AN ASSESSMENT OF STRATEGY IMPLEMENTATION IN ORGANIZATIONS: IMPACT OF TECHNOLOGY (MOBILE BANKING) ON KENYA’S BANKING SECTOR GROWTH

BY

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UNITED STATES INTERNATIONAL UNIVERSITY - AFRICA

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Fulfillment of the Requirement for the Degree of Masters of Business Administration
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SUMMER 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: ______________________
Elbusaidy Suheib Suleiman (631723)

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

Signed: ______________________  Date: ______________________
Dr. Paul Katuse

Signed: ______________________  Date: ______________________
Dean, Chandaria School of Business
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ABSTRACT

This study focuses on identifying the impact of technology (mobile banking) on Kenya’s banking sector growth in Kenya. Therefore, the objective of the study is aimed at solving the problem of banks preference on traditional transaction method to the modern technology reflected through mobile phone banking. This transition assists the bank in improving their growth margin in the Kenyan economy. The study therefore intends to determine the level of mobile services adoption in the Kenya’s banking sector, determine mobile money investment and revenues in banking sector in Kenya; and determining the constraining and driving factor in mobile banking in Kenya’s banking sector. The study incorporated a survey design type of research design which used a descriptive perspective. Therefore, the study focused on analyzing the impact of mobile banking technology in impacting banking industry growth. The population in focus in this study is the banking products offered through mobile platform by various banks in Kenya (Co-operative Bank, KCB, Equity, Family, and other banks operating locally... The study targeted a total population of 140 clients and staff of various banks operating as students in United States International University. This population made it easier to obtain sample population required for the study. A comparative analysis between various mobile banking models was used by various banks to reach at more customers towards enhancing their growth. The study therefore, involved staffs and customers from Co-operative bank, Equity Bank, KCB, Family, and other banks operating mobile banking platform to provide their services. The involvement of staffs and clients who are USIU students possessing knowledge on mobile banking, and own a bank account in various banks provided reliable and accurate information for the study.

A stratified sampling technique involving division of a population into sub set (strata) enables easy development of an exceptional population sample retrieved from different identified strata for the study. Therefore, stratified sampling was noted as the most preferred technique required for the study. The financial institutions models preferred in mobile banking platform was stratified in accordance with model type, bank oriented model; joint venture type of orientation; not oriented towards banks; and bank driven models. This brought out deposits ownership, dominant brand, financial accessibility, voice over payment transaction, and types of models involved (Eazy 247, M-kesho, ATM withdrawal through M-pesa etc.). The study focused on a sample not exceeding 30 per cent of the sample size due to the fact that representation falling between 10 per cent to 30 per cent gives a wholesome representation of
the general population. This presents a reliable data not exceeding 30% or falling below 10%. This has led to the study focusing on a 28 participant’s

The study used primary data gathering method enhanced through questionnaires which were administered to willing participant (USIU students who own banks account, operate m-banking, or work in banking institution) within USIU environment and possess Mobile banking knowledge as well as own bank accounts or work in the banking sector. The questionnaires was preferred as the best tool for gathering information from the USIU fraternity who work at financial institution, operate a bank account, or use mobile banking services platform offered by their respective banks. The study found out that among diverse elements associated as impacting or influencing mobile banking, elements such as convenience was highly rated by the participants. This vice was closely followed by service knowledge as well as the ability to operate the mobile handset. The findings will enable to bank to encourage the general public on the importance of using mobile banking or transaction towards enhancing their business operations. The major reason and finding was linked with the ability to create available service to customers through awareness of products presented by the banks and their module linked mobile banking services and ease of use of technology advancement serve to the elderly and the customers using the platform. The conclusion as well as the recommendation presented in the study is in accordance to addressing the research objective aiming at assessing of strategies implemented in organizations in relation to impact of technology (mobile banking) on Kenya’s banking sector growth.
DEDICATION

I dedicate this research to my family who have always been a source of strength and inspiration and to my lecture Dr. Paul Katuse who has been supportive from the beginning of my research to the end.
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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

There has been a consistent increase in accessibility to mobile phone over the years towards exploiting emerging technology innovation in mobile phones. The adoption of alternative banking channels by lenders in the past five years is bringing to an end days when interaction with your bank meant two hours in a queue before facing off with a hapless teller. The Kenyan landscape has been characterized over the years with fast intake of diverse key services uptake such as mobile focused products. The average customer is now likely to bank daily without ever setting foot inside a banking hall, utilizing instead new channels such as agents, mobile money and online banking. Mobile banking has turned out to be one of the advanced innovations which are constantly being viewed as a means of operation that cut across various sectors in the industry and economy. With the technology advancement society can enjoy the economies of scale due to development Competitive pressure force banks to lower their cost. Bank seeks to get economy of scale in bank procession instead of being a big bank. Bank seeks to secure the optimal business structure, and secure the competitive imperative of economy of scale. Moreover, the urgency of the society to conveniently access financial power beyond the tradition renowned mechanism has led to consistent modernization as well as expansion of the banking patterns. This is in attempt to give the society with growing demand competent services.

According to Koivu (2002), banking requires an appropriate environment which enables economic growth in a country. This is impacted through the consistent evolution of technological enhanced economy. This element has led the Kenyan economy to adopt the technological oriented environment for its operation. The information technology age has seen the emergence of mobile phones where consumers (users), firms and social networks have started realizing the importance of mobile phones. This is in connection to its mobility in usage which is linked to its
application into non-business and business activities. This has led to a shift in the perception of the banking institution on usage of mobile phones from the conventional renowned voice telephone to a device for making transaction in the banking sector as well as business sector. With most of the people having phones there has been a reduction in movement in the banking sector, revenues have gone up due to the transactions and payment of goods and services through the mobile with an extra amount of charge but on the other hand saves time, quick and secured. According to Koivu (2002), the interconnected aspect presented by the mobile phones application such as presence of internet, radio, and other marketing specs have made the internet to be embraced by a large population in Kenya. This ensures that the bank is able to reach every individual in the country despite the distance to the physical bank. As a result, the population who are in a position to save their money and borrow loans have increased consistently over the period since the onset of mobile banking.

1.2 Problem Statement

Information technology usage is broadly defined as peripheral and computer equipment’s which impacts on tremendous service industry’s growth in past. This is highly reflected in the banking industry where introduction information technology products in the mobile banking, electronic payments, internet banking, information exchanges, and security investments (Berger, 2003). These aspects have empowered banks to provide more diverse services to their customers with less initiation of manpower. This therefore affirms that information technology can inject profits within the banking sector.

The financial institutions such as banks have a tremendous positive interconnectedness between the bank’s performance and Information technology. The financial institutions do experience reduction in their cost of operation thus presenting the organization with cost advantage. Cost advantage is realized when internet mobile phone assist institution to carry out standardized minimum value-added operation in paying bills, account transfer, as well as balance inquiry. This enables the institution to align their resources towards specialized maximized value addition operations such as investment banking, personal trust activities, and small business lending via
their branches. Moreover, Salop (1992) technology can enhance operation among clients within parallel network leading to the network effect. This is evident in the case of banks ATMs (Automatic Teller Machines) which are available within a scattered specific geographical region. The customer benefit is made easier since the client is in a position to access his account information or transaction without physically visiting the premises but rather the access the Teller Machine from any point. Therefore, the efficiency in use of ATMs increases with increase in the number of installed Teller machine as per the bank’s network size. Therefore, it will be inconsistent to brash off the participation of Information system on banks profit.

The consistent transformation of technology in the banking sector to initiate mobile phones as a key tool in banking transaction connecting the bank to the client, client to bank, and client to client has made operation much easier impacting on banking profit margins. This is more alike the initial information systems used by banks such as computer and internet to transact, however, the portability of the gadget which may be linked to internet is crucial in empowering stability of banks transaction. This aspect has been ignored by some banks which still embraces the conventional banking method in the mobile phone transaction age. This gives an efficient means of transaction linking banks to banks, client to banks, banks to client, and clients to clients in transaction.

1.3 General Objective

The study intends to analyze impact of mobile making technology on Kenya’s banking sector growth

1.4 Research Questions

1.4.1 To determine the level of mobile services adoption in the Kenya’s banking sector.

1.4.2 To determine mobile money investment and revenues in banking sector in Kenya

1.4.3 To determining the constraining and driving factor in mobile banking in Kenya’s banking sector.
1.5 Significance of the Study

1.5.1 The general public

The research will intend to give in-depth information on the level of mobile use in the banking sector by the Kenyan citizen. It will reflect the effectiveness of this mode of technology on the general public in saving and investing using the technology. The findings will enable to bank to encourage the general public on the importance of using mobile banking or transaction towards enhancing their business operations. Moreover, this platform will enable those citizens who are far from their banks to be able to make transaction without physically visiting their bank.

1.5.2 The Banking Sector

The Banking firm will be in a position to adopt mobile phone as a mode of transaction and keeping in touch with clients without the need for physical contact. The sector will also be in a position to analyse the market and know the effective means of competing with their competitors through gathering information from various clients.

The study will as well enable clients from various banks to access various banks information thus enabling them to make informed choices while making any transaction. Clients are in a position to access their bank account transformation and control their account depending on the level of information accessed from their account through the mobile phone.

The researches findings will also help managers on identify the best way to enhance service delivery to their clients and staffs as well as how to supervise their region of operations. This will have led to setting up realistic goals to their client and staff towards ensuring that their customers’ needs are met. This will ensure public confidence is enhanced in the banking sector while ensuring positive growth in the industry.

1.5.3 Future research

Future scholars will refer the study findings to come up with mechanism on improving the banking sectors’ operation and relation with the public. This will ensure that the industry evolves
with the transforming technology in the world thus reaching more clients and informing more individuals.

The state’s economy as well will grow as the banks’ profits consistently grow as more public get involved in saving and investing in the market. This ensure that the public is oriented to a saving and investing culture which is healthy for the national economic growth in future

1.6 Scope of the Study

The research geographical coverage will focus in the specified identified area of United States International University and banking sector (Equity, Cooperative bank, KCB and Family Bank) based within Nairobi City Centre and Roysambu-Kasani region. The study will assess the level of adoption and accessibility of mobile phone banking by students and how familiar are the students to various services offered by their bank. Moreover, the study will initiate various employees working in different identified banking institutions within the area of study to try and analyze the effectiveness of mobile phone transaction and the impact on the organizations growth. The information will be gathered in Nairobi within a time frame of four weeks, through giving out of questionnaires to students in United States International University of Africa and employees in the banking sector in Kenya. This study was conducted as from January 2017 to June 2017 in United States International University targeting the Student who were at the same time either various banking firm’s client and operating mobile banking or working in banking institution. This was used in the primary data collection process, however, data focusing on mobile banking integration focused on data as from 2000 when mobile banking become rampant in Kenya business environment to date.

1.7 Definition of terms

1.7.1 EDI (Electronic Data Interchange) technology: this is a scientific term referring to computer to computer information exchange which is relayed in a way that permits automatic process where manual intervention is not involved (Lucey, 2005)

1.7.2 M-pesa: this refers to the mobile money service (Lonie, 2010)
1.7.3 **SMS**: Short messages services (Start & Wells, 2003)

1.7.4 **Virtual Bank**: A financial organization which operates in every transaction through the e-mail, Web, ATM machine, and mobile deposits checks (Porteous, 2007)

1.8 **Chapter Summary**

This chapter introduces my research topic and also introduces the research objectives to be addressed. It starts by giving the transformational perspective of mobile phone over the years and its initiation into the banking sector. The technology transformation especially mobile phone, has improved the relationship between the banking sector and the public, as well as business men with business men, institution and institutions, in daily transaction. The study gives an analysis of the contribution of initiation of mobile phone banking in Kenya in the banking industry’s economic growth.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter gives other author literature review from previous scholarly studies focusing on the impact of mobile banking on banking sector growth. The analysis presented is in accordance with the study research questions. It discusses the roles of mobile banking in banking sectors growth; determining the level of mobile services adoption in the Kenyan Banking sector, to assess the impact of mobile money investment and revenues in the banking sector, and determining the constraining and driving factor in mobile banking in Kenya’s banking sector...

