

EFFECT OF MOBILE BANKING FINANCIAL INCLUSION ON THE PERFORMANCE OF COMMERCIAL BANKS IN WEST POKOT COUNTY KENYA

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Abstract: Financial inclusion is an important issue due to high numbers of people not banking in developing countries. The use of mobile phones makes access to financial services easier to the consumers and in return reducing the operation costs of the financial institutions. The financial sector in Kenya has heavily continued to invest in mobile related technology innovations and manpower trainings to cover the skills gap that might be experienced. The growing investment in mobile technology and bank financial inclusion in Kenya needs various studies to establish how mobile banking financial inclusion has impacted on commercial banks from various counties. The study was done in West Pokot County. The main aim of the study was to examine the effect of mobile banking financial inclusion on the performance of commercial Banks. The specific objectives are; establishing the effects of network distribution and mobile money services enrolments on the performance of commercial banks. Assessing the effects of the number of mobile banking transactions on performance of commercial banks. Finding out whether mobile banking services and products meet the needs of the consumers and finally assessing the value of mobile money transaction and performance of commercial banks. The study adopted a descriptive research design. The target population included all 157 staffs in the 6 commercial banks. The study collected primary data by use of structured questionnaires. Questionnaires were administered by the drop-off and pick-up later method. Descriptive analysis was used to draw important conclusions and deductions with regards to the study objectives. Multiple regression analysis was done to assess the relationship between the independent variable and the dependent variables. Data was presented in form of table, graphs, figures and pie chart forms. The results of the study revealed that financial inclusion through the specific objectives of the study that is network distribution and mobile money services enrolments, mobile banking services and products and the value of mobile money transaction significantly affected performance of commercial banks because most if not all respondents agreed with the questions asked while the number of mobile banking transactions didn't affect the performance of commercial banks. The study concluded that network distribution and mobile money services enrolments significantly affected performance of commercial banks. The enrolment of new mobile agents in the region led to increased number of mobile subscribers thus more bank customers through mobile banking. Mobile banking services and products significantly affected performance of commercial banks. The provision of diversified loan products have improved the banks' loan books. Value of mobile money transaction significantly affected performance of commercial banks. Banks have experienced increased deposits. Saving rate of locals has increased. The number of mobile banking transactions didn't affect the performance of commercial banks. Deposits significantly influenced performance of commercial banks. Diversified financial service offering has increased the number of customers in our Bank. The study recommends that communication authority of Kenya should provide conducive regulatory environment that facilitates network distribution. Commercial banks in Kenya should enhance the rate at which customers' access loans as this would significantly result into enhanced performance. The Central Bank of Kenya should formulate sound monetary policies that increase accessibility to credit and this shall improve living standards of locals in an economy.

Keywords: Value of mobile money transaction, mobile banking services and product, network distribution and mobile money services enrolments and performance of commercial.

I. INTRODUCTION

Background of the study

Financial inclusion also known as inclusive financing refers to the act of ensuring that financial services can be accessed by many at an affordable cost both individual and business entities irrespective of net worth and size. It tries to address issues that hinder people from being part of the financial sector. Financial inclusion is an important fundamental concept of development policy globally (IMF, 2011). This comes about because financial inclusion is important factor to consider when it comes to abject poverty reduction, furthering collective growth and development (World Bank, 2011). Mobile banking technology facilitates the carrying out of financial transactions through mobile phones. Guitterez and Singh (2013) described mobile banking as the act of using mobile phones to carry out financial and banking transactions. Klein and Mayer (2011) on the other hand said that mobile banking is the use of mobile phones to make financial transactions. Mobile banking too may be referred to as the use of a mobile phone to carry out transactions on one's bank account which must be linked to the phone number of the customer. Mobile banking in the current innovative world is a key area of financial innovation making it a major booster of financial inclusion. Developing countries do not fully embrace financial inclusion. Kent and Klapper (2012) said that half of adults in the world have not formally accessed bank accounts and the number is higher amongst low middle income individuals among developing countries although they do own a mobile phone. For this reason, there is a potential to reach the traditionally undeserved population portions (Guitterez and Singh, 2013). Mobile banking offers financial facilities like transfer of cash, payment of bills, savings and financial services not having to rely on cash to informal populations which didn't have access to formal services (Claire and Katama, 2013).

With about 2 billion people, and at least half of being adult's population, lack one of the most basic amenities of modern life: a bank account. They belong to the less fortunate group struggling to fend for their families. This is very common in volatile states and developing countries. In this areas financial sectors function less effectively and vulnerable people need access to delivered financial aid just to stay alive. The International Finance Corporation which is the World Bank's investment arm, approximates that about 200 million formal and informal enterprises in developing economies are either unserved or underserved in terms of their financing needs. Because of this the United Nations, World Bank and the World Economic Forum, launched a commitment for Universal Financial Access by 2020 which covers 25 countries and whose population is financially excluded. Various actors, both from public and private, have committed to creating approximately 1.5 billion accounts for unbanked and under-banked people. Any economy to experiencing growth and development needs a strong and sturdy financial system although banking facilities must be available to facilitate developmental and expansionary activities. Information technology is very key in promoting inclusivity although not all technologies are suitable for financial inclusion due to factors such as privacy, accessibility, security and affordability. In the past ten years mobile phone technology has proved to be the most potential and well suited channel for financial inclusion owing to the fact that many own this gadget and it's easier to operate regardless of your literacy levels. For any given nation to achieve complete financial inclusion, the following factors are of much importance; financial services should be reachable to every one; this is so often seen as the objective of financial inclusion, financial services provided should also be of value: quality financial inclusion is characterized by ; convenience, product fit, safety, dignity of treatment, affordability and client protection. Financial inclusion involves provision of complete collection of fundamental financial services such as loans, deposits, funds transfer insurance cover and payment services (Gradeva and Rhyne, 2011).

Money transacted through the mobile platform has an effect on financial inclusion process as it gives an assortment of markets instruments permitting access to financial services (Sarma, & Pias, 2010). Mobile loans have been introduced to provide loans to the less fortunate individuals depending on one's limit as allocated to by the financial institutions in addition to old fashioned loans and savings clusters/ groups (Ngugi, 2015). The financial sector day in day out is innovating new and seamless ways to provide financial services to the global population which has led to many being brought on board in participating or contributing to the financial sector? Innovation of fintech has led to a way in which people can access financial tools and services at a reasonable cost. Some of its developments that have been embraced by consumers of financial services are insurance telematics, peer to peer (P2P), digital payments, crowd funding etc. With all innovations that have brought many on board in the money sector, there is still some world populations that still remains unbanked or is under banked. In 2016, from the statistics of the World Bank around 2 billion people worldwide don't use formal financial services and the greater percentage of this are adults from poorest households who do not own a bank

account, this may be due to their negative attitude towards the financial system. World Bank Group created an initiative called Universal Financial Access 2020 which is taking measures to ensure that the unbanked community has access to simplest and oldest banking platforms like checking account balances by 2020. They classify people basic transaction accounts as under banked: these are adults who own normal bank accounts but are not privy to the digital incorporation of these transactions (such as digital payments). Because having a basic bank account is the foundation on which disruptive innovations are built, therefore fintech tries to offer the under banked a platform of financial digital inclusiveness.

