IMPACT OF MOBILE BANKING INNOVATIONS ON SERVICE DELIVERY ON COMMERCIAL BANKS IN KENYA: A CASE OF KENYA COMMERCIAL BANK

BY

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UNITED STATES INTERNATIONAL UNIVERSITY-AFRICA

SPRING 2019
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A Research Project Report Submitted to Chandaria School of Business in Partial Fulfillment of the Requirement for the Degree of Master of Business Administration (MBA)

UNITED STATES INTERNATIONAL UNIVERSITY-AFRICA

SPRING 2019
STUDENT’S DECLARATION

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

Signed: ___________________________ Date: _____________________________
Anne Wamwea (ID 654177)

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

Signed: ___________________________ Date: _____________________________
Timothy C. Okech, PhD

Signed: ___________________________ Date: _____________________________
Dean, Chandaria School of Business
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ACKNOWLEDGEMENT

I wish to thank the Almighty God for giving me the Grace to write this work. I wish to express my gratitude to my supervisor Prof. Timothy Okech for the patience and the professional guidance he has accorded me all through this project.

Finally, I thank my family for supporting me throughout my studies at the various levels and their unconditional love to me is my greatest strength.
DEDICATION

This project is dedicated to my parents, who taught me that the best kind of knowledge to have is that which is learned for its own sake. To the Almighty God for His unmerited favor without which it is impossible to accomplish anything.
ABSTRACT

The general objective of this study was to determine the effect of mobile banking innovations on service delivery at Kenya Commercial Banks in Kenya. The following objectives were used to guide the study: To analyze the effect of mobile banking applications on service delivery at Kenya Commercial Bank; to assess the effect of agency mobile banking agency on service delivery at Kenya Commercial Bank, and to determine the effect of online mobile banking on service delivery at Kenya Commercial Bank.

A descriptive research design was used to guide the study as it enabled researcher to collect data that could be used to describe characteristics of study subjects through descriptive and inferential statistics without influencing the study subject. The target population of this study consisted of middle to senior level managers working at KCB headquarters and bank branches within Nairobi Central Business District. The sampling strategy used was stratified, as 40 managers were selected from different functional departments at the bank. Primary data was collected using a structured questionnaire, and analyzed for inferential and descriptive statistics using SPSS version 24, and presented using Figures and Tables.

In determining the effect of mobile banking applications on service delivery at KCB. Majority of the study respondents were of the view that agency mobile banking had enhanced flexibility in terms of service delivery. Additionally, introduction of mobile banking applications had enhanced convenience for customers seeking banking services. The findings also show that mobile banking applications had enhanced banks management and delivery of loan services and portfolio to clients. The study findings revealed the existence of statistically significant relationship between mobile banking applications and banks service delivery, r (0.812); p-value < 0.01.

This study sought to establish the effect of mobile banking on service delivery at KCB. The findings show that mobile agency banking had increased the bank’s service delivery to customers, reduced the cost of banking services, and led to increase in service innovation in the banking sector. This study established the existence of a statistically significant relationship between mobile banking agency and service delivery, r (0.748); p-value < 0.01.

Last but not least, this study examined the effect of mobile banking platform innovations on service delivery at KCB. The findings show that online banking platforms had had enhanced banking service delivery. Additionally, online banking platforms has enhanced banking security, and increased feedback channels to customers. The study did establish the existence
of a positive relationship between online banking platforms and service delivery at KCB, r
(0.636); p-value < 0.01.

On the effect of mobile banking application on service delivery, this study concludes that
mobile applications are essential for commercial banks service delivery. Mobile banking
applications enhance service convenience to the banks clients. There is an increase in bank’s
loan portfolio management and loan dispensing as compared to traditional banking systems.
On the effect of mobile agency banking on service delivery, this study concludes that
adopting mobile banking agency is one of the most effective ways of enhancing commercial
banks service delivery. The adoption of mobile agency banking had enhanced the bank’s
channels of service delivery to clients while at the same time had led to a reduction in cost of
service delivery. Mobile banking agencies are important in the banking service sector as they
spur innovations that are essential for diverse service delivery to clients. Finally, this study
concludes that commercial banks that adopt and incorporate online mobile banking platforms
such as Electronic Funds Transfer (EFT), online payments, and Real Time Gross Settlements
(RTGS) have a higher chance of enhancing service delivery compared to traditional banking
services.

Based on the findings presented, this study recommends that mobile banking applications
should be developed in a versatile manner beyond money transfer services and loan
applications. In this case, KCB and other commercial banks should consider variety of
financial services beyond the constraints of traditional banking walls. On the effect of mobile
banking agency, this study recommends that KCB and other commercial banks should
increase mobile agency networks in rural and remote areas that are not served by commercial
banks. This will increase banking service delivery as marginalized communities in accessing
banking services will be able to access these services. There is need for KCB and other
commercial banks in Kenya to enhance development of mobile banking innovation platforms
beyond the traditional use of debit and credit cards that are widely used.
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<td>ATM</td>
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<td>EFT</td>
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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Mobile banking entails provision of service by financial institutions in co-operation with telecommunication companies to enable customers conduct financial transactions using a mobile device such as a smartphone (Tobbin, 2012). A customer does not necessarily need to have a bank account, but a smart mobile phone can be lined to a smart mobile banking App. As such, banking services can be rendered without physically visiting a banking hall (Singh & Srivastava, 2018). Services provided include bill payment, monitoring account balances, transferring of funds between bank accounts, requesting loans, and locating an ATM can all be done through the use of mobile banking. Mobile banking is regarded as one of the most remarkable innovation in the global business environment specifically in the banking industry by introducing convenience to both customers and commercial banks as opposed to traditional banking (Ghosh, 2016).

In the current global market that is highly driven by competition, it is necessary for financial institutions to improve their market position. This can be enhanced by becoming better at keeping up with changing socio-economic patterns on which the industry relies heavily on in order to deliver an effective service to the customers (Tobbin, 2012). One way of banks to achieve this is by allowing themselves to be more agile by adopting digitization technologies. Financial service institutions have traditionally been cautious when it comes to inventions, but the current business environment is changing forcing banks to be increasingly aware of the need to become innovative and to produce creative products and services, processes, systems, and business models (Nicoletti, 2014).

Mobile devices have become the ideal enabler for commercial banks to undertake mobile banking innovations and it has a wide impact on the way individuals conduct banking transactions at their own convenience (Singh & Srivastava, 2018). The development of new technologies across the world had profoundly transformed the way in which customers interact with their service providers. In the traditional context, retain banking relied on customers physically visiting the bank to access any banking services (Anderson, 2010). In today’s business environment, advancement in technology has changed how banking services
are offered by commercial banks. According to Chironga, Grandis and Zouaoui (2017) advancement in Automated Teller Machines (ATM) was considered as an important factor in banking, however, Chirchir and Juma (2016) argue that ATMs have been bypassed by advancement internet bandwidth and wireless technology, that has led to widespread adoption of mobile commerce services including mobile banking. As such, advancement in technology has changed the way in which financial services are offered, particularly, use of mobile phones (Coderias, 2017).

In the United Kingdom, PayBox supported by the Deutsche Bank started mobile banking in 1999. However, PayBox faced a myriad of challenges to mitigate and respond to advancement in mobile technologies. Particularly, PayBox mobile phones lacked hardware and software support. Additionally, the high costs of data plans and relatively low speed network were also limiting factors for mobile banking adoption (Asfour & Haddad, 2014).

The introduction of smart phones technologies, and in this case, the Wireless Application Protocol (WAP), enabled PayBox to effectively implement the use of mobile banking services to the account holders (Mullan, Bradley, & Loane, 2017). The introduction of WAP technologies have provided necessary infrastructures for the growth of mobile banking globally and the numbers of individuals using mobile banking has increased as users shift from online banking to mobile banking for easy use and fast access.

In India, the banking sector has witnessed various changes in terms of mobile banking. For instance, in the 1990s, the banking industry saw a great emphasis towards the use of technology with an attempt to providing better quality service at a high speed (Shet, 2016). In the country, the role of mobile banking has been redefined from a mere financial intermediary to the service provider of various financial services (Gulati, 2015). This has made it convenient for commercial bank customers to transact from diverse geographical locations and now nearly all the banks have invested in mobile banking technology. In the United States, Wachovia bank was the first commercial bank to introduce mobile banking innovation to their consumers in 2006. The bank re-launched in the year 2007 with a few other commercial banks adopting the technology. The bank developed its own banking platform with cooperation from AT&T network operator (Gowanit & Chaivawat, 2016). The Bank of America launched mobile banking platform in 2007 in collaboration with four major telecommunication carriers that reported 500,000 subscribers within the first six months. Initially, commercial banking services that were offered included; funds transfer, bill payments and Automated Teller Machine, but since then there has been a huge progress in
the mobile banking services. In 2009 and 2010 respectively, the US banking industry witnessed an increase in the adoption of mobile banking technologies. For instance, in San Antonio, Bank of America was the first to adopt mobile banking innovations for both Android and iPhone users. The bank customers were able to transmit the photo of a check they wanted deposited at the bank, and just transmit it electronically, which increased customers use of mobile banking platform (Nejad, 2016).

In 2010 in the United States, Morgan Chase Bank also introduced the mobile Remote Deposit Capture (RDC) application for iPhone users followed by another innovation by U.S Bank and Visa who announced an introduction of mobile payment system for their customers providing banking services via the use of MicroSD card that fits in most existing mobile gadgets. U.S. Bank had launched a full suite mobile banking platform for its prepaid cardholders that has bill payment capabilities, as much as the US based commercial banks offer different kind of mobile banking services, they are relatively far behind their counter parts in the globe (Makanyeza, 2017).

In Africa, Nigeria currently considered as the largest economy in the provision of banking services introduction of mobile banking services which has improved the banking efficiency in rendering services to the client (Adewoye, 2013). In the country, the banking sector has witnessed advancement in technology just like any other parts of the world. The adoption of electronic banking is one of these technology advancements and has continued to service the population of Nigeria. Mobile banking has become one of biggest platform used to render services to the customers. Mobile banking offers convenience to the customers and offer banking services beyond traditional service banking, hence, encourages a cashless society (Curwen & Whalley, 2011). Increased information communication technology in Nigeria has moderated the constraints of space, time and information accessibility in the world trade and the commercial environment as a whole. The emerging trends in mobile technology innovations indicates that a high premium is put on information and communication technology. Therefore, it could be argued that efficiency in service delivery in the banking sector has precipitated the rise and continuous growth of mobile banking technologies. As such, the introduction of mobile banking facilities have enhanced delivery of banking services for businesses and individuals holding banking accounts (Makanyeza, 2017).

