gain at the same time. The theory highlights the function of mobile banking in the financial mediation process by making banking services accessible via telephones.

The study notes, in terms of their future consumption needs, that similar depositors run risks adverse and uncertain, according to Diamond and Dybvig (1983) researching the ability of banks to turn assets that are illiquid to liabilities that are liquid. The study therefore found that financial intermediaries ought to ensure that shareholders are not tied up in highly leveraged lengthy-term investments which will pay a heavy price to future users. In conclusion, the important aspect about financial intermediaries is that it ensures continuously flow of resources form surplus to deficit units in the economy.

2.2.3 Modern Economics Theory

This theory has many different disciplines: macroeconomics, public finance, money and banking, microeconomics, international economics, growth economy, planning economics and social welfare economy. Modern economy suggests that money is created by commercial banks' loans. A deposit matching in a bank account is created when a customer receives a credit from his bank. This concept is known as money creation that enhances the state of the economy

through the money multiplier effect.

The central bank controls the monetary policy in the economy by setting a certain reserve price according to the desired objective of the central bank. However, banks lend depending on various factors including on how profitable lending opportunities are available for them determined by CBK's interest rate. The lending decisions made by the commercial banks will in turn influence the amount of bank deposits created by the overall banking system. The CBK will thereby make decisions on reserve requirements based on the bank deposits (broad money) created by commercial banks.

There are three factors limiting the money banks can generate. Firstly, since banks have to lend profitable in the competitive environment, they will restrict themselves on their lending decision by selecting those that reward highly. Secondly, money creation is constrained by households and business that use the new loans issued for repayment of existing loans. Thirdly, is the monetary policy laid down by the C.B.K. Mobile companies are known to compete with banks through offering of products similar to those of banks, that, loans and deposit services. This has had a negative impact in the banking sector of commercial banks due to loss of market share, example transaction fees charged on Mpesa users and commission based services like Mshwari.

2.3 Factors Affecting Adoption of Mobile Banking

This investigation looked at various facets that have been studied previously. These factors have been identified to have some level of influence to recent innovation and new technology adoption. The factors that lead many to mobile baking adoption includes social and cultural influence, perceived risk, perceived usefulness and financial accessibility (Kazi & Mannan, 2013; Kimanyi & Ndung'u, 2009; Njoroge, 2001).

2.3.1 Perceived ease of use

This refers to a one's belief that free effort would be made using a mobile banking system (Omwansa et al., 2012). It does not take much effort to use this particular system because it is simple and practical. As mobile banking is user friendly, customer satisfaction is increased while making a bank transaction rather than waiting in line at the bank counters. Sometimes the consumer

assesses the right services that offer benefits and are easy to use. Mobile phones can be used and brought to any location, so that the user can always access the system for bank transactions. Lee et al. (2008) also reported a considerable impact on consumer readiness to utilize mobile banking. However, banks must simplify their use and develop application interfaces for mobile banking services that are even more user friendly. When clients find it easier to understand and implement mobile banking, they intend to accept it (Zohra & Kashif, 2011).

2.3.2 Financial Accessibility

Mobile Banking is a service that provides mobile telecommunication services to customers every time and anywhere in the world. Each mobile internet user can use this service very easily. It saves a lot of time as well. Due to mobile pin number support (m-pin), Mobile banking is safe and secure. Each mobile banking client has the first pin number issued by the bank, but users can change that number as many times as possible in response to customer needs. Through mobile banking. customers can easily control and encrypt account details of all transactions (Aggarwal, 2014).

Laukkanen (2007) points to price being an integral component in determining how commercial banks adopt mobile banking. Mobile banking access in Kenya reduced to the customers ' ability to offer and own a smartphone with internet access and suitable software versions that support banking applications and other facilities. These smart phones are expensive and as such some customers, who may be willing to use mobile banking, are unable to access the facility due to lack of smart phones. The more consumers can connect phones that can be used for digital banking, the more mobile banking is adopted.

Some cultural practices in Kenya have quite an adverse effect on mobile banking adoption. Mobile phones access and other technological facilities have been discouraged in some cultures. According to Al-Jumeily, *et. al.* (2014) a common behaviour, which is learned and acquired from the community that a person is born from, is referred to as culture. Culture is composed of norms, beliefs, and customs, which reflect the common set of values that are held and in most cases, characterize the society in which a person is brought up. Social factors on the other hand are the real life experiences and facts that influence the appetites, attitudes, lifestyle and the personality of an individual.