In rural areas there is little access to bank premises therefore the under banked users mostly carry out transactions in cash or cheques exposing them to theft and street frauds. In case of being able to access the banks or financial institutions, carrying out of the financial transactions such as cash deposit, cheques cashing, money order and funds transfer may be high in terms of transaction fees. Fintech, telecommunication and banking institutions have been and are still working hand-in-hand to invent more mobile payments and micro lending facilities for financially under banked populations. Numerous online payment and commerce systems incorporated with cell phones have been built to facilitate the ease with which this underserved population can also be part of the digital economy. Examples of popular apps that have been created to foster financial inclusiveness include China's Alipay and India's Paytm Wallet, serving 450 million and 122 million users in 2016, respectively. In the global market there are many opportunities for fintech. However, access to a number of markets is impeded by the unbanked groups, who do not believe in the financial institutions and opt to conduct all their transactions via cash. To alleviate this challenge, fintech companies have come up with innovations that promote transparency in their dealings with customers. Examples of these innovations include telematics insurance technologies which in a way furnish policy owners with premium rates based on number of miles used; digital currency transactions that use block chain ledgers technology to give the details about the nature of the dealings and those involved in the online sphere; robo-advisers who openly disclose and offer low fees for customers who do not have access to traditional financial advisers because of high fees charged; and peer-to-peer (P2P) lending sites that promote financial transactions where individuals lend and borrow from each other. P2P lending which is of benefit to the emerging-market participants who can't access loans from financial institutions because of poor credit record, lack of financial history and may be lack of collaterals or guarantors to secure the facilities. The process of financial inclusion has been made successful because of mobile money which provides markets instruments that enable access to financial services. Mobile banking as the most common mobile money concept enables consumers to perform banking transactions such as checking of account balances, funds transfers, bill payments. Mobile money also has features that encourage saving culture without requiring minimum account balances and other traditional banking fees (Gaurav, 2007). Mobile credit services too have been made available on mobile money services provide micro loans to low-income individuals, who initially accessed funds through table banking done in self-help groups. Mobile banking is helping mobile operators and the financial industry collaborate to deliver affordable financial services that provide safety, security and convenience to millions both banking and not banking. Mobile banking serves as a platform for efficient exchange of goods and services by reducing transactions time at the point of sale, providing versatility by enabling customers to use a single device for multiple services (Jenkins, 2008). Fintech has been on the rise as each day passes therefore, mobile banking financial inclusion seeks to promote the betterment of the world's population through the use of financial services and tools available in an increasingly digital-based economy.

Global perspective of mobile banking financial inclusion and bank performance

Use of mobile money has led to reduced risks thus providing wide coverage through the use of a communications infrastructure that is used by millions of people (Jenkins, 2008). The disadvantages that come along with handling physical cash include theft, loss of funds, delayed remittance or delivery of cash to the beneficiary and also funds not intended beneficiary. These informal means of transacting have resulted in considerable delays which according to me is a cost through time lost. In an effort to provide financial access to every citizen, the financial authorities led by the Central Bank of Kenya and Ministry of Finance have consistently advocated for the banks, other financial institutions and all stakeholders in the financial sector to come up with innovative products that are affordable to all. Hannig and Jansen (2008:2) in their research found out that financial services to those not banking had become a major area of interest for policymakers, practitioners, stakeholders in financial sector and academicians who are increasingly emphasizing financial inclusion as a policy objective so as to bring more if not all on board in trying to bridge the gap between the rich and the poor. In the United States of America, the Community Reinvestment Act (CRA) which was introduced by the Government was seen as a good initiative to deal with the unbanked or under banked populations, this led positive impact in lending to

black and Hispanic Americans which had increased in areas that were being regulated by CRA. (Kempson et al., 2004). The Australia Government too partially sold Telstra (the telecommunication company) to raise A\$70 million to allow for the provision of banking and other transactional services to the communities without banking facilities through the Rural Transaction Centre (RTC) set up in post offices, stores or stand-alone facilities run by Councils (Kempson et al., 2004). The initiative was a success as per Kempson et al., 2004 and that at least 100 communities had benefited from the programme and more were still applying to be brought on board. Financial inclusion is still an issue being tackled by many developing countries such as India, Brazil, South Africa and Kenya that are still struggling to achieve inclusivity although have adopted mobile banking, to give banking access to the unbanked sector.

Regional Perspective of mobile banking financial inclusion and bank performance

African governments have adopted financial inclusion as one of the means to spur economic growth and development. To achieve financial inclusion of the poor, the evolution of mobile money has been cited as a game changing agent (IFC Mobile Money Report 2011). Petrova K. (2002) termed M-banking as the ability to conduct bank or financial transactions via a mobile device. This definition is simple and precise because it includes basic services such as bank account statements, funds transfer, account balances, account limits, loan account limits, debit and credit alerts, exchange rates, prices for commodities on stock exchange etc. Mobile banking is termed as an invaluable and powerful tool as it's the driving force for development; it supports growth, promotes innovation, and also enhances competitiveness (Nath, R. et al, 2001). The remarkable progression of mobile sector all over the world has made an exclusive chance for delivering financial as well as social services through mobile network (Kabir, 2013). Mobile Banking as an innovation has led to the elimination of the time as well as space shortcomings from banking operations like, funds transfer one account to another account or to other banks, bill payments, balance requests etc. (Mishra and Sahoo, 2013). It enhances efficiency, offers access to financial and banking services, generates new opportunities for income generation and improves governance and also giving poor people a voice in the society by them contributing towards economies growth directly or indirectly. In Zimbabwe, the Reserve Bank has always been championing for the adoption of strategies that promote financial inclusion by the financial institutions. In 2006 the Reserve bank Monetary Policy Statement affirmed that the majority of Zimbabweans had no access to financial services. A study that was done by FinMark (2012) revealed that 65% of the Zimbabwean population occupy rural areas and that out of that only 5% do have access to a bank which can be accessed within 30 minutes. In recent years banks in Sub Saharan Africa have focused on developing innovative products and offered a wide range of services in an effort to increase efficiency and maximize on profits which is the ultimate goal of banks. Various definitions have been generated when discussing the provision of financial services through mobile phone networks, this study uses the increasingly popular term mobile money to refer to the convergence of mobile telephone and financial services. Kigen (2010), through his investigation said that m-banking involves the use of a mobile phone or another mobile device to undertake financial transaction linked to a client account. Kingoo (2011) on the other hand referred to mobile banking as the provision and availing of banking and financial services with the help of mobile telecommunication device. In Africa as a whole the advancement in technology has seen an increase in financial services access by its inhabitants because they can use their mobile phones to transact at their comfort.

Kenyan Perspective of mobile banking financial inclusion and bank performance

Mobile banking is a portable service provided by banks or other financial institutions which allows its clients or customers to conduct financial transactions remotely. Mobile banking services in Kenya has been embraced by all banks, SACCOS, MFI's because Kenyans find these services very accessible and convenient. Mobile banking has generally revolutionized how Kenyans conduct transactions in the long run reducing the long queues in banking halls that have been experienced for long. I will highlight a few of the mobile banking applications that make banking easier to each individual, business entity, corporate organizations include: KCB - The KCB Bank Limited has the KCB app which accessible to all KCB bank customers in Kenya and its subsidiaries. The application has features that safeguards the customers' details, in that users are required to complete a transaction by use of the passwords sent to their phone numbers for authentication before completion of any transaction, Cooperative Bank's application is called MCo-op Cash which enables Cooperative bank customers to access their accounts on the mobile phone platform, Equity Bank has an app called Eazzy Banking which has been incorporated with Equitel money making it very easy, convenient for equity customers who get most of their financial solutions on this application, Barclays Bank which is one of the oldest banks in Kenya and Africa as a whole has been in the financial business for quite some time and for not being left behind launched

its mobile application that serves both personal and business clients all over the country, Family Bank has a mobile banking platform called PesaPap which has enabled family bank customers to transact at the comfort of their mobile phones and its USSD short code is *325#, on the other hand NIC Bank Kenya app is basic just like for other banks and offers its clients services like money transfers, mini bank statement, account balances, bill payments etc. Eco bank Kenya – the Eco bank's app, has been integrated with many functions such as, Master pass QR, a mobile payment solution designed and operated in partnership with MasterCard to the phone, for National Bank its Nat mobile application was launched few years ago after its rebranding. It offers its customers a wide variety of services and its accessed through USSD Code *625# and least but not least CFC Stanbic mobile banking has services like money transfers, account balances, bill payments thus providing easy, fast, convenient and secure way of accessing its services daily and at any time. These mobile applications have enabled customers to perform various bank transactions without having to access the banking halls. Some of the services available on the app include: funds transfer across the same banks accounts and to other banks, transactions here are real time; utility payments such as electricity, water payments, DSTV, ZUKU, GO TV, KPLC; funds transfer from accounts to Mpesa; purchasing of airtime for own mobile phones numbers or different mobile phone numbers; withdrawal of cash from the various bank agents and from the ATM machines; blocking of lost or stolen credit or debit cards; mini account statement and loan statement; request of various loan products i.e. salary advance, mobi loans e.t.c;