Regionally, Zimbabwe has experienced an increase in modern technology, which has brought a number of changes in the traditional banking system in the country (Nejad, 2016).
has been a significant progression from the brick and mortar banking model, to mobile and internet banking platforms. The emergence of internet and rapid expansion of the telecommunications in Zimbabwe has led to a wider adoption of mobile banking (Tinashe & Kelvin, 2016). Mobile communication gadgets like smartphone and tablet have enhanced customers ability to conduct transactions on their traditional accounts such as cash withdrawals, bill payments, and money transfers. The mobile banking revolution in Zimbabwe had threatened the survival and profitability of traditional commercial banks forcing the banks to adopt mobile banking technology. In the traditional banking context, money was sent from one point to another through physical banking transactions. A customer had to physically avail themselves at the commercial bank to effect any transaction. However, technological trends have made it possible for money to be sent to a particular individual irrespective of their geographical location. Thus, technology has made it possibly for banks to rethink their traditional model of doing business, by adopting emerging mobile innovation technologies (Riquelme & Rios, 2010).

In Kenya, mobile money platforms such as the M-Pesa by Safaricom Limited has revolutionized not only money transfers and payments, but how commercial banks in Kenya offer banking and financial services. (Chironga, Grandis, & Zouaoui, 2017). The adoption of mobile money transfer systems has enhanced competition among commercial banks seeking to leverage on the mobile technologies to enhance profitability and customer subscription. Commercial banks in Kenya have come to appreciate the value of mobile banking innovations on financial and banking service delivery, as opposed to traditional banking. Additionally, since the advent of mobile money transfer platform (M-Pesa) in Kenya, mobile banking (Anyanzwa, 2016). innovations have played a bigger role in transforming service delivery and business efficiency. The use of mobile banking and other mobile innovations being brought as a result of increased technology in Kenya, has resulted in commercial banks been able to enhance their asset valuation, human capital productivity, increased revenue generation and most importantly quality service delivery systems that helps the banks attract and retain customers (Chirchir & Juma, 2016).

Kenya commercial bank is the largest commercial bank in Kenya with assets more than US$3.81 billion and US$2.766 billion in customer deposits (Anyanzwa, 2016). Kenya Commercial Bank has been quite innovative in terms of mobile banking services and products by partnering with various stakeholders for effectively service delivery that is desired by potential banking customers. The company provides an innovative and robust
mobile banking platform known as KCB M-benki. The mobile banking platform at KCB has not only focused on enhancing efficiency in service delivery, but also offering banking services to unbanked populations who do not have access to physical banks. Additionally KCB M-Benki platform enables customers to pay bills, transfer funds, do balance inquiry, cash withdrawal and ultimately enabling non-KCB customers to open bank accounts straight from their mobile phones (Kangethe, 2013).

1.2 Statement of the Problem

Globally, commercial banks are faced with the pressure of globalization, stiff competition coming from non-banking financial institutions and the volatility of market dynamics, which are forcing commercial banks to seek new ways that could add value to the services they offer to the client (Tobbin, 2012). The environment of the banking sector is expected to have intense competition coming from introduction of new technologies that are set to change financial products as well as service delivery by commercial banks. For instance, in Kenya, all the 43 commercial banks have adopted some form of innovative technology for customer service, including ATM machines, queueing number generator machine in banking halls, and payment digital assistance. Commercial banks are therefore expected to rethink their business strategies while at same time leveraging on innovative and affordable products and services in order to retain and capture potential markets (Farah, Hasni, & Abbas, 2018).

A study by on the impact of mobile banking on profitability of commercial banks in India revealed the existence of a direct relationship between mobile banking and commercial banks profitability, however, quality of the service was low since mobile banking had not been adopted across the entire country. In Kenya, local studies have been carried by scholars on mobile banking. Coderias (2017) conducted a study on the impact of mobile banking on commercial banks and found out that most commercial banks adopted the use of mobile banking due to it being convenient for most customers regardless of their geographical locations. Kihara (2015) also carried out a study on the effect of mobile banking on the competitive advantage of commercial banks in Kenya, his findings indicated that there is a positive relationship between mobile banking and competitive advantage in Kenyan commercial banks. Mutua (2010), studied the effects of mobile banking on the financial performance of commercial banks in Kenya and indicated that there is a weak relationship between mobile banking and financial performance of commercial banks in Kenya. However, this study did not examine the contribution of mobile banking innovations to banking service delivery. The studies (Kihara, 2015; Coderias, 2017) did not exhaustively examine the
contribution of mobile banking innovation to commercial banks service delivery but focused more on the competitive advantages commercial banks attain by adopting mobile banking innovations. As such, the aim of this research was to bridge the gap by investigating the extent to which mobile banking innovations has impacted banking service delivery in Kenya, with KCB as a case study.

1.3 General Objective
The general objective of this study was to determine the impact of mobile banking innovations on commercial banks service delivery based on Kenya Commercial Bank as the case of the study.

1.4 Specific Objectives
This study was guided by the following objectives:

1.4.1 To analyze the effect of mobile banking applications on service delivery at Kenya Commercial Bank.

1.4.2 To assess effect of agency mobile banking innovation on service delivery at Kenya Commercial Bank.

1.4.3 To determine the effect of online mobile banking platforms on service delivery at Kenya Commercial Bank.

1.5 Justification of the study
The study is beneficial to the following stakeholders:

1.5.1 Kenya Commercial Bank
Kenya Commercial Bank is the immediate beneficiary of the findings obtained from this study by acknowledging the impact of mobile banking innovations on their service delivery. The findings could also aid the decision-making process of the bank in regards to matters relating to mobile banking innovations and its impact on the bank’s service delivery.

1.5.2 The Banking Sector
Both the current players in the banking industry and new investors that intend to venture into banking could benefit from the findings by assessing the role of mobile banking technology on service delivery by commercial banks, hence, being able to make informed decisions that will enhance their competitive advantage through innovations.
1.5.3 Policy Makers

The government as well as other regulatory bodies of the banking industry can rely on the findings of this study to put in place regulations and laws that could protect the interests of consumers and those of commercial banks to effectively drive the growth of the banking sector.

1.5.4 Academicians and Researchers

Researchers and academicians will also benefit from the findings of this study by gaining more knowledge in the field of technology innovations and its impact on service delivery by commercial banks. Researchers can also use the information in their literature review as long as their topic cuts across the impact of mobile banking on commercial banks service delivery.

1.6 Scope of the Study

The study focused on the impact of mobile banking innovations on commercial banks service delivery specific for Kenya Commercial Bank. The study targeted 40 respondents consisting of senior managers, middle level managers and supervisors working at KCB’s head office (Kencom House) in Nairobi. The study was conducted in March 2019. This study focused exclusively on the effect of mobile banking innovations on service delivery by Kenya Commercial Bank. One of the study limitation was that it only targeted middle to senior level managers. However, to mitigate this, the head office was used since they coordinate all the functions and operations of the bank.

1.7 Definition of Terms

1.7.1 Mobile Banking

Mobile banking refers to the use of mobile phones and telecommunication technology in delivering banking services to the customers allowing them to conduct financial transactions with the help of a mobile device (Priya, Gandhi, & Shaikh, 2018).

1.7.2 Commercial Bank

A commercial bank offers services like accepting deposits, providing basic investment products to its clients and granting of business loans to the potential investors (Koriyow & Karugu, 2018).
1.7.3 Service Delivery

Service delivery refers to the act of offering or delivering the intended service to the customers in a manner that is consistent and reliable to meet the expectations perceived by the customer (Demoulin & Djelassi, 2013).

1.8 Chapter Summary

The background of the study on the effects of mobile banking innovations on service delivery has been presented in this chapter. The main content of this chapter included the study statement of the problem, research objectives, significance of the study highlighting various beneficiaries that can benefit from the findings, the scope of the study and definition of key terms used in the study have all been presented in this chapter. Chapter two has presented literature review highlighting the work of different authors and researchers on the subject matter. Chapter three has presented the methodology adopted for the study; chapter four the research results and findings, and finally, chapter five, the study discussion, conclusion, and recommendations.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

Literature review on the effect of mobile banking innovations on commercial banks service delivery is presented in this chapter. The first section of this chapter covers the literature on the effect of mobile banking applications on commercial banks service delivery, followed by the effect of mobile banking agencies on commercial banks service delivery and the third section presents the literature on the effect of online mobile banking platforms on commercial bank service delivery. A chapter summary is provided at the end of the chapter highlighting major components covered in the literature review.

2.2 Effect of Mobile Banking Applications on Commercial Banks Service Delivery

Recently, commercial banks have adopted the use of technology in providing banking services as opposed to the traditional banking channels (Tobbin, 2012). According to Priya, Gandhi, and Shaikh (2018), mobile banking has been categorized as the latest development in electronic banking services. Through mobile banking, customers can review their bank balance, check accounts, credit transfers, and payment transactions without having to physically visit the bank. In terms of service delivery, customers enjoy convenience of performing banking transactions at anytime, anywhere on user-friendly platforms. Additionally, the use of encrypted and password protected transactions have increased customers confidence in mobile banking transactions (Priya, Gandhi, & Shaikh, 2018). The increased penetration of mobile phones has helped commercial banks in achieving their objectives (Adewoye, 2013).

According to Tiwari, Buse and Herstatt (2006), Mobile Banking can be defined as any procedure of transaction that involves the transfer of goods and services, which is both started and concluded by use of mobile access to various networks thanks to the assistance of an electronic device i.e. mobile phone or tablet. Various factors will definitely influence mobile banking especially in Kenya. Kreyer, Pousttchi and Turowski (2002) described the mobile phone as the instrument driving the mobile banking initiative. According to Deans (2002), the usage of mobile phones in mobile banking is expanding gravely in that even countries with less than adequate infrastructure are now using the platform for their communication and business transactions. The affordable nature and low upkeep of this device has encouraged users unlike the use of laptops, desktop, e.tc, which are quite expensive in terms of purchase
and maintenance. The ongoing trend in which companies are coerced towards merging mobile phones and electronic devices like Personal Digital Assistant (PDAs). Through this, the emergence of a brilliant combination of mobile devices, such as the innovation of multifunctional phones like smart phones (e.g. Huawei Phone) which has the combination of cell phone capabilities, PDA and wireless email. Tiwari et al (2006) stated that the growth of mobile phones vary from each country. In German at least 87% of the population uses mobile phones while in Korea, 79% of the population has reported to own a mobile phone. This indicates a high acceptance rate of mobile banking and the use of mobile phones is an added advantage. The developed countries easily adopt innovation as compared to developing countries although there is evidence that some developing counties are experiencing a much higher acceptance rate such as China (Gupta & Herman, 2012).

One of the key drivers of mobile banking applications is easy of accessibility and security. Mobile Banking is a service that provides the customers anytime and anywhere banking with the assistance of mobile telecommunication services. This service is very easy available by each and every mobile internet users. It also saves a lot on time consumption. Mobile Banking is also safe and secure with the assistance of the mobile pin number (m-pin). The pin number, which is firstly distributed by the bank, secures every user of mobile banking but it is possible for the customer to change it as many times as per the needs of the customers. The customers can straightforwardly control all the transactions through mobile banking and all transactions will be safe in the account details. Aggarwal (2014). Additionally, mobile banking applications are less costly and much faster compared to traditional banking systems. Mobile Banking is a less expensive option of banking as compared to other modes of banking. There are numerous categories of charges levied by the banks when we use other methods of banking likes ATM facility, but by the use of mobile banking, there are very minimal charges that will be charged by the banks (Gupta & Herman, 2012).