Social and cultural influence are likely to influence the level of mobile banking adoption of in nation of Kenya, this is from the aspect that culture influences a person's behaviour that moulds or makes up ones character. Cultural tendencies and practices that are quite opposed to change, are in most cases less likely to embrace mobile banking. Such cultural tendencies try to support the old order where activities are undertaken traditionally. New ways of performing activities are rarely embraced, or if they are embraced, much effort is required to convince the people concerned to change from the old ways of doing things. Social influence also affects the rate into which a person would adopt to new innovation, if the society one belongs to easily and warmly embraces mobile banking, one is then more likely to embrace and adopt mobile banking while the vice versa is true (Abdinoo & Mbamba, 2017).

2.3.3 Risk Perception

Mobile banking reflects an improvement in internet banking to boost the technology's ability to easily serve customers. The experience and sophistication of the evolving environment are the main challenges of mobile banking. Intolerance could open room for risk. Mobile banking faces risks like insecure networks, mobile malware, software from third parties and risky consumer behaviour. There are five different types of perceived risks: risk of performance, risk of time, financial risk, social risk and safety risk that made it possible to understand the risks surrounding internet banking. (Gerrard & Barton Cunningham, 2003).

Performance Risk refers to losses arising from mobile banking deficiencies. An instance is where a phone has a battery life that is limited and may interrupt the wireless connection, which restricts mobile service use. When the system suddenly breaks down or disconnects, insecurity about the accounts pops up in the consumer's mind. These could be connected to customers ' capacity in a reasonable time to operate the mobile bank services. Security or Privacy Risk is described as possible losses from fraud or hackers that affect mobile banking users ' security. The portable PIN codes can be put on the device. It can be done by hacking and other ways. This can lead to possible security risks and privacy risks. Phishing is the latest way to steal consumer information. Phishers collect sensitive information from consumers by masquerading it as a trusted entity through electronic communications such as the username, password, and the credit

card information (Ezzi, 2014).

Time or Convenience Risk are the delays in receipt of payments or the difficulties with mobile banking (finding the appropriate services), mean the risk of time loss due to any inconvenience caused by payment delays. Due to the changes times, mobile banking infrastructure that can accommodate the speed of change so quickly. Social risk applies to the absence of mobile banks when friends, family, communities or even media disagree or have a negative view. A possible social group loss of status from the adoption of a product or service reflects social risk. The financial risk refers to money loss potential caused by misuse of transactions or bank accounts. You worry about making mistakes with your own bank processes if you are using a computer or phone (Lule, Omwansa & Waema, 2012).

2.3.4 Social Influence

Mobile banking is possible if individual customer intentions are influenced by the thoughts of people. Social pressures such as work, friends, parents and family members arise when a consumer decides to follow mobile devices and use them (Kansal, 2017). The perceived image can be characterized by using innovations as a level of image change or social status. Percepted photos of mobile banking have had a positive effect on technology (Johnson, Twilley, Zhang, Zhou & Wu, 2014).

Through M-Banking customers use this method for creating and maintaining a positive picture in others ' minds and how it influences their clients' social status. Opinions, misinterpretations, behaviors, and concerns need to be dealt with if people who are used to cash storage are required to store the money on the phone. This could be quite a challenge, therefore, which convinces you that the handset operates as a wallet, affecting the adoption of mobile banking. Therefore, adopting a digital cash individual would depend on how convenient it is (Khan, Akter & Akter, 2017).

Another factor affecting mobile banking adoption is the attitude towards transition. Mobile banking users' personal characteristics decide their decision-making process. For example, the easiest and more convenient way to manage their money is increasingly sophisticated for

customers or users. Nevertheless, savvier consumers are more likely to take charge. Therefore, they are more likely to take advantage of mobile banking flexibility as their confidence grows (Lai, 2016).

2.4 Empirical Reviews

There are both local and international empirical reviews already undertaken on the issue of adoption of mobile banking or else on the issue of new innovation or technologies. The underlying and the consistent issue is that there are varying factors that enhance adoption of new innovations and new technology. The results of these studies therefore vary dependent on the innovation under study and the factors under study as well.

Eseonu and Egbue (2014) undertook a study that they were interested on social-cultural practices effect on technology adoption and sustainable development. They analysed the social technical success factors on both Silicon Valley and Silicon Glen by the use of socio- technical systems lens. Data was also classified. They found that social cultural practices influenced adoption of technology in both Silicon Valley and Silicon Glen, and their findings enabled them to create a road map that facilitate navigation among challenges that are socio-technical in nature. This study concentrated on socio-cultural dimensions on technological adoption at Silicon Valley and Silicon Glen. However, there are other factors not considered including and not limited to accessibility of mobile banking infrastructure and easy utilization of the same technology thus necessitating this investigation.

 A study examined the demographic controls, causes and preferences of the users that affect mobile banking adoption in Bangladesh, (Khan et al., 2017). They also developed a self-administered questionnaire for a 4-year sample survey of 400 of people using mobile banking. A vast majority of mobile banking users were revealed to be men between the ages of 20 and 24 years, and that, although it was viewed as complicated and vulnerable to network problems, mobile banking was confident, secured and cost-effective. They also discovered that demographics have no bearing on mobile banking use. However, it demonstrates the perception that mobile banking adopting affects security, cost, comfort and complexity. This study was undertaken in Bangladesh where perception and environmental issues are different from the current study which was undertaken

locally, that is, in Kenya.