The speedy acceptance of mobile services in Kenya has proven the possibility of reaching the underprivileged by means of mobile technology and caused interest globally about what is conceivable with these kind of technologies (Fin Access 2016). Kenya launched Mpesa services in 2007 which as per Mbiti's and Weil's (2011:1) definitions it's a money transfer system operated by Safaricom, Kenya's largest mobile service provider. Mpesa allows its customers to send money to both registered and non-registered users, withdraw money from its agents and banks ATMs depending on their convenience, purchase airtime, save and borrow money under loans and savings option and above all conduct numerous bill payments which has been made possible through the creation of unique bill payment numbers. This product has been adopted by citizens from all walks of life thus reaching the previously excluded poor folks. Mpesa has a wide coverage due to its vast network distribution and the fact that it is used through the mobile phones which are now in possession of many people all over. Mpesa has continued to be one of the most fruitful mobile money transmission packages globally, this is evident by the high volumes of transactions and the values of monies being transacted all being attributed to lower transaction fees compared to banks. In 2012, Safaricom Ltd in partnership with Commercial Bank of Africa, one of the Kenya registered commercial bank, launched M-shwari product that automatically opens a bank account for M-pesa registered customers and operates fully like a bank account. With this kind of partnerships, the society stood a chance to gain more population being included in the formal financial sector (Kabbucho and Coetzee, 2010). In 2015, KCB bank limited together with Safaricom limited also launched a product called KCB mpesa, targeting all the mpesa customers. Through the product customers are able to borrow loans, open transactional accounts and also save money. A press release by KCB Bank limited dated 26th September 2016 stated that the Bank had extended its Financial Services to over 7 million Customers as at that time and over Ksh12 Billion of loans disbursed through KCB mpesa within a period of one year, meaning that on averagely each customer had accessed at least Ksh1800, however in 2019 KCB Mpesa mobile platform disburses at least Ksh 500 million loans monthly to all mpesa customers with good credit score giving a huge relief to those customers who do not have a formal account that can enable them get loan. The group CEO and Managing Director Joshua Oigara during the press release stated that the sharp rise in loan requests on all our mobile loans was because of the decrease in interest rates, meaning the mobile platform is still central in further deepening of the financial inclusion agenda. He further said that as one of the pioneering mobile loan services in East Africa, KCB mpesa would provide the financial solution to the unbanked, hence enhancing the financial inclusion agenda of the bank. In his press release the latest statistics he had showed that at least 40% of the loans that were being processed through KCB mpesa were below Ksh 500 and 57% below Ksh 1000, giving an indication that the service was providing affordable finance to users across all income levels. Mr Oigara said KCB mpesa, is a mobile-based account, and was accessible by all M-pesa users. Through their mobile phones, all the active M-PESA customers in Kenya are able to access instant micro loans from as low as Ksh 50 to Ksh 1 million for a period of one month to six months. One does not need to be a KCB Bank customer to enjoy the KCB mpesa service. This clearly shows how mobile banking financial inclusion affects the performance of banks.

The commercial banking industry in Kenya is governed through various acts namely: the Central Bank of Kenya Act, Companies Act, the Banking Act and the various prudential guidelines issued by the Central Bank of Kenya (CBK). The banking sector was liberalized in 1995 and exchange controls lifted. The CBK, which is under the Ministry of Finance formulates and implements monetary policy and fosters the liquidity, solvency and proper functioning of the financial system. As at December 2010 there were forty-four commercial banks and one Mortgage finance company (CBK Annual report, 2015). In the year 2007, the performance of commercial banks in Kenya was characterized by a strong growth in asset size and profitability. Asset growth i.e. the loans portfolio in the banking sector was mainly funded by increase in deposits being held by financial institutions and this is attributed to aggressive marketing campaigns for new deposits mounted by a number of institutions and rapid branch network expansion, and also deposits campaigns via mobile banking transfers. Kenya has succeeded in significantly expanding the reach of financial services over the past several years. Including mobile money transfer services, savings and credit cooperatives (SACCOs) and micro finance institutions (MFIs) all together, formal financial inclusion increased from 26.4 percent in 2006 to 40.5 percent in 2009, this is as per the CBK annual report, 2012. There are several factors that have contributed to greater level of inclusion; the expanding reach of three major types of financial service providers, the identification of financial inclusion as a national priority (as stated in the Kenya vision 2030 national planning document) and the accessibility brought about by innovative electronic payment systems.

Statement of the Problem

In Kenya a financial access survey was conducted in 2018 revealed that 38 per cent of the adult's Kenyan population lack access to financial services. This population is excluded from formal banking institutions due to high costs of maintaining bank accounts and some barriers like fear of unknown, proximity, complexity of the process. According to the CBK's (2015) annual report, the enactment of the Microfinance Act was expected to offer a wide range of financial services to this unbanked population, which will usher in more players and competitiveness in the banking sector. The banking sector comprised of 45 institutions, 42 of which were commercial banks, 2 mortgage finance companies and 1 non-bank financial institution as at 31st December 2012.

There has been fast adoption of mobile banking in Kenya, this being attributed to the drastic reduction of financial transaction costs, serving the unbanked population and risk diversification. However, the effects of inclusion of mobile banking to the financial sector and economy at macro levels have not been studied. This calls for a macro approach of mobile banking with specific focus to financial inclusion which is a key indicator of financial development and economic development. This study will attempt to analyze mobile banking data in relation to financial inclusion variables to establish possible relationship that exist between the two concepts. Innovation of the mobile banking services has revolutionized the way the financial services industry conducts business, empowering organizations with new business models and new ways to offer 24 hour accessibility to their customers. The ability to offer financial transactions over the mobile phone has also created new players in the financial services industry, such as mobile phone service providers who offer personalized services. This is evident with the prevalent use of M-pesa, Airtel Money and Orange Money. The real time money transfer over the mobile phones enables individuals in areas with no demand to acquire demand within seconds. Several studies have been done on mobile phone banking and financial inclusion concepts. Kigen (2011) studied the impact of mobile banking on transaction costs of microfinance institutions with Nairobi region as the study area. In his findings, mobile banking drastically reduced the transaction costs of microfinance institutions (MFI) thereby increasing the penetration level of the MFIs because of affordability. Otieno (2008) studied challenges in the implementation of mobile banking information systems in commercial banks in Kenya and established that the key challenges included high levels of online insecurities, fraud and low acceptance by the market. Wambari (2009) studied mobile banking in developing countries using a case study on Kenya where he established that m-banking has a positive impact on transfers, payments, deposits and withdrawals in financial transactions of small businesses. While in Zimbabwe a study carried out by Stephen Mago (PhD) and Sibert Chitokwindo in Masvingo province on the impact of mobile banking on financial inclusion and the results revealed that the low income people are willing to adopt mobile banking and the reasons are that it's easily accessible, convenient, cheaper, low charges, efficient and fast, affordable by all, it offers one stop shop and it's easy to use and secure. From the above discussions, many studies had been undertaken in mobile banking. However, no known study had been done to ascertain the relationship between mobile banking financial inclusions and performance of commercial banks in Kenya. This study therefore, aimed at filling the identified gap in knowledge concerning the relationship between mobile banking financial inclusion and performance of commercial banks with focus on west Pokot

County. The study sought to answer one research questions like the products fitness to all and if mobile banking offers solutions to financial inclusions by commercial banks in West Pokot Kenya?