Nowhere is the ability of Kenyans to turn technology to commercial use better illustrated than in mobile banking. They use their phones to pay for goods and bills, make deposits and withdraw cash from agents, buy insurance, for public transport and to transfer to relatives. According to the Central Bank of Kenya (CBK), the value of transactions carried out through mobile phones rose 24.7% to KSh2.4 trillion in 2014, compared to KSh1.9 trillion in 2013. Growth drivers include rising use by merchants and individuals due to convenience, cost-effectiveness and security. As public transport starts to enforce cashless payments, usage is likely to rise.

2.2 The Level of Mobile Services Adoption in The Kenya’s Banking Sector.

2.2.1 Mobile Banking Technology

Porteous (2006) has attempted to define mobile banking as a segment of electronic banking where the client easily access a wide scope of banking products such as availability of variety of credit and savings instruments through the electronic channels. Venable Telecommunication (2008) on the other hand describes mobile banking as financial transaction founded on wireless handset concept. Both Porteous (2006) and Venable Telecommunication (2008) agree that finance involves a large scope of products and services which are of great interest to banking firms as well as mobile payment, mobile banking, mobile commerce. All these transaction or operations takes places within a handheld wireless instrument which is utilized by the client or
business men to transact. Therefore, this means of transaction enables easy provision and accessibility of financial and banking services with assistance of mobile phones which are communication devices. In the contemporary society, mobiles banking is usually operated through mobile Internet or SMS hence providing 2 distinct customer account platforms to access their accounts. These aspects involve simple text communication interface and a web-focused interface thus enabling the client to be in a position to transact at any time and at any place where the interface operates.

A form of technology known as EDI (Electronic Data Interchange) is used in mobile banking operation. The EDI technology is a scientific term referring to computer to computer information exchange which is relayed in a way that permits automatic process where manual intervention is not involved (Lucey, 2005). Moreover, the EDI operates where special EDI networks are involved. The use of EDI technology is widely used in retailing, finance, and banking. However, the most preferred mode of EDI application is in EFT (Electronic Funds Transfer) which is a special elaborately developed application. The customers or computer controllers are in a position to make transactions electronically to their respective bank, authorizing funds transfer or payment between accounts. This mode of transactions is mostly used for paying salaries or paying suppliers. There also exists another mode of globally recognized mode of transaction termed as Society for Worldwide Interbank Financial Telecommunications (SWIFT).

### 2.2.2 Adoption of Mobile Banking

Rogers (2013) notes that adoption of mobile banking is examinable through TALC (Technology Adoption Life Cycle) which defines how new concepts as well as technologies are adopted by different cultures in the society. TALC indicates that the phases where individuals embraces a new idea is realized when enough sensitization of the essentially of innovation, preferring to reject or adopt a new concept, and initial attempts to test the innovation and embrace using it in daily activities. Through the identified phases the process of diffusion is realized. Rogers (2013) further notes that there exist five distinct adopters categories known as initial embraces, initial and late majority, and finally those who lag behind or laggards. Innovators are always linked those individuals who are always the first to attempt to use innovation, have great interest in
innovative ideas, and are risk takers. On the other hand early embracers are those individuals who are opinion leaders representative for they like to take leadership role while accepting new opportunities hence are not rigid to change. The early majority segment of individuals embraces new concept faster than the average person, however, they require identifying the innovation operating for them to adopt it.

2.2.3 Various Adopted Mobile Banking Models

Various models are used in mobile banking, however, these models have been evolving and being embraced by service providers in mobile banking. The models take a differentiated approach on diverse elements like who will be in a position to create customer based relationship, who should be legally entitled to deposit between the non-bank or telecommunication firms or the bank that gives the terms of opening, lending, and handling deposits in the account; and whose brand is public appealing an; who executes terms of payment is it tied to specific network or independent network.

Mobile banking categorization as per model being used in the institution, is indicated by Porteous (2005) as; Bank led (Joint venture), non-bank oriented, and Pure bank focused (Bank focused). The bank oriented model develops when conventional institutions implements non-conventional low cost channels delivery to avail banking services targeting its existing clients. This is reflected in the evolution in provision of specific banking service utility from ATMs (automatic teller machines) to mobile or internet banking to bank’s clients. This type of model is perceived as additive, thus providing an easy contemporary extension of modern branch focused banking, and this model of banking is seen in Eazzy 247 Equity Bank mobile banking product which permits its consumers to easily obtain services from their bank through their cell phones.

The Joint Venture oriented model ensures that the clients operate their financial transaction via their cellphones rather than visiting their physical bank branches. This banking design presents an opportunity to potentially maximize fiscal service outreach through opting for a different medium for delivery (mobile phones/retails). Moreover, the model utilizes, a distinct trade partner who is experienced in targeting unique markets from the renowned trade in the traditional
banking systems which may be reasonably affordable as compared to the bank focused available alternatives. This model is implementable through initiating correspondence bargaining between non-banking agent and the bank. The client account relationship in joint venture model rests on the bank. This can be seen in the M-Kesho services managed by Equity bank Co-operative Bank operating M-Banking services, Barclays operating Hello Money, Commercial Bank of Africa operating M-Shwari, SIM-ple banking service managed by National Bank Kenya, Kenya Commercial Bank Operating Mobi-bank, and Standard Chartered Bank managing Mobile Banking services.

The model embraced by non-banking led system involves situations where the bank possessing limited operation in the daily management of account which other times may not reflect in picture hence non-bank agency executes every transaction. In essence the banking institution has limited role involving keeping safely excess funds. However, the management of the accounts lies within the non-bank agency possessing direct touch with the individual clients. This type of model is reflected in the M-Pesa services provided by Safaricom. This service empowers their clients to make withdrawal of their money from their respective accounts held in bank ATMs via M-Pesa service. Most of the Safaricom mobile service competitors are yet to adopt this transaction model.

The model which is deemed Non-bank driven effectively involves non-banking agency as a major depository entity via the electronic-money issuance. Transactions management and ownership of account is purely operated by telecommunication firms, a model reflected in Yu Cash managed by Yu, M-Peas services provided by Safaricom, Orange Money operated by Orange, and Airtel Money operated by Airtel executed via their preferred contracted agencies.

The difference is reflected in the below table 1.0
Table 1.0 Models of Mobile Banking

<table>
<thead>
<tr>
<th>Name Of Model</th>
<th>Bank Oriented</th>
<th>Joint Venture Bank Oriented</th>
<th>Non-Bank Oriented</th>
<th>Non-Bank Driven</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deposit Holding Ownership</td>
<td>Firm(Bank)</td>
<td>Firm(Bank)</td>
<td>Firm(Bank)</td>
<td>Non-Bank</td>
</tr>
<tr>
<td>Dominant Brand</td>
<td>Firm(Bank)</td>
<td>Joint Non Institutional Bank Agency</td>
<td>Non-Banking Institutions Hegemonic</td>
<td>Non-Bank</td>
</tr>
<tr>
<td>Financial Accessibility(Cash)</td>
<td>Firm(Bank)</td>
<td>Firm(Bank)</td>
<td>Firm(Bank) And Preferred Agency Network</td>
<td>Non-Banking Institutions</td>
</tr>
<tr>
<td>Authority Over Payment Transaction</td>
<td>Any Banking Firm Agency</td>
<td>Preferred None Bank Agency</td>
<td>Any Or preferred agency</td>
<td>Specific to Delivering Telco</td>
</tr>
<tr>
<td>Types</td>
<td>Eazzy 247</td>
<td>M-Keso, M-Shwari</td>
<td>ATM Withdrawal Via M-Pesa</td>
<td>Yu Cash, Airtel Money, M-Pesa</td>
</tr>
</tbody>
</table>

Source: Adopted table 1.0 for Porteous (2006), pp 27

Adoption Level of Mobile Banking in Kenya

Operators of cell phones indicates that mobile banking model is a potential product service is presentable to clients while increasing the level of loyalty and generating fees through charges levied in messaging (Donner and Tellez, 2008). This can be experienced in Airtel Money operated by Airtel and M-Pesa services provided by Safaricom service providers in Kenyan service industry. Those financial firms which have experienced growth challenges in their operation in the process of using conventional channels to reach the low income earning population perceive mobile banking as “branchless banking” model that minimizes cost incurred in serving low income earning population. Equity bank presents a good case as it market target is the poor or low income earners in the Kenyan population. In the same level, the government of Kenya regulators has identified the same niche; however, the body is still rolling out legal impact
of the available technology especially in relation to mobile transactions security (Ivartury and Mas, 2008).

2.3 Mobile Money Investment and Revenues in Banking Sector in Kenya

Mobile money is a form of electronic money that allows you to conduct financial transactions using your mobile phone. It allows financial services to be extended to unbanked people at a significantly lower cost because physical infrastructure isn't needed.

Mobile phone penetration is rising across sub-Saharan Africa, with almost 76 percent of the population having a mobile phone subscription. The growth in mobile phone ownership raises the potential for mobile money to reach unbanked people, providing them with a more affordable payments system.

M-PESA, Africa's first mobile money platform, was launched by Safaricom in Kenya in 2007. The service was designed to enable remittances to be sent home, and has enjoyed widespread adoption. Today 96 percent of households outside Nairobi have at least one M-PESA account (Logan, 2017). Moreover Logan, (2017) notes that the only way an investor can invest his or her money and earn profit in the short and long run is to invest in the Kenyan mobile money. Mobile money investment is a booming business in Kenya today and the main reasons are because;

2.3.1 The entrepreneurs are sited on the innovation table

The M-Pesa idea set the pace of innovation in the IT market. Many other inventions have been created to meet the demands of the Kenyan population. Such include M-Shwari and M-Akiba. Banks have also partnered with Kenyan mobile money service providers to ensure that deposits and withdrawals are easier for the consumers. There is no doubt that more inventions will be made, which creates more opportunities for the investors. Besides, the international market has had its eye on such innovations for a while and may well invest heavily in the sector in the future. (Sarah Logan, 2017).
2.3.2 The regulation is right

According to Safaricom’s former CEO, Mr. Michael Joseph statement in an interview with the Financial Times in 2012 “One of the reasons why the Kenyan mobile money sector has thrived is because the regulators have not created strict rules to govern it. Out of the 200 experiments that were tried in different parts of the world on mobile money, only 4 succeeded.” Other than the fact that there were qualified innovators behind the concept, the regulation in Kenya is such that people can try different ideas and succeed without hiccups. It implies that the investor in the industry will face fewer risks.

The element of capital requirement is big thus limiting businessmen or interested partners who are willing to join hands in the business to operate. This is reflected by Logan Sarah who states that;

“While being guaranteed of success, you are not required to have a lot of money to invest in the Kenyan mobile money industry. Just recently, the government launched an M-Akiba idea, where the Kenyans were only required to invest a minimum of 3,000 Kenyan shillings worth of bonds. The mobile transfer agents are also able to get license to operate businesses at an affordable rate” (2006, P.62)

2.3.3 Poverty Reduction

According to Smith (2015) indicates that, mobile banking impact on poverty reduction appears to be the result of improved financial behavior by facilitating easier and safer savings and changes in the occupational choice of users. Therefore, mobile wallets offer a secure place to save as funds are stored virtually. And both the mobile money facility and the mobile phone can be password-protected. Savings can be used during hard times or for productive investments, like establishing or expanding a small business. Before mobile money the transaction costs of sending money over large distances were high. This was true both in terms of time as well as the financial resources needed to effect transactions.