Kansal (2016) looked into the factors that influences mobile banking in either being rejected or accepted. She stipulated a number of factors that included cost, trust and risk. The mediating variables employed were perceived ease of use and perceived usefulness. She found that increased perceived risk and perceived cost increased the chances of users rejecting adoption of mobile banking and trust had the greatest impact on whether to adopt or fail to adopt mobile banking. She recommended that India needed to pursue strategies that would help them gain trust of their clients in the banking segments. The variables under this study are different from the study to be undertaken which tends to determine socio-cultural factors, level of innovation, level of technology and accessibility to mobile banking infrastructure.

Abdinoor and Bamba (2017) used TAM to facilitate the understanding of adoption levels of mobile banking in Tanzania. The research was based on individual knowledge of services empowered by mobile banking, perceived benefits, perceived ease of use and implication of expenses on adoption. They used random sampling to assess 200 participants from Dare Salam. Analysis was also conducted using a regression model. A positive interlinkage between the explanatory variable and individual knowledge, perceived benefit and perceived ease of use was found but a negative relationship between the dependent variable and cost implications was found. Demographic effects were found to be moderating the relationship. The study by Abdinoor and Bamba was based in Tanzania whereas the current study was based in Kenya, where level of technological advancement vary between the two countries thus adoption is affected by different factors.

Wamai and Kandiri (2015) undertook a local study with an interest on the determinants that caused mobile banking to be adopted by clients of micro finance institutions in Nairobi County. A sample size of 210 customers and TAM framework was used in analysing data collected. The perceived value of mobile banking and its perceived ease of use connect positively. On the other hand, a negative correlation was realized between perceived risks and transaction costs and mobile banking adoption technology. This study seems similar to the current study though it concentrated on microfinance institutions, the study was conducted in the year 2015 and changes on the factors might have changed as well.

In order to determine the use of mobile and internet banking in financial institutions, Okiro and Ndung'u (2013) surveyed 30 financial institutions in Nairobi. It was established that in most cases the clients used internet banking on enquiring on the balances in their accounts. They also found out that the clients rarely used internet banking for bill payment. Researchers discovered that the most frequently used service was cash withdrawals while the least frequently used buying goods. This study concentrated on the extent or on what mobile banking concentrated on, while the current study concentrated on determiners that contributed to the adoption of mobile banking.

Achieng and Ingari (2015) examined factors that affect mobile banking in Kenya by commercial banks with specific aims to assess the perceived risk part of mobile banking, its influence on costs and its perceived ease of use. They have a design that is descriptive in nature in which 169 respondents in the KCB Kilindini branch have been sampled. The study was carried out using SPSS technology and found that perceived risk and costs were the main factors preventing mobile banking, while mobile banking was considered to be easy to use. The area centred on for the investigation was Mombasa region and especially one Kilindini branch. Consequently, the discoveries could not be easily extended to other sectors of numerous social and cultural aspects.

A study conducted by Patel (2015) confirmed that TAM model beliefs influenced adoption of the use of IT and usage behaviour, specifically beliefs of perceived ease of use and usefulness. However the inter correlation between these factors was unclear and how this influenced the intent to utilize technology. The researcher critiqued a several models that were used severally by a number of researchers in determining factors that predicted technology adoption in Durban Ireland. Secondary data was utilised to review the literature and the findings of these researches. The study was based on the use of Information Technology (IT) and behavioural effects on the users, and not on its influence on mobile banking adoption, thus necessitating this study.

2.5 Conceptual Framework
Both dependent variable and explanatory variables are included in the investigation. The variable depending on the survey is the adoption of mobile banks, which can consist of the number of clients using mobile banking. The independent variables are the factors which influence this

adoption that have been identified as the perceived usefulness, perceived risk, perceived ease of use and social and cultural factors. The figure below represents this conceptual framework.