Mobile banking and Internet banking are often referred to as electronic banking. The two are alternative channels for commercial banks in delivering their services to the customers using mobile banking through wireless devices (Chiu & Bool, 2017). The use of mobile banking through wireless devices shows the difference in contexts between mobile banking and online banking. Customers on the other hand, tend to consider mobility as the valued attributes that is associated with mobile banking while time critical consumers consider its functionality as the most important feature of mobile banking (Salhieh & Hijazi, 2011).
Millions of people globally access the Internet through the use of mobile phones. Mobile banking transactions are increased by new technological innovations like wireless application tool, Bluetooth and 3G standard and many more (Cruz & Laukkanen, 2010). The use of mobile banking in commercial banks may increase customer satisfaction by coming up with innovation services that are not limited to time and place in order to add more value to the customer. According to Asfour and Haddad (2014), commercial banks in Jordan aspire to achieve competitive advantage in the domestic and global market through building a strong relationship with clients. This can be enhanced by offering new services of good quality that are highly secured. The banks have invested in information technology to present services in order to get confidence and satisfaction that their customers aspire through mobile banking services.

Mobile communication tools such as smartphones are revolutionizing banking transactions through the use of wireless networks and Internet in attracting customers. Commercial banks in general, tend to extend their full range of banking services across a wide range of mobile, wireless tools without having any effect on their infrastructure and delivery channels which have the most important role in bringing mobile banking strategy into the market (Asfour & Haddad, 2014).

2.2.1 Payment Services

The introduction of a myriad of mobile money services by different mobile money service renders to the customers has become more common in recent years. Mobile banking is regarded as a way of gaining competitive position through diversification, increasing market share, maintaining customer loyalty and increased market accessibility for financial institutions to generate more revenues while at the same time delivering services that are desired by the customer (Frempong, 2014). The rolling out of these services in developing nations has generated a lot of attention among various players in the banking sector of the economy. These services include; mobile money transfers, pay bill services, loan to clients and accessibility to various wide range of banking services such as monitoring statements, and money transfer from one account to another (Kihara, 2015). This offers an opportunity and a challenge at the same time to the banking sector as the commercial banks try to keep up with mobile banking innovations to support payment services (Chironga, Grandis, & Zouaoui, 2017).
The remarkable gains that have been made towards mobile phones accessibility have seen a steady progress in technological innovations. The Kenyan mobile landscape is characterized by a rapid uptake of various mobile payment services through mobile banking innovation which has progressively offered services to the bank users enabling them to pay for their expenditures, buying of goods and services and enabling businesses to perform their transactions without physically visiting the branch for traditional banking services (Muisyo & Alala, 2014). Due to the increase of information in a technology driven economy, commercial banks offering payment services inevitably find themselves unable to resist technological indulgence. The need for commercial banks having convenient ways of accessing payment services through mobile banking which is beyond the traditional banking norms has seen recurrent expansion and modernization of the banking patterns. With the huge demand for finance oriented services, commercial banks have joined the fray in an attempt to grab the opportunity by creating various payments services available to consumers through mobile banking (Tinashe & Kelvin, 2016).

### 2.2.2 Loan Application Services

Mobile banking innovations has enabled commercial banks to create systems in which customers can easily apply for loans using their mobile phones and after loan approval customers are able track the details from their phone (Jenush & Karthiyayini, 2016). Loan applications that have been integrated with mobile banking can easily help the bank manage the database with customer information and loan details to maintain the type of a loan and the interest rates that the borrower should pay. The loan application system can use a calculator in giving the exact payable loan amount for the client and generate all the details of each customer (Asfour & Haddad, 2014).

Banks have developed an android system that can be used by smartphone users to apply for loans through a standard interface between customers and commercial banks. Customers can use the portal to maintain their loan accounts in various commercial banks and can as well directly log on to the loan system and make any customer request (Jenusha & Karthiyayini, 2016). Jenusha and Karthiyayini (2016) further indicate that, in the backend, the android system takes care of the entire necessary requirement in order to conduct transaction smoothly and when a customer requests a loan then the customer can easily register on the website with all the necessary identity proofs by uploading them using a smartphone. The
bank can check the formalities and rules to make sure they are matching, and send the
necessary feedback to the customer requiring a loan.

2.2.3 Mobile Money Transfer Service

Mobile banking began with the creation of services by commercial banks that could be
accessed through the mobile phones and these facilities aimed at helping the consumer access
all the information relating to their accounts (Frempong, 2014). Subsequent innovations have
witnessed the mobile banking phenomena and continue to expand steadily. These innovations
represent a new distribution channel which has allowed commercial banks and other financial
institutions to offer banking services through mobile money transfer services. With mobile
money transfer services, the customer can deposit to their bank account and can also transfer
money from their bank account to any mobile money service providers that have partnered up
with the bank in service rendering (Demoulin & Djelassi, 2013). According to Kangethe
(2013), in Kenya, the mobile banking services are available to the mobile users of the three
major telecommunication companies namely Airtel, Safaricom and Telkom in which users
that are registered with these networks are able to access mobile banking services and carry
out different transactions at their convenient time and place.

2.3 Effect of Mobile Banking Agencies on Commercial Bank Service Delivery

Commercial banks being just like any other institution has experienced turbulence as they try
to gain competitive advantage in the banking sector. Technological turbulence in the banking
industry has made commercial banks to come up with appropriate strategies in order to
improve their markets and also for survival. Mobile banking agencies has become one of the
fundamental strategies for commercial banks to provide their services to the customers
around the world (Gowanit & Chaiyawat, 2016).

Mobile banking agency is a service outlet where the bank contracts an agent or mobile
network entity to provide services to their customers. Customer transaction including
customer deposits, money transfers and withdrawals are therefore conducted through the
agency (Mutua, 2010). The government of Kenya altered its banking policies in January 2010
to allow commercial banks to provide their services by a third-party dealing where bank
agents function like satellite branches in bank transactions being rendered to their clients. The
acceptance of agency mobile banking in Kenya has not been fully adopted by the targeted
beneficiaries that is individuals, small and medium-sized enterprises in the Kenyan rural
areas. Despite mobile banking agency expansion, customers have not entirely adopted the use
of existing agents in their areas that would help them reduce transactional costs which is caused by their travelling to the banking halls and the time wasted on queues waiting to be given service (Muisyo & Alala, 2014).

In traditional banking, for commercial banks to access the rural market they had to use mobile vehicles to make their services available in the rural population. Mobile banking technology has introduced service provision method through the use of agency banking which can be accessed from mobile money agents. This has been made possible by high mobile penetration in developing nations (Chironga, Grandis, & Zouaoui, 2017). Chin and Bool (2017), argue that despite the advantages that come along with mobile banking, approximately half of the world’s population have not fully accepted the use of mobile banking agencies making it a challenge for commercial banks to encourage their customers on the same.

The banking industry is essential for any economy since economic growth may not be attained unless savings have efficiently been channeled into viable investments (Mungai, 2017). The lack of a fully-fledged banking system has been identified as major weakness of centrally planned economies since banks have been the early uses of technology and the core drivers of technological advancement. Despite having agency banking services, it is not clear whether the challenges associated with the same have a significant effect on performance of the bank (Farah, Hasni, & Abbas, 2018). Commercial banks depend on mobile banking innovations as strategic variables to outperform their competitors through efficient service delivery of services, so as to attract more customers (Anderson, 2010). The banking industry is competitive and for commercial banks to be successful in creating a unique value proposition to their customers they must invest in ceaseless innovation and improvements of products and service to its customers through mobile banking (Chirchir & Juma, 2016).

2.3.1 Accessibility of Banking Services

Banks and other financial institutions are striving to make their services and products easily accessible to their target customers through mobile banking agencies. However, the challenges of getting access to the formal financial services by customers remains a big challenge that the banks need to address effectively (Kant & Jaiswal, 2017). Mobile banking agencies have now facilitated banking for customer that are in remote areas or travel long distance to access banking services. Most commercial banks now have their agents in rural areas to help customers carry out banking activities which is a reflection of the service they
would be offered in the banking hall. In developing nations, mobile banking agencies play a bigger role in financial inclusion since the innovation has been able to cover a large population of the unbanked to become financially included through mobile banking accessibility in their remote areas (Frempong, 2014). Commercial banks benefit from mobile banking innovation in accessing the markets that they would not realize through traditional ways. The introduction of efficiency through mobile banking services has been enhanced by access to banking services making them easily available to all (Koriyow & Karugu, 2018).

A study conducted by Dzombo and Kilika (2017) to assess the unbanked prospects through mobile banking in Africa with its main objective being to evaluate the use of branchless banking in offering cost effective and secure solution to gaining new clients. The study established that 23% of adults in the African continent. The study attributed the reasons for this large unbanked population in Africa to poor infrastructure, and inaccessibility with large unbanked population living in remote rural areas (Gulati, 2015). The study further established that among other factors that influence financial service accessibility include literacy rate, low entry barriers, and flexible approach to repayment schedules.

2.3.2 Financial Inclusion

Financial inclusion is a state where businesses and individuals have access to useful and affordable financial services and products and the services are delivered in a responsible and sustainable manner (Sethi & Acharya, 2018). Agency banking has been fundamental in increasing the rate of financial inclusion to both individuals and businesses. A study conducted by Musau, Muathe and Mwangi (2018) to determine how agency banking had contributed to the performance of commercial banks in Kenya in terms of service delivery, revealed that more that 6.7 million of the adult population living in rural area are either unbaked or underbanked. Furthermore, the study concluded that low business transactions that take place in the rural areas and high cost that is required to sustain bank branches in rural areas do not make economic benefit for banks to set up a branch in the rural areas (Muisyo & Alala, 2014). Mobile banking agencies have offered an opportunity for commercial banks to enable their customers to enjoy a great deal of flexibility when it comes to banking. Agency banking enables commercial banks to keep track of the transactions that are made by the retail banking outlets, strongly contributing to financial inclusion since the services can easily be accessed through an agent without visiting the branch (Frempong, 2014).
According to Sethi and Acharya (2018) most unbanked individuals were in that position mostly for “economic reasons”, which related in part to their work status and in part to their view that formal employment, was a precondition for opening a bank account. He also identified that the youth tend to not to have bank accounts and see less importance for them. The same study also publicized that Mobile banking users in general have a relatively higher income, are more probable to reside in urban areas. They are also publicized to be of formal employment, as well as somewhat older than banked people with mobile phones. Musau, Muathe and Mwangi (2018) have also argued that the early adopter profiles seem to associate more with the anticipated functionality than with factors, which suggest risk acceptance such as age. A high quantity of the banked population either do not comprehend Mobile banking or have at no time heard about it. Notwithstanding these high levels of unfamiliarity about Mobile banking, banked people still have sturdy critical approach, with around one in five people hesitant in regards to its dependability. In this day and age, still there still exists a large percentage of our population that lack bank accounts but with the assistance of mobile banking consciousness especially young account owners will open the bank account and helps in economic growth (Gulati, 2015).