Mobile money enables quicker, cheaper and more reliable money transfers over greater distances. In turn, this has allowed mobile money users to diversify their informal risk-sharing networks and draw on a wider network of social support.
2.3.4 Easy Accessibility

Small and micro businesses are among the greatest beneficiaries of using M-Pesa mobile payments. There are now over 9,000 M-Pesa agents spread throughout the country offering the mobile payments service. The micro-business operators go to the bank less often and spend more time running their businesses. Equally, many unbanked Kenyans can now receive or send money wherever they are in the country. Majority of the micro-business operators are familiar with the use of the mobile payment services as they are easy to use and require no formal training before use.

2.3.5 Adoption

Adoption is the acceptance and continued use of a product, service or idea. According to Rogers and Shoemaker (1971), consumers go through “a process of knowledge, persuasion, Decision and confirmation” before they are ready to adopt a product or service. In order to understand the process behind the factors consumer’s intention to use and adopt mobile services, it is necessary to provide thorough understanding of the theoretical foundation behind adoption behavior of information systems research. Several models that have been developed and built up on each another will be reviewed in this research. This section discusses the models and shows how they are used in adoption of mobile services research.

Three models of IS adoption behavior have been widely applied when explaining ICT - adoption, i.e, the Technology Acceptance Model (Davis, 1989), the Theory of Reasoned Action Fishbein & Ajzen, 1975) and the extension of Theory of Reasoned Action into a Theory of Planned Behaviour (Ajzen, 1985).

2.3.5.1 Technology Acceptance

Several studies focusing on adoption of mobile services have their roots in Technology Acceptance Model. The model is originally designed to predict user’s acceptance of information technology and usage on the job. TAM focuses on the attitude explanations of intention to use a
specific technology or service; it has become the most widely applied model for user acceptance and usage. TAM has become well established as a robust, powerful model for predicting user acceptance.

The original Technology Acceptance Model was developed based on the Theory of Reasoned Action (TRA) (Fishbein and Ajzen’s, 1975). According to TRA, determinants of behavioral intention are attitude towards the behavior and subjective norm associated with the behavior. Attitude refers to personal beliefs about the positive or negative value associated with a health behavior and its outcomes. Subjective norm refers to a person’s positive or negative value associated with a behavior. It depends on whether or not the behavior is accepted by important referent individuals and their motivation to comply with those referents.

Interventions can be designed to change behavioral intention by affecting attitude and subjective norm to promote specific health behaviors. Fishbein and Ajzen (2015) suggested that a person’s actual behavior could be determined by considering his or her prior intention along with the beliefs that the person would have for the given behavior.

The Kenyan population has embraced the mobile transaction idea. Since there are so many M-Pesa shops and banks agents around the country. Millions of Kenyans rely on mobile money transfers as opposed to the traditional ways such as banking. Specifically, 70% of the adult population use the platform because it convenient and affordable. Investing in this industry, where you are guaranteed that you will make transactions from the get-go makes a lot of sense.

2.3.6 Satisfaction
Personal experiences for a lot of people indicate that the current technology is user friendly and previous studies of the adoption of mobile payments show that it is the usability, usefulness, speed and convenience of the service itself that counts. Safaricom’s annual report for 2009/2010 shows that by the end of March 2009, there were over 6.175 Million registered M-Pesa customers with an average of 11,580 new registrations per day representing a growth of 198% from the previous year. This indicates that the wide usage and satisfaction that the existing customers have reported which in turn has influenced new customers to take up the services.
Table 1.2: Trend of Mobile Payment Service M-Pesa.

<table>
<thead>
<tr>
<th></th>
<th>2009 March</th>
<th>2010 April</th>
<th>Growth Rate of the Mobile Payment Service</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number-of Registered Customers</strong></td>
<td>2.077Million</td>
<td>6.175Million</td>
<td>198%</td>
</tr>
<tr>
<td><strong>Number of Retail Outlets</strong></td>
<td>2,262</td>
<td>8,650</td>
<td>282%</td>
</tr>
<tr>
<td><strong>Number of person to person transactions</strong></td>
<td>14.74Billion</td>
<td>120.61Billion</td>
<td>719%</td>
</tr>
<tr>
<td><strong>Average Registrations Per Day</strong></td>
<td>9,965</td>
<td>11,580</td>
<td>19%</td>
</tr>
</tbody>
</table>

Author (2017)

2.4 Determining the Constraining and Driving Factor’s in Mobile Banking in Kenya’s Banking Sector.

The terms Mobile Phone banking and mobile banking (M-Banking) are used interchangeably. The term M-Banking is used to denote the access to banking services and facilities offered by financial institutions such as account-based savings, payment transactions and other products by use of an electronic mobile device. Mobile banking has yielded a multiple effect on the number of solutions available to clients. This is in addition to more efficient transactional environment and the high substitution of banking point.

2.4.1 Evolution of Mobile Banking in Kenya

Mobile banking started with the creation of services by banks which could be accessed through the mobile phone. These facilities aimed to enable customer’s access information relating to their accounts. Subsequent innovations have seen the mobile banking phenomena continue to grow steadily. Mobile banking takes several dimensions of execution all representing a new
distribution channel that allows financial institutions and other commercial actors to offer financial services outside traditional bank premises.

2.4.2 Infrastructure and service provision / providers

The transformational mobile banking is made available by mobile phone service providers as part of their value added services. It is embedded among other services within the service providers menu. The perceived difference between mobile service providers mainly lies on the pricing strategy, quality and scope of services as well as the pricing strategy.

The mobile banking services are available to mobile phone users of the two major mobile service providers namely Safaricom and Zain. Safaricom’s service is branded “Mpesa” and Zain’s service goes by the “Zap” brand name. The latest entries, Orange / Telkom and Econet wireless are also expected to roll out their mobile banking services in the course of time. While the fees charged for transactions are largely below those levied by traditional banks for similar services, low incomes amongst the vast proportions of the population tends to reduce the levels of affordability. But prices are expected to decline over time as competition intensifies. For instance the launch of Zap service at a flat rate of Kshs. 10 is expected to have a ripple effect on M-Pesa whose average transaction charge stands at Kshs.35. The collective access points of mobile banking are numerous and widespread.

2.4.3 Mobile Banking Environment Characteristics

Porteous (2006) asserts that mobile banking has the potential to be transformational owing to various facts. First, it uses existing mobile communications infrastructure which already reaches unbanked persons. Secondly it may be driven by new players, such as mobile phone industry operators, with different target markets from traditional banks who are able to harness the power of new distribution networks for cash transactions. These include airtime merchants, who extend the reach beyond the conventional tellers or ATM networks of banks. In addition it may be cheaper than conventional banking, if the offering is competitive enough. In tune with this understanding the various characteristics defining the Kenyan mobile banking environment can be analyzed as follows: -
2.4.3.1 Competition

The Kenyan case offers sufficient evidence to the claim that competition triggers creativity and innovation. To survive in a competitive market firms must maintain new products. The sustained presence of mobile products being floated to customers on a consistent basis depicts high standards of innovativeness. Continuous innovation not only yields new products but rather promotes efficiently in performance of activities. As a result the price for new services introduced to the market declines consistently. Currently, the mobile banking market is held by Safaricom and Zain with the latter dominating due to the benefits of early entry. Once the remaining providers notably Orange/Telkom and Econet finalize their groundwork, it can be reasonably expected that the prices will sink further probably to settle within the average of Kshs. 5.

2.4.3.2 User capacity building and empowerment

Though not seriously impaired, the capacity of a wider population of Kenyan users is fairly curtailed by not being fully conversant with all that they can accomplish through the mobile. Deliberate interventions must be undertaken to successfully ensure that the targeted persons particularly the rural residents and females are empowered not only with technology but with skills and finance as well. To prevent these communities from lagging behold they must be familiarized with the benefits and opportunities of mobile banking. Calculated strategies to overcome hindrances require exploration so that these groupings can be converted into meaningful participants who will utilize this technology for economic take off.

2.4.3.3 Literacy Levels and Knowledge

An interesting finding was in the form of a typical negative correlation between the levels of usage and the education background and scope. Observably population categories with lower levels of education happen to be the larger user category. What the study could not establish fully is whether the argument that academic exposure matters little when it comes to the use of technology based products is a valid one. This study therefore took the view that the capacity for
unschooled and semi illiterate persons to quickly capture the skills of manipulating the considerably sophisticated mobile phone menu items is of a derived nature.

It emanates from the motivation the facility provides in terms of real time monetary worth. And since the mobile phone is perceived to hold cash, users, their literacy level notwithstanding inevitably acquaint themselves with the monetary oriented menus, just like they would acquaint themselves with new currency.

A review of the offline and online bank services literature has revealed that limited customers’ knowledge about mobile banking services has an impact on perceived usefulness of mobile Banking (Laforet & Li, 2005; Servon, & Kaestner, 2008). For example, a considerable amount of knowledge is required to improve consumers’ use of mobile banking services. In this context, consumer may not quickly adopt mobile banking because of a lack of understanding and knowledge about this technology (Corritore, Kracher & Wiedenbeck, 2003).

2.4.3.4 Mobile phone penetration

The number of enlisted mobile phone service users imposes a ceiling on the possible user of M-banking Auxiliary services availability in the form and time vendors are also a factor of concern, this is so because mobile banking services largely ride on the back of other services of mobile operators. Most agents happen to be air time distributors or retail outlets for handsets. Where network coverage is inexistent or poorly established it then follows that mobile banking implementation is low in form. CCK puts the current mobile phone penetration at 39% of the populace. Sharp concentrations of those with access are within urban areas (75%). This reveals a spectacular mobile banking divide highly skewed against the rural population.

2.4.3.5 Income levels and mobile banking use

A clear majority of regular M-banking users are low and average income earners. These categories also happen to hold the higher percentage of people without possession of traditional bank accounts. On this account users perceive the M-banking service as a complete substitute to bank accounts as previously held. This negates the argument of mobile service providers, who in
an effort to circumvent certain regulatory requirements front these facilities as “Money transfer services” rather than “Mobile banking services.

Though the average mobile phone balances may be seen as low, the fact that there are balances is sufficient to prove the case that there’s storage. This can be perceived as acceptance of deposits, a domain of legally established banks. In overall, there’s a significant indication of the high value placed on the convenience associated with the use of mobile money services.

2.4.3.6 Urban Rural Access

Concentration of M-banking is evidently heavier in urban settings. Universal access in rural areas is faced with numerous challenges including how to manage the float (Cash) in light of prospected demand. Access becomes a serious issue of concern in some other underdeveloped regions where network signals are extremely sparse. Operators have tended to focus mainly on the densely populated economic zones. With the latest government move to encourage operators to develop services in the rural areas, with promises to support these efforts it is reasonable to expect a better environment for mobile activities.

2.4.3.7 Personal Desire and Habits

An alarming question on the minds of many banks is whether or not people would use mobile banking services. Staff (2006) and Cook and Goette (2006) argued that the customer's desire negatively affects their perceived usefulness of mobile banking services. That is, personal desire play a critical role in using mobile banking services since as the desire of using this service decreases the perceived usefulness of mobile banking services will decrease. Hence, we suggest that personal desire negatively affects customer's perceived usefulness of mobile banking.

Within the mobile banking literature; attention has been given to the impact of customer's habit of dealing with their banks on customer's perceived usefulness of mobile banking (Laforet & Li, 2005; Servon, & Kaestner, 2008). Bank's customers prefer to perform their transaction with banks by using offline services, therefore, this habit is preventing customer from using mobile
banking services. Consequently, we suggest that there is a negative relationship between customer's habit and their perceived usefulness of mobile banking.

2.4.3.8 Experience

While a mobile banking experience generally influences a customer's usage, the degree to which a mobile banking experience affects a consumer’s usage varies and is subject to the particular technical support being examined. Specifically, the use of mobile banking depends on the technical support itself and the skill or experience level of the individual using it. Karjuoto (2002) contended that prior computer experience, prior technology experience, and prior personal banking experience positively affect consumers’ attitude and behaviors towards online banking.

However, the limited prior experience of using mobile banking will contribute negatively to the perceived usefulness of mobile banking.

