THE IMPACT OF MOBILE BANKING ON COMMERCIAL BANKS IN KENYA

BY

SHEILA CODERIAS

UNITED STATES INTERNATIONAL UNIVERSITY

SPRING 2017
THE IMPACT OF MOBILE BANKING ON COMMERCIAL BANKS IN KENYA

A Research Project Submitted to the Chandaria School of Business in Partial Fulfillment of the Requirement for the Degree of Masters in Business Administration (MBA)

UNITED STATES INTERNATIONAL UNIVERSITY

SPRING 2017
STUDENT’S DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university other than the United States International University Africa in Nairobi for academic credit.

Signed: ______________________  Date: ______________________

Sheila Coderias (ID No: 645286)

This project proposal has been presented for examination with my approval as the appointed supervisor.

Signed: ______________________  Date: ______________________

Dr. George O. Achoki

Signed: ______________________  Date: ______________________

Dean, Chandaria School of Business
COPYRIGHT

© Copyright by Sheila Coderias 2017

All right reserved. No part of this project may be produced or transmitted in any form or by any means electronic, mechanical, including photocopying, recording or any information storage without prior written permission from the author.
ABSTRACT
The main purpose of this study was to establish the impact of mobile banking on commercial banks in Kenya. The study focused on the following research questions: what are the factors influencing mobile banking in Kenya, how has mobile banking influenced the reduction of transaction costs in banking and what is the effect of mobile banking on financial accessibility.

The study adopted a descriptive research design. The research design was applied to a population of 200 Master of Business Administration (MBA) students in The United States International University – Africa (USIU – A) that used mobile banking. The design was appropriate because the study sought to build a profile about the impact of mobile banking on commercial banks in Kenya. A further sample of 70 students in the population were requested to take part in the study. A close ended structured questionnaire was used to collect the data. The data was evaluated and deduced using descriptive statistics through frequencies, percentages and regression analysis. Excel was the tool used in this study for analysis.

The study found that majority of the respondents adopted the use of mobile banking due to its ease of use, quick transactions and ability to conduct transactions wherever they are situated. The study also found that majority of the respondents are do not live or work near their domicile bank branch. Through this mobile banking reduces the transaction costs in regards to time and distance because they can perform banking transactions despite not being near the bank branch. The study also found that the simplicity and usefulness of mobile banking is one of the major influencers and increases financial accessibility in that customers can not only perform banking transactions but also make other payments e.g. Utility payments.

The study concluded that the cost of mobile banking was not a huge factor in influencing mobile banking in that due to different banking tariffs over the counter transactions would relatively cost the same. The study also concluded that the threat of fraud and privacy were a major concern for customers in that they felt that there were more susceptible to fraudulent activity and identity theft due to their information being readily available.
The study recommended that in regards to the cost of mobile banking, the regulators should come up with a standard price against all bank tariffs. In regards to the threat of fraud associated with mobile banking, the study recommended that the bank should ensure that all measures are taken to prevent fraud including hiring outside security firms to monitor all activity. Finally, the study recommended that the bank should ensure that the mobile banking platform should offer complete privacy to the end user including the use of asterix (*) or dots (.) to block out the pin number when the end user is performing a mobile banking transaction.
ACKNOWLEDGEMENT

To quote Shannon L. Adler “When you invite people to share in your miracle, you create future allies during rough weather.” This quote is a true reflection of my journey writing this research project because without the individuals involved, this journey would have been impossible.

I would like to thank the respondents for taking the time out of their busy schedules to assist in making this possible. The process was challenging especially getting the feedback from each and every one of them and for their cooperation, I am forever grateful.

A sincere “thank you” goes out to Dr. Achoki for his patience, support and guidance during this whole process. For believing in my project and offering his insight and expertise in this field. For not hesitating to share his thought and views enabling me to be where I am today. I would like to thank my colleagues who were there to offer me support and to listen to me and my views while writing this research project. Finally I would like to thank my friends who were there for me throughout the whole experience. They encouraged me and were a shoulder for me to lean on when things got hard. They encouraged me to never give up and for that I will always be forever grateful.
DEDICATION
I dedicate this research project to my parents and Ruitha Githaiga. They have been my inspiration to achieve my dreams. Through their motivation and prayers for my success I have been able to complete this project and for that I am grateful.
# Table of Contents

STUDENT’S DECLARATION ........................................................................................................... ii
COPYRIGHT ................................................................................................................................. iii
ABSTRACT .................................................................................................................................... iv
ACKNOWLEDGEMENT ................................................................................................................ vi
DEDICATION .................................................................................................................................... vii
CHAPTER 1 .................................................................................................................................... 1
  1.0 INTRODUCTION ....................................................................................................................... 1
  1.1 Background of the Study ......................................................................................................... 1
  1.2 Statement of the Problem ....................................................................................................... 4
  1.3 Purpose of the Study ............................................................................................................... 5
  1.4 Research Questions ............................................................................................................... 5
  1.5 Significance of the Study ....................................................................................................... 5
  1.6 Scope of the Study .................................................................................................................. 6
  1.7 Definition of Terms ............................................................................................................... 6
  1.8 Chapter Summary ................................................................................................................... 6
CHAPTER 2 .................................................................................................................................... 8
  2.0 LITERATURE REVIEW ......................................................................................................... 8
  2.1 Introduction ........................................................................................................................... 8
  2.2 Factors Influencing Mobile Banking in Kenya ........................................................................ 8
    2.2.1 Easy Accessibility and security ......................................................................................... 9
  2.3 How Mobile Banking has Influenced the Reduction of Transaction Costs in Banking ....... 12
  2.4 Effect of Mobile Banking on Financial Accessibility ............................................................ 15
  2.5 Chapter Summary ................................................................................................................... 18
CHAPTER 3 .................................................................................................................................... 19
  3.0 RESEARCH METHODOLOGY ............................................................................................... 19
  3.1 Introduction ........................................................................................................................... 19
  3.2 Research Design .................................................................................................................... 19
  3.3 Population and Sampling Design .......................................................................................... 20
  3.4 Data Collection Methods ...................................................................................................... 22
  3.5 Research Procedures .............................................................................................................. 22
3.6 Data Analysis Method ........................................................................................................... 23
3.7 Chapter Summary .................................................................................................................. 23
CHAPTER FOUR ......................................................................................................................... 24
4.0 RESULTS AND FINDINGS ................................................................................................. 24
4.1 Introduction .......................................................................................................................... 24
4.2 General Information ............................................................................................................. 24
4.3 Understanding of mobile banking and influence of mobile banking on commercial banks. ........ 27
4.4 Understanding how Mobile Banking has influenced the reduction of transaction costs .......... 38
4.5 Effect of Mobile Banking on Financial Accessibility ............................................................ 47
4.6 Chapter Summary ................................................................................................................ 54
CHAPTER FIVE ............................................................................................................................ 55
5.0 DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS ............................................ 55
5.1 Introduction .......................................................................................................................... 55
5.2 Summary of Findings .......................................................................................................... 55
5.3 Discussion ............................................................................................................................. 58
5.4 Conclusions .......................................................................................................................... 62
5.5 Recommendations ............................................................................................................... 63
REFERENCES ............................................................................................................................. 65
Appendix A: Cover Letter .......................................................................................................... 69
Appendix B: Questionnaire ........................................................................................................ 70
LIST OF TABLES

Table 3.1 Total Population Distribution ................................................................. 20
Table 3.2: Sample Respondents .................................................................................. 21
Table 4.1: Access to bank accounts ........................................................................... 28
Table 4.2: Access to cell phones ................................................................................. 28
Table 4.3: Mobile banking platform ........................................................................... 28
Table 4.4: Usage of Mobile Banking Services ............................................................. 29
Table 4.5: Mobile banking a cheaper way of making banking transactions ................. 36
Table 4.6: Mobile Banking Usefulness ........................................................................ 38
Table 4.7: Branch access to ATM Machine ................................................................. 40
Table 4.8: Are transaction cost more expensive on non Kenswitch operated ATM’s ........ 41
Table 4.9: Mobile banking service providers are fair in their conduct of customer transactions ........................................................................................................... 43
Table 4.10: When transaction errors occur, reversals are done more efficiently ............. 44
Table 4.11: Mobile banking provides me with relevant and timely information about my bank accounts & transactions ................................................................................. 46
Table 4.12: Access to mobile banking service encourages regular access to financial services .......................................................... 50
Table 4.13: I am worried about threat of fraud associated with the use of m-banking .......... 51
Table 4.14: I find security and privacy as an issue while using mobile banking services........ 53

LIST OF FIGURES

Figure 4.1: Customer Segment ................................................................................... 25
Figure 4.2: Gender of the Respondents ...................................................................... 25
Figure 4.3: Age of the Respondents .......................................................................... 26
Figure 4.4: Sector of Employment ............................................................................. 27
Figure 4.5: Most convenient mode of conducting Mobile Banking Transactions ........... 30
Figure 4.6: Most preferred banking option ................................................................. 31
Figure 4.7: Mobile Banking Usage Frequency ............................................................. 31
Figure 4.8: Mobile Banking information obtainment .................................................. 32
Figure 4.9: Mobile Banking is easy to use.................................................................. 33
Figure 4.10: Mobile Banking allows me to conduct banking transactions wherever I am........ 34
Figure 4.11: Mobile Banking transactions are quick....................................................... 35
Figure 4.12: Mobile Banking is less time consuming than over the counter transactions
........................................................................................................................................... 36
Figure 4.13: My mobile banking service provider has the ability to provide mobile banking
service effectively .................................................................................................................. 37
Figure 4.14: Distance of the branch where the account was opened to where they live ........ 39
Figure 4.15: Distance of the branch where the account was opened to where they work
............................................................................................................................................... 39
Figure 4.16: Access to alternative ATM’s? (i.e. Kenswitch) .................................................. 41
Figure 4.17: Mobile Banking is a cheaper alternative to otc & internet banking................... 42
Figure 4.18: The cost of over the counter transactions discourage minimal cash transactions... 43
Figure 4.19: Transferring money from one bank account to another is much cheaper .......... 45
Figure 4.20: Mobile banking has increased the quality of my transactions............................ 45
Figure 4.21: Mobile Banking makes the payments of utilities much cheaper........................... 47
Figure 4.22: Usefulness of mobile banking before applying for mobile banking services ....... 47
Figure 4.23: Simplicity of mobile banking services before applying for it............................... 48
Figure 4.24: What they use mobile banking for ...................................................................... 49
Figure 4.25: Mobile Banking makes it safer for me to pay or receive money (as opposed
to cash or other forms of transactions). .................................................................................. 50
Figure 4.26: Various services offered by mobile banking encourages the use of mobile banking
.................................................................................................................................................. 52
Figure 4.27: I find the Mobile Banking applications flexible to interact with ....................... 52
Figure 4.28: Overall, I am satisfied with the use of Mobile Banking................................. 54
CHAPTER 1
1.0 INTRODUCTION

1.1 Background of the Study
According to Anyasi and Otubu (2009) the term Mobile banking or m-banking can be defined as the use of mobile devices such as mobile phones or tablets to execute banking transactions.

Tiwari, Buse and Herstatt (2006) define mobile banking as any form of transaction that encompasses the transfer of control or rights to use goods and services, which is started and/or concluded by using mobile access to various networks, have also defined it. This is through the assistance of an electronic device such as mobile phones or tablets. Further suggestions show that mobile banking also refers to the delivery and accessibility of bank-related financial services with the aid of mobile telecommunication devices.

Globally, banks that are aided by technological improvements, have retorted to the various encounters by implementing various innovative strategies, which systematically highlight on making an effort to increase the customer satisfaction rate. This can be done through providing better products and services while at the same time doing what is necessary to reduce the operational costs (Sohail & Shanmugham, 2003).

Here in Kenya, mobile banking is mostly performed via short message services (SMS) or mobile internet, but changes in technology these days shows that banks have had mobile application programs developed for this specific function and they are downloaded by the clients to their mobile devices.