2.3.3 Efficiency in Service Delivery

The banking industry of the 21st century faces increasing challenges with the rapid growth in technology which involves innovative ways of doing business in a way that enhances effectiveness and efficiency brought by improved productivity as well as reduced costs of handling business operations (Koriyow & Karugu, 2018). The banking industry in developing nations has gone through various innovations from the introduction of automatic teller machines, mobile banking, and sharia compliant banks and in the recent past agency banking. Commercial banks enjoy efficiency from agency banking when it comes to service provision through agency banking. Agency banking has reduced costs associated with establishing branches as well as cutting down on employment costs while at the same time banking services are offered to the customers in diverse geographical locations (Coderias, 2017).

Mobile Banking is generally recognized by every bank. The customer can control their bank account at any location around the country with the use of mobile internet. It is extensively recognized by the banks anywhere and anytime. Kahandawa and Wijayanayake (2014) were in the opinion that alleged credibility is an element of behavioral intention to use an
information system. According to Mbama and Ezepue (2018) it is believed that the implementation of mobile banking service would be made possible if it is well matched with the customer’s bank transaction requirements. Compatibility of an innovation is more likely to be implemented, if it is well matched with job accountabilities, customer’s requirements and value system (Cruz & Laukkanen, 2010). When it comes to checking our account statements, it is much more convenient in that we can get them immediately and it is only possible with the online and mobile banking. Mobile Banking provides us immediate effect of banking transaction on our mobiles with SMS and Mini statements on our mobile devices.

Commercial banks have also found efficiency in mobile banking agencies as a strategy for them to increase their market share by offering a wide range of services to their customers in varied geographical places. It is an effective strategy since the implementation comes from both the need to reduce cost of offering service through personnel and the corresponding needs of meeting technological turbulence of new innovative products and services from competitors (Gulati, 2015). Technological changes that take place in the banking industry like rapid global networking, deregulation, and the rise in personal wealth has led to the implementation of sophisticated service delivery systems. Agency banking being one of the most strategic mobile banking innovations enabling banks to have their banking operations done by an agent without a customer having to visit the banking hall (Patrick, 2015). According to Tran and Corner (2016), it is estimated that there are over 7000 microfinance institutions in the globe providing financial services to more than 16 million people in the developing continents. Some of these institutions have innovated the use branchless banking services like mobile banking and by doing so they are able reach a wider scope of customers while reducing transactional costs, and increasing accessibility to financial services to the poor living in remote areas through mobile banking agencies.

2.4 The Effect of Online Mobile Banking Platforms on Service Delivery

According to Adewoye (2013), every industry of the economy whether financial or non-financial, is adopting computer-based strategies in rendering their services to the target market. Online mobile banking is any financial transactions carried out on to a bank’s website with the use of a smartphone such as making transfers between accounts, paying bills, payments and account transactions. Mobile banking innovation platforms equally do offer commercial bank’s clients technological avenues to check their bank balances, make payments, and other related mobile banking transactions and platforms over a smart mobile phone device (Sikdar, Kumar, & Makkad, 2015). The convenience of mobility accompanied
by rich-multimedia content on the internet and the integration of the mobile telephone with palm sized devices and content related information has made it almost inevitable that the access point to the electronic information is not the common personal computer but rather some form of mobile device as observed by Tucker and Jubb (2018).

Customers’ complaints from accessing their services from commercial banks is considered as part of the business life just like in any other corporate entity. Customer service satisfaction should be the prime concern for any commercial bank. (Adewoye, 2013). In banking industry, offering prompt and efficient service is very essential not only in attracting new customers but also retaining the existing customer base through online mobile banking systems. However, the services tend to minimize instances of customer complaints as well as grievances by providing proper delivery and review mechanisms that will ensure prompt redress of the customer complaints and grievances. Service delivery is considered to be one of major performance indicators of a bank, the extent to which customers are satisfied with the service provided also tend to have great impact on the overall performance of a commercial bank (Ayachit, 2015).

Online mobile banking is considered to be one of the most value addition that has been done in the banking industry since they enable commercial banks to provide facilities through mobile devices reducing face to face banking transactions through an automated mobile banking services where ever possible (Kahandawa & Wijayanayake, 2014). As mobile phone penetration rate increases, banking transactions is expected to migrate to a mobile based banking technology. Furthermore, mobile banking could possibly change the way customers do their banking transactions. Electronic banking systems focus on providing efficient automated banking services through wireless networks because mobile banking is capable of redesigning and also redefining the total context and business models of the banking sector (Gowanit & Chaiyawat, 2016). In the present business world, clients expect services to be offered twenty four hours a day and available for three hundred and sixty five days per year and this is all possible through higher possession of mobile phones as opposed to ownership of personal computers, hence, commercial banks’ transactions will be done through mobile phones (Anderson, 2010).

Cruz and Laukkanen (2010) argue that mobile phones would be the frontline technology in the banking sector as it offers consumers facilities to support their banking transactions through electronic channels. Commercial banks can provide online mobile banking facilities
such as bill statements, portfolio management, third party accounts and stock trading. Consumer also benefit from a wide range of services among them being privacy and convenience factors, ease of use, low transactional costs that have led to successful implementation of mobile banking requests. It has also been indicated that the use of mobile banking can be accepted as the most powerful marketing tool that keeps good connections between the management of commercial banks and their customers. Nevertheless, research also shows that among the reasons for users of internet banking to move into online mobile banking include; speed, processing power, and security that comes along with mobile banking services (Kahandawa & Wijayanayake, 2014). When one is considering mobile banking services in western nations, it can be said that the banking sector is at its highest expectations making it crucial to understand the impact of online mobile banking adoption (Mbama & Ezepue, 2018).

2.4.1 Electronic Funds Transfer

Electronic Funds Transfer refers to the system whereby one is able to transfer money from one bank account directly to another bank account without involvement of any paper money changing hands. It is any transfer of funds that can be initiated through electronic terminal and can be used from both mortgage payments, credit transfers, debit transfers and even payroll payments (Lassa & Manolis, 2015). The electronic funds transfer systems use computer as well as electronic technology as a substitute for paper transactions like cheques. Electronic Funds Transfer is initiated through devices like codes or cards that one uses to gain access to their account, through online mobile banking one is able to initiate electronic funds transfer by using an automated teller machine and personal identification number for the purpose of carrying this kind of transfer without having to visit the bank (Leblebici, 2012). Sending of payments or purchasing orders has never been so easy, in the present business environment, online mobile banking has become a popular method for bank customers to transfer money at affordable and secure means as opposed to traditional banking systems (Anyanzwa, 2016).

Accumulated balance digital payments systems offered by commercial banks through online mobile banking enables customers to make micro payments for their goods and make purchases on the web, accumulating a debit balance that bank customers must pay periodically on their credit card or telephone bills (Chironga, Grandis, & Zouaoui, 2017). Online stored value payment platforms enable customers to initiate instant payments to the
merchants and individuals based on the value that is stored in an online digital account offered by the bank through online mobile banking. In general, stored value cards have all the information necessary for identifying the card and its value. Online mobile banking supports the use store value cards that do not have finality of cash since they must pass through complex payment system before completing payment (Gatembe & Magutu, 2013).

Digital checking systems that can be accessed through online mobile banking have extended the functionality to the existing checking accounts to allow customers to do online shopping payments. They are also processed much faster than traditional paper based checking methods (Gatembe & Magutu, 2013). Online mobile banking billing presentment and payment systems allow customers to view their bills electronically and can initiate payments through electronic fund transfers from the bank or a credit card account. This process enables bills creation, delivery and payments over online mobile banking cutting across various industries from financial sector to the telecommunication companies and utilities as they notify customers about their bills due dates as well as presenting a mode of payment (Jenusha & Karthiayyini, 2016).

2.4.2 Real Time Gross Settlement Services

Real Time Gross Settlement is the quickest money transfer system via the banking networks which is offered by standby commercial banks of the nations with an attempt to develop a great value cash transactions from one account to another in a secured manner (Muhoro & Mungai, 2015). In Real Time Gross Settlement system, disbursements can be settled independently, and instantaneously after the payment instruction than can be done through online mobile banking, given after the remitter has the cover for the reimbursement in query. Payments made through real time gross settlement are characterized by credit businesses, and payments introduced by the debtor and members can obtain liquidity through a finance policy loans that comes from the central bank, loans with maturity of at least a day or by borrowing from members within the money market (Low, Albada, & Ghazali, 2018).

According to Low et al. (2018) Real Time Gross Settlement (RTGS) is a service offered by the reserve banks of countries to process high value cash transactions safely between two accounts (Rodrigo Andrés de Souza Peñaloza, 2011). RTGS is therefore a funds transfer systems whereby money or securities are transferred from one bank to another on a real time and on gross basis. Settlement on real time means there is no waiting period and the payment is considered as final and irrevocable. Gross settlement transaction is settled on one to one
basis without batching or netting with any other transaction. Once processed, payments are final and irrevocable. An RTGS system can thus be characterized as a funds transfer system that is able to provide continuous intraday finality for individual transfers. Muho and Mungai (2015) argue that banks utilize Real Time Gross Settlement system for interbank transfers, where funds are settled on a gross basis as they arrive at the Central Bank. RTGS is in fact the fastest possible money transfer system through the banking networks and is offered by the reserve banks of countries to process high value cash transactions safely between two accounts. In RTGS systems payments are, as described above, settled individually and immediately after the payment instruction, provided that the remitter has cover for the payment in question. Payments in RTGS systems are typically credit transactions, i.e. payments initiated by the remitter (debtor). Participants obtain liquidity via monetary-policy loans from the central bank, i.e. loans with maturity of minimum one day, or by borrowing from other participants in the money market. RTGS is an emerging innovation in the banking sector.

In the financial sector, innovation is regarded as the act of creating and propagating of new monetary instruments, technologies, institutions and markets that will enhance trading, data accessibility and means of reimbursement (Chiu & Bool, 2017). As far as service delivery is concerned, innovation in the banking sector is the influx of a new improved service, product or process that aims to depress the costs involved in producing financial services to the customers. Settlement on real time basis means that customers do not have to wait because reimbursement is reflected as final and irreversible that real time gross settlement is done on face to face basis without netting with another business and once processed expanses are final and irreversible (Mugarura, 2014).

Online mobile banking services have enabled commercial banks to provide real time gross settlement procedures whereby the customer can easily initiate real time payments when making payments for their goods and purchases and the transaction needs to take place instantly without having to wait for a long period as compared to traditional banking (Sikdar, Kumar, & Makkad, 2015). In a modern world of commercial activities, with rapid growth of
economic activities it requires banks to have fast, reliable and convenient payment systems and procedures that will support the ways businesses are conducted for them to gain a competitive advantage of staying relevant in the banking sector (Asfour & Haddad, 2014).