Independent Variables
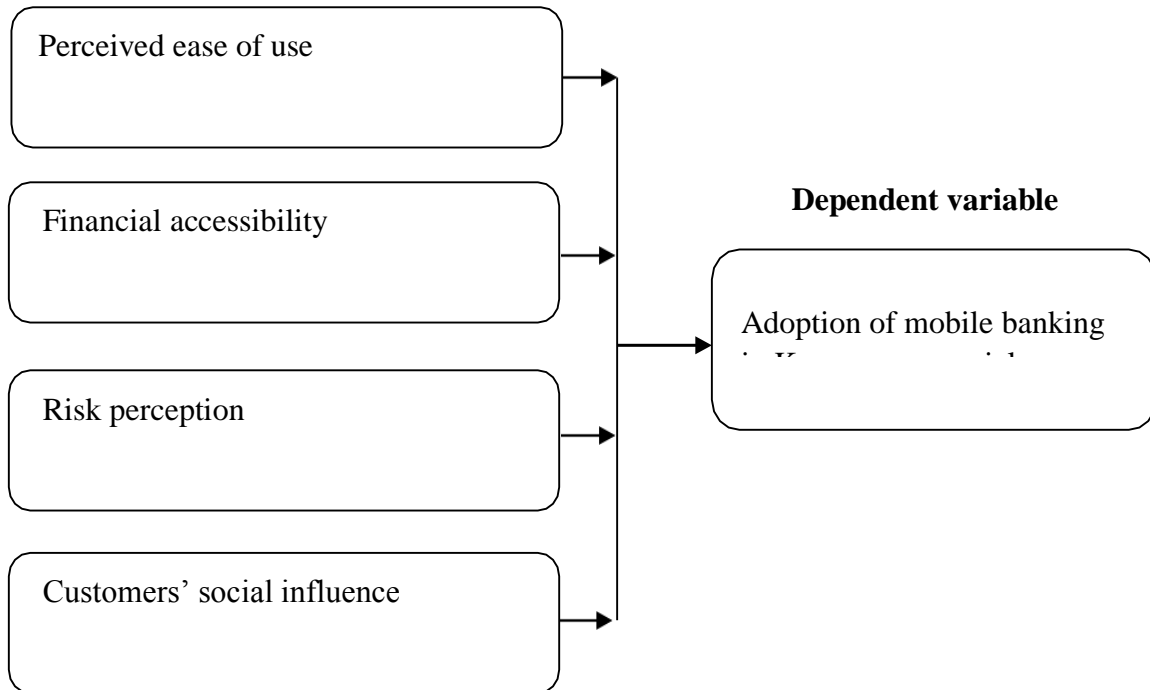
Figure 2.1: Conceptual Framework

Source: Author (2020)

2.6 Summary and Conclusions

Controversies, differences, and confusion that surround new technology, mobile banking, are clear from this chapter Theoretical evaluations indicate proposed and valid theories for this research. The theories and model (Innovations diffusion theory, theory of reasoned action and technical advanced models) show how level of technology advancement is adopted by various users. Some factors influence new technology users while other factors inhibit adoption of the new technology. These factors however differ from one population to the other, they also depend on one user and the level of perceived usefulness by one user over the other. It therefore becomes imperative to

carry out this study as it would shed light on whether these factors also influence mobile banking adoption in Kenya.

The local and international studies also give different outcomes and different conclusions. The factors under study have been studied in different populations with different cultural and social influence. The factors under study are also different in the different studies that have been conducted. This therefore increases the study gap that the researcher would like to achieve by understanding the factors that influence adoption of banking via mobile in Kenya. This paper examined factors such as accessibility of banking via mobile infrastructure, level of technology and level of innovation, said to be the determiners of adopting the technology of banking via mobile in Kenya.

CHAPTER THREE:
RESEARCH METHODOLOGY

3.1 Introduction

In this chapter the design used for research is covered followed up by target populace, sampling technique utilized for the investigation, and methodology to facilitate the gathering and analysis of data.

3.2 Research Design

Research design refers to the methods and procedures that are used in collecting and analyzing data of the variables that were specified in the study variables. Through this, research question answers are provided. The methods of research design are; descriptive research design that tries to explain relationships between variables, correlational research design among others. By use of a descriptive design the interlinkage between control and outcome variable is expounded (Kothari, 2004).

3.3 Target Population

The research focused on all accounts of Kenya's commercial banks (customers). A study had shown that Kenya is 75% of Eastern Africa's biggest banking penetration.

3.4 Sample and Sampling Technique

A stratified method of sampling was employed. A sample from the different banks of four non-company customers was randomly chosen. Kenya has 43 registered commercial banks as per the year 2018 (Appendix II). According to Krejcie and Morgan (1970) a sample is important as it helps in making inference about the features of the entire population from the features of the sample. A sample should therefore contain about 10-30% of the population, meaning at least 10% but not more than 30% of the population. This study encompassed a big population and therefore apply the below formulae to determine the sample size.

Sample size = $\dfrac{(Za/2)2 \times P\,(1\text{-}P)}{E2}$

Where:

(Za/2) = Z value, we shall use 1.96 in this case

P represents the percentage proportion of choice (10% used for sample size needed)

E represents the error margin set at (5%)

Using the assumptions made we therefore conclude the following:

Sample Size will be given by $(1.96)^2 \times 0.1\,(\,1\text{-}0.1\,)\,/\,0.05^2$

= (3.8416 x 0.09) / 0.0025

= 138 respondents

3.5 Data Collection Method

The author received from the University an introductory letter which was addressed to respondents. With help from research assistants, the researcher formulated questionnaires and give the selected respondents' a maximum of 3 days after which the researcher would collect completed questionnaire for analysis. To give the respondents plenty of time to respond well, the drop-and-pick method was preferred for questionnaire administration.