Objectives of the study

General Objective

To determine the effects of mobile banking financial inclusion on the performance of commercial banks in West Pokot County, Kenya

Specific Objectives

- i.To establish the effects network distribution and mobile money services enrolments have on the performance of commercial banks in West Pokot County, Kenya
- ii.To assess the effect of the number of mobile banking transactions on the performance of commercial banks in West Pokot County, Kenya
- iii.To find out whether mobile banking services and products provided to meet the needs of the consumers in West Pokot County, Kenya
- iv.To assess the value of mobile money transaction on the performance of commercial banks in West Pokot County, Kenya

Research Questions

- i.How do network distributions and mobile money services enrolments have effects on the performance of commercial banks in West Pokot County, Kenya?
- ii.How do the number of mobile banking transactions impact on the performance of commercial banks in West Pokot County, Kenya?
- iii.How does mobile banking services and products meet the needs of the consumers in West Pokot County, Kenya?
- iv.Of what importance does the value of mobile money transaction have on the performance of commercial banks in West Pokot County, Kenya?

Significance of the Study

The findings of this study would be significant to a number of stakeholders including: Managers in commercial banks, government of Kenya especially the central Bank of Kenya, future scholars and researchers. The study will inform the managers of commercial banks on how accessibility of mobile financial services among its customers in west pokot affects performance of their banks. Findings of this study will significantly enhance strategy formulation and improved performance on their banks.It's hoped that the findings of this study will enable the central bank of Kenya to assess the effectiveness of policies governing financial accessibility within the county. This will open ways for other policy issues that need to be undertaken for the globally accepted financial levels in financial accessibility and depth it's reached for optimal economic development. Results of the study will assist future scholars and researchers since it will provide evidence verifiable by observation, on the effects of financial accessibility on financial performance of commercial banks. This will aid in enriching extend of empirical literature and also suggesting other areas for further research.The data from the study findings will help the government of Kenya to enhance benchmarking and drive policy maker's to work towards the agenda of financial inclusion. It's further hoped that the data will also enable identification of segments of the population left out of the formal financial sector, hence policy makers will enact reforms and track success of those reforms by use of future data that will become available.

Scope of the Study

The study focused on the effects of mobile banking financial inclusion on performance of commercial banks in West Pokot County, Kenya. The research was conducted West Pokot County, (Its capital and largest town is Makutano). The study's concentration was based on four independent variables namely: network distribution and mobile money services enrolments, number of mobile banking transactions, mobile banking services and products offered by financial institutions, and value of mobile money transaction while the dependent variable is financial performance of commercial banks. The research was carried out in the month of May, 2019.

2. LITERATURE REVIEW

Introduction:

This section looks at the theories onto which the study is anchored on. It also has a conceptual framework that links the independent and the dependent variables and the empirical review of studies done by previous scholars on same related subject and the research gap explaining the need to conduct this study.

Theoretical Review

This section presents the theories on which the study is under pinned on in view of the variables under study, the theories include: Financial Intermediation Theory, Diffusion of Innovations Theory and Silber's Constraints Theory of Innovation.

Financial Intermediation Theory

Financial intermediation refers to the process in which units holding surplus funds deposit in those funds in financial institutions who in turn lend to deficit units. This theory solely focuses on the role played by financial intermediaries in an economy. It is noteworthy that the financial sector plays a central role in financial intermediation in any economy by mopping surplus resources from households and channelling the same resources to households with investment ideas but limited in resources to invest (Christopoulos & Tsionas, 2004). This theory is premised on the information asymmetry and agency theories whose main focus is the moral hazard and adverse selection effects which consequently compels the organization to invest in some verification and auditing procedures to safeguard against individuals who may want to take advantage of the privilege of access to information in the organization (Towey, 1974). Scholters and Van Wensveen (2003) demonstrates that the function of the financial intermediary is fundamentally deemed as that of making specified financial products. These products are developed every time an intermediary discovers that the anticipated selling price for the products is higher compared to their production cost, thus falling the category of both direct and opportunity costs. Essentially, financial intermediaries are formed due to market imperfections. As such, financial intermediaries would not be present in a 'perfect market' condition with no cost relating to either transactions or information. Many markets have characteristics such as information dissimilarities between purchasers and suppliers. Unlike in perfect markets where all market participants have information about the borrower as well as savers; the imperfect market presents great challenges of information asymmetry which can be exploited to hurt the financial performance of banks (Fama, 1980). This theory is further explained from the transaction cost approach which holds that financial intermediaries help in improving efficiency in collection of information about deficiency households thus help reduce the transaction costs for the lender (Pyle, 1971).

Financial intermediation is perceived as the level to which institutions dealing with financial services bring negative spending components and positive spending components together (Ndebbio, 2004). A vital question that the model and concept try to give a solution to is why do investors principally loan financial institutions like banks who then advance to those that borrow, instead of loaning directly?. Opinions emphasize it to the fact that financial are able to efficiently assess individuals that borrow therefore play the part of given monitoring (Diamond, 1984). Diamond indicated that minimized monitoring charges are basis for this relative advantage. Diamond points out that financial intermediaries offer services by offering secondary financial assets to purchase primary financial assets. If an intermediary did not provide any services, those who invest and who purchases assets offered by intermediary may as well buy the primary securities directly and without having to incur the intermediation charges. Borrowers typically not only know their collateral but also their industriousness and moral integrity better than lenders. On the other hand, entrepreneurs hold critical inside information about their own business for which they seek financing (Liman, 2012). Therefore, this theory will be relevant to this study since it explains how mobile banking transactions namely deposits, loans requisitions, transfer of monies and airtime purchases impact on the performance of commercial banks.

Diffusion of Innovation Theory

Rogers (1962) developed the Diffusion of Innovation (DOI) Theory; its origin being in communication. The essence was to explain how, over time, an idea or product gains traction and permeates through a specific population or social system.

Okiro and Ndungu (2013) defined innovation diffusion as the process by which innovation transcends certain channels over time to reach members of social systems. The driving force behind the diffusion of an idea, product or behaviour are the perception of their innovativeness. (Rogers, 1971). According to the theory, there are several factors that influence innovation diffusion. Rogers (2003), points out those innovation adopters can be classified into five different categories on the basis of innovation uptake speed: there are innovators; early adopters; early majority, late majority and laggards. In essence, innovation adoption success will be dependent on early adopters since they have considerable influence over innovation adoption. The key to a smooth diffusion process is to improve on customer awareness of new technologies among the intended innovation users. This will emanate as a result of observing other users that use the technology. According to Robinson (2009), relative advantage of an innovation is the degree to which an innovation is perceived as better than the idea it supersedes by a particular group of users, measured in terms that matter to those users, like economic advantage, social prestige, convenience, or satisfaction. He opines that the greater the perceived relative advantage of an innovation, the more rapid its rate of adoption is likely to be. The reception, implementation and usage of banking over mobile avenues has the power to spread the limited personality and influence of the financial sector which is formal to the underprivileged and rural populace in Africa (Nyangosi, Arora and Sing 2009).