2.5 Chapter Summary
This chapter presented the literature review on the effect of mobile banking applications on commercial bank service delivery, the effect of mobile banking agencies and the effect of online mobile banking platforms on commercial bank service delivery. Research methodology adopted for this study is presented in the successive chapter three.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction
The research methodology chapter presents study approach in terms of design, population, sampling techniques, data collection methods, research procedures and data analysis methods.

3.2 Research Design
Research design refers to the framework or a strategy that offers guide to the researcher on how to conduct the study (Cooper & Schindler, 2014). There are several types of research design including exploratory, explanatory and descriptive survey. A descriptive research design was adopted for this study. Descriptive survey design refers to the type of research design that can be used by the researcher to describe certain characteristics of the population or the phenomenon being investigated (Bryman & Bell, 2015). Descriptive survey can be used in gathering information about the status of the phenomena and describing what exists with respect to the variables or conditions in a given situation. Therefore, making it the most suitable research design for this particular study. This is because, descriptive design enabled the researcher to collect information on KCB mobile banking innovation, and be able to provide this information in the form of descriptive data such as percentage usage of specific mobile innovations, percentage mobile clients on the platforms, types of mobile innovations most preferred and their influence on mobile banking service delivery.

3.3 Population and Sampling Design

3.3.1 Population
Population is defined as the full set of cases from which the study sample can be drawn (Bryman & Bell (2015). The population of a study is significant in helping the researcher to stay focused on the items that need analysis as well as ensuring credibility of the study is guaranteed for inference (Zikmund, 2013). The population of this study consists of senior managers, middle level managers and supervisors working at KCB Bank head office and branches in Nairobi. The population is presented in Table 3.1.
Table 3.1: Population Distribution Table

<table>
<thead>
<tr>
<th>Level of Management</th>
<th>Population</th>
<th>Distribution (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Managers (Headquarter)</td>
<td>10</td>
<td>12%</td>
</tr>
<tr>
<td>Branch Managers</td>
<td>19</td>
<td>22%</td>
</tr>
<tr>
<td>Customer Service Managers</td>
<td>19</td>
<td>22%</td>
</tr>
<tr>
<td>Relationship Managers</td>
<td>19</td>
<td>22%</td>
</tr>
<tr>
<td>Business /Enterprise Managers</td>
<td>19</td>
<td>22%</td>
</tr>
<tr>
<td>Total</td>
<td>86</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: KCB (2018)

3.3.2 Sampling Design

3.3.2.1 Sampling Frame

Cooper and Schindler (2014) define a sample frame as a list that entails all items within a population from which a research seeks to select the study elements. For this study, a sample frame list was obtained from the human resource office at KCB Nairobi Headquarters.

3.3.2.2 Sampling Technique

Bryman and Bell (2015) define sampling technique as that a research adopts to select representative units of a population that will take part in a study. There are various sampling techniques that can be used in research including stratified sampling, purposive sampling, simple random sampling, and convenient sampling technique among others. This study used stratified sampling. This sampling technique was selected because it enabled the researcher to select different managers at different levels and departments so as to make the study inclusive and representative. Also this sampling technique was adopted given that the population was not homogeneous.

3.3.2.3 Sample Size

A sample size is a unit of analysis that represents an entire population of a study (Cooper & Schindler, 2014). The sample size has to have similar characteristics as the main population for effective generalization of study findings. The sample size for this study was 40 managers from KCB Nairobi branches and the headquarters as summarized in Table 3.2.
Table 3.2: Sample Size Distribution

<table>
<thead>
<tr>
<th>Management Level</th>
<th>Population</th>
<th>Sample Size</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head Quarters Senior Managers</td>
<td>10</td>
<td>10</td>
<td>12%</td>
</tr>
<tr>
<td>Branch Managers</td>
<td>19</td>
<td>19</td>
<td>22%</td>
</tr>
<tr>
<td>Customer Service Managers</td>
<td>19</td>
<td>19</td>
<td>22%</td>
</tr>
<tr>
<td>Relationship Managers</td>
<td>19</td>
<td>19</td>
<td>22%</td>
</tr>
<tr>
<td>Business /Enterprise Development Managers</td>
<td>19</td>
<td></td>
<td>22%</td>
</tr>
<tr>
<td>Total</td>
<td>86</td>
<td>40</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Authors Computation

3.4 Data Collection Methods

Data collection is the process of gathering of information on variables of interest to address the research objectives effectively (Muñoz, 2014). According to Cooper and Schindler (2014), data collection method is the process of collecting information that is relevant and sufficient to answer researcher’s study objective. This study utilized primary data. As such, a structured questionnaire was used to collect the primary data. A questionnaire was ideal for this study in that it enabled the researcher to structure respondents’ views, which made it easy to conduct descriptive analysis since the response was restricted to a Likert scale scope (Saunders et al., 2016). The questionnaire had a five-level Likert scale of strongly disagree, disagree, neutral, agree and strongly agree. The scale used numeric numbers of 1, 2, 3, 4, 5 in the same order of the Likert scale. The first section of presents demographic data of the study respondents; second section presents information on the first research question; the third section presents information on second research question; the fourth section presents information on the third research question.

3.5 Research Procedures

Research procedure refers to a detailed sketch consisting of step by step guide on how the researcher should conduct the study to meet the objectives of the study (Cooper & Schindler, 2014). Before this study starts, the researcher sought approval from the supervisor, after the approval has been granted, a letter was drafted to the director of human resource at KCB Bank requesting their participation on the study. After the approval, a pilot test consisting of 4 respondents was conducted to test the reliability and validity of the contents of the questionnaire. Once the pilot test was completed, areas of the questionnaire that were not
clear were corrected and the questionnaire amended before being administered for the actual study. Research assistants were used to physically collect data from KCB offices in Nairobi Central Business district and at the headquarters. The questionnaires were dropped off in the morning and collected in the evening once they were fully filled. This strategy accorded the manager enough time to fill the questionnaire. All questionnaires were checked for completeness by the research assistants. In cases where the questionnaires were not fully filled, respondents were alerted and asked to provide additional information.

3.6 Data Analysis Methods

Data analysis is the process through which the researcher uses both statistical and non-statistical methods with the purpose of making sense of research data and presenting it in a meaningful way to the intended user (Bryman & Bell, 2015). This study used the Statistical Package for Social Sciences (SPSS) version 24 to analyze both descriptive and inferential statistics. Descriptive statistics were used to document information frequencies and percentages, while inferential statistics were used to document correlation and regression analysis. The analyzed information has been presented using Tables and Figures. The following regression model was used:

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e \]

Where; \( \beta_0 \) is a coefficient constant; \( X_1 = \) Mobile Banking Applications; \( \beta_1 = \) Standardized Beta vale for Mobile Banking Applications; \( X_2 = \) Mobile Banking Agency; \( \beta_2 = \) Standardized Beta vale for Mobile Banking Agency; \( X_3 = \) Online Banking platforms, \( \beta_3 = \) Standardized Beta value for Online Banking platforms;

3.7 Chapter Summary

The study methodology adopted by this study has been presented in this study. Mainly, the study descriptive design, study population and sampling design, data collection methods and analysis have been presented. Chapter four presents results and findings.
CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction

The findings of this study as presented in this chapter, are structured for each specific objective. Findings on the effect of mobile banking application on service delivery are presented first, followed by findings on effect of agency banking innovation on service delivery, and finally effect of online mobile banking platforms on service delivery in Kenya Commercial banks.

4.2 Response Rate and General Respondents Information

The study response rate and background information are presented in this section.

4.2.1 Response Rate

This study targeted 40 respondents from Kenya Commercial Bank. A response rate of 80% was achieved, while 20% of respondents did not provide any feedback to be used in the study as summarized in Table 4.1.

Table 4.1: Response Rate

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responded</td>
<td>32</td>
<td>80%</td>
</tr>
<tr>
<td>Did Not Respond</td>
<td>8</td>
<td>20%</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100%</td>
</tr>
</tbody>
</table>

4.2.2 General Respondents Information

General respondents information presented in this study include: Respondents gender, their age, respondents work departments, and work description. Results on the study demographics are presented in this section as follows:

4.2.2.1 Gender

This study sought to establish the gender of the respondents. This is summarized in Figure 4.1. As shown in the figure, 66% of respondents were male, while 34% or respondents were female.
Figure 4.1: Respondents Gender

4.2.2.2 Age

Figure 4.2 provides the summary of age of the respondents. As shown, 50% of respondents were aged 41-50 years, 29% were 51-60 years, and 18% were 31-40 years, while 3% were aged 18-30 years. This means that the bank has more managers within the age range of 41-50 years.

Figure 4.2: Age of Respondents

4.2.2.3 Work Description

On the question on respondents’ work departments, 25% indicated they worked in customer care, 22% in marketing, 19% in Finance and sales respectively, 9% of respondents worked in
operations department, while the remaining 6% worked in IT department as indicated in Figure 4.3

![Bar Chart: Work Description](image)

**Figure 4.3: Work Description**

### 4.2.2.4 Number of Years at KCB

Most (38%) of the respondents had spent 7-9 years, 28% had spent 10-12 years, 16% had spent 13-15 years, 12% of the respondents had spent 4-6 years, and the remaining 6% had 1-3 years of work at KCB as summarized in Figure 4.4

![Pie Chart: Years of Work](image)

**Figure 4.4: Years of Work**
4.2.2.5 Work Designation

On the question on work designation, majority, 63% of respondents indicated that they were mid-level managers followed by 28% senior level managers, and 9% worked at the bank as supervisors as highlighted in Figure 4.5

![Figure 4.5: Work Designation](image)

4.3 The Effect of Mobile Banking Applications on Service Delivery at Kenya Commercial bank

Respondents of this study were asked as series of questions to determine whether mobile banking applications had any effect on service delivery at Kenya Commercial bank. Among the issues considered were service productivity, service flexibility, service cost, convenience, loan portfolio and service innovation.