According to Al-Jabri (2012), it has been seen that over the past few years that the advancement in information technology has completely transformed the manner in which various organizations are operating and conducting their business on a day to day basis. The established advancement in technology has consequently brought about the progress that we see now of mobile banking and online banking in the banking industry. This has entirely changed the manner in which commercial banks and financial institutions go about their business these days. Through internet and mobile banking, financial organizations are in a position to offer banking services online and via mobile devices. This has also enabled the customers to have access to simple and readily available financial services and other remunerations.
Through the technological developments in the area of telecommunications and information technology, it is seen to have sustained the transformation of the banking industry in a positive manner. The manner in which financial services are delivered to the customers has displayed major alterations over the past few years.

Tiwari and Buse (2006) indicated that various studies have shown that in order to be in line with the dynamics in the operating environment, banks and other financial institutions have to embrace mobile banking in order to satisfy the customer demands. Therefore, up-and-coming partnerships in financial institutions and other service providers has led to the growth of mobile banking as the different customers can conduct their daily banking needs through the use of their mobile devices.

According to Chogi (2006), only a small fraction of the Kenyan population had access to banking and financial services and this was as a result to the high bank fees, the various products and services and the limited geographical/locational reach. Therefore, the enthusiasm towards banking was through the income produced from fees for the various services provided, interest earned on the different deposits and interest that is received from the lending that occurs to different customers. Therefore, the relocation from the traditional banking that was there to agency banking and currently mobile banking has absolutely been seen as advantageous to both the banks and customers. This is because it reduces the operating cost of the institution and it is very opportune and economical seeing as the fees charged on mobile transactions are cheaper as compared to the over the counter transactions.

The start of Mobile banking was encouraged by the competition or rivalry from the telecommunication industry. Mobile networks in Kenya offer mobile money services in the name of M-pesa by Safaricom, Orange money by Orange, Yu-cash by Essar, and Airtel money by Airtel. Currently the mobile money market size is about 15 million users transferring Kshs. 2 billion daily, of these over 14 million are Mpesa customers. These services have enabled the customers to deposit money into their account without the hustle of queueing or travelling long distances, they have enabled the customers to transfer money to other user just by pressing a confirm button i.e. sellers of goods and services, relatives or friends etc. this has been viewed as very convenient.
Daniel (1999) indicated that through the lapse of time, the banking sector has made a point to go with the flow and implement technological change in order to stay competitive and relevant. Banks have had to adjust and recognize the value of differentiating themselves from other financial institutions through new service distribution channels, due to the search for competitive advantages in the technological financial service industry. Due to the banks structural process of account opening, many people from the rural areas/ outskirts could not succeed in opening their own accounts. With the growth in competition from the telecommunication companies, the banks definitely had to simplify and improve the process of account opening and had to come up with numerous innovative ways of doing so. Therefore, Mobile money providers have partnered with commercial banks such as Equity Bank, Standard Chartered Bank, and Commercial Bank of Africa, Barclays and National Bank of Kenya among many others to offer mobile based financial products that aim to reach the unbanked.

Banks will be myopic if they view mobile devices as just another channel for doing business. Mobile technology is seen to be altering the network of the banking industry as various new players both locally as seen above and internationally have innovative solutions to enter into this market.

Mobile banking absolutely more advantageous for both the banks and the customers. Mobile banking eradicates the geographical limitation that was a limitation to customers and therefore bringing forth convenience. There is no time limitation i.e. banking services may be executed throughout the day and in any place as long as a mobile device is accessible.

According to Gupta and Herma (2012), commercial banks have already began investing in mobile technology and security. They are introducing and developing smartphone apps, introducing various new features such as remote deposit of checks, and educating consumers etc. Therefore, this indicates that mobile banking acceptance among consumers has been greater than the acceptance of online banking more than a decade ago.

According to Campbell and Frey (2010), several banks believe that the mobile banking channel will be of great support in reducing transaction costs as well as increasing customer commitment and retention. This has been indicated as to be quite comparable to the envisioned benefits of online banking that were set out numerous years ago. On the other hand, a Harvard study shows that while online banking may have enhanced the customer retention rate and reduced the cost
per transaction, it ended up leading to an increase in the total number of online and offline transactions that resulted in an increase in the total transaction cost.

The impact of mobile banking on commercial banks in Kenya relates to the finance discipline in that mobile banking is a form of financial intermediation and commercial banks deal with finance. Overall, this study relates to the finance discipline in all ways possible and it will be seen further into the project.

1.2 Statement of the Problem

According to Upton and Kim (1999), Technology has completely brought about inevitable change, and in order to keep up banks have been made to embrace this change. An important theory of most recent research in operations development and learning has been that technological enhancement has a conventional behavior on performance enhancement.

Only financial institutions that are in a position to adapt to their dynamic environment and implement new ideas and business methods have assured survival. Some of the forces of change, which have affected the performance of financial institutions primarily, include technological developments such as use of mobile phones and the internet.

Mobile money has advanced as great competition to financial institutions in Kenya. Initially, cellular phones were developed to improve communication. Financial institutions then presented Information and Communication Technology (ICT) as a development to the banking networks. This consequently permitted the customers to have access to information relating to their accounts, (Tiwari, Buse and Herstatt, 2006.).

Mobile phone service providers have further introduced mobile money services into the financial sector by presenting a variety of different financial services through their various networks. The CBK and the Communication Commission of Kenya (CCK) have since legalized service providers to provide mobile money services as there appears to be no amnesty as the competition in the mobile money business is still growing with the entry of new money transfer systems which have allowed transactions across all mobile telephone service providers example M-pesa.

According to Kigen (2010), the impact of mobile banking on transaction costs of financial institutions had considerably reduced the transaction costs noticeably though they were not felt directly by the banks because of the then small mobile banking customer base. This study
contrasted from other studies in that it envisioned to fill the gaps by expounding on the impact of mobile banking on commercial banks in Kenya.

1.3 Purpose of the Study
The purpose of this study was to determine the impact of mobile banking on commercial banks in Kenya.

1.4 Research Questions
1.4.1 What are the factors influencing mobile banking in Kenya?
1.4.2 How has mobile banking influenced the reduction of transaction costs in banking?
1.4.3 What is the effect of mobile banking on financial accessibility?

1.5 Significance of the Study
1.5.1 Beneficiaries
This study was significant in that it was quite crucial to both developing and already developed financial institutions as it provided answers to the factors that deter the implementation of mobile banking in Kenya. It also validated the success and growth associated with the implementation of mobile banking and highlight the areas of banking operations that can be boosted via mobile banking.

The study also gave understanding on the state of mobile money services as a form of competition to the commercial banks in Kenya and the factors that have greatly swayed its growth. The different players in the financial institution sector and telecommunications industry will find this study useful in that they can use the findings to form strategies as to how they can mutually benefit from this change.

1.5.2 Other Researchers and Policy Makers
In regards to the policy makers and agencies like the Central bank of Kenya (CBK), the findings of this study were vital in enlightening the policy formulation especially with regard to regulating and improving the mobile banking services in Kenya. The research findings added features that may help improve the policy direction with regard to regulation of mobile banking as well as factors that will accelerate economic development.
Finally, this study added on to the existing literature that is available, and it proved to be a valuable tool for students, academicians, institutions, corporate managers and individuals who want to learn more about mobile banking.

1.6 Scope of the Study
The study focused on as many respondents that were willing to share their data with me that are currently using mobile banking. This study made use of primary data so as to provide sufficient information for purposes of drawing conclusions.

The study mostly focused on individuals who use mobile banking and that are situated in Nairobi, Kenya. This was to reduce the limitations in that location was not a barrier to this study.

This study was subject to limitations such as lack of cooperation from the respondents in providing assistance with the data to make the study possible.

1.7 Definition of Terms
1.7.1 Mobile Banking:
According to Anyasi and Otubu (2009), Mobile banking or m-banking can be defined as the use of mobile devices such as mobile phones or tablets to execute banking transactions.

1.7.2 Transaction costs:
Klaes, (2008) described a transaction cost as a cost that gained in making an economic exchange.

1.7.3 Financial Institutions:
According to Siklos (2001) a financial institution can be defined as an institution that deals with the provision of financial services to its clients or affiliates. Among the most important financial services provided by a financial institution is acting as a financial intermediary. Majority of the financial institutions are regulated by the government.

1.8 Chapter Summary
This chapter was basically an introduction to the topic the impact of mobile banking on commercial banks in Kenya. It clearly outlined the statement of the problem and with that discussed the significance of the study to the beneficiaries, other researchers and policy makers.
The purpose of the study was clearly outlined to determine the impact of mobile banking on commercial banks in Kenya. There are three research questions which were namely:

1.8.1 What are the factors influencing mobile banking in Kenya?

1.8.2 How has mobile banking influenced the reduction of transaction costs in banking?

1.8.3 What is the effect of mobile banking on financial accessibility?

It also discussed the scope which included the intended population, the location, the timeframe and the limitations.

In chapter 2, the literature review was discussed there, the research questions were looked into there. In chapter 3, there was a discussion of the research methodology which included the research design that was intended for this project among other things. After chapter 3, chapter 4 was looked at. Here, there was the results and findings from the data that is used. Finally, chapter 5 was looked at. Here, there was the discussions, conclusions and recommendations in regards to the study of the impact of mobile banking on commercial banks in Kenya.
CHAPTER 2

2.0 LITERATURE REVIEW

2.1 Introduction
This chapter sets out to explain the effect of mobile banking on commercial banks in Kenya through the following research questions:

What are the factors influencing mobile banking in Kenya? How has mobile banking influenced the reduction of transaction costs in banking? And what is the effect of mobile banking on financial accessibility?

2.2 Factors Influencing Mobile Banking in Kenya
According to Tiwari, Buse and Herstatt (2006), Mobile Banking can be defined as any procedure of transaction that involves the transfer of goods and services, which is both started and concluded by use of mobile access to various networks thanks to the assistance of an electronic device i.e. mobile phone or tablet. Various factors will definitely influence mobile banking especially in Kenya.

Kreyer, Pousttchi & Turowski (2002) described the mobile phone as the instrument driving the mobile banking initiative. According to Deans (2002), the usage of mobile phones in mobile banking is expanding gravely in that even countries with less than adequate infrastructure are now using the platform for their communication and business transactions. The affordable nature and low upkeep of this device has encouraged users unlike the use of laptops, desktop, e.tc, which are quite expensive in terms of purchase and maintenance. The ongoing trend in which companies are coerced towards merging mobile phones and electronic devices like Personal Digital Assistant (PDAs). Through this, the emergence of a brilliant combination of mobile devices, such as the innovation of multifunctional phones like smart phones (e.g. Huawei Phone) which has the combination of cell phone capabilities, PDA and wireless email.

Tiwari et al (2006) stated that the growth of mobile phones vary from each country. In German at least 87% of the population uses mobile phones while in Korea , 79% of the population has reported to own a mobile phone. This indicates a high acceptance rate of mobile banking and the use of mobile phones is an added advantage. The developed countries easily adopt innovation as
compared to developing countries although there is evidence that some developing counties are experiencing a much higher acceptance rate such as China (Donner 2008).

According to International Telecommunication Union (ITU) report, Africa and Asia have benefited both from this innovation, and is transforming people’s lives. It has also brought about various openings for mobile commerce (ITU 2008B; ITU 2008C). New mobile devices which are being developed, are for the purpose of enabling data transmission with the introduction of UMTS (Universal Mobile Telecommunication system). This is a form of third generation (3G) technology, which is an huge improvement over the 1G, 2G, 2.5G and 2.75G (Tiwari et al 2006b).

The 4G mobile devices have been introduced to the world, and countries like Sweden, Germany and United States have rolled out this new technology. The 4G mobile devices are faster, cheaper and have more capacity than 3G. (BBC NEW 2011). According to Telecomsinsight 2008 and ITU 2008, developing countries like Kenya, The Philippines and Sri-Lanka have introduced 3G networks) and are making use of it.