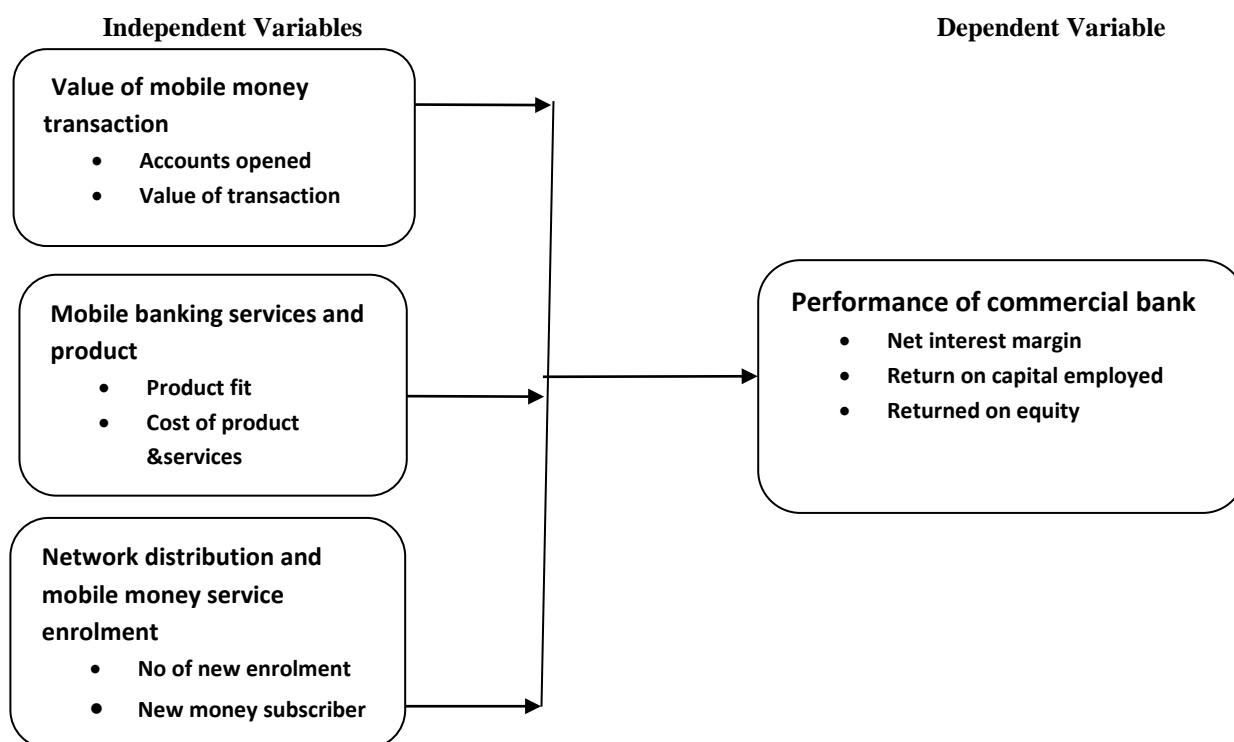
The adoption of innovation in an organization is beneficial since old processes are improved hence improving on overall performance. Archaic processes are eliminated when new systems are adopted thus leading to efficiency that translates to better organizational performance. Innovation will serve to simplify complex processes thus leading to few errors on part of employees hence improving on their productivity. New products and services will be introduced by organizations through innovation thus leading to customer loyalty that will positively affect performance of the organization. Even though diffusion theory only provides the framework to observe the adoption and impact of Information Technology over time, it gives little attention to user acceptance. The theory links innovation area characteristics and the drive for individual adoption decisions by staff and the innovation positioning (Rogers, 2003). This theory will then be important in expounding and explaining how mobile banking products and services have been adopted by the consumers and in the long run how is the adoption affecting the performance of commercial banks in West Pokot.

Silber's constraints theory of innovation

Silber (1975) relates financial innovation to initiatives by firms whose intentions are to maximize profits with a view to reducing the various limitations that lower profitability. The theory asserts that financial innovations are developed or acquired by financial institutions with the sole goal of maximizing profits. Silber observes that there are some limitation (including external and internal handicaps such as administration management) that stand on the way of profit maximization. While these boundaries ensure steadiness of management, they reduce the efficiency of financial institutions and as such, organization have to struggle to cover the cost off (Silber, 1975). Strangely, some research writings have shown that particular segments that are innovative in organizations are not highly profitable. Their reduction in profitability, which can be assumed to result from external competition or government control, has inspired these organizations to come up with new ways with a view to spurring profitability. This is in agreement with the propositions in the research of Silber that investment in innovation is a strategic reaction to competition that is not favourable therefore results in more profitability and improved performance (Silber, 1983). This theory is relevant in this study as it captures financial innovation. Mobile banking constitutes financial innovations and as such the financial underpinnings of Silber's Constraint Theory can be used to help understand the independent variables that is mobile money services enrolments, number of mobile banking transactions, mobile banking services and products and the value of mobile money transactions and how they are likely to relate with performance of commercial banks.

Conceptual Framework

Conceptual framework is a structure which the researcher believes can best explain the natural progression of the phenomena to be studied (Camp, 2001). In this study, the researcher is trying to look how independent variable impact on the dependent variable.



Review of variables

A variable refers to anything that has a quantity or quality that varies. Variables represent the measurable parameters that can change in the course of a research activity. The key to designing any experiment is to identify and monitor the research variables that could significantly affect the outcome. Although there are many types of variables, the most important for the most research methods, are the independent and dependent variables. The independent variables, which form the core of the experiment, are isolated and are at the disposal of the researcher to manipulate. On the other hand, the dependent variable is the measurable outcome of this manipulation, the results of the experimental design.

Mobile banking products and services on the Performance of Commercial Banks

Financial access can generally be categorized in two broad groups, one based on supply side of information from the angle of lenders, such as financial institutions and other service providers. The other based on demand side information from the angle of consumers, families or organizations. Some of the commonly used pointers for assessing financial inclusion are bank accounts (for example, per 100 adult population), bank branches number (per million people), number of automatic teller machines (per million people), amount and volume of bank loans/credit and level of deposits made in banks. Nevertheless, these indicators of financial access provide limited information on the inclusiveness of the financial system of in an economy and thus in turn, fail to gather all the facts required to fairly assess the level of financial inclusion. Formally encompassed families are deemed to be those who make use of financial services offered by bank accounts.

Recently, credit products like loans offered over mobile technology have been introduced to provide micro loans to the poor folks to supplement old fashioned loans and savings clusters/groups (Ngugi 2015). Mobile banking provides an efficient exchange of products by significantly reducing the duration of time taken in transactions at the point of sale, thereby offering flexibility by permitting clients to use all these multiple services on one device (Jenkins, 2008). The loan application process represents an investment at origination with the aim of minimizing credit losses in the future. All else being equal, a greater investment in the credit application process will result in lower subsequent rates of delinquency and default; conversely, a less strict process would result in increased loss of credit in the future. (Pollinger et al, 2017). Since access to loans is one of the major problems facing small scale enterprises in Nigeria, the idea of creating microfinance institutions is to offer easy accessibility. Small scale enterprises that do not have access to loans will in effect be unable to satisfy their clients.

Angelini, Clerc, Cúrdia, Gambacorta, Gerali, Locarno and Vlček (2015) investigated the long-term impact on economic performance and fluctuations the study focused on deposits and relationship lending. From the complete data set of banks, they constructed a panel that includes 126 banks that reported in each quarter from the first quarter of 2007 through the fourth quarter of 2014. They concluded that core deposits such as demand and savings deposits, which are largely inelastic, have historically insulated the bank funding costs against economic shocks. Kiragu (2010) while reviewing the relationship between the capital adequacy and the profitability of banks in Kenya, concluded that there existed a positive relationship between capital and profitability. However, the relationship was found to be stronger in smaller banks compared to larger banks.

Effect of Network distribution and mobile money services enrolments on the performance of commercial banks

A common basis of inclusion services that is by and large acknowledged universally is the proportion of people who own bank accounts. The number of deposit accounts as proportion of the number of families is taken to be a better indication of banking diffusion compared to other deposit accounts as percentage of number of families. (Agarival, 2008). In getting to know the level of financial inclusion, it's important to know the exposure of populace to formal bank offices in both rural and urban areas. Superior financial inclusion does not by itself suggest better wellbeing. The fundamental postulation is that being privy to formal financial services is has a lower magnitude in terms of demanding on susceptible groups who have to pay more cost for informal services (Donovan, 2012). Kenya currently has six mobile money services for various providers. Safaricom's M-pesa has the largest share followed by Airtel money and the Equitel Money. Other mobile money service providers are Mobikash, Mobile Pay and Telkom Money service (T-Kash). Mobile money enrolments from the six service providers is an ongoing process and competition has pushed it a notch higher in that any sim card bought upon registration, mobile money enrolments must be effected. The distribution networks of these providers plays crucial role on the mobile money enrolments. In the present day, the registered on mobile technology are privy and have embraced banking through mobile platform for transaction and amenities such as funds transfer across the same banks accounts and to other banks, transactions here are real time; utility payments such as electricity, water payments, DSTV, ZUKU, GO TV, KPLC; funds transfer from accounts to Mpesa; purchasing of airtime for own mobile phones numbers or different mobile phone numbers; withdrawal of cash from the various bank agents and from the ATM machines; blocking of lost or stolen credit or debit cards; mini account statement and loan statement; credit receipt and reimbursements. It also facilitates the transfer of funds from one person to another through a communications structure that already links billions of customers globally, (Jack and Suri, 2010). Banking through the mobile platform permits payments to bring up risk sharing and also bring up consumption smoothing. It eases the cost and risk inherent to working using money. Mobile airtime also acts as market instrument where phone corporations have permitted people to buy airtime and to transmit this credit to users.