3.6 Data Analysis

Data was cleaned, coded and systematically organized. Then SPSS was utilized to facilitate analysis. Using descriptive statistics; frequency, mean and standard deviation, quantitative analysis was employed. To discover the interlinkage between various factors and the adoption of banking via mobile regression analysis was employed. The findings were then presented in Tables.

3.6.1 Analytical Model

The analytical model used was as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where;

Y= Adoption of mobile banking in Kenya commercial banks β_0=constant

$\beta_1, \beta_2, \beta_3$ and β_4= Beta coefficients

X_1 = Perceived ease of use

X_2 = Financial accessibility

X_3 = Risk perception

X_4 = Customers' social influence

ε= Error term.

CHAPTER FOUR:

DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

The main objective of the study is to identify the factors which affect mobile banking adoption in Kenya by bank customers. In this section, the research findings were analyzed and the data analysis was done by SPSS. The results were summarized using descriptive statistics and regression analysis.

4.1.1 Response rate

The research population was 150 respondents and all questionnaires were successfully administered and returned. The response rate was 100%

Response Rate	Distribution	
	Frequency	Percent
Returned	150	100
Not returned	0	
Total	150	100

Table 4.1: Response rate

4.2 General Information

General information from the respondents that included their age, gender, level of education, years as a bank client.

4.2.1 Gender of Respondents

The table 4.3 below shows the gender distribution of the respondents. Male respondents accounted for 54% while 46% of the respondents were female.

Gender	Frequency	Percent
Male	81	54
Female	69	46
Total	150	100

Table 4.2: Gender of Respondents

4.2.2 Age of Respondents

Respondents were categorized into four groups shown in table 4.3. The table shows that 51% of the respondents were aged between 20-30 years, 39% aged between 31-40, 8% were between 41-50 whereas 4% were between 51-60 years.

Age	Frequency	Percent
Below 25 years	77	51.33
25-30 years	58	38.67
31-39 years	12	8
40 years and above	3	2
Total	150	100

Table 4.3: Distribution of Respondents' Age

4.2.3 Level of Education

The research also looked the respondents' level of education. The table below shows that 38.67% of the respondents were certificate holders, 20% were diploma holders, 34.67% were degree holders while those who had advanced to get a masters were 4.67% whereas those who had PhD were 2%

Level	Frequency	Percent
Certificate	58	38.67%
Diploma	30	20%
Degree	52	34.67%
Masters	7	4.67%
PhD	3	2%
Total	150	100

Table 4.4: Respondents' Highest level of Education

4.2.4 Years as a Bank Client

The research sought to find out how long the respondents were bank clients. The table below shows that 20% of the respondents were clients for less than a year while 48.67% were clients between 1 and 5 years. The study also showed that 23.33% of the respondents had been bank clients for 6 to 10 years while those who had were clients for more than 10 years were only 8%.

Time	Frequency	Percent
Less than 1 year	30	20
1 – 5 years	73	48.67
6 – 10 years	35	23.33
Over 10 years	12	8
Total	150	100

Table 4.5: Years as a Bank Client

4.3 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Mobile Banking	150	1	5	3.74	1.052
Ease of use	150	1	5	4.43	1.114
F.A	150	1	5	3.99	0.912
R.P	150	1	5	3.47	1.562
Social	150	1	5	4.19	1.028
Valid N (listwise)	150				

Table 4.6: Descriptive Statistics

4.3.1 Mean

Mobile Banking had a mean of 3.74 indicating that it had a most of the respondents did use mobile banking. Perceived ease of use had a mean of 4.43 meaning that most of the respondents found it easy to use mobile banking. Financial accessibility had a mean of 3.99 while Risk Perception had a mean of 3.47. Customers' social influence had a mean of 4.19 showing that most of the respondents' social life had an influence on their mobile banking usage.

4.4 Correlation analysis

The researcher set to find out about the relationship between the variables of the study. For this to be determined, a correlation analysis was conducted. The relationships were determined using the Pearson's correlation coefficient.