The following are factors that influence mobile banking in Kenya and all over the world.

2.2.1 Easy Accessibility and security
Mobile Banking is a service that provides the customers anytime and anywhere banking with the assistance of mobile telecommunication services. This service is very easy available by each and every mobile internet users. It also saves a lot on time consumption.

Mobile Banking is also safe and secure with the assistance of the mobile pin number (m-pin). The pin number, which is firstly distributed by the bank, secures every user of mobile banking but it is possible for the customer to change it as many times as per the needs of the customers. The customers can straightforwardly control all the transactions through mobile banking and all transactions will be safe in the account details. Aggarwal (2014).

2.2.2 Less costly and much faster
Mobile Banking is a less expensive option of banking as compared to other modes of banking. There are numerous categories of charges levied by the banks when we use other methods of
banking likes ATM facility, but by the use of mobile banking, there are very minimal charges that will be charged by the banks.

In regards to speed, it is observed that with the emergence of new technology like 3G services, the customers perform their banking transactions within a fraction of a second. Mobile Banking is executed by the mobile internet users in a very fast speed as compared to another method of banking. For Example: If we want to deposit the money, firstly, we have to queue and wait for our turn in order to reach the counter, but these obstacles can be easily eradicated by the use of mobile banking.

2.2.3 Universally Accepted, compatible and easier to access account statements

Mobile Banking is generally recognized by every bank. The customer can control their bank account at any location around the country with the use of mobile internet. It is extensively recognized by the banks anywhere and anytime.

Amin, Hamid, Tanakinjal and Lada (2006), were in the opinion that alleged credibility is an element of behavioral intention to use an information system. According to Mattila (2003), it is believed that the implementation of mobile banking service would be made possible if it is well matched with the customer's bank transaction requirements. Compatibility of an innovation is more likely to be implemented, if it is well matched with job accountabilities, customer’s requirements and value system (Agarwal and Prasad, 1998).

When it comes to checking our account statements, it is much more convenient in that we can get them immediately and it is only possible with the online and mobile banking. Mobile Banking provides us immediate effect of banking transaction on our mobiles with SMS and Mini statements on our mobile devices.

2.2.4 Increasing Customers and Economic Development

Mobile Banking aids in the increase bank customers. It is evident that the increase of regularity of mobile users is cumulating at very high speed but the regularity of banks account holder is very less. Therefore, mobile banking is a new technological platform to the banks to increase their customers.
Mobile Banking gives us a possibility to always be in connection with our bank accounts in regards to receiving updates every minute. Various account holders have great transaction per day. With the assistance of downloading the mobile banking application and software of their banks, they can get the update of their account by every minute or second.

According to Porteous (2007) most unbanked individuals were in that position mostly for “economic reasons”, which related in part to their work status and in part to their view that formal employment, was a precondition for opening a bank account. He also identified that the youth tend to not to have bank accounts and see less importance for them.

The same study also publicized that Mobile banking users in general have a relatively higher income, are more probable to reside in urban areas. They are also publicized to be of formal employment, as well as somewhat older than banked people with mobile phones. Porteous (2007) has based an argument on the fact that the early adopter profiles seem to associate more with the anticipated functionality than with factors, which suggest risk acceptance such as age. A high quantity of the banked population either do not comprehend Mobile banking or have at no time heard about it. Notwithstanding these high levels of unfamiliarity about Mobile banking, banked people still have sturdy critical approach, with around one in five people hesitant in regards to its dependability.

In this day and age, still there still exists a large percentage of our population that lack bank accounts but with the assistance of mobile banking consciousness especially young account owners will open the bank account and helps in economic growth.

Overall, numerous factors intensify with the grouping of cellular and financial service. This is due to the fact that this enhances commerce, it permits microfinance, it permits ease of payments, it compromises security that cash does not and, possibly, it could aid as a substitute for debit and credit cards. It also delivers various banking services for the unbanked. Porteous (2007)

Commerce is improved because it becomes simpler to purchase goods and services by the use of the mobile phone. It is not necessary to go to a bank to withdraw money as it is readily available through the use of the phone. Moreover, the targeted population does not have a traditional bank account. The phone "holds" the funds, just as a conservative saving or checking account would. A reversal of the process allows it to receive funds. The phone is intended to be the bank.
Individuals can either remit money to their families in the rural areas of the country or remit funds to their country of origin.

They lack the means to travel the distance or to depend on a courier or other means to transfer their money to their family. Thus, it is less time consuming, security is better and it is cheaper. The functionality of mobile expenses is exactly like a debit card. Money is deducted from your account via your mobile phone, just as a debit card would debit your bank account. To the degree that the mobile provider or a third party leader, would like to spread credit to its customers, the phone would act precisely like a credit card. In this means, a micro-financial institution is able to advance funds to qualified individuals. As the service grows unquestionably, many other uses of these mobile-payments will arise.

### 2.3 How Mobile Banking has Influenced the Reduction of Transaction Costs in Banking

Transaction costs for financial transactions are usually very high especially over the counter transactions. This sector seeks to explain how mobile banking has significantly reduced transaction costs in banking.

According to Kigen (2010) in regards to a study he has done on the impact of mobile banking on transaction costs of microfinance institutions, he found out that in that period, mobile banking had significantly reduced transaction costs though it did not directly affect the the banks because at that time there was a small mobile banking customer base. He was determined to understand the impact that mobile banking bore on transactional costs of microfinance institutions.

The transaction cost theory enables us to comprehend how the various markets and hierarchies are selected. In a free market economy, individuals can perceive two basic mechanisms for directing the movement of materials and services through adjacent steps in the value chain markets and hierarchies.

Williamson (1981) classifies different transactions into those that support management between several buyers and sellers, i.e. market transactions, and those supporting management within the organization, as well as industry value chain, i.e. hierarchy transactions. The pricing of a product consists mainly of three elements: the cost of production, the cost of management and the profit margin. Different scholars have chosen different terms to distinguish management costs.
Chandler (1979) has described them as administrative costs. Malone, Yates and Benjamin (1989) differentiate among productions and management costs.

According to A.P.E.I.S (2007), many governments and international financial institutions have in time made an effort to address the difficulties of high transaction costs. According to Williamson (1981) a transaction can be described as a simple element of analysis. Furthermore, he explained that it happens when a good or service is moved across a technologically divisible interface with one stage of activity being dismissed and another beginning. Transaction costs are in reference to the cost of performing a transaction through the means of an exchange in the open market and are linked to the division of work (Rotke and Gentgen, 2008).

According to various empirical studies, transaction costs are not directly measured, but instead substitutes such as uncertainty, transaction frequency, asset specificity, opportunism etc. are used as an alternative. These are believed to unfavorably affect the costs of transactions (Pessali, 2006).

Therefore, according to Nalukenge, (2003), transactions are subsidiary financial costs produced by numerous processes, comprising the costs of penetrating and gathering appropriate information. Polski and Kearney (2001) were of the view that banking activities produce two types of transaction costs, which vary based on different political and economic influences. In addition, Shankar (2007) went further to break down transaction costs into indirect and direct. He described direct transaction costs as the ones that consist of training costs, cost of direct organizational activities and cost of monitoring. He further illustrated that indirect transaction costs include distributed fixed costs of the branch office, regional office and head office, depreciation and taxation costs.

Dyer (1997) viewed transaction cost analysis of the firm as an authority structure. However out of the many characteristics describing transactions, the three main measurements that are informative to the study of commercial transactions are the regularity with which transactions repeat, the vagueness (turbulences) to which they are subject, and the state of asset specificity (Williamson, 1998). Husted and Folger (2004) and Zhao, Luo & Suh (2004) referred to Asset specificity as a state where the physical or human assets are capitalized to support a specific transaction that cannot be easily redistributed to substitute uses without a substantial loss in value.
In addition, asset specificity is viewed as a variety of forms. These forms are physical assets, human assets, site specificity, dedicated assets, brand name, principal, progressive specificity and to which individual governance structure responses accumulate. Therefore, Rindfleisch & Heide, (1997) and Williamson (1981) viewed transaction cost theory as the theory that rests on the relationship of opportunism, asset specificity, transaction frequency and uncertainty dimensions. According to Moschandreas, (1997) the communication of environmental features (asset specificity, uncertainty and complexity) with social characteristics (bounded rationality and opportunism) creates transaction costs. Likewise, if the risk of opportunism in a particular relationship is adequately high, substantial resources must be spent on control and observation on resources that could have been positioned more effectively for other commitments.

A recent office of technology valuation study followed example of a consumer purchase (the acquisition of a high-end stereo system) from a transaction cost viewpoint. Economic theory and actual market behavior proclaim that firms will choose transactions that economize on coordination costs. As information technology carries on its prompt cost performance development, firms will continue to find motivations to organize their activities electronically. Repeatedly, this synchronization takes the form of single-source electronic sales channels (one supplier and many purchasers synchronized through ranked transactions) or electronic markets. Electronic markets are more effective forms of synchronization for certain classes of products transactions. Applying cheap coordinative transactions, organized networks and straightforwardly available databases, economic theory forecasts that a relative shift of economic activity from single-source sales channels to electronic markets is likely to transpire as: Lower organization costs are more favorable to electronic markets, low-cost calculation is more favorable to electronic markets by making the complex product descriptions simpler and minimizing asset specificity. they are also most likely to transpire as a progression from producer controlled value chains to electronic markets can be predicted and stakeholders will choose markets when amplified volume is larger than loss in income from electronic market effect.

The above four clarifications can already be detected in a number of practical settings. Rival electronic booking systems (e. g., American Airlines' SABRE CRS), particular organizations within the financial markets, product markets and in time electronic markets will progress from electronic single-source sales channels to partial markets. This is where the market maker is one
of the beneficiaries and uses the market transaction instruments in its favor to impartial markets and finally to modified markets where customers can use personalized aids in deciding on their choices.

Overall, it is cheaper to transact via mobile banking than it is over the counter. An example here in Kenya is where over the counter withdrawals will cost an average of 200 Kenyan shillings. The alternatives to over the counter withdrawals include Automated Teller Machines and Mobile Banking.

Transfer of money through Mobile Banking is much cheaper in that it will cost an average of 60 Kenyan shillings to perform that transaction. Through this, we are able to see that Mobile banking does indeed reduce transaction costs.

2.4 Effect of Mobile Banking on Financial Accessibility

Rose (1999) has defined mobile banking as a service delivered by financial institutions in collaboration with the various mobile phone operators. This allows customers with busy lives convenient banking methods using their phones at any given time. This is an indicator that financial services become more available.

Mobile banking is generally about providing banking services to the unbanked, those who do not have bank access or bank accounts, and those who are at the bottom of the financial pyramid, often living in rural areas. These targeted people will access the benefits of banking services such as being able to save and borrow in a cost-efficient and secure way.

The services that are provided by mobile banking include viewing account balances, making cash transfers between accounts, buying airtime or paying bills via a mobile device. In today’s world, mobile banking is frequently performed via SMS or the Internet but there has also been an emergence of special applications downloaded to the mobile device (Hicks and Niehans, 1998). According to the German mobile operator Mobilcom, mobile devices, in specific smart phones, are the most capable way to reach the multitudes and to create “stickiness” among existing customers, due the capacity to provide services anytime and anywhere. There is also a high rate of penetration and a lot of potential to grow.

A study conducted by Hernando and Nieto (2007) on the effect of mobile banking and financial performance of Spanish commercial banks determined that banks that executed mobile banking
were able to entice more customers and this definitely directed to increased contact to customer deposits leading to positive financial performance.

Sometimes it is difficult for financial services like banking to be readily available. Given a situation like one is at a function and it is in the middle of the night and no bank and ATM is available and payments for food or drinks have to be made, mobile money will come in handy. It will make the financial services more accessible.