Mobile banking experience has been found to be associated with perceived usefulness (Chung & Kwon, 2009). Given the lack of prior experience of mobile banking usage of Jordanian banking customers, we propose that experience has a negative impact on perceived usefulness of mobile banking.

2.4.1.9 Resistance to Innovations (Status Quo)

Rammile and Nel (2012) explain the influence of customers’ resistance to mobile banking on their behavior intention through usefulness and ease of use constructs as mediator variables extracted from Technology Acceptance Model (TAM) theory that has been first introduced by Davis (1989) to present “the determinants of technology acceptance.” Barati and Mohammadi (2009) argue that if the resistance to mobile banking would increase, the intention of using mobile banking would decrease. Further, Laukkanen and Cruz (2010) suggest that the functional and psychological barriers to innovation positively and significantly affect the non-adoption of mobile banking. Thus, a negative relationship between the resistance to innovation and the intention of using mobile financial services would be expected. Hence, in this study we propose
that customers’ resistance to innovation negatively affects the perceived usefulness of mobile banking.

2.5 Chapter Summary

This chapter has looked at various literatures view on the impact of mobile banking on banks growth. The literature is based on the objective of the study; to explore experiences of teenage mothers; to examine the reported psychological challenges; and to suggest counseling or psychological coping mechanism. The study therefore presents the gap of the study which is not tackled by most of the literature. Though various literature in have analyzed the issue of mobile banking, few have focused on the issue of impact on the bank growth in the Kenyan industry.

As the banking fraternity continues to make forays into the retail segment of the market, it is becoming more paramount that customers be given value for their hard-earned deposits. The new banking environment is about differentiating banking products, increased choices, security and accessibility. The ability of financial Institution to deliver products and services in the most efficient and effective manner, will therefore be the key to performance and relevance. Mobile banking serves to give the customers a new easier and quick approach to banking.

There are various services and products in m-banking in Kenya. The study further established that use of m-banking is speed, accurate and convenient to the customers. However it faces a problem of low network coverage in some segments of the market. The study recommended that funding be directed and initiatives taken to widen network coverage in Kenya and m-banking services be expanded to include m-wallet in Kenya

This study sought to establish the trend, status and challenges facing m-banking in Kenya. To achieve this objective, the study collected data from the staff and customers of KCB. The data collected was qualitative and quantitative. Quantitative data was edited, coded and entered into a computer software SPSS version 17 for analysis. The study analyzed the data using descriptive statistics such as mean and standard deviation. The study found that the trend of m-banking in Kenya is increasing.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter focuses on the method best suited for the study. The chapter tackled research design, population, sample size, data collection method, data collection procedures, data analysis, as well as ethical issues identified in the study. Moreover, the study focused on tools used in ensuring research reliability and data validity.

3.2 Research Design

The study incorporated a survey design type of research design. The research design therefore used a descriptive perspective in the survey design. Shaw (1999) acknowledges that descriptive survey is mostly used in the preface phase in the research. This approach enables fast data presentation that is in line with the prevailing trends which is associated with study variables and related environment context which impacts on the study. Judith (2003) as well indicates that descriptive data usually assist researcher in calibrating and unveiling the link between the cause and the impact reflected in the study variable. This association was brought out in this study through use of questionnaire survey where status squo was maintained was presented with comparative analysis.

This was achieved by making comparative presentation of study variables while creating analysis which presented a kind of cross sectional evolution which occurred for a specified period. Mugenda (2008) notes that this kind of approach permits a wider scope and more precise data to be used in a study hence enabling the researcher to gather, make analysis, criticize, and give presentation of the study findings as study findings to enhance study clarity.

According to Mugenda and Mugenda (1999) descriptive data analysis usually takes the centre stage in a research due to the fact that the method offers a faster means of effectively gathering
data from a wider sample population. Therefore, the method is usually preferred by most researchers conducting research surrounding initial data collected from a wider population. The study findings provided an important platform to contribute towards the already existing institutions such as business firms, financial institutions, groups and other. This provides a common ground for conducting future research in the area of interest. Therefore, the study focused on analyzing the impact of mobile banking technology in impacting banking industry growth.

3.3 Population and Sampling Design

3.3.1 Population

According to Mugenda and Mugenda (2003), a population can be described as the sum total of the objects, individuals, or events, sharing a common visible trait. Tull and Hawkings (2008) as well as Cooper and Schindler (2008) acknowledges the view that a population is a whole set of elements in the study where deductive observations can be made. In accordance to this view, a population can be described as the largest segment or set under study where the least portion is termed as a sample. The population in focus in this study is the banking products offered through mobile platform by various banks in Kenya (Co-operative Bank, KCB, Equity, Family, and other banks operating locally. The various mobile banking models presented in this study are; M-Kesho services managed by Equity bank Co-operative Bank operating M-Banking services, Barclays operating Hello Money, Commercial Bank of Africa operating M-Shwari, SIM-ple banking service managed by National Bank Kenya, Kenya Commercial Bank Operating Mobi-bank, Standard Chartered Bank managing Mobile Banking services, and Eazzy 247 in Equity Bank mobile banking product.

This study focused on 50 customers and staffs working in the banking sector who have knowledge of mobile banking and operate account in various banks operating locally. The area of focus will be to identify the level of mobile banking adoption in the country, to identify the level of investment and innovation in the banking sectors, and factors hindering or enhancing growth of banks through mobile banking use in the country. The study targeted a total population
of 140 clients and staff of various banks operating as students in United States International University. This population made it easier to obtain sample population required for the study.

3.3.2 Sampling Design

3.3.2.1 Sampling Frame

Sampling frame as noted by Densombe (1998), involves a list of population where researchers’ interest are pegged on, so as to carry out selection which is preferred for the study. In the same perspective, Cooper and Schindler (2001) agrees that sample frame needs to include a reliable sum total of specific list of elements under study. Therefore, the fact that banks have opened up branches everywhere and customers spread all over, USIU offered a platform to be able to make analysis on the impact of mobile banking models used by various banks to boost their growth record. This study opted for comparative analysis between various mobile banking models used by various banks to reach at more customers towards enhancing their growth. The study therefore, involved staffs and customers from Co-operative bank, Equity Bank, KCB, Family, and other banks operating mobile banking platform to provide their services. The involvement of staffs and clients who are USIU students possessing knowledge on mobile banking, and own a bank account in various banks provided reliable and accurate information for the study.

3.3.2.2 Sampling Technique

Cooper and Schindler (2008) agrees that stratified sampling involving division of a population into sub set(strata) enables easy development of an exceptional population sample retrieved from different identified strata for the study. Therefore, stratified sampling was noted as the most preferred technique required for the study as the major population segment under analysis, was projected within the sample under study.

The financial institutions models preferred in mobile banking platform was stratified in accordance with model type, bank oriented model; joint venture type of orientation; not oriented towards banks; and bank driven models. This brought out deposits ownership, dominant brand, financial accessibility, voice over payment transaction, and types of models involved( Eazy 247,
M-kesho, ATM withdrawal through M-pesa etc). Knowledge by banks staffs and customers studying in USIU for various causes provided a good platform for stratifying the participants as per the level of knowledge and holding of bank account and mobile banking services in their day to day life. The preference for the study was limited to convenience sampling technique. This combination offered a reliable platform for generating dependable and effective findings reflected the whole population under study.

**Table 3.2: Sample Size Distribution**

<table>
<thead>
<tr>
<th>Level</th>
<th>Population (N)</th>
<th>Percentage</th>
<th>Sample size (n)=N*Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staffs from Co-operative bank</td>
<td>20</td>
<td>30</td>
<td>6</td>
</tr>
<tr>
<td>Staffs from KCB</td>
<td>20</td>
<td>30</td>
<td>6</td>
</tr>
<tr>
<td>Staffs from Equity</td>
<td>10</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>Interns at Banks</td>
<td>20</td>
<td>30</td>
<td>6</td>
</tr>
<tr>
<td>Customers with no m-banking knowledge but own bank account</td>
<td>10</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>Customers holding mobile banking account and transact using it</td>
<td>20</td>
<td>30</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

Sample sizes have been defined by Mugenda and Mugenda (2003) as the sum of the available sampling units to be incorporated in the study focus sample. Every focus sample under study should be allocated 30 per cent of the sample size. The argument according to Mugenda and Mugenda (2008), a representation falling between 10 per cent to 30 per cent gives a wholesome representation of the general population hence presenting a reliable data not exceeding 30% or falling below 10%. This has led to the study focusing on a 30 participant’s
Presented below is a sample size table 3.2

3.4 Data Collection

The study used primary data gathering method enhanced through questionnaires which were administered to willing participant (USIU students who own banks account, operate m-banking, or work in banking institution) within USIU environment and possess Mobile banking knowledge as well as own bank accounts or work in the banking sector. The questionnaires was preferred as the best tool for gathering information from the USIU fraternity who work at financial institution, operate a bank account, or use mobile banking services platform offered by their respective banks. The questionnaire was sub divided into three section; the bio-data section offering personal information; close ended questions, where a Likert scale kind of measurement was used to guide the participant feedback( 1=strongly agree, 2= Agree, 3=disagree, 4= strongly disagree). The last section will also include unstructured questions which gives the participant freedom to present more his view. This data collection tool was much preferred for this study due to its ease in administering to a large population and convenience offered in gathering information within a very short time as reflected in the study.

This study will use primary method of collecting data by using questionnaires to collect data from the USIU students taking internship in insurance organization and from the employee’s perception on university students market.

Questionnaires were used as a major tool for data collection in the study as it was one of the most efficient tools of collecting data available for the study. A likert scale type of measurement ( 1 strongly Agree, 2 Agree, 3 neutral, 3 disagree 4, strongly disagree) format is going to be utilized. Moreover, the questionnaires will include both unstructured questions and structured research questions. The second and fourth section of the questionnaire tackled the study objectives as presented in the study while the first presented the participant personal information. A questionnaire was the most preferable in this study since it is easier to administer as well as convenient process of gathering data within a short duration.
3.5 Research Procedures

The study used a data collection process which was realized through convinience approach. Therefore, the success in the study was realized through acquiring an introductory letter from the dean of school of business in United States International University of Africa to be able to collect data from clients and staffs of various banks and with mobile banking knowledge studying in USIU. This approach ensured that there was a faster means of data gathering from the target group focused in the study. The participants in the study were informed of the requirements of the data collection process, which was offered on voluntary basis, and the need to stop when one feel uncomfortable to answer some questions in the questionnaire. The questionnaire took structured and unstructured format hence giving the researcher easy time to get the required feedback as per the structured questions and acquire the unforeseen information through unstructured questions. The questionnaire was delivered to the participant through email and face to face contact, then the information coded to ensure ethical standard was reserved.

3.6 Data Analysis Methods

The analysis used a quantitative research method where stratified sample was used to conviniently obtain the required information from various strata. This provided an opportunity for the researcher to acquire the correct data through using descriptive research approach where data collected targeted at testing the already existing hypothesis in the mobile banking industry and its growth. The research design therefore used a descriptive perspective in the survey design. Shaw (1999) acknowledges that descriptive survey is mostly used in the preface phase in the research. This approach enables fast data presentation that is in line with the prevailing trends which is associated with study variables and related environment context which impacts on the study. Descriptive data usually assist researcher in calibrating and unveiling the link between the cause and the impact reflected in the study variable. This association was brought out in this study through use of questionnaire survey where status squo was maintained was presented with comparative analysis.
The study embraced frequency analysis in the information process of analysis so as to be in a position to measure the data as from the highest and lowest percentiles. Moreover, measures of central tendencies (mode, means, and variations) were applied to help in data analysis, where the primary quality standards verification were performed during data gathering which were fed in computer devise for statistical package for social sciences (SPSS) version 22 analysis.