4.3.1 Mobile Banking Applications and Productivity

Respondents were asked whether mobile banking applications had enhanced service productivity at their bank. Majority, 81% agreed this to be the case, 13% strongly agreed, 3% were neutral while remaining 3% disagreed as highlighted in Table 4.2.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Neutral</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Agree</td>
<td>26</td>
<td>81</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
4.3.2 Mobile Banking Applications Flexibility

On the question on whether mobile banking applications had created flexibility in terms of service delivery, majority, 85% of respondents agreed that banking applications had indeed created flexibility in service delivery, 9% strongly agreed, while 6% remained neutral as indicated in Table 4.3

Table 4.3: Mobile Banking Application Flexibility

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Agree</td>
<td>27</td>
<td>85</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.3.3 Mobile Banking Service Delivery Costs

In determining whether mobile banking applications had eliminated service delivery costs, majority, 88% noted this to be the case, 6% strongly agreed, while the remaining 3% were neutral and disagreed respectively as summarized in Table 4.4

Table 4.4: Mobile Banking Service Delivery Costs

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Neutral</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Agree</td>
<td>28</td>
<td>88</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.3.4 Convenience of Mobile Banking

On the issue on whether mobile banking applications had brought about convenience in service delivery channels. Eighty-five percent of respondents agreed this to be the case, 9% strongly agreed, Majority, 85% agreed, 9% strongly agreed, while 6% were neutral as summarized in Table 4.5.
Table 4.5: Mobile Banking Convenience

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Agree</td>
<td>27</td>
<td>85</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

4.3.5 Mobile Banking Applications and Loan Portfolio’s

Respondents were asked whether mobile banking applications had helped KCB expand loan portfolio’s to clientele, 85% of respondent agreed this to be the case, 9% strongly agreed, while 6% remained neutral as indicated in Table 4.6

Table 4.6: Mobile Banking Applications and Loan Portfolio's

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Agree</td>
<td>27</td>
<td>85</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

4.3.6 Mobile Banking Applications and Payment Services

This study sought to examine whether mobile banking applications had enhanced payment systems by the bank. Majority, (81%) agreed this to be the case, 13% strongly agreed, while 6% remained neutral as indicated in Table 4.7

Table 4.7: Mobile Banking Application Payment System

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Agree</td>
<td>26</td>
<td>81</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

4.3.7 Mobile Banking Application and Banking Usage

Respondents were asked to indicate whether mobile banking applications had increased banking usage due to convenience it provided. Majority, 81% agreed this to be the case, 13% strongly agreed, while 6% remained neutral as noted in Table 4.8
Table 4.8: Mobile Banking Application Payment System

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Agree</td>
<td>26</td>
<td>81</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

4.3.8 Mobile Banking and Service Innovation

This study sought to examine whether mobile banking applications had enhanced innovative service delivery channels at KCB, majority, 91% agreed, 6% were neutral, while 3% strongly agreed as highlighted in Table 4.9

Table 4.9: Mobile Banking and Service Innovation

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Agree</td>
<td>29</td>
<td>91</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

4.3.9 Correlation between Mobile Banking Applications and Service Delivery

A correlation analysis was conducted to establish the degree and direction of the relationship between mobile banking applications and service delivery at KCB. The findings show that there exists a significant relationship between mobile banking applications and service delivery ($r = 0.812^{**}$, $p$ value = 0.000). This implies that mobile applications and service delivery are positively correlated as summarized in Table 4.10. This implies that there exists a strong positive relationship between mobile banking applications and service delivery at commercial banks.

Table 4.10: Correlation between Mobile Banking Applications and Service Delivery

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Delivery</td>
<td>Pearson’s Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Mobile Banking Application</td>
<td>Pearson Correlation</td>
<td>.812^{**}</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>32</td>
<td>32</td>
</tr>
</tbody>
</table>

**Correlation significant at the 0.01 (2-tailed)
4.3.10 Linear Regression Analysis

Since there existed a significant relationship between mobile banking platforms and service delivery, a linear regression analysis was conducted to establish the strength of the relationship. The regression revealed an $R^2$ which is a coefficient of determination used to measure of establish strength of relationship. The $R^2$ was 0.668, which means about 67% of mobile banking application can explain the variability in KCB’s service delivery. The remaining 33% was not considered in this study and therefore could not be explained under this linear regression model as noted in Table 4.11.

Table 4.11: Summary of Linear Regression Model

<table>
<thead>
<tr>
<th>Model</th>
<th>$R$</th>
<th>$R$ Square</th>
<th>Adjusted $R$ Square</th>
<th>Std. Error of Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.812$^a$</td>
<td>.775</td>
<td>.668</td>
<td>1.72314</td>
</tr>
</tbody>
</table>

An analysis of variance (ANOVA) was conducted to test model fitness for the data using the F-value test. The findings show an F-value $(1, 30) = 7.685, p < 0.05$. This means that there exists a statistically significant effect of mobile banking applications on service delivery at Kenya Commercial bank since the $p$ value is less than the required threshold of 0.05 as summarized in Table 4.12.

Table 4.12: 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</td>
<td>Regression</td>
<td>423.265</td>
<td>1</td>
<td>420.002</td>
<td>7.685</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>268.100</td>
<td>30</td>
<td>4.024</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>365.210</td>
<td>31</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Service Delivery
b. Predictors: (Constant), Mobile Banking Applications

4.4 Effect of Mobile Banking Agencies on Service Delivery

This section presents findings on the effect of mobile banking agency on service delivery. Some of the areas examined include agencies impact on service delivery, accessibility to banking services, new channels of delivery, cost of delivery and service efficiency.
4.4.1 Mobile Banking Agencies and Increase in Service Delivery
This study sought to examine whether mobile banking agencies had increased service delivery to customers. 81% agreed this to be the case, 13% strongly agreed, while 6% were neutral as indicated in Table 4.13.

Table 4.13: Mobile Banking Agencies and Increase in Service Delivery

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Agree</td>
<td>26</td>
<td>81</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

4.4.2 Mobile Banking Agencies and Enhanced Service Delivery
Respondents of this study were asked whether they believed that mobile banking agencies had enhanced service delivery. The findings show 81% of respondents agreed that mobile banking agencies had enhanced service delivery at KCB, and 19% strongly agreed as highlighted in Table 4.14.

Table 4.14: Mobile Banking Agencies and Enhanced Service Delivery

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>26</td>
<td>81</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

4.4.3 Mobile Banking Agencies and Service Accessibility
On the issue of service accessibility, this study findings show majority, 75% agreed, 19% strongly agreed, while 3% disagreed and were neutral respectively and summarized in Table 4.15.

Table 4.15: Mobile Banking Agencies and Service Accessibility

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Neutral</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Agree</td>
<td>24</td>
<td>75</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
4.4.4 Mobile Banking Agencies and New Channels of Delivery

Based on this study findings, mobile banking agencies had increased new channels of service delivery to customers, 81% agreed this to be the case, while 19% strongly agreed as highlighted in Table 4.16.

Table 4.16: Mobile Banking Agencies and New Channels of Delivery

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>26</td>
<td>81</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

4.4.5 Mobile Banking Agencies and Cost of Service Delivery

It was determined that mobile banking agencies had helped KCB reduce on the costs of service delivery to customers, 81% agreed, 16% strongly agreed, while 3% remained neutral as indicated in Figure 4.6.

Figure 4.6: Mobile Banking Agencies and Cost of Service Delivery

4.4.6 Mobile Banking Agencies and Banking Efficiency

To determine whether mobile banking agencies had enhanced banking efficiencies at KCB, respondents were asked to indicate their views on a scale of ‘1’ strongly disagree, to ‘5’ strongly agree. Majority, 75% noted this to be the case, 19% strongly agreed, and 6% were neutral as summarized in Figure 4.7
4.4.7 Mobile Banking Agencies and Financial Inclusion

The analysis of the finding on whether mobile banking agencies had enhanced financial inclusion to their customers, 66% agreed, 31% strongly agreed, while 3% were neutral as indicated in Table 4.17.

Table 4.17: Mobile Banking Agencies and Financial Inclusion

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Agree</td>
<td>21</td>
<td>66</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>10</td>
<td>31</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

4.4.8 Mobile Banking Agency and Banking Service Expansion

Respondents were asked whether mobile banking agencies had expanded banking services to customers; 66% agreed, 31% strongly agreed, while 3% were neutral as noted in Table 4.18.

Table 4.18: Mobile Banking Agency and banking Expansion

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Agree</td>
<td>21</td>
<td>66</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>10</td>
<td>31</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
4.4.9 Correlation Analysis between Mobile Banking Agency and Service Delivery

A correlation analysis was conducted between mobile banking agencies and service delivery. The findings show the existence of a significant relationship between mobile banking agency and service delivery ($r = 0.748^{**}$, $p$ value = 0.000). This implies that mobile agency and service delivery are positively correlated as summarized in Table 4.19.

**Table 4.19: Correlation between Mobile Banking Agency on Service Delivery**

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Delivery</td>
<td>Pearson’s Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>32</td>
</tr>
<tr>
<td>Mobile Banking Agency</td>
<td>Pearson Correlation</td>
<td>.748**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>32</td>
</tr>
</tbody>
</table>

**Correlation significant at 0.01 (2-tailed)**

4.4.10 Linear Regression Analysis

Since there existed a significant relationship between mobile banking agency and service delivery, a linear regression analysis was conducted to establish the strength of the relationship. The regression revealed an $R^2$ which is a coefficient of determination used to measure of establish strength of relationship. The adjusted $R^2$ was 0.527, which means about 53% of mobile banking agency can explain the variability in KCB’s service delivery. The remaining 47% was not considered in this study and therefore could not be explained under this linear regression model as noted in Table 4.20.

**Table 4.20: Summary of Linear Regression Model**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.748$^a$</td>
<td>.592</td>
<td>.527</td>
<td>1.38821</td>
</tr>
</tbody>
</table>

An analysis of variance (ANOVA) was conducted to test model fitness for the data using the F-value test. The findings show an F-value $(1, 30) = 4.3201$, $p < 0.05$. This means that there exists a statistically significant effect of mobile banking agency on service delivery at Kenya Commercial bank since the $p$ value is less than the required threshold of 0.05 as summarized in Table 4.21.
Table 4.21: 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>Regression</td>
<td>611.008</td>
<td>1</td>
<td>527.326</td>
<td>4.3201</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>423.705</td>
<td>30</td>
<td>6.444</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>339.200</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Service Delivery  
b. Predictors: (Constant), Mobile Banking Agency

4.5 Effect of Mobile Banking Platforms on Service Delivery

This study sought to examine the effect of banking platforms on service delivery at Kenya Commercial Bank. The findings are presented in this section:

4.5.1 Online Banking and Enhanced Service Delivery

When respondents were asked whether online banking platforms adopted had enhanced the banks service delivery, majority, 75% agreed that online banking platforms had indeed enhanced service delivery, 22% strongly agreed, and the remaining 3% were neutral as highlighted in Table 4.22

Table 4.22: Online Banking and Enhanced Service Delivery

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Agree</td>
<td>24</td>
<td>75</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>7</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.5.2 Online Banking Platform and Security of Service Delivery

On the question on whether online banking has enhanced security of banks service delivery, majority, 72% of respondents agreed this to be the case, 22% strongly agreed and 6% remained neutral on the same as summarized in Figure 4.8
4.5.3 Online Banking Platform and Continuous Service Delivery

This study sought to examine whether online banking platforms had enhanced 24-hour service delivery to the bank’s clients. The findings show that 69% of responded noted this to be the case with 28% who strongly agreed, and the remaining 3% were neutral as indicated in Figure 4.9.