Conventionally, the delivery of banking services was an expensive venture. The banks had to invest in staff, machines and infrastructure in order to deliver services to their customers. With the introduction of Mobile banking, banks do not need to invest in principal equipment to provide banking services.

Many people in rural areas have access to financial services brought about by mobile banking penetration. Majority of urbans residents use Mobile-banking services to make payments of airtime, prepaid electricity, and transfer of money to friends and relatives in rural villages. Mobile banking is facilitating relocation of wealth. An instance would be new business will start in order to deliver services to the users; new agency growing in orders to serve the unreached areas in the country. Mobile banking and mobile phone business contribute to economic growth though creating openings for revenue generation. A wide range of mobile/branchless banking ideas are being recognized now.

2.4.1 Bank-led model

This model can be defined as the model that displays when customers execute transactions with the use of their phones. This varies from the branch-base with the assistance of a trade partners. This is an substitute to predictable branch-based banking. This technique could be fashioned by joint venture between banks and telecommunication companies. This system permits customers account relationship to be recognized and managed by the bank. (Cudjoe, Anim and Nyanyofio 2015)

The bank-focused model comes into play when a traditional bank uses non-traditional low-cost distribution networks to offer banking services to its existing customers.
Examples range from use of automatic teller machines (ATMs) to internet banking or mobile banking to deliver definite restricted banking services to bank customers. This model is inclusive in nature and may be viewed as an unassertive addition of conventional branch-based banking.

2.4.2 Bank-focused model

The bank focus model can be defined as the model whereby a traditional banks decides to use the low-cost distribution channels. Porteous (2006) defines this as a non-traditional banking system to provide banking facilities to its customers such as the use of mobile banking facilities, automatic teller machine (ATMs), internet banking, etc. The bank-focus model is positive in nature and is an addition of the predictable branch-based banking.

The bank-led model offers a separate substitute to predictable branch-based banking in that the customer performs financial transactions at a whole range of retail agents or through the use of the mobile phone as compared to the bank branches or through bank employees. This model promises possibilities of the potential to considerably increase the financial services outreach by using a diverse delivery, a different trade partner having knowledge and target market separate from traditional banks, and may be considerably affordable than the bank-based substitutes. The bank-led model may be executed by either using correspondent provisions or by creating a JV between Bank and the telecommunications. In this model customer account relationship lies with the bank.

2.4.3 Non bank-led model

According to Aguirre, Ernesto, Dias, Denise and Prochaska (2008), the non-bank-led does not get involved unless necessary when the need arises as a safe keeper of excess funds. This enables the telecommunication company the means to handle all the functions. Nonetheless, mobile banking services are fixated on low-income wage earners of the population size who are frequently found in the rural area will need to respond to retail outlets.

All in all, mobile banking has had a great effect on financial accessibility in that everyone can now easily access their money through the use of mobile phone services. Money can be transferred just through the touch of a button without physically having to be present. One doesn’t have to travel far just to be able to access money or to send money. It is very revolutionary and is slowly encouraging more people to open up bank accounts where they are.
2.5 Chapter Summary
This chapter basically set out to expound on the research questions that were posed. The chapter helped understand the factors that influence mobile banking in Kenya. It also helped understand and analyze how mobile banking has significantly influenced the reduction of transaction costs in banking. Lastly, this chapter helped to clearly understand the effect of mobile banking on financial accessibility.

In chapter 3, there was a discussion of the research methodology which included the research design that was intended for this project among other things. After chapter 3, chapter 4 was looked at. The results and findings from the data were used. Finally, chapter 5 was looked at. Included, were the discussions, conclusions and recommendations in regards to the study of the impact of mobile banking on commercial banks in Kenya.
CHAPTER 3

3.0 RESEARCH METHODOLOGY

3.1 Introduction
This chapter focused on the research methodology. It was an outline to define and explain the chosen research design used in this project which is seen in section 3.2. Section 3.3 explains the population and sampling design, which specifies and shows the population size and also defines and explains the chosen sampling design i.e. the sampling frame, the sampling technique and the sampling size. Section 3.4 helps understand the data collection methods, section 3.5 helps get a cleared view of the research procedures and finally section 3.6 provides a clear understanding of the data analysis methods.

3.2 Research Design
McMillan and Schumacher (2001) defined the term research design as a blueprint for choosing subjects, research sites and data gathering techniques to answer the research questions. The research design can also be defined as the theoretical background within which research is conducted and establishes the plan for the gathering and the analysis of the collected data.

This study has adopted a descriptive research design. According to Mugenda and Mugenda (2003) a descriptive research design can be described as a methodical, practical analysis into which direct control of independent variable by the researcher is not visible as their manifestation has already occurred or because it fundamentally cannot be manipulated. Descriptive studies are mostly concerned with the what, where and how of an occurrence therefore more positioned to shape a profile on that occurrence (Mugenda and Mugenda, 2003). Descriptive research design is more appropriate because the study seeks to build a profile about the impact of mobile banking on commercial banks in Kenya.
3.3 Population and Sampling Design

3.3.1 Population

A population can be defined as the total collection of components about which the researcher wishes to make some interpretations. A component can be defined as the focus on which the measurement is being taken and is the unit of the study. Cooper and Emory (1995)

The population of study consisted of 200 Master of Business Administration (MBA) students belonging to United States International University – Africa (USIU-A) from various disciplines which include: Finance, Marketing, Strategic Management, Global Social Sustainable Enterprises (GSSE) and Human Resource Management. These students are mostly working students and have access to financial services i.e. bank accounts.

There was a need to sample the population because not all the population elements use mobile and internet banking.

Table 3.1: Total Population Distribution

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance</td>
<td>60</td>
</tr>
<tr>
<td>Marketing</td>
<td>30</td>
</tr>
<tr>
<td>Strategic Management</td>
<td>60</td>
</tr>
<tr>
<td>GSSE</td>
<td>40</td>
</tr>
<tr>
<td>Human Resource Management</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>200</strong></td>
</tr>
</tbody>
</table>

3.3.2 Sampling Design

3.3.2.1 Sampling Frame

According to Cooper and Schindler (2003) a sampling frame can be defined as a list of all the components from which the sample is derived and clearly connected to the population. For the purpose of this study, the sample frame for the study was Master of Business Administration (MBA) students from various disciplines, which include: Finance, Marketing, Strategic
Management, Global Social Sustainable Enterprises (GSSE) and Human Resource Management and they were targeted as the key respondents.

3.3.2.2 Sampling Technique

The sampling technique the researcher used was simple random sampling. This is due to the fact that each member of the study was chosen completely by chance and each one had an equal chance of selection (random selection). The simple random sampling is a method whereby a sample is selected by a method involving a random factor by taking a number of independent interpretations from the same probability distribution, without involving any real population. Cooper and Schindler (2003) defined simple random sampling as the basic sampling technique whereby a group of subjects (a sample) for study from a larger group (a population) is selected. Simple random sampling normally reduces the sampling error in the population. This technique is free of classification error, and it involves least possible advance knowledge of the population other than the frame. Its simplicity also makes it rather easy to deduce the data collected. This in turn increases the accuracy of any estimation methods used.

3.3.2.3 Sample Size

The sample size is necessary in that it helps get a clearer picture on a representation of the population. The study focused on bank customers within Nairobi County. Master of Business Administration (MBA) students belonging to United States International University – Africa (USIU-A) from various disciplines which include: Finance, Marketing, Strategic Management, Global Social Sustainable Enterprises (GSSE) and Human Resource Management. The researcher obtained a 35% sample of all strata this was viewed as adequate more representative.

Table 3.2 Sample Respondents

<table>
<thead>
<tr>
<th>Customer Segment</th>
<th>Population (N)</th>
<th>Percentage</th>
<th>Sample Size(n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance</td>
<td>60</td>
<td>35</td>
<td>21</td>
</tr>
<tr>
<td>Marketing</td>
<td>30</td>
<td>35</td>
<td>10</td>
</tr>
<tr>
<td>Strategic Management</td>
<td>60</td>
<td>35</td>
<td>21</td>
</tr>
</tbody>
</table>
3.4 Data Collection Methods
According to Creswell (2003) data collection can be defined as means by which information is acquired from the selected subjects of an study. In order to establish the impact of mobile banking on commercial banks, self-administered drop and pick questionnaires were distributed among sampled Master of Business Administration (MBA) students currently in USIU - A and who have access to financial services. In order to collect primary data, questionnaires were designed to establish the impact of mobile banking on commercial banks. The questionnaires had closed ended questions. Secondary data sources were also used through the use of previous documents or materials to supplement the primary data received from the questionnaires.

3.5 Research Procedures
The primary research data was collected from the sampled students from USIU-A through questionnaires which were self-administered by the researcher to minimize variation in data collection procedures and ensure consistency. The questionnaire contains four sections. The appendix 1 & 2 began with the introduction statement written alongside the research questions which shows the aim and the importance of the research study, the attached letter give respondents the assurance of confidentiality of every information provided, also the time needed to complete the questionnaire was given. The questionnaires have closed ended questions divided into four sections: first section contained the respondent’s background and demographics of the customer with four questions. The second section will address the understanding of mobile banking and the influence of mobile banking on commercial banks. The third section will address the understanding of how mobile banking has influenced the reduction of transaction costs. The fourth will investigate the effect of mobile banking on financial accessibility.

Secondary sources of data collection were obtained for additional information. The study relied on both unpublished and published data such as, articles from journals and the internet, which is
related to the topic. Sources of all secondary data were duly acknowledged at the reference section of the research.

3.6 Data Analysis Method
Data analysis normally refers to a methodology that is used to make interpretations from the data collected by means of a methodical and impartial identification of specific features Bryman and Bell (2003). The data has been analyzed using descriptive statistics.

Collected data was analyzed using qualitative measures. Qualitative data regarding customer level satisfaction, challenges faced, demographics and services provided and used were analyzed using content analysis to measure the semantic contents of the message.

Qualitative data was analyzed using statistical data analysis. Mugenda and Mugenda (2009), descriptive analysis can be described as a process that is constituted by transforming raw data into tables, charts, with frequency distribution and percentages, which are an important part of analyzing the data. In this study, the descriptive statistics was used to give meaning to the data. The data was tabulated in pie-charts, tables and graphs for easier understanding and presentation.

3.7 Chapter Summary
As seen above, this chapter is all about the research methodology. It has defined and explained the chosen research design that will be used in this project. It also explains the population and sampling design. That is, it specifies and shows the population size and it also defines and explains the chosen sampling design i.e. the sampling frame, the sampling technique and the sampling size.

It also helps understand the data collection methods, the research procedures and the data analysis methods.

The next chapter is chapter 4. The results and findings from the data that is used were looked at and analyzed. Finally, chapter 5 was be looked at. The discussions, conclusions and recommendations in regards to the study of the impact of mobile banking on commercial banks in Kenya were looked at.
CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction
This chapter was a representation of the findings and the results of the study. The data was analyzed on three research questions, which involved establishing the factors influencing mobile banking in Kenya, to establish how mobile banking has influenced the reduction of transaction costs in banking, and to establish the effect of mobile banking on financial accessibility.

The researcher supplied questionnaires to a sample of 70 respondents. The numbers of respondents who successfully filled, returned and completed the questionnaires to required satisfaction of researcher were 60 while 10 respondents did not give effective response. Based on the analysis it can be concluded that the response rate was 86%, which was high compared to non-response of 14%.

4.2 General Information
This section provides the background and demographic details of the respondents. These include the customer segment, gender, age, level of education and sector of employment. This information based on the respondents was considered necessary because it allowed the researcher to determine the target audience that mostly used mobile banking and if the information required was being collected.