Data analysis model \( Y=a+bX \)

3.7. Chapter Summary

This chapter will focus on elaborating procedures to be used in enhancing information gathering towards realizing the already identified research objective. The primary data which is required to realize the objective in the study will be achieved through using questionnaires distribution to key actors in insurance industry and student’s views on the most preferred insurance package. In addition, secondary data will as well apply in retrieving information from already existing authors who have focused on the topic.
CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction

The chapter analyses findings obtained from the study. It answers to the key objective of the study which was to determine the impact of mobile banking technology on Kenya’s banking sector. Responses are analyzed according to the specific objectives which include: The level of mobile services adoption in banking, mobile money investments and revenues in the banking sector and constraints and factors in mobile banking. The results are presented sequentially starting with general information of the respondents followed by descriptive analysis and inferential analysis of each specific objective.

4.2 Demographic Information

4.2.1. Response rate

The percentage response rate obtained from the study is 81.1% which is deemed sufficient to develop an accurate analysis. 37 questionnaires were distributed and 30 were filled and returned.

4.2.2 Gender of respondents

Seventy three percent respondents were male and 27% female. There is a significant gender difference between the respondents and these may affect the findings obtained by the study. Findings are as seen in figure 4.1 bellow
Figure 4.1 Gender of respondents

4.2.3 Age of respondents

A large number of the respondents were youthful 40% were between 18 and 28 years, 53.3% were between 29 and 39 years while only 6.7% were above 40 years. The age groups sampled are sufficient for the study since this age group is more familiar to the mobile banking technology platform. Results are in figure 4.2


**Figure 4.2: Age of respondents**

**Number of account holders and preferred banks**

All the respondents had at least a bank account, 20.1% respondents each had two accounts, and 6.7% had 3 accounts. Equity bank seemed to be the most popular bank among the respondents, followed by Kenya Commercial Bank while all other banks including Corporative bank, Standard Charted, and Barclays shared the remaining customers equally. Each with a market share of 6.7% according to these findings results are as reflected in table 4.1 bellow

<table>
<thead>
<tr>
<th>Bank account</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity Bank</td>
<td>10</td>
<td>33.3</td>
</tr>
<tr>
<td>Kenya Commercial Bank</td>
<td>4</td>
<td>13.3</td>
</tr>
<tr>
<td>Barclays</td>
<td>2</td>
<td>6.7</td>
</tr>
<tr>
<td>Cooperative Bank</td>
<td>2</td>
<td>6.7</td>
</tr>
<tr>
<td>Standard Chartered Bank</td>
<td>2</td>
<td>6.7</td>
</tr>
<tr>
<td>Other Bank</td>
<td>2</td>
<td>6.7</td>
</tr>
<tr>
<td>2 accounts</td>
<td>6</td>
<td>20.1</td>
</tr>
<tr>
<td>3 accounts</td>
<td>2</td>
<td>6.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

**Table 4.1. Specific accounts held by the respondents**

4.2.4 Respondent’s possession of a mobile phone and registered for Mobile banking

Respondents were required to state whether they had mobile phones registered to M-banking platforms. A majority of the respondents 87% agreed that they had M-banking apps on their phones while 13% did not have the applications. The figure 4.3 reflects the findings
Figure 4.3: Respondents’ possession of a mobile phone and registered for Mobile banking

4.2.5 Respondent income Status

A large percentage of the respondents involved in this study had an income totaling to 93% of the sample population. Only 7% respondents did not have an income. The chart 4.2 reflects the findings.
Figure 4.4 Respondent income Status

4.2.6 Influence on decision to sign up for M-banking

The researcher sought to know the forces behind the respondents influence to sign up for M-banking applications to their specific banks. A majority of them were realized to have been influenced by their friends and family taking 57.1%. The number two key influence was media advertisements 28.6% and organizational policy at 14.3%. The chart 4.2 reflects the findings

Figure 4.5 Impact of mobile banking Technology on banking in Kenya

4.2.7 Factors that influence respondent’s capacity to adopt mobile banking

Respondents were asked to state their level of agreement concerning a list of factors that are believed to influence bank account holder’s decisions on adoption of M-banking. The factors were placed on a Likert scale of 1-5 1 being very important, 2 Important, 3 Neutral, 4 slightly important and 5 not important. The results are summarized in table 4.2
Table 4.2: Factors that influence respondent’s capacity to adopt mobile banking descriptive analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Very important</th>
<th>Important</th>
<th>Neutral</th>
<th>Slightly Important</th>
<th>Not important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Reliability</td>
<td>80%</td>
<td>20%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Convenience</td>
<td>53.30%</td>
<td>33.30%</td>
<td>13.30%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Security</td>
<td>80%</td>
<td>13.30%</td>
<td>6.70%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Secure with virtual transaction</td>
<td>53.30%</td>
<td>26.70%</td>
<td>13.30%</td>
<td>6.70%</td>
<td>0%</td>
</tr>
<tr>
<td>Ease in cell phone use</td>
<td>53.30%</td>
<td>13.30%</td>
<td>20%</td>
<td>13.30%</td>
<td>0%</td>
</tr>
<tr>
<td>Operation Cost</td>
<td>26.70%</td>
<td>33.30%</td>
<td>26.70%</td>
<td>13.30%</td>
<td>0%</td>
</tr>
<tr>
<td>Service awareness</td>
<td>21.40%</td>
<td>42.90%</td>
<td>14.30%</td>
<td>21.40%</td>
<td>0%</td>
</tr>
</tbody>
</table>

The factor service reliability was seen to be highly considered by the account holders with 80% respondents saying it was very important and 20% saying it was important to them. Convenience was also seen to be important 53.3% said it was very important, 33.3% said it was important and 13.3% responded to being Neutral. Security also came out as critical 80% regarded it as very important, 13.3% important and 6.7% neutral.

The sub variable Secure with virtual transaction was generally ranked as important. Fifty three point three percent respondents said it was very important that they are secure when transacting, 26.7% ranked it important, 13.3% neutral and 6.7% slightly important. Ease of cellphone use was also considered important; 53.3% said it was very important, 13.3% important, 20% neutral, and 13.3% slightly important. The factor operation costs was also ranked important but did not seem to affect the account holders decision to acquire the application that significantly, 26.7% ranked it as very important, 33.3% important, 26.7% neutral and 13.3% slightly important.
The final factor service awareness attracted a wide range of responses, 21.4% said it was very important in influencing their decision to adopt mobile banking, 42.9% said it was important, 13.3% were neutral and 21.4% considered it slightly important.

### 4.3 Level of Mobile Service Adoption

The first objective of the study was to determine the level of mobile services adoption in the Kenya’s banking sector. Respondents were asked to rate their level of agreement on various factors that determine their adoption of mobile banking services. Descriptive statistics showing frequencies were run on this objective followed by inferential statistics verify correlation and regression relationship between the dependent and independent variable.

#### Table 4.3: Level of Mobile Service Adoption

<table>
<thead>
<tr>
<th>Variable</th>
<th>Always</th>
<th>Often</th>
<th>Sometimes</th>
<th>Seldom</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statement Inquiry</td>
<td>26.70%</td>
<td></td>
<td>35.70%</td>
<td>7.10%</td>
<td>14.30%</td>
</tr>
<tr>
<td>Balance Inquiry</td>
<td>42.90%</td>
<td></td>
<td>7.10%</td>
<td>5.00%</td>
<td>7.10%</td>
</tr>
<tr>
<td>Intra-banking money transfer</td>
<td>21.40%</td>
<td></td>
<td>28.60%</td>
<td>14.30%</td>
<td>21.40%</td>
</tr>
<tr>
<td>Funds transfer to M-pesa and M-pesa to account</td>
<td>50%</td>
<td>21.40%</td>
<td>28.60%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Application for loan</td>
<td>21.40%</td>
<td>7.10%</td>
<td>21.40%</td>
<td>21.40%</td>
<td>28.60%</td>
</tr>
<tr>
<td>Request for account statement</td>
<td>15.40%</td>
<td>30.80%</td>
<td>46.20%</td>
<td>7.70%</td>
<td>0%</td>
</tr>
<tr>
<td>Request for cheque book</td>
<td>15.40%</td>
<td>7.70%</td>
<td>7.70%</td>
<td>0%</td>
<td>69.20%</td>
</tr>
<tr>
<td>Bill payment</td>
<td>21.40%</td>
<td>14.30%</td>
<td>35.70%</td>
<td>7.10%</td>
<td>21.40%</td>
</tr>
</tbody>
</table>
The factor statement inquiry neutrally affected a majority of respondents 35.7% who took option 3 of sometimes. Twenty six point seven percent said they always considered this factor, 14.3% often, 14.3% never considered it and 7.10 seldom considered it. The balance inquiry tool seemed to be a critical requirement for most users with 42.9% saying they always considered it and another 42.9% saying they often consider it. Seven point one percent and 7.1% said they sometimes consider it and never consider it respectively, 5% seldom consider it. Funds transfer to M-pesa and Mpesa account is always considered significant to the respondents, 50% said they always consider this factor, 28.6% said they sometimes consider it and 21.4% accepted to considering it often.

The possibility of applying for a loan on the online portal had a very wide range of responses with each of the respondents sharing conflicting opinions. A majority said they never consider it at 28.6%, 21.4% seldom consider it, another 21.4% sometimes consider it an equal number also always considers it while 7.1% often consider it. The factor request for account statement was more sometimes considers relating to 46.2% respondents, 30.8% often consider, 15.4% always consider this factor and 7.7% seldom consider the factor.

Request for a cheque book seemed to be an insignificant factor to many of the respondents, 69.2% reported to never consider it, 15.4% always considered it, 7.7% often considered it and 7.7% seldom looked into this factor. Many respondents were neutral on the bill payment component of the app, 35.7% said they sometimes consider it, always and never were both 21.4% and 7.1% seldom considered it.

**Correlation Analysis**

A correlation analysis was done to establish the association between level of adoption of mobile banking services and impact on banking. Finding are as reflected in table 4.4 below there was a no significant correlation between level of adoption of mobile banking services and impact on banking. ($r=-0.182$, p-value=0.354)
Level of Mobile Service Adoption Correlations

<table>
<thead>
<tr>
<th></th>
<th>Mobile banking adoption</th>
<th>Impact on banking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile banking</td>
<td>Pearson Correlation</td>
<td></td>
</tr>
<tr>
<td>adoption</td>
<td>1</td>
<td>-.182</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.354</td>
</tr>
<tr>
<td>N</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>Impact on banking</td>
<td>Pearson Correlation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-.182</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.354</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>28</td>
<td>30</td>
</tr>
</tbody>
</table>

Linear Regression

4.4 Mobile money Investments and Revenues

The second objective of the study was to assess mobile money investments and revenues in Kenya’s banking sector. Respondents were asked to rate their level of agreement on various factors that affect their investment in mobile money. Descriptive statistics showing frequencies were run on this objective followed by inferential statistics to verify correlation and regression relationships between the dependent and independent variables.