Number of mobile banking transactions on performance of commercial banks

The mobile money industry is now processing in excess of a billion dollars a day and generating direct revenues of over \$2.4 billion. With 690 million registered accounts worldwide, mobile money has evolved into the leading payment platform for the digital economy in many emerging markets. Several factors underpin the success of a growing number of service providers: a sustained focus on activity rates, the digitization of platforms and strategies to bring down the net cost of the agent network. Measured on each of these parameters, the trends in 2017 look upward, (2018 GSM Association). Globally, the industry continued to experience exponential growth in transaction numbers. Mobile payments between January and October hit Sh3.27 trillion, registering a growth of Sh265.84 billion over the same period in 2017.

Value of mobile money transaction and performance of commercial banks

Just a few years ago, mobile money was valued by many mobile network operators (MNOs) for its indirect benefits, such as less churn and greater brand loyalty. Today, it is widely viewed as a source of direct revenue. In 2017, the mobile money industry realized more than \$2.4 billion in direct revenues, driven by a reported revenue growth of 34 per cent for two successive years. In line with this, the number of MNOs reporting that mobile money contributed more than 10 per cent of total MNO revenues increased in 2017. For example, M-Pesa contributed over 27.3 per cent of Vodacom's revenue in Tanzania. In Zimbabwe, many people relied on mobile money to manage persistent cash shortages. Mobile money revenues as a proportion of total operator revenues in Zimbabwe grew accordingly, from 13.1 per cent to 18 per cent between Q2 and Q3 of 2017 (2018 GSM Association). Total transaction values grew by 21 per cent from \$26 billion

In December 2016 to over \$31.5 billion in December 2017. On average, an active customer moved \$188 per month, primary being deposits and withdrawals on mobile and sending person-to-person (P2P) transfers. Increasingly, customers are also paying bills, topping up airtime and conducting other transactions through their mobile money accounts.

In Kenya the value of mobile money transacted in the second quarter of 2017/18 financial year stood at Sh1.7 trillion, a new report by the Kenya Communication Authority says. As at December 31, 2017, a total of 607.4 million mobile money transfer transactions valued at Sh1.763 trillion were carried out. The number of active mobile money transfer accounts and agents was 30.0 million and 198,234 respectively; and 308.6 million mobile commerce transactions valued at Sh1.1 trillion were conducted. In the case of person-to-person transfers, the value of transactions amounted to Sh. 596.4 million. Recently the industry regulator introduced the cross network money transfer to allow mobile money subscribers to seamlessly send and receive money across networks. This service will allow for the seamless transfer of funds from one mobile money wallet to another across Safaricom, Airtel and Telkom, shortening the lengthy process consumers were initially subjected to when transacting across networks, (standard newspaper, 12th April 2018).

Performance of Commercial banks

Commercial banks are important intermediaries in mobilizing savings that is required for sustainable growth. A more efficient and diversified financial system is not only useful in increasing the level of domestic savings but also central in promoting foreign capital inflows. Additionally, it assists businesses and government in ensuring better management of risks. Understandably, commercial banks continue to form the core of the financial sector in both developing and industrialized countries. They are at forefront in monitoring projects and enforcing contracts when public information is limited and the legal and financial infrastructure is immature. It is well recognized that banks' lending to private sector strongly influences investment, productivity and growth in developing countries (Jabnoun & Hassan Al-Tamimi, 2013). In the India, commercial banks like other private companies are driven by the profit motive. It is argued that to establish a new fully-fledged bank branch is very expensive and may take long time before the new branch may break even or make profit. According to Abdullah, Suhaimi, Saban and Hamali, (2011) commercial banks perceive rural areas of not being profitable to the banks. One of the supporting argument or reason is the type and the number of transactions that are likely to take place in rural areas whether they would be able to sustain the branch to make profit or break even. This argument, however, may not hold water when viewed from the overall position of the bank. Bologna's (2011) study titled; 'Is there a role for funding in explaining recent US bank failures?' focused on an econometric Analysis on the Bank Portfolios and Bank Earnings in Kenya. The author results suggested that except for customer deposits and investments in subsidiary companies, all other factors (LA = loans and advances; COD = certificate of deposit; GSEC = government securities; DBFB = deposit balances from other banks; PLABB = placements, loans and advances to building; societies and other banking institutions; and 'Other' = other assets) affect bank earnings positively. Generally, customer deposits, which include demand deposits, savings deposits and time deposits, are a proxy for reservable deposits. These deposits also constitute the cheapest source of funds available to commercial banks. Therefore, the performance of a commercial bank is related to its ability to attract individual deposits. Therefore, one way to improve a bank's profitability or earnings is to formulate aggressive policies for attracting personal deposits. With the existence of a regulation by the Central Bank of Kenya for banks to retain a certain proportion of their deposits (liquid cash) with themselves, there is a critical need for a study to establish how deposits through mobile phones impact the performance of banks.

Gul et al (2011) using data on top fifteen Pakistani commercial banks over a period 2005-2010, investigated the impact of assets, loans, equity, deposits, economic growth, inflation and market capitalization on profitability indicators i.e. ROA, ROE, ROCE and NIM. Their findings showed that deposits, among other factors had a positive correlation with ROA. Deposits however, had negative relationship with ROCE. Similarly, total deposits as a proportion to total assets had negative correlation with ROCE, which established that banks that rely on deposits for their funding are less profitable.

Critique of existing Literature

As a basis, the empirical literature has explored various studies that relate to mobile banking and financial inclusion. In India Kathuria, Uppal and Mamta (2009) while evaluating the influence of penetration of mobile technology on economic growth throughout states in India, used three equations force structural model for 19 states in India from 2000 to 2008. In his focus was the associations through which mobile phones impact growth and the restraints, if any, that limit their influence. The researcher found out that Indian states that had high mobile penetration rates had propensity to develop

more rapidly, and that there is a critical mass at the penetration rate twenty five percent, above which the influence of the mobile phones on growth is dependent on network effects. Telecom networks are determined by network behaviors, the development affect is bigger when an important threshold network size is realized.

Etim 2011 investigated banking through mobile avenues and mobile money acceptance for financial inclusion. The research aimed towards examining the utilization of mobile money acceptance for financial inclusion. The research aimed towards examining the utilization of mobile gadgets and services provided over mobile money. The researcher examined whether the respondents in the research viewed mobile phones as user friendly for several responsibilities including mobile banking and money transfers and whether such services were accepted. The researcher gathered from the study results that while rudimentary mobile phones were extensively accepted and utilized mainly for communication with commonly family and friends, they were seldom utilized for servicing great order tasks like mobile banking or mobile money transfer. Ishengoma (2011) studied banking via mobile phones system coverage for financial addition in Tanzania, in the coast region at Kibana district council. The target populace for this research involved individuals registered and who were subscribed to mobile services and the agents who offered mobile banking system whereby approximately 20.4 million Tanzanians are registered with mobile service provider companies. The findings of the study exhibited a positive association and statistically important link between mobile banking and financial inclusion. Ngugi (2012) empirically investigated mobile banking and financial inclusion in Kenya using a descriptive research methodology, the researcher used secondary data for the period 2006 to 2011. The researcher made use of multiple regression analysis to test the link between financial inclusion and mobile banking services, the researcher established that money transfer services are positively associated to financial inclusion in Kenya. The researcher in addition established that services offered through mobile banking have led considerably to financial markets deepening majorly out of financial products linked to established mobile money avenues. Mago and Chitokwindo (2014) empirically investigated the influence of mobile banking on financial inclusion at Masvingo Province in Zimbabwe. The sample for the research study included 270 respondents who were categorized into 50 from formal sector, 50 respondents from informal sectors and 20 tertiary scholars. The districts Chivi, Bikita, Gutu and Masvingo districts were chosen and constituted of the sample to represent the rest of the populace in the province. The research results showed that the poor individuals were prepared to accept mobile banking and the explanations for that were that its easily available, convenient, relatively inexpensive , user friendly and safe. Saliu 2015 evaluated the influence of transfer services incorporated through mobile money affect the socio economic status of the money dealers in Kumasi, Metropolis Ghana. The populace of the study was mobile money vendors in Kumasi Metropolis from which a sample of 104 participants were selected for the enquiry with the help of Statistical Package for Social Sciences Software (SPSS). The responses indicated that there was important influence on income levels, employment characteristics and living standards on the socio Economic status of the mobile money vendors in Kumasi Metropolis. The research showed a positive and strong relationship between mobile banking and financial inclusion in Ghana. Boro 2017 researching on the effects of mobile banking on financial inclusion in Kenya, established that there was a steady increase in the number of mobile money subscribers and also close association between the number of mobile money subscribers and the deposits in bank accounts was strong and positive and was statistically significant. Furthermore, the researcher found that there was a consistent rise in the number of mobile money agents and the association between the number of mobile money agents and deposits in bank accounts was strong and positive.