4.2.1 Customer Segment
The customer’s segment was asked in order comprehend the customer’s composition mix. 30% of the respondents were Finance Students, 14% of the respondents were Marketing Students, 30% of the respondents were Strategic Management Students, 20% were GSSE Students while 6% were Human Resource Management. This illustrated in Figure 4.1 below.
4.2.2 Gender of the respondents

Gender was chosen as the respondents information in order to determine which gender used mobile banking more and also to avoid bias. Majority of the respondents were female 53% and the male respondents were 47% as shown in figure 4.2.

Figure 4.2 Gender of the respondents
4.2.3 Age of the respondents

Age was chosen as the respondent’s information in order to determine which age group used mobile banking the most. Majority of the respondents were between the age group of 25-35 at 58%. Respondents between the age group of 18-24 made up 20%, between the age group of 36-19 made up 20% of the respondents and lastly respondents between the age group of 50+ made up 2% as shown in figure 4.3.

Figure 4.3 Age of the respondents

4.2.4 Level of education

As the research was conducted at USIU-A and the sample was MBA students, 100% of the respondents had university level qualification.

4.2.5 Employment Sector

From the data obtained from the questionnaire, majority of the respondents were from the private sector. This was at 67%. The respondents worked in the public sector i.e government were at 15%, they were followed closely by the respondents that were self employed who were at 13%.
Those who were unemployed were at 5% and none of the respondents were in the semi-government i.e. parastatals sector. This is illustrated further below in figure 4.4

**Figure 4.4 Sector of Employment**

![Sector of employment](image)

### 4.3 Understanding of mobile banking and influence of mobile banking on commercial banks.

The understanding of mobile banking and the influence of commercial banks was evaluated by quite a number of factors. Among them was access to bank accounts, access to cell phones, if the respondent has access to mobile banking, the respondents’ most convenient way of conducting mobile banking transactions, preferred mode of banking, usage frequency of mobile banking and where they obtained the information about mobile banking. The researcher also set out to find out which factors generally influenced the usage of mobile banking.

#### 4.3.1 Access to bank accounts

In order for mobile banking to occur, the customer’s bank account is to be linked to the customers phone number. This was an important question for the respondents because it was crucial to find out if they had access to financial services. One hundred percent (100%) of the respondents indicated that they had bank accounts. This is illustrated in table 4.1 below
### Table 4.1 Access to bank accounts

<table>
<thead>
<tr>
<th>Do you have a bank account</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>60</td>
<td>100%</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

#### 4.3.2 Access to a cell phone

In order for mobile banking to occur, the customer’s phone number is to be linked to the customers bank account. This was an important question for the respondents because it was crucial to find out if they had access to communication services. One hundred percent (100%) of the respondents indicated that they had cell phones. This is illustrated in table 4.2 below

### Table 4.2 Access to Cell Phones

<table>
<thead>
<tr>
<th>Do you have a cell phone</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>60</td>
<td>100%</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

#### 4.3.3 Mobile Banking Platform

Seeing that 100% of the respondents had responded yes to the question on if they has a cell phone, they followed next to answer if their cell phones have a mobile banking platform. One hundred percent (100%) of the respondents responded positively by indicating that indeed their cellphones had a mobile banking platform. This is illustrated further in table 4.3

### Table 4.3 Mobile Banking Platform

<table>
<thead>
<tr>
<th>Mobile Banking Platform</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>60</td>
<td>100%</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>
4.3.4 Usage of Mobile Banking Services

Once the respondents gave feedback on whether or not they had a mobile banking platform, next they were asked to provide feedback on whether or not they used mobile banking services. One hundred percent (100%) of the respondents used mobile banking services as a form of banking. This is a positive outcome in that the project is about the impact of mobile banking on commercial banking and the respondents all use mobile banking. This is further illustrated in table 4.4.

Table 4.4 Usage of Mobile Banking Services

<table>
<thead>
<tr>
<th>Usage of Mobile Banking Services</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>60</td>
<td>100%</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

4.3.5 Most convenient mode of conducting Mobile Banking Transactions

Mobile banking has various methods of conducting the transactions. Among them are through a software developed mobile app, a system generated USSD code and through the internet. The respondents provided feedback on these three methods. According to the feedback provided 59%, which was the majority, used the mobile banking app, 23% used the internet and lastly 18% used USSD. This is illustrated further below in figure 4.5.
4.3.6 Most preferred Banking option

Commercial banking these days offers various forms of banking for ease of convenience. The respondents were asked to provide what banking option they found most convenient to them and the feedback was as follows, 57% of the respondents indicated that mobile banking was their preferred banking option, 25% indicated that internet banking was their preferred option and 18% indicated that over the counter was their most preferred banking option. This information is further illustrated below in figure 4.6
4.3.7 Mobile Banking Usage Frequency

This question was aimed at finding out how frequently our respondents used mobile banking. From the data collected, 45% of the respondents used mobile banking at least once a week, 30% used mobile banking daily, 13% used mobile banking quarter yearly and 12% of the respondents used mobile banking at least once a month. The following information is as illustrated below in figure 4.7:

Figure 4.7 Mobile Banking Usage Frequency
4.3.8 Mobile Banking information obtainment

This question was asked in order to obtain information on how the respondent found out about mobile banking. Which means managed to assist the researcher to know which means mobile banking is spread to others. Respondents here were asked to pick all the means they learnt about mobile banking. Some provided more than one answer. The respondents indicated that 65% got their information about mobile banking from banks, 23% found out about mobile banking from advertisements, 20% found out about mobile banking from relatives, 8% found out about mobile banking from relatives and none of the respondents indicated other means of obtaining information about mobile banking. The information is further illustrated in figure 4.8.

Figure 4.8 Mobile Banking information obtainment

4.3.9 Factors that influence usage of Mobile Banking

This section was intended to find out which factors influenced the usage of mobile banking and how the respondents felt about the factors. Below are some of the factors that influence the usage of mobile banking.

4.3.9.1 Mobile Banking is easy to use

The respondents were asked to provide feedback on how easy it is to use mobile banking. Eighty two percent (82%) of the respondents strongly agreed with the statement that mobile banking is
easy to use. Fifteen percent (15%) of the respondents just simply agreed with the statement and 3% of the respondents were neutral about the statement. None of the respondents disagreed with the statement. Further illustration is provided in figure 4.9

**Figure 4.9 Mobile Banking is easy to use**

![Mobile Banking is easy to use](image)

4.3.9.2 Mobile Banking allows me to conduct banking transactions wherever I am

This was among the factors that influenced mobile banking in that it demonstrates the flexibility it provides. The respondents were required to provide feedback on whether or not mobile banking allows the respondent to conduct banking transactions wherever they are. Eighty percent (80%) of the respondents strongly agreed that mobile banking allows them to conduct banking transactions wherever they are. Thirteen percent (13%) of the respondents just simply agreed with the statement and 7% of the respondents were neutral about the statement. None of the respondents disagreed with the statement that mobile banking allows them to conduct banking transactions wherever they are.

Further information is illustrated below in figure 4.10
4.3.9.3 Mobile Banking transactions are quick

The respondents were asked to provide feedback on whether or not they find mobile banking transactions quick or not. Seventy eight percent (78%) of the respondents strongly agreed with the statement that mobile banking transactions are quick. Fifteen percent (15%) of the respondents just simply agreed with the statement and 7% of the respondents were neutral about the statement. None of the respondents disagreed with the statement. Further illustration is provided in figure 4.11
4.3.9.4 Mobile Banking is less time consuming than over the counter transactions

The respondents were asked to provide feedback on whether or not they find mobile banking is less time consuming than over the counter transactions. Eighty two percent (82%) of the respondents strongly agreed with the statement that mobile banking is less time consuming than over the counter transactions. Thirteen percent (13%) of the respondents just simply agreed with the statement and 5% of the respondents were neutral about the statement. None of the respondents disagreed with the statement. Further illustration is provided in figure 4.12
4.3.9.5 Mobile banking a cheaper way of making banking transactions

The respondents were asked to provide feedback on whether or not they find mobile banking a cheaper way of making banking transactions. Forty two percent (42%) of the respondents strongly agreed with the statement that mobile banking is a cheaper way of making banking transactions. Twenty percent (20%) of the respondents just simply agreed with the statement 14% of the respondents were neutral about the statement. Twelve percent (12%) of the respondents disagreed with the statement and 12% strongly disagreed with the statement that mobile banking is a cheaper way of making banking transactions. Further illustration is provided in table 4.5

Table 4.5 Mobile banking a cheaper way of making banking transactions

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>25</td>
<td>42%</td>
</tr>
<tr>
<td>Agree</td>
<td>12</td>
<td>20%</td>
</tr>
<tr>
<td>Neutral</td>
<td>9</td>
<td>16%</td>
</tr>
<tr>
<td>Disagree</td>
<td>7</td>
<td>11%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>7</td>
<td>11%</td>
</tr>
</tbody>
</table>
4.3.9.6 My mobile banking service provider has the ability to provide mobile banking service effectively

The respondents were asked to provide feedback on whether or not their mobile banking service provider has the ability to provide mobile banking service effectively. Fifty three percent (53%) of the respondents strongly agreed with the statement that their mobile banking service provider has the ability to provide mobile banking service effectively. Eighteen percent (18%) of the respondents just simply agreed with the statement and 28% of the respondents were neutral about the statement. None of the respondents disagreed with the statement. Further illustration is provided in Figure 4.13

Figure 4.13 My mobile banking service provider has the ability to provide mobile banking service effectively

4.3.9.7 Mobile Banking Usefulness

The respondents were asked to provide feedback on whether or not they found mobile banking useful. Sixty eight percent (68%) of the respondents strongly agreed with the statement. Twenty percent (20%) of the respondents just simply agreed with the statement and 12% of the respondents were neutral about the statement. None of the respondents disagreed with the statement. Further illustration is provided in Table 4.6
Table 4.6 Mobile Banking Usefulness

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>41</td>
<td>68%</td>
</tr>
<tr>
<td>Agree</td>
<td>12</td>
<td>20%</td>
</tr>
<tr>
<td>Neutral</td>
<td>7</td>
<td>12%</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

4.4 Understanding how Mobile Banking has influenced the reduction of transaction costs

Quite a number of factors evaluated the understanding of how Mobile Banking has influenced the reduction of transaction costs. Among them was distance of the branch where the account was opened to both the respondents place of work and from their residence. The researcher also set to find out if the branch has an ATM machine, if the bank provided options for alternative ATM’s i.e Kenswitch, whether or not the transactions are more expensive on non Kenswitch ATM’s and whether or not they found mobile banking is a cheaper alternative to internet banking and over the counter usage. The researcher also set out to find out how various factors fair on the effect of transactions costs in the respondents opinion.

4.4.1 Distance of the branch where the account was opened to where they live

The respondents were required to provide information on whether or not the branch where they opened their banking account was within walking distance from where they lived. Majority of the respondents responded No. this was 73% of the respondents. Twenty seven percent (27%) of the respondents confirmed that the branch was indeed a walking distance from where they live. This can be further illustrated in figure 4.13
Figure 4.14 Distance of the branch where the account was opened to where they live

4.4.2 Distance of the branch where the account was opened to where they work

The respondents were required to provide information on whether or not the branch where they opened their banking account was within walking distance from where they work. Fifty three percent (53%) of the respondents responded no whereas 47% of the respondents confirmed that the branch was indeed a walking distance from where they work. This can be further illustrated in figure 4.14

Figure 4.15 Distance of the branch where the account was opened to where they work
4.4.3 Branch access to ATM Machine

The respondents were required to provide feedback on whether or not the branch where they opened their bank account had access to an ATM Machine. One hundred percent (100%) of the respondents indicated that indeed the branch where they opened their bank account did have access to an ATM machine. This is further illustrated in table 4.7

Table 4.7 Branch access to ATM Machine

<table>
<thead>
<tr>
<th>Branch access to ATM Machine</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>60</td>
<td>100%</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

4.4.4 Access to alternative ATM’s? (i.e. Kenswitch)

Kenswitch is the Payments Service Provider (PSP) that facilitates commercial banks and other financial services participants provide payments across the East African region. Customers use debit cards to access financial services at any ATM, retailer, e-commerce merchant or agent.