		Mobile Banking	Ease of use	F.A	R.P	Social
Mobile Banking	Pearson Correlation	1	.905**	.913**	.863**	.885**
	Sig. (2-tailed)		0	0	0	0
	N	150	150	150	150	150
Ease of use	Pearson Correlation	.905**	1	.865**	.763**	.888**
	Sig. (2-tailed)	0		0	0	0
	N	150	150	150	150	150
F.A	Pearson Correlation	.913**	.865**	1	.758**	.862**
	Sig. (2-tailed)	0	0		0	0
	N	150	150	150	150	150
R.P	Pearson Correlation	.863**	.763**	.758**	1	.855**
	Sig. (2-tailed)	0	0	0		0
	N	150	150	150	150	150
Social Influence	Pearson Correlation	.885**	.888**	.862**	.855**	1
	Sig. (2-tailed)	0	0	0	0	
	N	150	150	150	150	150

** Correlation is significant at the 0.01 level (2-tailed).

Table 4.7: Relationship between variables

The results showed that Mobile Banking had a strong positive correlation with perceived ease of use, financial accessibility, risk perception and customer social influence. As all the correlation values are above 0.8, hence more than 64% of the variance is related.

4.5 Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.962a	0.926	0.924	0.29	0.352

Table 4.8: Model summary

The R square value (Coefficient of determination) is 0.962 which means that 96.2% of the variation in Mobile Banking is explained by the independent variables. The results also show that the standard error of estimate is 0.29 hence showing that there is little variation and thus the correlation was almost perfect.

The Durbin-Watson measures autocorrelation and a value towards 0 indicates a positive autocorrelation. The results show the value is 0.352 hence indicating a positive autocorrelation.

Significance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	152.685	4	38.171	454.598	.000b
	Residual	12.175	145	0.084		
	Total	164.86	149			

Table 4.9: Significance level

a Dependent Variable: Mobile Banking

b Predictors: (Constant), Social, R.P, F.A, Ease of use

The table above shows that independent variables can significantly predict Adoption of Mobile Banking (dependent variable) as the p value is less than 0.005.

Table 4.10: Regression coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-0.089	0.124		-0.716	0.475		
	Ease of use	0.341	0.051	0.361	6.662	0	0.173	5.771
	F.A	0.478	0.057	0.414	8.393	0	0.209	4.78
	R.P	0.241	0.029	0.358	8.189	0	0.267	3.745
	Social	-0.101	0.066	-0.098	-1.538	0.126	0.124	8.05
a Dependent Variable: Mobile Banking								

From the Table the following regression equation was derived

$$Y = -0.089 + 0.341\,X_1 + 0.478\,X_2 + 0.241\,X_3 - 0.101\,X_4 + \varepsilon$$

The regression found a positive relationship between mobile banking and perceived ease of use, whereas there is a negative relationship between the adoption of mobile banking and the social influence of the customers. The findings also found out that financial accessibility had a positive relationship with adoption of mobile banking. Further the table shows that Risk perception had a positive relationship with adoption of mobile banking.

4.5 Test for Multicollinearity

The study carried out multi-collinearity test to check to see whether two or more variables were correlated.

Table 4.11: Collinearity Diagnostics

Dimension	Eigenvalue	Condition Index	Variance Proportions				
			(Constant)	Ease of use	F.A	R.P	Social
1	4.879	1	0	0	0	0	0
2	0.089	7.4	0.17	0	0	0.29	0
3	0.019	15.924	0.71	0.15	0.06	0.47	0.01
4	0.007	25.683	0.03	0.37	0.93	0	0.06
5	0.005	30.332	0.1	0.48	0.01	0.23	0.93

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The collinearity tests show that Variance proportions were below 1. This shows that there is no multicollinearity among the variables.

4.6 Interpretation of the findings

The results of the research showed a positive relationship between mobile banking adoption and perceived ease of use. This shows that the more the respondents found the mobile banking system easy to use the more they used mobile banking. Similarly, Lee et al. (2008) also reported a considerable impact on consumer readiness to utilize mobile banking. Another study done by

Ezzi (2014) reveals that an application that is perceived to be quite easier to use than another is very likely to be accepted by users.

The study showed that there is a positive relationship between financial accessibility and adoption of mobile banking hence the more respondents accessed financial services via their phones, the more they used mobile banking. A study by (Aggarwal) 2014 revealed that through mobile banking customers can easily control and encrypt account details of all transactions.

The research observed that risk perception had a positive relationship with adoption of mobile banking hence as respondents continued to use mobile banking, they continued to be aware of the risks that mobile banking system has. Similarly, a study by Lule, Omwansa & Waema, (2012) revealed that you worry about making mistakes with your own bank processes if you are using a computer or phone.

The study found that customers' social influence had a negative relationship with the adoption of mobile banking hence showing an inversion relationship between the two variables in that the more the respondents got information about mobile banking from their social group, the less they used mobile banking. A study done by Kansal (2017) showed that social pressures such as work, friends, parents and family members arise when a consumer decides to follow mobile devices and use them. However, Johnson, Twilley, Zhang, Zhou & Wu (2014) learnt that precepted photos of the mobile banking have had a positive impact on technology.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter looks at the findings of the study, the conclusions and the recommendations made to the study. This study also looks at the limitation of the research and makes suggestions of areas that further research is needed.