Summary

In developing countries where financial exclusion is particularly related to geographic location, inadequacy or lack of infrastructure, in order to contribute to the challenge of financial inclusion, monetary authorities develop various incentive means which range from the increasing branches to the adoption of financial innovations, (Etim 2011). Unlike traditional banking practises, financial innovations like mobile banking are implemented through new information and communication technologies, and other electronic channels like mobile service providers, (Gardeva & Rhyne,2011) hence the introduction of a myriad of Mobile Money Services (MMS) by various mobile money service providers to customers in now widespread and has brought competitive advantage through diversification, ensuring customer loyalty. It has also assisted in growing market share to raise their profitability and as a consequence improve on their financial position. The various studies that have been done did find out that there is a direct relationship between mobile banking utilization and financial inclusion. However questions arise as to whether they significantly influence the banking sector.

This research therefore is studies how mobile banking financial inclusion influences the performance of commercial banks.

Research Gaps

Notable that several studies have looked at different contexts in financial inclusion and performance. Kathuria, Uppal and Mamta (2009) evaluated the influence of penetration of mobile technology on economic growth throughout states in India, Etim 2011 also investigated banking through mobile avenues and mobile money acceptance for financial inclusion. The aim of the research is to examine the utilization of mobile money as a measure of financial inclusion and its influence on commercial banks. Ngugi (2012) empirically investigated mobile banking and financial inclusion in Kenya using a descriptive research methodology, an empirical research by Mutsune (2014) examines financial inclusion using mobile banking in Kenya. The researcher studies Kenya's extremely successful cash transfer model Mpesa in an energy stimulating economic activity but the two researchers do not touch on accessibility of financial services and performance creating a knowledge gap. These studies have covered different contexts in their topics; have been done in different contextual regions with varied financial systems than the one in Kenya hence creating a research gap, which this study will fill by looking at the effects of mobile banking financial inclusion and performance of commercial banks in West Pokot County, Kenya.

3. RESEARCH METHODOLOGY

Introduction

Research methodology is an approach and a set of supporting methods and guidelines used as a framework for conducting research (Blessing & Chakrabati, 2009). This chapter outlines the research design that will be used in the study, the target population, sampling techniques that will be used in coming up with the sample size for the study, data collection instruments and methods together with how their validity and reliability will be determined, data analysis and presentation and finally the ethical considerations that the researcher will try to abide by while carrying out the research process.

Research Design

Kerlinger, N.F (1986) defined research design as the strategy and structure of analysis that is perceived in order to get answers to the research questions. Strategy is defined as the overall scheme or program of the research. It gives an outline of what the investigator will do from writing of the hypotheses and their operational implications to the final analysis of data. A research design shows both the structure of the research problem and the plan of investigation to be used to obtain empirical evidence on relations of the problem. Research design can also be defined as a master plan that specifies the methods and procedures for collecting and analysing the required data, (Jonker & Pennink, 2010). A descriptive research design will be adopted for this study, this is the process of collecting data in order to test hypotheses or to answer questions concerning the current status of the subjects under study. It concludes and reports items the way they are. It tries to define things like possible behaviour, attitudes, values and characteristics. According to Yin (2013) a descriptive research is defined as the design which provides an accurate account of characteristics of a particular individual, event or group in real life situation and that it may be used for developing a theory, problem identification with current practice, justification of the current practice, making judgments or determining what others in similar situations are doing. Kothari (2004), said that the purpose of descriptive research is to find out and report the way things are thus helping in establishing the current status of the population under study. The researcher will be pay interest in finding out the impact of the independent variables on the dependent variable, therefore descriptive research design will be suitable in focusing on the current phenomenon in regard to mobile banking financial inclusion and performance of commercial banks.

Target Population

A population refers to an entire group of individuals, events or objects having a common observable characteristic (Gravetter & Forzano, 2012). Ngechu (2004) defines a population as a well-defined or set of people, services, elements, and events, group of things or households that are being investigated. Busha et.al, (1980) states that "a population is any set of persons or objects that possesses at least one common characteristic." A population describes the parameters whose characteristics the research will attempt to describe and the target population is the group of individuals who have the knowledge and information that the researcher is interested in. For this study the target population will be all the staffs of

commercial banks West Pokot County. According to the CBK records of 2016, there are 5 bank branches the county however currently there are 6 banks after Trans national Bank setting up its business in 2018.

Sampling Techniques

Sampling techniques is a process adopted by researchers in selecting respondents who participate in a study from the target population. This study adopted a census sampling technique, this is the sampling technique where all the respondents will be included in the study because the population size is small and can easily be accessed to respond to the research question. This was made possible because the study targeted all the staffs of the commercial banks in west Pokot County hence each one of the being able to participate in the study.

Research Instruments

Research instruments are measurement tools designed to obtain data on topic of interest from research subjects. They are tools developed by researchers to achieve stated objectives when carrying out research study. They are designed tools that aid collection of data. The research instruments widely used include questionnaires, interviews and observation. This study adopted questionnaires and interviews.

Data Collection procedure

Data was collected using structured questionnaires for their proximity of the truth and control of error (Cooper & Schinder, 2003). These are questions, which are accompanied by a list of possible alternatives from which respondents select the answer that best describes their situation. The researcher developed closed ended questions that covered the background information of the respondents and the four independent variables and the dependent variable. Data was also collected by use of structured interviews, this an oral (face to face) administration of a questionnaire or an interview schedule, in order to obtain accurate information through interviews, a researcher needs to obtain the maximum co-operation from respondents. Interviews are very useful when it comes getting the story behind a participant's experiences. The interviewer can ask more questions relating to the topic in order to pursue and get more information about a given topic. Interviews may also be used in following up on some respondents to questionnaires, e.g., to further investigate their responses, normally the open-ended questions are asked during interviews but in this study on the effects of mobile banking financial inclusion on performance of commercial banks, the closed – fixed response interviewees will be used to collect data, where all interviewees are asked the same questions and asked to choose answers from among the same set of the given alternatives. In case Secondary data is required in the study it will be obtained from communication commission of Kenya, central bank of Kenya and Kenya National Bureau of statistics, the data might be used in getting the number of people registered on mobile subscriptions on mobile banking, number of transactions effected through mobile banking and number banks that provide the mobile banking services. In the case of our research, we did use data from the central bank of Kenya on the number of mobile banking transactions, value of the monies the monies transacted and the number of new mobile agents all within the span of one year.

Pilot Testing

A pilot, or feasibility study, is a small experiment designed to test logistics and gather information prior to a larger study, in order to improve the latter's quality and efficiency. A pilot study can reveal deficiencies in the design of a proposed experiment or procedure and these can then be addressed before time and resources are expended on large scale studies (Borg and Gall, 1989). Questionnaires will be pre-tested before being administered to respondents in order to ensure validity and reliability of the data collection instruments. According to Kothari (2004), pre – testing of the data collection instruments is usually carried out to ensure that the items in the instrument are clearly stated to enable clear understanding of the questions by the respondents.