This was meant to understand from the respondent whether or not they can access their money despite not being near an ATM operated by the bank they use.

Eighty five percent (85%) of the respondents indicated that indeed they do have access to alternative ATM’s i.e Kenswitch and 15% of the respondents indicated that they do not have access to alternative ATM’s. This is illustrated further in figure 4.15
4.4.5 Are transaction cost more expensive on non Kenswitch operated ATM’s

The respondents were required to provide feedback on whether or not they found transaction costs to be more expensive on non-Kenswitch operated ATM’s. One hundred percent (100%) of the respondents indicated that indeed non-Kenswitch operated ATM’s are more expensive to use in the event that they need to use an ATM other than the one provided by their bank. This is further illustrated in table 4.8

Table 4.8 Are transaction cost more expensive on non Kenswitch operated ATM’s

<table>
<thead>
<tr>
<th>Are transaction cost more expensive on non Kenswitch operated ATM’s</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>60</td>
<td>100%</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>
4.4.6 Mobile Banking is a cheaper alternative to otc & internet banking

This question was set out to get different opinions on whether or not the respondent thought that mobile banking was a cheaper alternative. The result was neutral in that 50% felt that it was a cheaper alternative whereas 50% felt that it wasn’t a cheaper alternative to other banking options. This is illustrated further in figure 4.16

**Figure 4.17 Mobile Banking is a cheaper alternative to otc & internet banking**

![Pie chart showing 50% for Yes and 50% for No](chart.png)

4.4.7 Effect of transactions costs in the respondents opinion

This section was intended to find out the effect of transactions costs in the respondents opinion. Below are some of the factors that show the effect of transactions costs.

4.4.7.1 The cost of over the counter transactions discourage minimal cash transactions

The respondents were asked to provide feedback on whether or not they thought the cost of over the counter transactions discouraged minimal cash transactions. Sixty five percent (65%) of the respondents strongly agreed with the statement that mobile banking is easy to use. Eighteen percent (18%) of the respondents just simply agreed with the statement, 10% of the respondents were neutral about the statement and 7% of the respondents strongly disagreed with the statements. This is illustrated in Figure 4.17
4.4.7.2 Mobile banking service providers are fair in their conduct of customer transactions.

The respondents were asked to provide feedback on whether or not they felt that their mobile banking service providers are fair in their conduct of customer transactions. Forty seven percent (47%) of the respondents strongly agreed with the statement. Twenty four percent (24%) of the respondents just simply agreed with the statement 18% of the respondents were neutral about the statement. Eight percent (8%) of the respondents disagreed with the statement and 3% strongly disagreed with the statement. Further illustration is provided in table 4.9

Table 4.9 Mobile banking service providers are fair in their conduct of customer transactions.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>28</td>
<td>47%</td>
</tr>
<tr>
<td>Agree</td>
<td>14</td>
<td>24%</td>
</tr>
<tr>
<td>Neutral</td>
<td>11</td>
<td>18%</td>
</tr>
<tr>
<td>Disagree</td>
<td>5</td>
<td>8%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>2</td>
<td>3%</td>
</tr>
</tbody>
</table>
4.4.7.3 When transaction errors occur, reversals are done more efficiently

The respondents were asked to provide feedback on whether or not they felt that when transaction errors occur, reversals are done more efficiently. Thirty five percent (35%) of the respondents strongly agreed with the statement. Thirty eight percent (38%) of the respondents just simply agreed with the statement 13% of the respondents were neutral about the statement. Seven percent (7%) of the respondents disagreed with the statement and 7% strongly disagreed with the statement. Further illustration is provided in table 4.10

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>21</td>
<td>35%</td>
</tr>
<tr>
<td>Agree</td>
<td>23</td>
<td>38%</td>
</tr>
<tr>
<td>Neutral</td>
<td>8</td>
<td>13%</td>
</tr>
<tr>
<td>Disagree</td>
<td>4</td>
<td>7%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>4</td>
<td>7%</td>
</tr>
</tbody>
</table>

4.4.7.4 Transferring money from one bank account to another is much cheaper

The respondents were asked to provide feedback on whether or not they felt that transferring money from one bank account to another is much cheaper. Thirty seven percent (37%) of the respondents strongly agreed with the statement. Thirty percent (30%) of the respondents just simply agreed with the statement 20% of the respondents were neutral about the statement. Eight percent (8%) of the respondents disagreed with the statement and 5% strongly disagreed with the statement. Further illustration is provided in figure 4.18
4.4.7.5 Mobile banking has increased the quality of my transactions

The respondents were asked to provide feedback on whether or not they felt that mobile banking has increased the quality of my transactions. Fifty percent (50%) of the respondents strongly agreed with the statement. Thirty five percent (35%) of the respondents just simply agreed with the statement 7% of the respondents were neutral about the statement and 8% of the respondents disagreed with the statement. Further illustration is provided in figure 4.19.
4.4.7.6 Mobile banking provides me with relevant and timely information about my bank accounts & transactions

The respondents were asked to provide feedback on whether or not they felt that mobile banking provided them with relevant and timely information about their bank accounts & transactions. Forty-eight percent (48%) of the respondents strongly agreed with the statement. Thirty percent (30%) of the respondents just simply agreed with the statement. Seventeen percent (17%) of the respondents were neutral about the statement. Three percent (3%) of the respondents disagreed with the statement and 3% strongly disagreed with the statement. Further illustration is provided in table 4.1

Table 4.11 Mobile banking provides me with relevant and timely information about my bank accounts & transactions.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>28</td>
<td>47%</td>
</tr>
<tr>
<td>Agree</td>
<td>18</td>
<td>30%</td>
</tr>
<tr>
<td>Neutral</td>
<td>10</td>
<td>17%</td>
</tr>
<tr>
<td>Disagree</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>2</td>
<td>3%</td>
</tr>
</tbody>
</table>

4.4.7.7 Mobile Banking makes the payments of utilities much cheaper

The respondents were asked to provide feedback on whether or not they felt that mobile banking makes the payments of utilities much cheaper. Fifty-two percent (52%) of the respondents strongly agreed with the statement. Twenty-seven percent (27%) of the respondents just simply agreed with the statement. Eighteen percent (18%) of the respondents were neutral about the statement and 3% of the respondents disagreed with the statement and 3% strongly disagreed with the statement. Further illustration is provided in figure 4.20.
4.5 Effect of Mobile Banking on Financial Accessibility

Quite a number of factors evaluated the understanding of how Mobile Banking has influenced the reduction of transaction costs. Among them whether or not the respondent considered the usefulness of mobile banking before they applied for it, whether or not they considered the simplicity of mobile banking before they applied for it and what they used mobile banking for. The researcher also set out to find out how various factors fair on financial accessibility in the respondents opinion.

4.5.1 Usefulness of mobile banking before applying for mobile banking services

This question was necessary in that the researcher needed to find out before hand whether or not the respondents considered mobile banking useful or not before applying for it. Eighty percent (80%) of the respondents responded with yes indicating that they did indeed consider the usefulness of mobile banking before applying for it. Twenty percent (20%) of the respondents did not consider the usefulness. This is further illustrated in figure 4.21
4.5.2 Simplicity of mobile banking services before applying for it

This question was necessary in that the researcher needed to find out before hand whether or not the respondents considered the simplicity of mobile banking before applying for it. Seventy percent (70%) of the respondents responded with yes indicating that they did indeed consider the simplicity of mobile banking before applying for it. Thirty percent (30%) of the respondents did not consider the simplicity. This is further illustrated in figure 4.22

Figure 4.23 Simplicity of mobile banking services before applying for it
4.5.3 What they use mobile banking for

This question was asked in order to obtain information on what the respondent uses mobile banking for. Respondents here were asked to pick all the uses mobile banking. Some provided more than one answer. The respondents indicated that 72% use mobile banking to transfer funds, 70% use mobile banking to check their account balances, 92% use mobile banking to pay bills, 60% use mobile banking for cash withdrawals and 50% of the respondents use mobile banking to buy airtime. The information is further illustrated in figure 4.23

Figure 4.24 What they use mobile banking for

![What they use mobile banking for](image)

4.5.4 Financial accessibility

This section was intended to find the respondents' opinions on financial accessibility. Below are some of the factors that show financial accessibility.

4.5.4.1 Access to mobile banking service encourages regular access to financial services

The respondents were asked to provide feedback on whether or not they felt that access to mobile banking service encourages regular access to financial services. Seventy percent (70%) of the respondents strongly agreed with the statement. Fifteen percent (15%) of the respondents just simply agreed with the statement 12% of the respondents were neutral about the statement and 3% of the respondents strongly disagreed with the statement. Further illustration is provided in table 4.12
Table 4.12 Access to mobile banking service encourages regular access to financial services

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>42</td>
</tr>
<tr>
<td>Agree</td>
<td>9</td>
</tr>
<tr>
<td>Neutral</td>
<td>7</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>2</td>
</tr>
</tbody>
</table>

4.5.4.2 Mobile Banking makes it safer for me to pay or receive money (as opposed to cash or other forms of transactions)

The respondents were asked to provide feedback on whether or not they felt that mobile banking makes it safer for them to pay or receive money (as opposed to cash or other forms of transactions). Fifty eight percent (58%) of the respondents strongly agreed with the statement. Thirty percent (30%) of the respondents just simply agreed with the statement and 12% of the respondents were neutral about the statement. This is further illustrated in figure 4.24

Figure 4.25 Mobile Banking makes it safer for me to pay or receive money (as opposed to cash or other forms of transactions)
4.5.4.3 I am worried about threat of fraud associated with the use of m-banking

The respondents were asked to provide feedback on whether or not they were worried about threat of fraud associated with the use of m-banking. Fifty percent (50%) of the respondents strongly agreed with the statement. Twenty seven percent (27%) of the respondents just simply agreed with the statement 20% of the respondents were neutral about the statement and 3% of the respondents strongly disagreed with the statement. This can be illustrated in table 4.14

Table 4.13 I am worried about threat of fraud associated with the use of m-banking

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>30</td>
</tr>
<tr>
<td>Agree</td>
<td>16</td>
</tr>
<tr>
<td>Neutral</td>
<td>12</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>2</td>
</tr>
</tbody>
</table>

4.5.4.4 Various services offered by mobile banking encourages the use of mobile banking

The respondents were asked to provide feedback on whether or not they felt that the various services offered by mobile banking encourage the use of mobile banking. Sixty one percent (61%) of the respondents strongly agreed with the statement. Twenty seven percent (27%) of the respondents just simply agreed with the statement and 12% of the respondents were neutral about the statement. This is illustrated in figure 4.25
Various services offered by mobile banking encourages the use of mobile banking

4.5.4.5 I find the Mobile Banking applications flexible to interact with.

The respondents were asked to provide feedback on whether or not they found the mobile banking applications flexible to interact with. Sixty five percent (65%) of the respondents strongly agreed with the statement. Twenty four percent (24%) of the respondents just simply agreed with the statement 8% of the respondents were neutral about the statement and 3% of the respondents disagreed with the statement. This is illustrated in figure 4.26

Figure 4.27 I find the Mobile Banking applications flexible to interact with.
4.5.4.6 I find security and privacy as an issue while using mobile banking services

The respondents were asked to provide feedback on whether or not they found security and privacy as an issue while using mobile banking services. Fifty percent (50%) of the respondents strongly agreed with the statement. Twelve percent (12%) of the respondents just simply agreed with the statement 20% of the respondents were neutral about the statement 6% of the respondents disagreed with the statement and 12% of the respondents strongly disagreed with the statement. This is illustrated in table 4.14

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>30</td>
<td>50%</td>
</tr>
<tr>
<td>Agree</td>
<td>7</td>
<td>12%</td>
</tr>
<tr>
<td>Neutral</td>
<td>12</td>
<td>20%</td>
</tr>
<tr>
<td>Disagree</td>
<td>4</td>
<td>6%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>7</td>
<td>12%</td>
</tr>
</tbody>
</table>

4.5.4.7 Overall, I am satisfied with the use of Mobile Banking

The respondents were asked to provide feedback on their overall satisfaction of their use of mobile banking. Forty two (42%) of the respondents strongly agreed with the statement. Forty seven (47%) of the respondents just simply agreed with the statement and 11% of the respondents were neutral about the statement. None of the respondents disagreed with the statement. The following information is illustrated further in figure 4.27
Overall, I am satisfied with the use of Mobile Banking

4.6 Chapter Summary
This chapter basically discussed and shed light on the results and findings of the study. It reported the findings of the research questions which included; which involved establishing the factors influencing mobile banking in Kenya, to establish how mobile banking has influenced the reduction of transaction costs in banking, and to establish the effect of mobile banking on financial accessibility. The data was presented by the use of bar graphs, pie charts and tables. The next chapter is chapter five which mostly covered the discussions, conclusions and recommendation of the study.
CHAPTER FIVE

5.0 DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS.

5.1 Introduction
This chapter set out to be a representation of the discussions, conclusions and recommendations of the study. The chapter was an analysis of the three research questions of the study. These three research questions included to establish the factors influencing mobile banking in Kenya, to establish how mobile banking has influenced the reduction of transaction costs in banking, and to establish the effect of mobile banking on financial accessibility. It also a discussion and analysis of the data based on the findings. Finally, it provided the appropriate recommendations and suggestions for further research options.