5.2 Summary

The objective of this research was to identify the factors which affect mobile banking adoption in Kenya by bank customers. The study was done to find out factors that affect Kenya's customers ' mobile banking adoption. Internet connectivity demand has risen during the last 20 years and the behaviour pattern of customers in their connection to financial institutions and in their buying and selling guidelines for banking products has changed. Descriptive research design was used to try to explain relationships between variables. Sampling was done to find respondents who were customers of the 43 registered commercial banks. Data collection was done using questionnaires.

The regression found a positive relationship between mobile banking and perceived ease of use, whereas there is a negative relationship between the adoption of mobile banking and the social influence of the customers. The findings also found out that financial accessibility had a positive relationship with adoption of mobile banking. Further the table shows that Risk perception had a positive relationship with adoption of mobile banking.

5.3 Conclusions

The respondents found the mobile banking system easy to use the more they used mobile banking. The more respondents accessed financial services via their phones, the more they used mobile banking. As respondents continued to use mobile banking, they continued to be aware of the risks that mobile banking system has. Finally, the more the respondents got information about mobile banking from their social group, the less they used mobile banking.

5.4 Recommendations

The study recommends to innovators to look at areas that respondents highlighted as potential places to be hacked while using mobile banking and increase the security and user experience.

The study recommends to banks to increase more services through mobile banking as users have found it easy and convenient to use while getting financial access.

The study recommends policies to be made in regard to mobile banking and its services by Central Bank of Kenya to encourage the adoption of mobile banking and technology in the Banking industry.

5.5 Limitations of the study

The study only sampled 150 respondents, this is not a substantial representation of the whole population and a bigger sample would have increased the reliability of statistical estimates.

The study relied on quantitative data and hence no analysis of qualitative data was done.

The study only sampled respondents who were commercial bank customers and not other financial institution users.

5.6 Suggestion for Further Research

Further study should focus on a bigger sample to improve the results of the study.

The study also recommends further research to include other institutions in the finance sector like microfinance banks and institutions, insurance firms and Saccos.

Further studies should use a mix quantitative as well as qualitative data to improve and strengthen the findings.

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APPENDICES

Appendix I: Questionnaire

This survey aims to identify and analyze the factors that impact mobile banking adoption by commercial bank customers in Kenya. Please replies by choosing the answer from the choices which best reflect your opinion.

A.) PERSONAL INFORMATION

Please indicate the set of information which accurately reflects you, please use a tick (✓)

1. Kindly state the bank that you hold an account in _____

2. Age

   Below 25 years   ☐

   25-30 years   ☐

   31-39 years   ☐

   40 years and above   ☐

3. Gend

   Male   ☐   Female   ☐

4. Highest Level of Education

   Certificate ☐   Diploma ☐   Degree ☐   Masters ☐   PhD ☐

5. How long have you been a client in the bank

   Less than 1 year ☐   1- 5 years ☐   6-10 years ☐   over 10 years ☐

B.) SOCIAL & CULTURAL FACTORS

Using a Likert scale of 1= Strongly Disagree 2- Disagree, 3= Neutral, 4 =Agree, 5= Strongly agree, indicate your level of agreement with the outline statements influence on mobile banking adoption.

	PERSONAL BAHAVIOUR	1	2	3	4	5
1	I have a smart phone that can use mobile banking services					
2	I have the knowledge to use mobile banking services					
3	I have the ability to use mobile banking service					
4	It would take much time and effort to learn to use mobile banking services					
	SOCIAL INFLUENCE					
5	Most of my friends use mobile banking					
6	People I value think I should use mobile banking services					
7	People whose opinion I value think I should use mobile banking services					
8	Most of the members in my community use mobile banking					
9	Most members in the community feel I should use mobile banking too					
10	I would use mobile banking for my banking needs without visiting the bank					

(C.) PERCEIVED USEFULNESS AND EASE OF USE AFFECTING ADOPTION OF MOBILE BANKING

	Perceived Usefulness	1	2	3	4	5
1	Mobile banking helps in saving time to undertake transactions					
2	Mobile banking is cheaper than normal banking					
3	My clients accept mobile banking payments as I also accept to be paid through mobile banking					
4	The limits for transactions allowed in mobile banking are sufficient for my transactions					
5	Mobile banking saves me long distances I would have travelled to access banking services					
	Perceived Ease of Use					
6	Mobile banking is very simple to use					
7	I am able to pay my bills conveniently using mobile banking					
8	The process of making and receiving payments through mobile banking is simple and cheaper					
9	Mobile banking is generally acceptable					
10	Mobile banking has many processes that are difficult to follow					