4.5.4 Online Banking Platforms and Electronic Banking

In analyzing respondents’ views on whether online banking had enabled electronic transfer of funds to clients’ accounts, majority (78%) agreed, and the remaining 22% strongly agreed as indicated in Table 4.23
Table 4.23: Online Banking Platforms and Electronic Banking

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>25</td>
<td>78</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>7</td>
<td>22</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.5.5 Online Banking Platforms and Real Time Gross Settlement Services

This study sought to examine whether online banking platforms have a real time gross settlement service, 81% agreed this to be the case, 16% strongly agreed, while 3% remained neutral as summarized in Table 4.24.

Table 4.24: Online Banking and Real Time Gross Settlement Service

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Agree</td>
<td>26</td>
<td>81</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.5.6 Online Banking Platforms Convenience

Respondents of this study were asked whether online banking platforms had created convenience for banks service delivery, majority, 75%, agreed, 19% strongly agreed, and the remaining 6% were neutral as indicated in Table 4.25.

Table 4.25: Online Banking and Real Time Gross Settlement Services

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Agree</td>
<td>24</td>
<td>75</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.5.7 Online Banking Platforms Effect on Electronic Bank Services

On the issue on whether online banking platforms had enhanced electronic bank services, 69% agreed, while the remaining 31% strongly agreed as indicated in Table 4.26.
Table 4.26: Online Banking Platforms Effect on Electronic Banking

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>22</td>
<td>69</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>10</td>
<td>31</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.5.8 Online Banking and Customer Feedback Channels

This study sought to examine the effect of online banking system on customer feedback channels. Majority, 85% agreed that online banking platforms had enhanced customer feedback, 9% strongly agreed, while 6% were neutral as indicated in Table 4.27.

Table 4.27: Online Banking and Customer Feedback Channels

<table>
<thead>
<tr>
<th>Scale</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Agree</td>
<td>27</td>
<td>85</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.5.9 Correlation Analysis between Mobile Banking Agency and Service Delivery

A correlation analysis was conducted between mobile banking platforms and service delivery. The findings show the existence of a significant relationship between mobile banking platforms and service delivery ($r = 0.636^{**}$, $p$ value = 0.000). This implies that mobile platforms and service delivery are positively correlated as summarized in Table 4.28. The implication is that increasing investment in mobile banking agency would yield significant increase in service delivery.

Table 4.28: Correlation between Mobile Banking Agency and Service Delivery

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Delivery</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>32</td>
</tr>
<tr>
<td>Mobile Banking Platforms</td>
<td>Pearson Correlation</td>
<td>.636^{**}</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>32</td>
</tr>
</tbody>
</table>

**Correlation significant at 0.01 (2-tailed)
4.5.10 Linear Regression Analysis

Since there existed a significant relationship between mobile banking platforms and service delivery, a linear regression analysis was conducted to establish the strength of the relationship. The regression revealed an $R^2$ which is a coefficient of determination used to measure of establish strength of relationship. The adjusted $R^2$ was 0.511, which means about 51% of mobile banking platforms can explain the variability in KCB’s service delivery. The remaining 49% was not considered in this study and therefore could not be explained under this linear regression model as indicated in table 4.29.

Table 4.29: Summary of Linear Regression Model

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.636a</td>
<td>.514</td>
<td>.511</td>
<td>1.89641</td>
</tr>
</tbody>
</table>

An analysis of variance (ANOVA) was conducted to test model fitness for the data using the F-value test. The findings show an F-value (1, 30) = 4.513, $p < 0.05$. This means that there exists a statistically significant effect of mobile banking platforms on service delivery at Kenya Commercial bank since the $p$ value is less than the required threshold of 0.05 as summarized in Table 4.30.

Table 4.30: ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sun of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>1</td>
<td>416.432</td>
<td>4.513</td>
<td>.000b</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>30</td>
<td>6.531</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>31</td>
<td>300.552</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Service Delivery  
b. Predictors: (Constant), Mobile Platforms

4.6 Chapter Summary

Research findings and results have been presented in this chapter. First, the findings the effect of mobile banking applications has been presented, which revealed the existence of a significant relationship between mobile banking applications and service delivery. Secondly, the study also has established the existence a significant relationship between mobile banking agency and service delivery. Finally, this study has also established the existence of a
significant relationship between mobile banking platforms and service delivery at KCB. Chapter five has presented study summary, discussion, conclusion, and recommendations.
CHAPTER FIVE

5.0 DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

The chapter presents the summary of discussion, conclusion and recommendations. It starts with followed by discussion of the findings based on each research objective, conclusion for each research objective, and recommendations for each research objective in that order.

5.2 Summary

The purpose of this study was to determine the effect of mobile banking innovations on service delivery at Kenya Commercial Bank. The following specific objectives were used: To analyze the effect of mobile banking applications on service delivery at Kenya Commercial Bank; to assess the effect of agency mobile banking agency on service delivery at Kenya Commercial Bank, and to determine the effect of online mobile banking on service delivery at Kenya Commercial Bank.

A descriptive research design was used to guide the study as it enabled researcher to collect data that could be used to describe characteristics of study subjects through descriptive and inferential statistics without influencing the study subject. The target population of this study consisted of middle to senior level managers working at KCB headquarters and bank branches within Nairobi Central Business District. Stratified and purposive sampling were used on a sample size of 40 managers drawn from Nairobi KCB branches. A structured questionnaire was used to collect primary data, which was analyzed for percentages and frequencies, correlations, linear regressions, and multiple regression using Statistical Package for Social Sciences.

In determining the effect of mobile banking applications on service delivery at KCB Majority, 94% noted that agency mobile banking had enhanced flexibility in terms of service delivery, 85% indicated that as a result of mobile banking agency, services are being delivered in a convenient manner, while 94 % were of the view that the banks loan portfolio had increase as a result of agency banking. The study, findings established the existence of a statistically significant relationship between mobile banking applications and service delivery, r (0.812); p value <0.05.

This study also sought to establish the effect of mobile banking agency on service delivery at KCB. Majority of respondents, 94% indicated that mobile banking agency had increased
service delivery to customers. Equally, 97% of respondent noted that agency banking had reduced cost of offering banking services, while 91% believed that agency banking had led to service innovation in the banking sector. The finding shows that there exists at significant relationship between mobile banking agency and service delivery at KCB, $r (0.748); p \text{ value} \ < 0.05$.

The study also examined the effect of mobile banking platform innovations on service delivery at KCB. The results show that majority (97%) respondents were of the view that online banking platforms had enhanced the banks service delivery. Additionally, 94% noted that online banking service security had also increased, while 94% indicated that online mobile platforms had enhanced feedback channels to customers. This study also established the existence of a positive relationship between online mobile platforms and service delivery at KCB, $r (0.636); p \text{ value} \ < 0.05$.

5.3 Discussion

5.3.1 Effect of Mobile Banking Applications on Service Delivery

One of the objectives of this study was to establish the effect of mobile banking applications on service delivery at Kenya Commercial Bank. This study found that there exists a significant relationship between mobile banking applications and service delivery. The contributing factors to the positive significant relationship is based on the fact that mobile innovations have covered a wide array of banking services including electronic transfers, account opening, payment systems, deposits and access to bank balances, credit and debit alerts. This finding supports arguments by Asfour and Haddad (2014) that mobile banking applications do increase customer satisfaction since the innovations associated with mobile technologies do not limit clients in time or physical space to access banking services. The ability for customers to transact via mobile phones from any place and still access their accounts, make payments and other funds transfers adds value to customers. Asfour and Haddad (2014) study in Jordan commercial banks had introduction and adoption of mobile banking application in Jordan had not only enhanced service delivery to clients, but also enhanced banks competitive advantage.

Similarly, this study has established that mobile banking applications increases convenience for accessing banking services by clients. This means that banks clients have access to multiple channels and services by using their mobile phones. Convenience has an important impact on customers ability for specific banks preference, and for accessing or signing up for specific banking services such as loans, deposits, transfers among others. This finding was supported by Kihara (2015) mobile banking application had availed a wide array of services including mobile money transfers, pay bill
services, loan to clients and accessibility to various wide range of banking services such as monitoring statements, and money transfer from one account to another that are important both to the commercial banks giving the service, and to the client seeking this services. Additionally, Chironga et al. (2017) had argues that mobile banking applications are essential in enhancing service delivery channels important banks. Additionally, Tinashe and Kelvin (2016) had argued that convenience in accessing payment services in payment services through mobile banking goes beyond the traditional banking norms, where clients had to physically visit a banking hall. This explains why most commercial banks have joined the fray in an attempt to grab the opportunity of creating various payments services available to consumers through mobile banking innovations.

This study has established that mobile banking applications have increase banks’ ability to offer loans and to manage loan portfolios. Customers can access loans by simply loading the digital loan pages and submitting them electronically. This argument is supported by Asfour and Haddad (2014) who also maintain that loan applications that have been integrated with mobile banking make it easy for managers to loan portfolios and databases with customer information loan details. The loan application system can use a calculator in giving the exact payable loan amount for the client and generate all the details of each customer. By integration loan application systems into the mobile phone applications has enabled commercial banks to reach any client with a smart phone within their region of operation.

This study found that mobile banking innovation have increased service delivery, particularly the adoption of mobile money transfer. Mobile banking began with the creation of services by commercial banks that could be accessed through the mobile phones and these facilities aimed at helping the consumer access all the information relating to their accounts. This argument has been posited by Frempong (2014), which aligns with the findings of this study. In Kenya particularly, commercial banks have benefited extensively from M-Pesa mobile money transfer services offered by Safaricom Ltd, as they are able to develop applications that link a client’s bank account to the mobile phone device. As such, a customer is able to check his balances, access minimum or available credit limits, debit alerts and notifications that is not possible under the traditional system of banking. Kangethe (2013) had further argued that in Kenya, the mobile banking services are available to the mobile users of the three major telecommunication companies namely Airtel, Safaricom and Telkom in which users that are registered with these networks are able to access mobile banking services and carry out different transactions at their convenient time and place. This means that
commercial banks like KCB can take advantage of all mobile telephony service providers by linking their clients who operate KCB accounts access to their bank accounts. Critically compare your findings and what already exists as reviewed in chapter two

5.3.2 Effect of Mobile Banking Agency on Service Delivery

This study sought to examine the effect of mobile banking agency on service delivery at Kenya Commercial Bank. This study found that mobile banking agency has a significant positive relationship with service delivery at Kenya Commercial Bank. The agency banking had made it possible for the bank to reach more clients that use of traditional banking halls. This finding supports arguments and findings by Chironga et al. (2017) who argued that the impact mobile banking agency had been more pronounced in the rural areas where access to traditional banking was difficult due to lack of banking infrastructure. Further, they argued that mobile banking agency was critical link in service delivery to larger populations as they could access services through mobile money agents, and not necessarily have to go to a bank.

On the other hand, Gowanit and Chaiyawat (2016) noted that due to the ability for mobile banking agency to reach more clients with service delivery, commercial banks were adopting this approach as a strategy to provide service to customers around the world. Agency banking, therefore, as confirmed by the findings of this study, enables customers to access banking services such as cash deposits, cash withdrawals, money transfers and payment of bills. However, despite the positive relationship as established by this study, Muisyo and Alala (2014) had argued most banking customers had not entirely adopted the use of existing agents, as majority still use traditional banking halls. This is probably associated to limited scope in services an agent is allowed to engage in by their respective banks.