The researcher identified various factors that go into the account holder’s decision to invest in mobile banking platforms, the findings are as seen in table 4.7 bellow. The factors were placed on a Likert scale of 1-5 which were 1 strongly disagree, 2 agree, 3 neutral, 4 agree and 5 strongly agree. The respondents gave a wide range of responses inclined towards options as summarized in the table 4.4
<table>
<thead>
<tr>
<th>Variable</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I use my preferred mobile money applications to transact daily</td>
<td>21.40%</td>
<td>7.10%</td>
<td>28.60%</td>
<td>35.70%</td>
<td>7.10%</td>
</tr>
<tr>
<td>I transact on mobile money applications at least every week</td>
<td>14.30%</td>
<td>0%</td>
<td>0%</td>
<td>57.10%</td>
<td>28.60%</td>
</tr>
<tr>
<td>I transact on my mobile money application several times a day</td>
<td>21.40%</td>
<td>35.70%</td>
<td>14.30%</td>
<td>7.10%</td>
<td>21.40%</td>
</tr>
<tr>
<td>I often pay my bills using my mobile money application platform</td>
<td>21.40%</td>
<td>7.10%</td>
<td>21.40%</td>
<td>35.70%</td>
<td>14.3%</td>
</tr>
<tr>
<td>I frequently use at least one of these mobile money Applications (Equitel, M-kesho, M-shwari. Corporative bank mobile banking, Barclays Bank Hello Money, national bank SIM banking)</td>
<td>0%</td>
<td>21.40%</td>
<td>0%</td>
<td>50.10%</td>
<td>28.60%</td>
</tr>
<tr>
<td>I have more than one mobile money application which I use frequently</td>
<td>14.30%</td>
<td>21.40%</td>
<td>7.10%</td>
<td>21.40%</td>
<td>37.50%</td>
</tr>
<tr>
<td>I prefer to use my mobile phone application to do transactions at a convenience cost rather than line up in banks to have less costly over the counter transaction service.</td>
<td>0%</td>
<td>14.30%</td>
<td>14.30%</td>
<td>57.10%</td>
<td>14.30%</td>
</tr>
</tbody>
</table>
Respondents primarily agreed to being influenced by the factor I use my preferred mobile money applications to transact daily with a majority 35.7% agreeing, 28.6% remained Neutral, 21.4% strongly disagreed and 7.1% disagreed and strongly agreed equally. Factor I transact on mobile money applications at least every week was heavily skewed towards agreement. 57.1% agreed, 28.6% strongly agreed while 14.3% strongly disagreed I transact on my mobile money application several times a day factor was mostly disagreed on 35.7% disagreed, 21.4% strongly disagreed, another 21.4% strongly agreed, 14.30% were Neutral, whilst 7.1% agreed. Thirty five point 7 respondents agreed that factor I often pay my bills using my mobile money application platform affected their investment choices on M-banking 28.6% were neutral, 21.4% strongly disagreed, 7.1% strongly agreed and disagreed. Respondents overwhelmingly agreed to factor I frequently use at least one of these mobile money Applications (Equitel, M-kesho, M-shwari. Corporative bank mobile banking, Barclays Bank Hello Money, national bank SIM banking 50.1% agreed and 28.6% strongly agreed while 21.4% disagreed. The Factor I have more than one mobile money application which I use frequently had widespread responses, 37.5% strongly agreed, 21.4% agreed another 21.4% disagreed 14.3% strongly disagreed and 7.1% were neutral. The last tested factor I prefer to use my mobile phone application to do transactions at a convenience cost rather than line up in banks to have less costly over the counter transaction service had 57.1% respondents agree while 14.3%, 14.3% and another 14.3% strongly agreed, disagreed and agreed.

**Correlation Analysis**

A correlation analysis was done to establish the association between investments and revenue in mobile money and relative impact on banking. Finding are as reflected in table 4.7.1 bellow there was a positive significant correlation between investments and revenue in mobile money and impact on banking ($r=-0.542, p$-value=0.003)
### Mobile money Investments and Revenues Correlations

<table>
<thead>
<tr>
<th></th>
<th>Impact on banking</th>
<th>Investment and revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact on banking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>-.542**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.003</td>
</tr>
<tr>
<td>N</td>
<td>30</td>
<td>28</td>
</tr>
<tr>
<td>Investment and revenue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>-.542**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.003</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>28</td>
<td>28</td>
</tr>
</tbody>
</table>

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

**Linear Regression**

The study sought to investigate how mobile money investments and revenues has impacted on banking in Kenya. Linear regression analysis was carried out to determine the relationship. Results are summarized in tables 4.7.2 bellow

#### Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.542a</td>
<td>.294</td>
<td>.267</td>
<td>.56010</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), investment and revenue
### ANOVA\(^a\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>3.394</td>
<td>1</td>
<td>3.394</td>
<td>10.817</td>
<td>.003</td>
</tr>
<tr>
<td>Residual</td>
<td>8.157</td>
<td>26</td>
<td>.314</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11.550</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) Dependent Variable: impact on banking

b. Predictors: (Constant), investment and revenue

### Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>2.906</td>
<td>.368</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>Investment and revenue</td>
<td>.353</td>
<td>.107</td>
<td>-.542</td>
<td>.003</td>
</tr>
</tbody>
</table>

\(^a\) Dependent Variable: impact on banking

The value of variance \(R^2 = 0.294\), shows that 29.4% of impact on banking is explained by investments and revenue in mobile banking. The values of \(F (1, 26) = 10.817\), \(p\)-value = 0.003, shows that investment and revenue in mobile banking is a statistically significant predictor of the impact on banking (i.e., the regression model is a good fit of the data). The value of investments and revenue in mobile banking is statistically significant \((t=-3.289, \ p\text{-value}=0.003)\), it impacts
on banking in Kenya. The regression model explaining the results in the table above is given by:

\[ \text{impact on banking sect} = 2.906 + 0.353 \times \text{investments and revenue in mobile banking} \]

The model shows that level of investment and revenue in mobile banking positively impacts on banking, i.e. a mean index increase in investment impacts on the banking industry in Kenya by a positive unit mean index value of 0.353

### 4.5 Constraints and driving factors of Mobile Banking Services in Kenya

Objective number three of the study was to assess constraints and driving factors of mobile banking services Kenya’s banking sector. Respondents were asked to rate their level of agreement on various factors that hinder or propel their take up of the mobile banking service. Descriptive statistics showing frequencies were run on this objective followed by inferential statistics to verify correlation and regression relationships between the dependent and independent variables.

The researcher identified various factors that go into the account holder’s decision to invest in mobile banking platforms, the findings are as seen in table 7bellow. The factors were placed on a Likert scale of 1-5 were 1 high hindrance, 2 substantial hindrance, 3 some hindrance, 4 little hindrance and 5 no hindrance. The respondents gave a wide range of responses as summarized in table 4.5
Table 4.5 Constraints and driving factors of Mobile Banking Services in Kenya

<table>
<thead>
<tr>
<th>Variable</th>
<th>High hindrance</th>
<th>Substantial hindrance</th>
<th>Some hindrance</th>
<th>Little hindrance</th>
<th>No hindrance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Restriction</td>
<td>26.70%</td>
<td>33.30%</td>
<td>20%</td>
<td>20%</td>
<td>0%</td>
</tr>
<tr>
<td>Service reliability</td>
<td>6.70%</td>
<td>60%</td>
<td>20%</td>
<td>0%</td>
<td>13.30%</td>
</tr>
<tr>
<td>Security</td>
<td>40%</td>
<td>20%</td>
<td>26.70%</td>
<td>0%</td>
<td>13.30%</td>
</tr>
<tr>
<td>Different Networks accessibility</td>
<td>20%</td>
<td>40%</td>
<td>20%</td>
<td>20%</td>
<td>0%</td>
</tr>
<tr>
<td>Knowledge on operating phone</td>
<td>20%</td>
<td>33.30%</td>
<td>20%</td>
<td>6.70%</td>
<td>20%</td>
</tr>
<tr>
<td>Cost</td>
<td>6.70%</td>
<td>53.30%</td>
<td>13.30%</td>
<td>20%</td>
<td>6.70%</td>
</tr>
<tr>
<td>Substitute availability</td>
<td>40%</td>
<td>40%</td>
<td>0%</td>
<td>6.70%</td>
<td>13.30%</td>
</tr>
</tbody>
</table>

The factor Service restriction was seen by several respondents as a hindrance, 33.3% said it was a substantial hindrance, 26.7% said it was a high hindrance, 20% little hindrance and another 20% some hindrance. Service reliability, was said to be of substantial hindrance by 60% respondents, 20% said it caused some hindrance, 13.3% said it caused no hindrance and 6.7% said it caused a high hindrance. Forty percent respondents said security fears were a high hindrance, 26.7% said it caused some hindrance, 20% substantial hindrance, and 13.3% no hindrance.

Concerning different networks accessibility, 40% said it caused substantial hindrance, and 20% high hindrance, 20% some hindrance and another 20% little hindrance. Knowledge on operating phone was a substantial hindrance to 33.3% respondents, high hindrance to 20%, some hindrance to 20%, no hindrance to 20% and little hindrance to 6.7%. The issue of cost was a substantial
impediment for 53.3% respondents, 20% little hindrance, 13.3% some hindrance, 6.7% high hindrance and another 6.7% said cost was not a hindrance.

The availability of substitute options was a major hindrance for many M-banking users, 40% said it caused high hindrance, another 40% substantial hindrance, 13.3% no hindrance and 6.7% little hindrance.

**Factors determining mobile banking preference**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does attitude dictates your behavior towards change and mobile banking use</td>
<td>28</td>
<td>3.0000</td>
<td>1.27657</td>
</tr>
<tr>
<td>The level of familiarity or experience with the mobile technology linked to banking operation has enhanced my interest in using the services</td>
<td>28</td>
<td>3.8571</td>
<td>1.26825</td>
</tr>
<tr>
<td>Absence of direct link to the bank has slowed down customer interest in savings in banks</td>
<td>28</td>
<td>2.7143</td>
<td>1.46204</td>
</tr>
</tbody>
</table>

**Correlation analysis**

A correlation analysis was done to establish the association between constraints and driving factors in mobile banking and impact on banking. Findings are as reflected in table 8 bellow there was a moderate significant positive correlation between constraints and determinant factors in mobile banking and impact on the banking sector (r=-0.497, p-value=0.007)
Factors determining mobile banking preference Correlations

<table>
<thead>
<tr>
<th></th>
<th>Impact on banking</th>
<th>Constraints and driving factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact on banking</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>-.497**</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Constraints and driving factors</td>
<td>Pearson Correlation</td>
<td>-.497**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.007</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>28</td>
</tr>
</tbody>
</table>

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

**Linear Regression**

The study sought to investigate how constraints and driving factors in mobile banking have impacted on the banking sector in Kenya. Linear regression analysis was carried out to determine the relationship. Results are summarized in tables 8 below.

**Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.497a</td>
<td>.247</td>
<td>.218</td>
<td>.57833</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), constraints and driving factors
ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>2.854</td>
<td>1</td>
<td>2.854</td>
<td>8.533</td>
<td>.007</td>
</tr>
<tr>
<td>Residual</td>
<td>8.696</td>
<td>26</td>
<td>.334</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11.550</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: impact on banking

b. Predictors: (Constant), constraints and driving factors

Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>2.784</td>
<td>.372</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>Constraints and driving factors</td>
<td>-.325</td>
<td>.111</td>
<td>-.497</td>
<td>.007</td>
</tr>
</tbody>
</table>

a. Dependent Variable: impact on banking

The value of variance \( R^2 = 0.247 \), shows that 24.7% of impact of mobile banking on the banking sector is explained by constraints and driving factors of mobile banking. The values of \( F (1, 26) = 8.533 \), \( p\text{-value} = 0.007 \), shows that constraints and driving factors of mobile banking are a statistically significant predictor of impact of banking technology (i.e., the regression model is a
good fit of the data). The value of constraints and driving factors is statistically significant (t=-2.921, \textit{p-value}=0.007), it impacts on the banking sector. The regression model explaining the results in Table above table is given by:

\[ \textit{impact on banking sector} = 2.784 - 0.325 \times \textit{constraints and driving factors} \]

The model shows that constraints and driving factors negatively impacts on banking, i.e. a mean index decrease in constraints and driving factors decreases impact on banking by a negative unit mean index value of -0.325.

4.6 Chapter summary

This chapter provided an analysis of the results obtained by the study. It began by describing the findings of the general information including demographics of respondents and their knowledge on mobile banking. It further analyses each objective of the study giving the descriptive analysis and inferential analysis by running regression and correlation tests. Chapter five will discuss and summarize the findings of this analysis and give recommendations realized from the study.
CHAPTER FIVE:

5.0 DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter focused on discussing major findings, concussion deduced from the study findings as well as present appropriate recommendation to the study. The conclusion as well as the recommendation presented in the study is in accordance to addressing the research objective aiming at assessing of strategies implemented in organizations in relation to impact of technology (mobile banking) on Kenya’s banking sector growth.