5.2 Summary of Findings
The main objective of this study was to establish the impact of mobile banking on commercial banks in Kenya. The study used the following research questions as a guide: to establish the factors influencing mobile banking in Kenya, to establish how mobile banking has influenced the reduction of transaction costs in banking, and to establish the effect of mobile banking on financial accessibility.

This study adopted a descriptive research design. The target population of study consisted of 200 MBA students belonging to United States International University – Africa (USIU-A) from various disciplines which include: Finance, Marketing, Strategic Management, Global Social Sustainable Enterprises (GSSE) and Human Resource Management. These students are mostly working students and have access to financial services i.e. bank accounts. From the target population a sample size on 70 students was obtained. The main method of data collection was through questionnaires which was a much easier and effective method used by the researcher. The response rate was 86%. This means that the numbers of respondents who successfully filled, returned and completed the questionnaires to required satisfaction of researcher were 60 while 10 respondents did not give effective response. Data analysis was illustrated through tables, graphs and charts. Descriptive statistics was used to describe the various features of the data and the presentation was done through the use of tables and charts.
On the understanding of mobile banking and the factors that influence mobile banking, all the respondents indicated that they have access to and use mobile banking services. Majority of the respondents had the mobile banking app as their most preferred mode of conducting mobile banking transactions and majority of the respondents used mobile banking at least once a week which is a positive response with respondents who used it daily as a close second. A huge number of the respondents indicated that they found out about mobile banking through the banks meaning that their methods of spreading mobile banking awareness is effective. There were various key factors identified that would most likely influence mobile banking. There were as follows: Mobile Banking is easy to use it allows banking transactions anywhere, Mobile Banking transactions are quick, Mobile Banking is less time consuming than over the counter transactions, Mobile banking is a cheaper way of making banking transactions, the mobile banking service providers have the ability to provide mobile banking service effectively and that Mobile Banking is Useful.

Majority of the respondents strongly agreed with all the factors where by those who agreed came in at a close second indicating that indeed the ease of use of mobile banking, the fact that individuals can transact wherever and whenever, that transactions are quick and are less time consuming than OTC transactions are among the few factors that strongly influence mobile banking.

Findings on the understanding of how mobile banking has influenced the reduction of transaction costs, majority of the respondents neither lived nor worked within a walking distance from where they opened their bank account. All the respondents stated that the branch where they opened their bank account had an ATM present and majority indicated that their bank offered alternatives ATMs because transactions on other ATMs was expensive. All in all it was a 50/50 tie in regards to whether or not the respondents found mobile banking as a cheaper alternative to OTC transactions and internet transactions in that half of the respondents indicated yes and half of the respondents indicated no. Various factors indicated the effect of transaction costs. They are as follows: The cost of over the counter transactions discourage minimal cash transactions, mobile banking service providers are fair in their conduct of customer transactions. When transaction errors occur, reversals are done more efficiently, transferring money from one bank account to another is much cheaper, Mobile banking has increased the quality of my transactions,
Mobile banking provides me with relevant and timely information about my bank accounts & transactions and Mobile Banking makes the payments of utilities much cheaper. Majority of the respondents strongly agreed with the factors while those who agreed came in at a close second. A few of the respondents strongly disagreed with the factors.

In regards to the effect of mobile banking on financial accessibility, majority of the respondents did indeed consider the simplicity and usefulness of mobile banking before applying for it. A large number of the respondents indicated that their primary use of mobile banking is to pay bills and funds transfer came in as a close second. Various factors indicated how mobile banking faired on financial accessibility. They are as follows: Access to mobile banking service encourages regular access to financial services, Mobile banking makes it safer to pay or receive money (as opposed to cash or other forms of transactions, the threat of fraud associated with the use of m banking is worrying. Various services offered by mobile banking encourages the use of mobile banking, Mobile Banking applications flexible to interact with., security and privacy is an issue while using mobile banking services and Overall satisfaction with the use of Mobile Banking. Majority of the respondents strongly agreed with the factors except for the overall satisfaction with the use of mobile banking whereby majority of the respondents agreed with the fact that overall they were satisfied with the use of mobile banking.

The study concluded that various factors such as ease of use, quick and timely transactions e.t.c. do indeed increase the use of mobile banking and have influenced the adoption of mobile banking amongst the bank users. This means the ability for banks to enable their customers to perform banking transactions from wherever they are and are less time consuming is a huge plus and therefore there is a strong influence of the use. The study also concluded that transaction costs were also a huge factor in the adoption of mobile banking in regards to time spent going to the bank. Majority of the respondents indicated that they neither worked nor lived within a walking distance from their home branch therefore mobile banking assisted with the distance in that they are able to transact more effectively. Customer were also able to perform other functions such as paying for utilities e.g. Electricity as compared to going to line up and pay for electricity. The study also concluded that financial accessibility has been greatly improved with mobile banking in that now various services are offered by mobile banking increasing financial accessibility and the fact that the services are flexible to use enabled the increase of financial
accessibility. In addition, the fact that majority of the users were overall satisfied with mobile banking.

The study recommends that the banks should work on improving the security of the different mobile applications and USSD codes as majority of the users were worried about the threat of fraud associated with mobile banking. The banks should also urge the software developers and their I.T. team to ensure that various protocols are in place to enable the user to feel comfortable and safe in that they still find privacy as an issue while using mobile banking. Finally, the study concluded that banks should also aim at reducing the price of mobile banking or coming up with a standard regulated price whereby every bank should abide by to ensure fairness and avoid biasness when choosing banking services.

5.3 Discussion

5.3.1 Factors Influencing Mobile Banking in Kenya

According to Tiwari, Buse and Herstatt (2006), Mobile Banking can be defined as any procedure of transaction that involves the transfer of goods and services, which is both started and concluded by use of mobile access to various networks thanks to the assistance of an electronic device i.e. mobile phone or tablet. Various factors will definitely influence mobile banking especially in Kenya.

Kreyer, Pousttchi & Turowski (2002) described the mobile phone as the instrument driving the mobile banking initiative. According to Deans (2002), the usage of mobile phones in mobile banking is expanding gravely in that even countries with less than adequate infrastructure are now using the platform for their communication and business transactions. The affordable nature and low upkeep of this device has encouraged users unlike the use of laptops, desktop, e.t.c, which are quite expensive in terms of purchase and maintenance. The ongoing trend in which companies are coerced towards merging mobile phones and electronic devices like Personal Digital Assistant (PDAs). Through this, the emergence of a brilliant combination of mobile devices, such as the innovation of multifunctional phones like smart phones (e.g. Huawei Phone) which has the combination of cell phone capabilities, PDA and wireless email.

Tiwari et al (2006) stated that the growth of mobile phones vary from each country. In German at least 87% of the population uses mobile phones while in Korea, 79% of the population has
reported to own a mobile phone. This indicates a high acceptance rate of mobile banking and the use of mobile phones is an added advantage. The developed countries easily adopt innovation as compared to developing countries although there is evidence that some developing counties are experiencing a much higher acceptance rate such as China (Donner 2008).

According to International Telecommunication Union (ITU) report, Africa and Asia have benefited both from this innovation, and is transforming people’s lives. It has also brought about various openings for mobile commerce (ITU 2008B; ITU 2008C). New mobile devices which are being developed, are for the purpose of enabling data transmission with the introduction of UMTS (Universal Mobile Telecommunication system). This is a form of third generation (3G) technology, which is an huge improvement over the 1G, 2G, 2.5G and 2.75G (Tiwari et al 2006b).

The 4G mobile devices have been introduced to the world, and countries like Sweden, Germany and United States have rolled out this new technology. The 4G mobile devices are faster, cheaper and have more capacity than 3G. (BBC NEW 2011). According to Telecomsinsight 2008 and ITU 2008, developing countries like Kenya, The Philippines and Sri-Lanka have introduced 3G networks) and re making use of it.

5.3.2 How Mobile Banking has Influenced the Reduction of Transaction Costs in Banking

According to Kigen (2010) in regards to a study he has done on the impact of mobile banking on transaction costs of microfinance institutions, he found out that in that period, mobile banking had significantly reduced transaction costs though it did not directly affect the the banks because at that time there was a small mobile banking customer base. He was determined to understand the impact that mobile banking bore on transactional costs of microfinance institutions.

The transaction cost theory enables us to comprehend how the various markets and hierarchies are selected. In a free market economy, individuals can perceive two basic mechanisms for directing the movement of materials and services through adjacent steps in the value chain markets and hierarchies.

Williamson (1981) classifies different transactions into those that support management between several buyers and sellers, i.e. market transactions, and those supporting management within the organization, as well as industry value chain, i.e. hierarchy transactions. The pricing of a product
consists mainly of three elements: the cost of production, the cost of management and the profit margin. Different scholars have chosen different terms to distinguish management costs. Chandler (1979) has described them as administrative costs. Malone, Yates and Benjamin (1989) differentiate among productions and management costs.

Therefore, according to Nalukenge, (2003), transactions are subsidiary financial costs produced by numerous processes, comprising the costs of penetrating and gathering appropriate information. Polski and Kearney (2001) were of the view that banking activities produce two types of transaction costs, which vary based on different political and economic influences. In addition, Shankar (2007) went further to break down transaction costs into indirect and direct. He described direct transaction costs as the ones that consist of training costs, cost of direct organizational activities and cost of monitoring. He further illustrated that indirect transaction costs include distributed fixed costs of the branch office, regional office and head office, depreciation and taxation costs.

Dyer (1997) viewed transaction cost analysis of the firm as an authority structure. However out of the many characteristics describing transactions, the three main measurements that are informative to the study of commercial transactions are the regularity with which transactions repeat, the vagueness (turbulences) to which they are subject, and the state of asset specificity (Williamson, 1998). Husted and Folger (2004) and Zhao, Luo & Suh (2004) referred to Asset specificity as a state where the physical or human assets are capitalized to support a specific transaction that cannot be easily redistributed to substitute uses without a substantial loss in value.

Overall, it is cheaper to transact via mobile banking than it is over the counter. An example here in Kenya is where over the counter withdrawals will cost an average of 200 Kenyan shillings. The alternatives to over the counter withdrawals include Automated Teller Machines and Mobile Banking.