(D.) PERCEIVED RISK AND HOW IT INFLUENCES ADOPTION OF MOBILE BANKING

	Perceived Costs	1	2	3	4	5
1	Mobile banking is more costly than other forms of banking					
2	Internet is not easily accessible by use of my phone					
3	Mobile banking involves use of many passwords that are difficult to remember					
4	It is costly to obtain a mobile phone that can be used for mobile banking					
5	There are other hidden costs in mobile banking that makes it unfavourable					
	Perceived Risk					
6	Use of mobile banking increases chances of other people to access my banking information					
7	Mobile banking is prone to cyber-crimes and loss of money					
8	It is possible to forget personal details in mobile banking that would lead to inaccessibility of one's account					
9	Hacking and malwares make mobile banking risky					
10	It is easy to send money to wrong accounts and wrong people by use of mobile banking					

(E.) EFFECT ON TRANSACTION COSTS

	Effect on Transaction Costs	1	2	3	4	5
A)	The cost of over the counter transactions discourage minimal cash transactions					
B)	Mobile banking service providers are fair in their conduct of customer transactions					
C)	When transaction errors occur, reversals are done more efficiently					
d)	Transferring money from one bank account to another is much cheaper					
e)	Mobile banking has increased the quality of my Transactions					
f)	Mobile banking provides me with relevant and timely information about my bank accounts & transactions					
g)	Mobile Banking makes the payments of utilities much cheaper					

(F.) EFFECT IN FINANCIAL ACCESSIBILITY

Financial Accessibility		1	2	3	4	5
A	Access to mobile banking service encourages regular access to financial services					
B	Mobile Banking makes it safer for me to pay or receive money (as opposed to cash or other forms of transactions)					
C	I am worried about threat of fraud associated with the use of m-banking					
D	Various services offered by mobile banking encourages the use of mobile banking					
E	I find the Mobile Banking applications flexible to interact with					
F	I find security and privacy as an issue while using mobile banking services					

(G.) ADOPTION OF MOBILE BANKING

Adoption of Mobile Banking		1	2	3	4	5
A	I transfer money from my account using mobile banking					
B	I check my account balance through mobile banking					
C	I make payments using mobile banking					
D	I perform card services using mobile banking					
E	I query my account information via mobile banking					

Appendix 2: List of Commercial Banks in Kenya and number of account holders

Below table shows the banks and account holders per bank; (http:fortuneofafrica.com)

BANK	MARKET SHARE (%)	NO. OF ACCOUNT HOLDERS
1. KCB Bank	13.1	5,764,000
2. Equity bank	9.3	4,092,000
3. Co-operative bank	8.6	3,784,000
4. standard chartered bank (k) ltd	8.4	3,696,000
5. Barclays Bank of Kenya Ltd	7.9	3,476,000
6. CFC Stanbic Bank Ltd	5.7	2,508,000
7. NIC Bank Ltd	4..4	1,936,000
8. Diamond Trust Bank (K) Ltd	4.1	1,804,000
9. Commercial Bank of Africa Ltd	4.3	1,892,000
10. Citibank NA	3.0	1,320,000
11. I & M Bank Ltd	3.9	1,716,000
12. National Bank of Kenya Ltd	2.9	1,276,000
13. Bank of Baroda	2.0	880,000
14. SBM Bank (Kenya) Ltd	2.1	924,000
15. Dubai Islamic Bank (Kenya) Ltd	0.1	44,000

16. Ecobank Limited	1.4	616,000
17. Spire Bank	0.6	264,000
18. Bank of India	1.1	484,000
19. Family Bank Ltd	1.3	572,000
20. Fidelity Bank	0.5	220,000
21. Development bank of Kenya	0.6	264,000
22. First Community Bank Ltd	0.4	176,000
23. Guardian Bank Ltd	0.5	220,000
24. Gulf African Bank Ltd	0.6	264,000
25. Habib Bank A.G. Zurich	0.4	176,000
26. Housing Finance Company Ltd	1.7	748,000
27. Imperial Bank Ltd (In Receivership)	1.5	660,000
28. ABC Bank	0.8	352,000
29. Jamii Bora Bank Ltd	0.1	44,000
30. Fina Bank	0.7	308,000
31. Giro Bank	0.5	220,000
32. M Oriental Bank Ltd	0.3	132,000
33. Bank of Africa	2.1	924,000
34. Credit bank	0.3	132,000
35. Paramount Universal Bank Ltd	0.3	132,000

36. Prime Bank Ltd	1.9	836,000
37. Middle East bank of Kenya	0.3	132,000
38. Victoria commercial Bank	0.4	176,000
39. Habib Bank ltd	0.3	132,000
40. K-Rep bank	0.4	176,000
41. Consolidated Bank of Kenya	0.8	352,000
42. Transnational Bank Ltd	0.4	176,000
43. UBA Kenya Bank Ltd	0.1	44,000
Total	100%	44,000,000