5.2 Summary of the findings

A sample collected from the students who work at various banks; those holding bank account and operate mobile banking services indicated that most of customers from various banks prefer mobile banking model in their attempt to transfer money from their M-pesa to Bank account or vise versa. Mobile banking has been enhanced in the country by customers who mostly prefer specific mobile banking model which is used by non-banking firms due to its ability to reach wide range of customers. The various mobile banking models adopted by various banking institutions provides clients with enough flexibility to load their accounts through their mobile banking services from their personal bank accounts for purposes transferring transactions to their clients as required.

The study found out that among diverse elements associated as impacting or influencing mobile banking, elements such as convenience was highly rated by the participants. This vice was closely followed by service knowledge as well as the ability to operate the mobile handset. The major reason was linked with the ability to create available service to customers through awareness of products presented by the banks and their module linked mobile banking services. Most of the named services and various models were reflected in various banks such as 224 presented by Barclays bank, however, this version has been enhanced to suite smart phone users. As for the financial institution staffs, the group attached little importance to the mobile banking
services charges as it was close to the amount charged by the telecommunication companies. This was closely associated with the charges linked to transfer of amount from bank accounts to their M-pesa platform and minimal amount charged on other transactions made. Therefore, the level of embracing the new technology and investment in modules search as in the M-Kesho services managed by Equity bank Co-operative Bank operating M-Banking services, Barclays operating Hello Money, Commercial Bank of Africa operating M-Shwari, SIM-ple banking service managed by National Bank Kenya, Kenya Commercial Bank Operating Mobi-bank, and Standard Chartered Bank managing Mobile Banking services. This has led to the financial institutions to grow both financial through increasing their customer base and technology strength through coming up with new products suitable for customers operation over their mobile phones.

The transition of banking operation from computer set, ATM, Cheque and physical over the counter transaction towards mobile banking operation involving both the agencies and retailers, leding to the banking institutions experience technology, workforce, and financial growth. This has as well assisted the banking institution to be stable during various econoiic hardship in the world such as recession and depression.

5.3 Discussion

5.3.1 Factors that influence respondent’s capacity to adopt mobile banking

The factor service reliability was seen to be highly considered by the account holders where 80% of the respondents indicated that it was very important while 20% noted that there was significance level of important to them. The aspect of convenience was also reflected where importance was reflected through 53.3% who indicated absolute importance in mobile banking while 33.3% indicated that a substantial level of importance of pegged on mobile banking and 13.3% responded to being Neutral. This element was closely linked by security element which also came out as critical with 80% of the population being regarded as very important, 13.3% important and 6.7% neutral.

The sub variable Secure with virtual transaction was generally ranked as important. This was indicated by 53 point reflected by three percent respondents who indicated that it was very
important that they are secure when transacting, 26.7% ranked it important, 13.3% neutral and 6.7% slightly important. This element was backed with the importance perspective that the ease of cellphone use was also considered important; 53.3% said it was very important, 13.3% important, 20% neutral, and 13.3% slightly important. Therefore, operation factor costs was also ranked important but did not seem to affect the account holders decision to acquire the application that significantly, 26.7% ranked it as very important, 33.3% important, 26.7% neutral and 13.3% slightly important. The final factor service awareness attracted a wide range of responses, 21.4% said it was very important in influencing their decision to adopt mobile banking, 42.9% said it was important, 13.3% were neutral and 21.4% considered it slightly important. These aspect is validated by a review of the offline and online bank services literature which’s revealed that limited customers’ knowledge about mobile banking services has an impact on perceived usefulness of mobile Banking (Laforet& Li, 2005; Servon, & Kaestner, 2008). The Servon and Kaestner (2008) vies is further brough out in the final factor which is service awareness which attracted a wide range of responses, where 21.4% said it was very important in influencing their decision to adopt mobile banking, 42.9% said it was important, 13.3% were neutral and 21.4% considered it slightly important.

The element of lack of enough knowledge affected the adoption level of mobile banking in various region, but was more prominent in the rural areas as compared to the urban region. This aspect boiled down to the perspective of complexity in smart phones devices in operation of the device interlinked with the education level and awareness level of client, restricted the adoption level of the products. On the contrary, the urban population who had more exposure to the products readily adopted the mobile banking services without any difficulty, indicating that the awareness creation played a major factor in initiating adoption of mobile banking.

**5.3.2 Level of Mobile Service Adoption**

The first objective of the study was to determine the level of mobile services adoption in the Kenya’s banking sector. Where the respondents involved rated their level of agreement on various factors that determine their adoption of mobile banking services.
The factor of statement inquiry was neutrally affected by majority of respondents (35.7%) who took option 3 of sometimes, however 26.7 percent noted that they always considered statement inquiry option factor, 14.3% often, 14.3% never considered it and 7.10 seldom considered it.

The balance inquiry tool was a critical requirement for most users with 42.9% saying they always considered it while 42.9% saying they often consider it. On the other hand, 7.1% indicated that they sometimes consider it and never consider it respectively, 5% seldom consider it. Funds transfer to M-pesa and Mpesa account is always considered significant to the respondents, 50% said they always consider this factor, 28.6% said they sometimes consider it and 21.4% accepted to considering it often. The possibility of applying for a loan on the online portal had a very wide range of responses with each of the respondents sharing conflicting opinions. A majority said they never consider it at 28.6%, 21.4% seldom consider it, another 21.4% sometimes consider it an equal number also always considers it while 7.1% often consider it. The factor request for account statement was more sometimes considers relating to 46.2% respondents, 30.8% often consider, 15.4% always consider this factor and 7.7% seldom consider the factor.

Request for a cheque book seemed to be an insignificant factor to many of the respondents, 69.2% reported to never consider it, 15.4% always considered it, 7.7% often considered it and 7.7% seldom looked into this factor. Many respondents were neutral on the bill payment component of the app, 35.7% said they sometimes consider it, always and never were both 21.4% and 7.1% seldom considered it.

The organizations experienced that the customer level of adoption to their products increased mostly with the increase in awareness. This was experienced by most of their clients enrolled in mobile banking services being concentrated in the urban areas where most of the clients had the knowledge of operating smart phones. However, the lower level of adoption of mobile banking in the rural areas was minimal due to the fact that most of the population had minimal exposure to modern communication devices such as smart phones which had complicated application and other communication tools.

Moreover, most of the population’s income was minimal to afford smart phones which are highly priced in the market. Therefore, the lower income earners in the country mostly populated
in the rural areas lacked accessibility to mobile banking while their counterparts in the urban region enjoyed the mobile banking services due to availability of substantial income to purchase the cheap Chinese smart phones. This slowed down the level of exposure of mobile banking services provided by various banks in the country.

The reflection of adoption is reflected by the high number of customers using mobile phones to make enquiry, and transferred funds on regular basis through mobile banking. This indicates that though the level of rural adoption was low, the level of adoption is spreading faster to other regions thus creating a positive impact in the banking sectors growth.

5.3.3 Mobile money Investments and Revenues

Respondents primarily agreed to being influenced by the factor such as using preferred mobile money applications to transact daily with a majority 35.7% agreeing, 28.6% remained Neutral, 21.4% strongly disagreed and 7.1% disagreed and strongly agreed equally. This was supported by the fact that most respondent used mobile money applications at least every week to transact where 57.1% agreed, 28.6% strongly agreed while 14.3% strongly disagreed. I transact on my mobile money application several times a day factor was mostly disagreed on 35.7% disagreed, 21.4% strongly disagreed, another 21.4% strongly agreed, 14.3% were Neutral, whilst 7.1% agreed. Thirty five point 7 respondents agreed that factor I often pay my bills using my mobile money application platform affected their investment choices on M-banking 28.6% were neutral, 21.4% strongly disagreed, 7.1% strongly agreed and disagreed. Respondents overwhelmingly agreed to factor I frequently use at least one of these mobile money Applications (Equitel, M-kesho, M-shwari, Corporate bank mobile banking, Barclays Bank Hello Money, national bank SIM banking 50.1% agreed and 28.6% strongly agreed while 21.4% disagreed. The Factor I have more than one mobile money application which I use frequently had widespread responses, 37.5% strongly agreed, 21.4% agreed another 21.4% disagreed 14.3% strongly disagreed and 7.1% were neutral. The last tested factor I prefer to use my mobile phone application to do transactions at a convenience cost rather than line up in banks to have less costly over the counter transaction service had 57.1% respondents agree while 14.3%, 14.3% and another 14.3% strongly agreed, disagreed and agreed.
The aspect of transacting mobile money application several times a day factor was mostly disagreed on reflected by 35.7% disagreed, 21.4% strongly disagreed, another 21.4% strongly agreed, 14.30% were Neutral, whilst 7.1% agreed. However, McGee (2007) ascertains that the more advantaged individuals as those clients in a position to own smartphones, for they are more likely educated and in a position to use mobile phone gadget in financial transaction as comparison to those owning ordinary mobile phones. Ivartuary and Mas (2008) differs with McGee’s view noting that the government of Kenya is working through its regulator to roll out legal measures which will ensure that the technology is available to all.

The tested factor preferred used mobile phone application to do transactions at a convenience cost rather than line up in banks to have less costly over the counter transaction service. This element was supported by 57.1% respondents who agreed with the factor while 14.3%, 14.3% and another 14.3% strongly agreed, disagreed and agreed. This shows that Smith (2015) report on mobile banking impact on poverty reduction appears to be the result of improved financial behavior by facilitating easier and safer savings and changes in the occupational choice of users. Therefore, mobile wallets offer a secure place to save as funds are stored virtually. And both the mobile money facility and the mobile phone can be password-protected. Savings can be used during hard times or for productive investments, like establishing or expanding a small business. Before mobile money the transaction costs of sending money over large distances were high. This was true both in terms of time as well as the financial resources needed to effect transactions.

The model shows that level of investment and revenue in mobile banking positively impacts on banking, i.e. a mean index increase in investment impacts on the banking industry in Kenya by a positive unit mean index value of 0.353. This aspect according to International Telecommunication Union (2005) affirms that the positive impact in sub Saharan Africa experienced through mobile banking in the mid 2000 exhibiting rapid increase in mobile banking in comparison to most regions in the world. This sequence is expected to increase within the shortest period possible.
5.4. CONCLUSION

5.4.1 The level of mobile services adoption in the Kenya’s banking sector.

Mobile Banking adoption level in Kenya has increased consistently with consideration of the level of customer awareness of the enrolled mobile banking model such as M-Kesho under Equity bank, M-Banking services under the Co-operative Bank of Kenya, Hello Money offered by Barclays Bank, M-Shwari managed by the Commercial Bank of Africa, Simple banking offered by the National Bank of Kenya, Mobi-bank offered by the Kenya Commercial Bank and Mobile Banking offered by Standard Chartered Bank. The presence of the diverse mobile banking models in the country has enabled banking industry in the country to increase their customer base which enables various transactions such as withdrawal, deposit, account enquiry, funds transfer, cheque book request, airtime top-up and other banking elements to be easily accessed by the customer without the need to physically visit their banks branch to access the services.

These levels of adoptions has led to the banking industry in Kenya growing consistently over the years through the 2007-2011 financial crises which saw most of financial institutions in the western world closing down or experiencing a drop in their growth record. The mobile banking increased the level of transaction and increase in automation of services in the banking industry to increase efficiency in the industry. As a result, a wider base of clientele was realized as the services reached the lowest income earner in various part of the country thus enabling more citizens to save for future purposes.

5.4.2 To determine the level of mobile money investment and revenues in banking sector in Kenya

The evolution of mobile use to accommodate various exercises such as radio, internet surfing, storage device, and banking service, has enhanced its initial role of communication in the market. The level of adoption of the mobile banking technology by the Kenyan population as well as the banking firms has led to increase in competition in the market hence resulting to more investment and creativity being pumped into mobile technology advancement. This has seen banking company diversifying investment from initial Automatic Teller Machine (ATM), cheque
payment, use of credit cards as well as other traditional method to use of mobile banking which is enhanced through use of mobile banking outlets and retail shops.