Transfer of money through Mobile Banking is much cheaper in that it will cost an average of 60 Kenyan shillings to perform that transaction. Through this, we are able to see that Mobile banking does indeed reduce transaction costs.
5.3.3 Effect of Mobile Banking on Financial Accessibility

Rose (1999) has defined mobile banking as a service delivered by financial institutions in collaboration with the various mobile phone operators. This allows customers with busy lives convenient banking methods using their phones at any given time. This is an indicator that financial services become more available.

Mobile banking is generally about providing banking services to the unbanked, those who do not have bank access or bank accounts, and those who are at the bottom of the financial pyramid, often living in rural areas. These targeted people will access the benefits of banking services such as being able to save and borrow in a cost-efficient and secure way.

The services that are provided by mobile banking include viewing account balances, making cash transfers between accounts, buying airtime or paying bills via a mobile device. In today’s world, mobile banking is frequently performed via SMS or the Internet but there has also been an emergence of special applications downloaded to the mobile device (Hicks and Niehans, 1998). According to the German mobile operator Mobilcom, mobile devices, in specific smart phones, are the most capable way to reach the multitudes and to create “stickiness” among existing customers, due the capacity to provide services anytime and anywhere. There is also a high rate of penetration and a lot of potential to grow.

A study conducted by Hernando and Nieto (2007) on the effect of mobile banking and financial performance of Spanish commercial banks determined that banks that executed mobile banking were able to entice more customers and this definitely directed to increased contact to customer deposits leading to positive financial performance.

Sometimes it is difficult for financial services like banking to be readily available. Given a situation like one is at a function and it is in the middle of the night and no bank and ATM is available and payments for food or drinks have to be made, mobile money will come in handy. It will make the financial services more accessible.
Conventionally, the delivery of banking services was an expensive venture. The banks had to invest in staff, machines and infrastructure in order to deliver services to their customers. With the introduction of Mobile banking, banks do not need to invest in principal equipment to provide banking services.

Many people in rural areas have access to financial services brought about by mobile banking penetration. Majority of urban residents use Mobile-banking services to make payments of airtime, prepaid electricity, and transfer of money to friends and relatives in rural villages. Mobile banking is facilitating relocation of wealth. An instance would be new business will start in order to deliver services to the users; new agency growing in orders to serve the unreached areas in the country. Mobile banking and mobile phone business contribute to economic growth though creating openings for revenue generation. A wide range of mobile/branchless banking ideas are being recognized now.

5.4 Conclusions
5.4.1 Mobile banking cost

The study concluded that the respondents were 50/50 about whether or not mobile banking was a cheaper alternative to over the counter transactions and internet banking. From the study, they indicated that the cost of mobile banking was relatively expensive according to different banking tariffs and it would make no difference in terms in monetary terms to withdraw money over the counter and via mobile banking.

5.4.2 Threat of fraud associated with the use of Mobile Banking

The study concluded that the respondents were very concerned about the issues related to the threat of fraud associated with the use of mobile banking. They were mostly concerned with the ongoing threat of accounts being hacked by outside hackers who pose as threats of transfer of funds to other foreign accounts or funds being transferred to their accounts without their consent. The respondents concerns were due to various stories they had heard of from friends and relatives about their own experiences.

5.4.3 Privacy as an issue while using mobile banking
The study concluded that the respondents found privacy as an issue while using mobile banking. They were concerned about the privacy of their personal information like their pin details and their personal details being available, as some mobile banking providers did not block out the numbers of their pin while they were logging in. This was a great concern in that they felt that if someone was standing right behind them, they would be able to view their pin number and this could result in fraudulent activity. They were also concerned with their personal details like their names, I.D. numbers and phone number was visible to other people as they felt like it was a platform for identity theft as a worst-case scenario.

5.5 Recommendations

5.5.1 Recommendations for improvement

5.5.1.1 Mobile banking cost

The researcher recommends that banks should come together alongside the regulators i.e. Central Bank of Kenya (CBK) and Communications Commission of Kenya (CCK) and come up with a set price against all bank tariffs. This will enable the customers to have the choice of using mobile banking or not based on their own experiences as compared to limitations such as the cost of pricing. Some of these banks don’t offer the option of cheaper alternative methods i.e. kenswitch ATMS and therefore mobile banking would be a cheaper and more effective mode of transacting in the event that there isn’t availability of banks or they need to transact at night time when banks are closed.

5.4.2 Threat of fraud associated with the use of Mobile Banking

The researcher recommends that the mobile banking service providers i.e. the bank should ensure that all measures are taken to prevent fraudulent activity. This includes hiring outside security firms to observe any fraudulent activity or to detect any fraudulent activity before it happens. They should also take measures to do thorough background checks on their staff, customers and the software company providing the mobile banking platform. They should ensure that there is a good code of ethics between all the aforementioned parties to avoid or reduce any possibility of fraud.
In the event of fraud, they should take all measures to find the parties associated with the fraud and take all necessary measures to have all the parties affected compensated and should have an insurance plan for all the customers in the event of fraud.

5.4.3 Privacy as an issue while using mobile banking

The researcher recommends that the mobile banking service providers i.e. the bank, should ensure that the platform offers complete privacy to the end user. This includes developing an application or the USSD code that ensures that the pin numbers are blocked out by either an asterix (*) or a dot (.). This will put the customer at ease in that they will feel that only they know that their pin, and that the numbers cannot be identified while inputting.

The researcher also recommends that the mobile banking service provider should put in place restrictions for other unauthorized parties to access the customer information unnecessarily. This will reduce the threat of identification theft and this will make the customers feel more safe and will not find privacy as an issue.

5.5.2 Recommendations for further studies

Studies may be extended to other financial institutions including Savings and Cooperatives Societies (SACCOS) and microfinance institutions to be able to understand the effect of the mobile banking platform on their institutions and whether or not it has a positive impact or a negative impact.
REFERENCES


Bryman and Bell (2003), is the resource-based ‘view’ a useful perspective for strategic management research. The Academy of Management Review, 26(1)


Chogi B. F. M. (2006). The Impact of Mobile Communication Technologies in Medium and Small Enterprises: Case Study of Nairobi City, MSc. Thesis submitted at the University of Nairobi, School of computing and Informatics.


Appendix A: Cover Letter

P.O. Box 14634, 00800
NAIROBI
Date:…………………………….

Dear Respondent,

RESEARCH QUESTIONNAIRE

I am currently a graduate student at United States International University-Africa pursuing degree of Master of Business Administration (MBA). I am conducting a research on the impact of mobile banking on commercial banks in Kenya.

The findings will be significant to the management of financial institutions in Kenya by highlighting the impact mobile banking has on commercial banks from a customer’s perspective.

This is entirely for academic research purposes and confidentiality is emphasized, your name will not appear anywhere in the report. Kindly spare 5 minutes to complete the questionnaire attached.

Thank you.

Yours sincerely,

Sheila Coderias
Appendix B: Questionnaire

The purpose of this questionnaire is to identify and analyze the impact of mobile banking on commercial banks in Kenya. Kindly, respond by selecting the response among the choices given that best represents to your views.

PART I: BACKGROUND AND DEMOGRAPHIC DETAILS OF THE RESPONDENT. Instructions: Please tick (√)

1. Gender:
   Male ( ) Female ( )

2. Age:
   18-24 ( ) 25-35 ( ) 36-50 ( ) 50+ ( )

3. Highest level of education:
   Primary education ( ) Secondary education ( ) Tertiary/college education ( ) University ( )

4. Sector of employment:
   Public sector ( ) Private sector ( ) Self employed ( ) Semi-government agency ( )
   Unemployed ( )

PART II: UNDERSTANDING OF MOBILE BANKING AND INFLUENCE MOBILE BANKING ON COMMERCIAL BANKS. Instructions: Please tick (√)

5. Do you have a bank account? Yes ( ) No ( )

6. Do you own a cell phone? Yes ( ) No ( )

7. If yes, does it have mobile banking platform? Yes ( ) No ( )

8. Do you use mobile banking services? Yes ( ) No ( )

9. What is your most convenient mode of conducting mobile banking transactions?
   Mobile App ( ) USSD ( ) Internet ( )

10. What is your most preferred banking option?
    Over The Counter Withdrawals ( ) Mobile Banking ( ) Internet Banking ( )

11. How often do you use Mobile Banking?
    Daily ( ) Once a week ( ) Once a month ( ) Quarter Yearly ( )

12. Where did you hear about mobile banking?
    Friends ( ) Relatives ( ) Banks ( )
Advert (TV, Radio, Newspaper…etc.) ( ) Others please, specify………………

13. Did the following factors influence your usage of mobile banking? (tick where necessary)

5 – Strongly Agree 4- Agree 3 – Neutral 2- Disagree 1 – Strongly Disagree

<table>
<thead>
<tr>
<th>Factors That Influence Mobile Banking</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Mobile Banking is easy to use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Mobile Banking allows me to conduct banking transactions wherever I am</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Mobile Banking transactions are quick</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Mobile Banking is less time consuming than over the counter transactions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Mobile banking a cheaper way of making banking transactions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) My mobile banking service provider has the ability to provide mobile banking service effectively</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) I find Mobile Banking Useful</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PART III: UNDERSTANDING HOW MOBILE BANKING HAS INFLUENCED THE REDUCTION OF TRANSACTION COSTS. Instructions: Please tick (√)

14. Is the branch where you opened your bank account within a walking distance from where you live?

   Yes ( ) No ( )

15. Is the branch where you opened your bank account within a walking distance from where you work?

   Yes ( ) No ( )

16. Does that branch have an ATM?

   Yes ( ) No ( )

17. Does your bank provide options for alternative ATM’s? (i.e. Kenswitch) *Kenswitch is the Payments Service Provider (PSP) that facilitates commercial banks and other financial services participants provide payments across the East African region. Customers use debit cards to access financial services at any ATM, retailer, e-commerce merchant or agent.*

   Yes ( ) No ( )

18. Is the transaction cost more expensive on non Kenswitch operated ATM’s?

   Yes ( ) No ( )

19. In your own opinion, do you think Mobile Banking is a cheaper alternative to otc & internet banking?
20. How do the following factors fair on the effect of transactions costs in your opinion (tick where necessary)

5 – Strongly Agree 4- Agree 3 – Neutral 2- Disagree 1 – Strongly Disagree

<table>
<thead>
<tr>
<th>Effect on Transaction Costs</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) The cost of over the counter transactions discourage minimal cash transactions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Mobile banking service providers are fair in their conduct of customer transactions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) When transaction errors occur, reversals are done more efficiently</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Transferring money from one bank account to another is much cheaper</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Mobile banking has increased the quality of my transactions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) Mobile banking provides me with relevant and timely information about my bank accounts &amp; transactions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) Mobile Banking makes the payments of utilities much cheaper</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PART IV: EFFECT OF MOBILE BANKING ON FINANCIAL ACCESSIBILITY.

Instructions: Please tick (√)

21. Did you consider the usefulness of mobile banking before applying for mobile banking services?

Yes ( ) No ( )

22. Did you consider the simplicity of mobile banking services before applying for it?

Yes ( ) No ( )

23. What do you use mobile banking for? (tick the all that apply)

Transfer funds ( ) Check account balance ( ) Pay bills ( ) Cash withdrawal ( )

buy airtime ( )

24. How do the following factors fair on financial accessibility? (tick where necessary)

5 – Strongly Agree 4- Agree 3 – Neutral 2- Disagree 1 – Strongly Disagree
<table>
<thead>
<tr>
<th>Financial Accessibility</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Access to mobile banking service encourages regular access to financial services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Mobile Banking makes it safer for me to pay or receive money (as opposed to cash or other forms of transactions)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) I am worried about threat of fraud associated with the use of m-banking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Various services offered by mobile banking encourages the use of mobile banking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) I find the Mobile Banking applications flexible to interact with.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) I find security and privacy as an issue while using mobile banking services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) Overall, I am satisfied with the use of Mobile Banking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**THANK YOU.**