This study found that mobile banking agency had enhanced financial inclusion which enables those who would otherwise be excluded from banking service either due to location, distance, accessibility to be reached. Kenya Commercial bank, just like any other commercial banks in Kenya is striving to make services and banking products available and easily accessible to target clients. Mobile agency, therefore, makes it possible for populations outside the mainstream traditional banking system to access formal financial services. This finding is confirmed by a study by Kant and Jaiswal (2017) who found that mobile banking agencies had facilitated banking for customer that are in remote in Kenya who would otherwise travel long distance to access banking services. As such, businesses and individual customers have access to useful and affordable bank services and products, being delivered in an efficient and
sustainable manner. Similarly, a study by Musau, Muathe and Mwangi (2018) to determine how agency banking had contributed to the performance of commercial banks in Kenya in terms of service delivery, revealed that more that 6.7 million of the adult population living in rural area are either unbanked or underbanked could now access banking services through mobile agency banking services, which are in line with the findings of this study.

This study found that mobile agency banking had reduced the cost associated with traditional banking services. Similar findings had been established by Coderias (2017) noting that agency banking had indeed reduced costs associated with establishing branches as well as cutting down on employment costs while at the same time banking services are offered to the customers in diverse geographical locations. As such, commercial banks have also found efficiency in mobile banking agencies as a strategy for them not only to increase efficiency in service delivery, but also enhance their market share by offering a wide range of services to their customers in varied geographical places. Critically compare your findings and what already exists as reviewed in chapter two

5.3.3 Effect of Online Mobile Banking Platforms on Service Delivery

One of the objectives of this study was to establish the effect of mobile banking platforms on service delivery at Kenya Commercial Bank. According to the findings, there exists a significant relationship between mobile banking innovation platforms and service delivery at Kenya Commercial Bank. As posited by Gateme and Magutu (2014), online mobile banking innovations had become essential in the banking industry, in that it allows commercial banks to offer prompt and efficiency services. Online mobile banking systems tended to have limited instant customer complaints as well as grievance mechanisms. However, this could not outweigh the benefits accrued by commercial banks in enhancing service delivery channels available through the online mobile banking systems.

The study found that electronic banking had enhanced Kenya Commercial banks service delivery to customers. This is because online banking system was considered to add significant value on efficiency required to deliver products or services to a client in the shortest time possible, as compared to traditional banking hall system. Kahandawa and Wijayanayake (2014) had argued that online mobile banking system is important in-service delivery but noted that the system is more complex that presented by most commercial banks. For instance, online systems do support the use store value cards that must pass through complex payment system before completing payment, which does complicate customer’s
willingness or eagerness to utilize the online banking systems, despite the obvious stated benefits. On the other hand, Gatembé and Magutu (2013) had argued that online mobile banking systems are enhance commercial banks service delivery since they have extended functionality, they allow customers to engage in services such as online shopping. This provides customers the convenience of utilizing electronic money through their credit or debit cards, than having to carry cash money for every business transaction. Online transactions would not be possible since a client in Kenya might be purchasing a product on Amazon in Europe, were they relying on traditional banking hall payment systems.

This study also found that online mobile banking platforms such as Real Time Gross Settlement (RTGS) enhances service delivery for commercial banks. This is because RTGS offers the quickest money transfer system across financial institutions via the banking networks. This finding confirms arguments by Muhoro and Mungai (2015) that RTGS offers mechanisms through which commercial banks conducts payments and disbursements instantaneously, which can be done on mobile platforms as opposed to traditional banking. As such, based on the findings of this study, and building on the arguments by Muhoro and Mungai, I could argue that making payments and disbursements through RTGS is the most efficient and effective way for commercial banks service delivery.

It is therefore important to note that as far as service delivery is concerned, RTGS innovation in the banking sector is has led to improvement in channels of service delivery to customers. Settlement on real time basis means that customers do not have to wait because imbursement is reflected as final and irreversible that real time gross settlement. This means that less time, energy, and effort is used to implement RTGS payment systems. This is important particularly, in business transactions that require efficiency in access to other products and services. One of challenging factor about RTGS as compared to other online banking platforms is that it incurs extra cost to the client to access and use the convenience and efficiency associated with the service. However, one could argue that this is a necessary cost a customer should be willing to pay for efficiency in service delivery as one accorded by RTGS.

5.4 Conclusion

5.4.1 Effect of Mobile Banking Applications on Service Delivery

The overall findings of this study on the effect of mobile banking applications on service delivery show the existence of a significant relationship between mobile banking applications
and commercial banks service delivery. Therefore, the study concludes that creating mobile banking applications is essential for commercial banks service delivery. Mobile banking applications that are essential for effective service delivery consists of payment service applications, mobile money transfer applications, mobile loan application and processing systems.

5.4.2 Effect of Mobile Banking Agency on Service Delivery

This study sought to examine the effect of mobile banking agency on service show the existence of a significant relationship between mobile banking agency and service delivery. In this regard, adopting mobile banking agency is one of the most effective ways of enhancing commercial banks service delivery. Some of the way’s agency banking can enhance accessibility to banking services, financial inclusion of the underbanked and unbanked populations, and efficiency in service delivery.

5.4.3 Effect of Online Mobile Banking on Service Delivery

On the specific objective on whether online banking platforms affects commercial banks service delivery, the study has established the existence of a significant relationship between online mobile banking platforms and service delivery in commercial banks. This study concludes that commercial banks that adopt and incorporate online mobile banking platforms have a higher chance of enhancing service delivery to their customers. Online mobile banking platforms that are essential to service delivery include the electronic money transfer platforms, and the real time gross settlement (RTGS).

5.5 Recommendation

5.5.1 Recommendation for Improvement

5.5.1.1 Effect of Mobile Banking Applications on Service Delivery

On the effect of mobile banking applications on service delivery, this study recommends that commercial banks should adequate and versatile mobile banking applications beyond money transfer and loan applications. This will enable clients to engage commercial banks on a wide array of services and products, and thus, enhance effectiveness and efficiency in service delivery. It is equally important that commercial banks provide necessary and sufficient educational materials to enhance clients’ knowledge and awareness of the mobile banking applications, and benefits of utilizing this application.
5.5.1.2 Effect of Mobile Banking Agency on Service Delivery

The second objective of this study sought to examine the effects of mobile banking agency on service delivery. The findings have established the existence of a significant relationship between mobile banking agency and service delivery in commercial banks. Therefore, the study recommends that Kenya Commercial bank should invest more in developing and establishing agency banking networks across the country. This approach will enable the bank to reach not only those who are within the bank’s coverage regions, but also the underbanked and unbanked populations.

5.5.1.3 Effect of Online Mobile Banking Platforms of Service Delivery

On the issue on whether online mobile banking platforms had an effect on the commercial bank’s service delivery, the study has established the existence of a significant relationship between the online banking and service delivery. To enhance service delivery, this study recommends that Kenya Commercial Bank, and other commercial banks in Kenya should invest more financial resources in establishing and developing mobile banking platforms such as electronic payment systems beyond the debit and credit cards that are currently widely issued. There is need also for commercial banks to make applications that utilize online banking platforms to conduct online real time gross settlements.

5.5.2 Recommendation for Further Studies

The main purpose of this study was to examine the effect of mobile banking innovations on commercial banks service delivery. Variables explored under this study included mobile banking applications, mobile banking agency, and online mobile banking platforms. These variables are not exhaustive in explaining factors that contribute to effective and efficient service delivery in commercial banks. Future studies should focus on other emerging mobile banking innovations not covered under this study.
REFERENCES


APPENDICES

APPENDIX I: RESEARCH QUESTIONNAIRE

SECTION I: Demographic Information

Kindly respond to the questions below by ticking in the boxes. Where space is provided you can write your answer.

1. Name (optional) __________________________________

2. Kindly indicate your gender.
   Male □
   Female □

3. What is your age bracket?
   18-30 yrs. □
   31-40 yrs. □
   41-50 yrs. □
   51-60 yrs. □
   Over 61 yrs. □

4. What department do you work in?
   Finance □
   Customer Service □
   Marketing □
   Sales □
   Operations □
   IT Department □
   Other (specify) ________________________________

5. What are your years of work at KCB Bank?
   1-3 years □
   4-6 years □
   7-9 years □
   10-12 years □
   13-15 years □
6. Kindly indicate your designation at KCB.

     Mid-level Manager [ ] Senior Manager [ ] Supervisor [ ]

**SECTION II: The Effect of Mobile Banking Applications on Service Delivery**

This section contains questions on the effect of mobile banking applications on service delivery. Kindly tick ( √ ) the appropriate answer. (Strongly disagree = 1; Disagree = 2; Neutral = 3; Agree = 4; Strongly Agree = 5)

<table>
<thead>
<tr>
<th>Mobile Banking Applications</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Mobile banking applications have enhanced your service productivity.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Mobile banking applications have created flexibility in terms of service delivery for your customers.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Mobile banking applications have eliminated service delivery costs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Mobile banking applications have brought convenience in your service delivery channels.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Mobile banking application has expanded your loan portfolio through loan application service delivery to your clientele.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Mobile banking application have enhanced payment services.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Mobile banking applications have increased your service usage due to its convenience.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Mobile banking applications have enhanced innovative service delivery channels in your bank.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SECTION III: The Effect of Mobile Banking Agencies on Service Delivery**

This section contains questions on the effect of mobile banking agencies on service delivery. Kindly tick ( √ ) the appropriate answer. (Strongly disagree = 1; Disagree = 2; Neutral = 3; Agree = 4; Strongly Agree = 5)
Mobile Banking Agencies

15. Mobile banking agencies have increased your service availability.

16. Mobile banking agencies have enhanced your service delivery.

17. Mobile banking agencies have increased your service accessibility.

18. Mobile banking agencies have created new channels for your service delivery.

19. Mobile banking agencies have helped your bank cut down costs associated with service delivery.

20. Mobile banking agencies have increased efficiency in your service delivery.

21. Mobile banking agencies have enhanced financial inclusion.

22. Mobile banking agencies have expanded your service offering.

SECTION IV: The Effect of Online Banking Platforms on Service Delivery
This section contains questions on the effect of online banking platforms on service delivery. Kindly tick (√) the appropriate answer. (Strongly disagree = 1; Disagree = 2; Neutral = 3; Agree = 4; Strongly Agree = 5)

Online Banking Platforms

23. 

24. Online banking platforms have enhanced security in service delivery.

25. Online banking platforms have ensured 24 hours service delivery to your clients.

26. Online banking platforms have enabled electronic funds transfer service in your bank.

27. Online banking platforms have Real Time Gross Settlement Services.
28. Online banking platforms have created convenience in terms of service delivery in your bank.

29. Online banking platforms has enhanced electronic banking services.

30. Online banking platforms supports your customer service response services.

Thank you for your participation