Banks such as Co-operative bank, Equity Bank, Family Banks, and Kenya Commercial Banks have outlet shops and retail shop agencies who transact on their behalf. This platform is made effective through mobile banking investment, a platform which is embraced by those who are not in a position to visit the ATM or transact via the counter. The level of investment in banks can be seen through the competitive mobile banking models (M-Kesho offered by Equity bank, M-Banking services offered by the Co-operative Bank of Kenya, Hello Money offered by Barclays Bank, M-Shwari offered by the Commercial Bank of Africa, Simple banking offered by the National Bank of Kenya, Mobi-bank offered by the Kenya Commercial Bank and Mobile Banking offered by Standard Chartered Bank) which has been launched by various institutions. This level of investment has automatically led to increase in organizations growth in terms of technology, capital, and large customer base.

5.4.3. To determining the constraining and driving factor in mobile banking in Kenya’s banking sector.

The level of adoption of the innovative mobile banking technology by various banks has been necessitated by the innate individual’s perception towards specific products. The individuals’ perception is highly dictated by social factor, where the use of the model presents convenience to the client. This convenience is reflected where family members use it as a wallet to transact amongst themselves. However, the level of trust in the mobile banking adoption is somehow linked to age in Kenya. The youthful society readily adopts technology and therefore copes easily with the complexity which may be involved in the advancement of the technology. However, the elderly though trying to catch up have difficult in adjusting easily to the ever changing technology world. This explains why most of the population driving the mobile banking economy in banks is the youthful generation.
5.5 Recommendations

5.5.1 Recommendation for the study

5.5.1.1 The level of mobile services adoption in the Kenya’s banking sector

The managers of various banks should consider the social habits of their clients and ensure that the product being launched is absorbable by most in the society. This will ensure that even the illiterate person in the society will not have difficulty in keeping up with the ever changing technology.

5.5.1.2 To determine the level of mobile money investment and revenues in banking sector in Kenya

Various service providers who work together with banking institution to avail their products to their clients through mobile platform ought to address challenges raised by clients so as to be at the same platform with the targeted group. This is in consideration that technology is an ever changing phenomenon which runs which time.

Competitive pressure force banks to lower their cost. Bank seeks to get economy of scale in bank procession instead of being a big bank. Bank seeks to secure the optimal business structure, and secure the competitive imperative of economy of scale.

5.5.1.3 To determining the constraining and driving factor in mobile banking in Kenya’s banking sector.

The economic status of individuals will as well dictate the level of adoption in mobile banking transaction. Most banks have experienced low income earners owning accounts which are operated through the phones in the contemporary world as compared to conventional renowned period when banks account were mostly owned by those in white collar jobs or wealthy business men in the society. This adoption level has increased banks’ customer base hence reaching most individuals in any part of the country thus leading to growth of banks economically, technologically, and through owning enlightened manpower.
5.5.2 Recommendation for future research

This study focusing on “an assessment of strategy of strategy implementation in organizations: impact of technology (mobile banking) on Kenya’s banking sector growth” have analyzed the field of mobile banking through three objective; to determine the level of mobile services adoption in the Kenya’s banking sector; to determine mobile money investment and revenues in banking sector in Kenya; and to determining the constraining and driving factor in mobile banking in Kenya’s banking sector. The field of mobile banking is however not exhausted and need further focus to enhance and create more awareness in the country. The study has not exhausted all the required evidence and therefore leaves a room for future research in this field while the findings of the study acting as a point of further reference by various scholars.
REFERENCES


APPENDIX I: QUESTIONNAIRE

If any question may not be appropriate to your circumstances do not answer.

Section A: Respondents’ background information

(Tick where appropriate)

1. Gender: Male ☐ Female ☐

2. Age bracket
   - 18 – 28 years ☐ 29 – 39 years ☐ 40 – 50 years ☐ 51 & above years ☐

3. a. Do you have a bank account? YES ☐ NO ☐
   b. If yes, which Organization do you have an account with?
      - Equity bank, ☐ Co-operative Bank, ☐
      - Commercial Bank of Africa, ☐ National Bank of Kenya, ☐
      - Kenya Commercial Bank, ☐ Standard Chartered Bank ☐
      - Barclays, ☐

4. a. Do you have a mobile phone and registered for Mobile banking?
   YES ☐ NO ☐
   b. If yes, which mobile banking product is enabled in your phone to your bank account to ease transaction? i.e the M-Kesho services (Equity bank), M-Banking services (Co-operative Bank), hello Money (Barclays), M-Shwari (Commercial Bank of Africa), SIM-ple banking (National Bank of Kenya), Mobi-bank (Kenya Commercial Bank), and Mobile Banking services (Standard Chartered Bank).

5. Do you have a source of income? YES ☐ NO ☐
6. What influence your decision to sign in on the m-banking service?

- Friends/Family
- Media advertisement
- Organization policy
- Others (please clarify)

SECTION B:

Research Questions

Please tick (v) or cross (x) your best preferred choice that you deem more applicable to you as per the provided choices in the Likert scale calibrated (1-5) where you are required to provide feedback for all questions in this section.

THE LEVEL OF MOBILE SERVICES ADOPTION IN THE KENYA'S BANKING SECTOR.

(i) The level of Awareness in Mobile Banking services

<table>
<thead>
<tr>
<th>Service</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Statement inquiry</td>
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<tr>
<td>2. Balance inquiry</td>
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<tr>
<td>3. Intra-banking money transfer</td>
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<tr>
<td>4. Funds transfer to M-pesa and from Mpesa to account</td>
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</tr>
</tbody>
</table>
5. Application for loan

6. Request for account statement

5. Request for Cheque book

6. Bill payment

Others, please do specify

(ii). Please indicate the level of importance in factors that influences your capacity to embrace mobile banking services. Indicate your preference using a standardized rikert scale of 1 to 5 by marking either V or X In the box.

<table>
<thead>
<tr>
<th>Factor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Service Reliability</td>
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<td></td>
</tr>
<tr>
<td>2. Convenience</td>
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<tr>
<td>3. Security</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>4. Secure with virtual transaction</td>
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<td></td>
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<tr>
<td>5. Ease in Cell phone use</td>
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<td></td>
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</tr>
<tr>
<td>6. Operation Cost</td>
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<tr>
<td>7. Service awareness</td>
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<tr>
<td>8. Please specify where other reasons apply</td>
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</tr>
</tbody>
</table>

**MOBILE MONEY INVESTMENT AND REVENUES IN BANKING SECTOR IN KENYA**

Please give your rating on the level of hindrance presented by the factors below towards mobile banking service uptake. Indicate the preferred feedback by X or V. The likert calibration 1 to 5 is represented by (1= large scope of hindrance, 2= Substantial level of hindrance, 3= some level of hindrance, 2= little level of hindrance, 1= absence of hindrance)

**(2.a) Factors hindering adoption of Mobile Banking Services in Kenya**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Service Restriction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Service reliability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Security</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4. Different networks accessibility</td>
<td></td>
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</tr>
<tr>
<td>5. Knowledge on operating the cell phone</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>6. Cost</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>7. Substitute availability</td>
<td></td>
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</tbody>
</table>
2. I) a. Who offers your mobile banking service? Please mark (X or V) the most preferred answer in the table below.

<table>
<thead>
<tr>
<th>Options</th>
<th>Mark with X or V where applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banking institution</td>
<td></td>
</tr>
<tr>
<td>Mobile Operator</td>
<td></td>
</tr>
<tr>
<td>Both Mobile operator and a bank</td>
<td></td>
</tr>
<tr>
<td>Another Firm</td>
<td></td>
</tr>
<tr>
<td>Not Sure</td>
<td></td>
</tr>
</tbody>
</table>

b). Is your mobile banking service an integration to the existing bank account or operated as a separate service?

<table>
<thead>
<tr>
<th>Description</th>
<th>Mark where preferred with X or V</th>
</tr>
</thead>
<tbody>
<tr>
<td>An Integrated Service</td>
<td></td>
</tr>
<tr>
<td>Separate Service</td>
<td></td>
</tr>
</tbody>
</table>

II) A. What type of Mobile Money Transaction do you usually use?

<table>
<thead>
<tr>
<th>Description of mobile banking model</th>
<th>Mark with(X or V) where preferred</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eazzy 247/Equitel (Equity)</td>
<td></td>
</tr>
<tr>
<td>M-Kesho (Equity Bank)</td>
<td></td>
</tr>
<tr>
<td>M-Banking (Co-operative Bank)</td>
<td></td>
</tr>
<tr>
<td>Service Name</td>
<td>Bank Name</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Hello Money</td>
<td>(Barclays)</td>
</tr>
<tr>
<td>M-Shwari (Commercial Bank of Africa)</td>
<td></td>
</tr>
<tr>
<td>SIM-ple banking (National Bank of Kenya)</td>
<td></td>
</tr>
<tr>
<td>Mobi-bank (Commercial Bank)</td>
<td></td>
</tr>
<tr>
<td>Mobile banking (Standard Chartered Bank)</td>
<td></td>
</tr>
</tbody>
</table>

**b. How often do you use your preferred mobile banking model during transaction?**

**Please circle the answer applicable to you.**

<table>
<thead>
<tr>
<th>Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Once on daily basis</td>
<td>1</td>
</tr>
<tr>
<td>Several times on daily basis</td>
<td>2</td>
</tr>
<tr>
<td>Once weekly</td>
<td>3</td>
</tr>
<tr>
<td>Once in a month</td>
<td>4</td>
</tr>
</tbody>
</table>
III. Where do you frequently make your transaction?

<table>
<thead>
<tr>
<th>Description</th>
<th>Mark with(X or V) where preferred</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the Sale Point</td>
<td></td>
</tr>
<tr>
<td>Automatic Teller Machine</td>
<td></td>
</tr>
<tr>
<td>Over the bank Counter</td>
<td></td>
</tr>
<tr>
<td>Mobile Banking Agent(Retail Shop or Pay Outlet)</td>
<td></td>
</tr>
</tbody>
</table>

IV. How did you come to know your preferred mode of mobile banking platform?

<table>
<thead>
<tr>
<th>Description</th>
<th>Mark with(X or V) where applicable to you</th>
</tr>
</thead>
<tbody>
<tr>
<td>media advertisement i.e. TV, Radio etc</td>
<td></td>
</tr>
<tr>
<td>Social medium i.e. Facebook, twitter, YouTube, LinkedIn etc.</td>
<td></td>
</tr>
<tr>
<td>Through a friend</td>
<td></td>
</tr>
<tr>
<td>Bill Boards organized by the banking institution</td>
<td></td>
</tr>
<tr>
<td>Road shows</td>
<td></td>
</tr>
<tr>
<td>Through Bank Sales agent</td>
<td></td>
</tr>
<tr>
<td>Mobile phone service provider</td>
<td></td>
</tr>
<tr>
<td>None of the above</td>
<td></td>
</tr>
</tbody>
</table>
DETERMINANTS OF CONSTRAIN AND DRIVING FACTORS IN MOBILE BANKING

Please give your satisfaction level of agreement as per the likert scale (1-5) provided to determine the constrains and driving factors in mobile banking. The callibration is as follows: 1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree.

(i). Factors determining mobile banking preference

<table>
<thead>
<tr>
<th>1= Strongly Disagree</th>
<th>2 = Disagree</th>
<th>3 = Neutral</th>
<th>4 = Agree</th>
<th>5 = Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does attitude dictates your behavior towards change and mobile banking use</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. The level of familiarity or experience with the mobile technology linked to banking operation has enhanced my interest in using the services.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. Absence of direct link to bank has slowed down customer interest in savings in banks</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

SECTION C

What is your general view on mobile banking technology platform on banking sector?

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Is mobile banking platform more reliable than operating directly with the branch oriented service?

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In comparison with other mobile banking services provided by other banks, what is your perception on the service provided to you by your bank?

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Do advertisement by banks act as a factor influencing mobile banking uptake?

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THANK YOU FOR YOUR INPUT