Validity of research instruments

Validity is defined as the degree to which the study accurately reflects or assesses the specific concept that the researcher is making an effort to measure. Under validity the results obtained from the analysis of data actually represent the phenomenon under study. It is the accuracy and meaningfulness of conclusions, which are based on the outcome of the research. Validity normally deals with how accurately the data obtained in the study represents the variables of the study. If such data is a true reflection of the variables, then conclusions based on such data will be accurate and meaningful.

Validity is largely determined by the presence or absence of systematic error in the data e.g. using a faulty scale to measure.

In validity the results obtained from the analysis of the data actually represents the phenomenon under study (Hillier, 2012). Mugenda and Mugenda, (1999) described validity as the degree to which the instrument measures the constructs under investigation. There are three types of validity tests namely; criterion, content and construct validity. Criterion validity refers to the likelihood that a question will be misunderstood or misconstrued. Pre - testing is a best way to increase criterion validity. Content validity measures the degree to which the sample of the items is a representation of the content that the test is intended to measure. A measure possesses construct validity to the degree that it confirms to predict correlations with other theoretical propositions (Yin, 2013). Criterion validity will be used in to establishing the validity of the data collection instruments. Validity will be ensured by having objective questions in the questionnaire. The validity of research instruments to be used in the study will be ensured by reviewing and discussing them with the supervisor in order to get advice on the most appropriate indicators that will measure variables of the study.

Reliability of research instruments

Reliability refers to the extent to which an experiment, test, or any measuring procedure gives the same outcome on repeated trials. Lack of an agreement between independent observers not being able to reproduce research procedures, or being able to use research tools and procedures that yield consistent measurements, researchers would be unable to draw satisfactorily conclusions, formulate theories, or make claims about the generalizability of their research. In addition to its important role in research. Reliability is an important concept and critical in many parts of our lives, including manufacturing, medicine and sports hence the application to a wide range of activities. Reliability is influenced by random error. Random error is the deviation from a true measurement due to factors that have not effectively been addressed by the researcher. As random error increases, reliability decreases.

The accuracy of data to be collected will largely depend on the data collection instruments in terms of reliability (Blumberg, Cooper & Schindler, 2014). Reliability is the degree to which a research instrument is consistent in capturing information on a phenomenon. According to Mugenda and Mugenda, (2009) reliability is also the measure of the degree to which a research instrument yields consistent results or data after repeated trials, this can be achieved if pre-testing of the instruments to be used is done to identify and change any ambiguous, awkward, or offensive questions and techniques as emphasized by (Kothari, 2004). In this study, reliability will be ensured through pilot testing of the research instruments and using Cronbach's Alpha value in finding out whether the research instrument is reliable or not. According to Cronbach, (1951), A Cronbach's Alpha value of 0.7 and above is recommended for a reliable research instrument. Equivalent reliability is the method that will be used in testing the reliability of the data, it refers to the extent to which two items measure identical concepts at an identical level of difficulty. Equivalency reliability is determined by relating two sets of test scores to one another to highlight the degree of relationship or association. In quantitative studies and particularly in experimental studies, a correlation coefficient, statistically referred to as r , is used to show the strength of the correlation between a dependent variable (the subject under study), and one or more independent variable, which are manipulated to determine effects on the dependent variable. An important consideration is that equivalency reliability is concerned with correlational, not causal, relationships.

Data Analysis and Presentation

Data analysis is defined as the process which commences after data collection and ends at the point where there is interpretation of results (Kothari, 2008). According to Mugenda & Mugenda, (2003), data analysis is the process of bringing order, structure and meaning to the mass information collected. After data collection has from the field, the questionnaires will be checked for completeness, coded, and then entered into Statistical Package for Social Sciences (SPSS version 22.0) for subsequent analysis. Descriptive analysis will be used to draw important conclusions and deductions with regards to the study objectives. Measures of standard deviation as means, standard deviations and variance will be obtained.

Multiple regression analysis will be done to assess the relationship between the independent variables (mobile banking services and products, number of mobile money transactions, network distribution and mobile money services enrolments and value of mobile money transactions) and the dependent variable (performance of banks). The results will be presented in frequency distribution table, pie charts, figures and graphs.

The Multiple Regression Model will follow this format:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where Y= performance of banks

β_0 = Constant

β_1 , β_2 , β_3 and β_4 are Coefficients of the determinants of the effects of mobile banking financial inclusion on the performance of commercial banks in West Pokot County, Kenya.

X1= mobile banking services and products

X2= number of mobile money transactions

X3= network distribution and mobile money services enrolments

X4= value of mobile money transactions

ϵ = error term

4. RESEARCH FINDINGS AND DISCUSSIONS

Introduction

In this chapter the results of the collected data that has been analysed is presented. The main reason for carrying out the study was to determine the effects of mobile banking financial inclusion on the performance of commercial banks in West Pokot County, Kenya. The study relied primarily on the data via the questionnaires. The collected data was coded into SPSS version 23 for analysis and interpretation using descriptive and inferential statistics.

Response Rate

The study sampled all the staffs of the commercial banks in West Pokot County. The total number of staffs in the 6 commercial banks was 157 hence 157 questionnaires were prepared and distributed to the respondents, out of which only 122 questionnaires were dully filled and returned to the researcher. This gave a response rate of 78%. The findings are indicated in the Table 4.1 below.

Table 4.1: Response Rate

Variable	Frequency	Percentage (%)
Response	122	78
Non Response	35	22
Totals	157	100

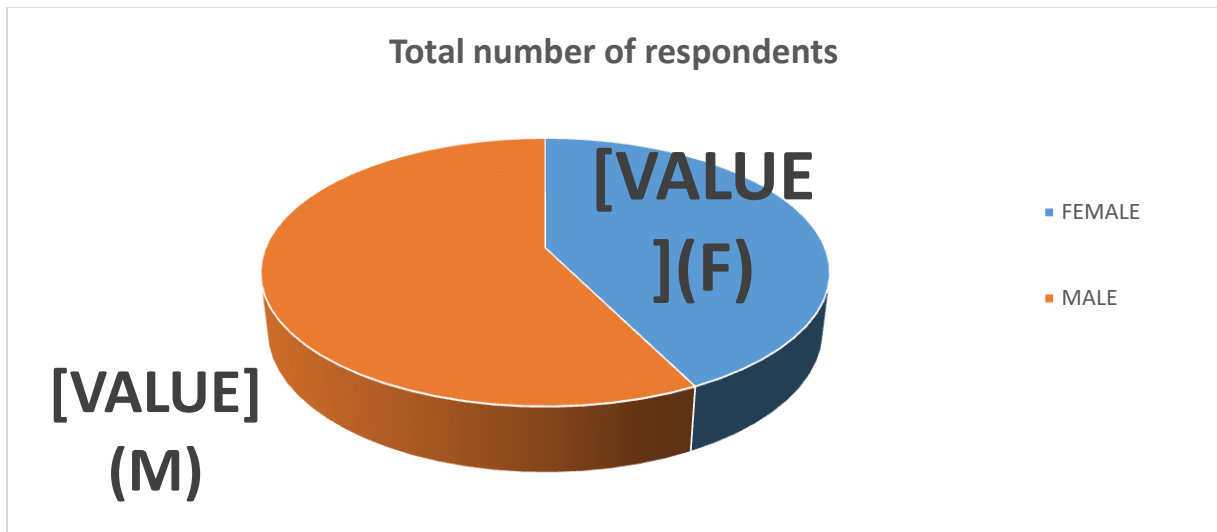
Mugenda (2008) said that a response rate of 50% sufficient for data analysis and reporting of the findings, a 60% rate was generally good and that above 70% was excellent. Therefore, the response rate in the current study was way above the required threshold hence good for analysis and reporting of the findings.

General Information

The general distribution of the respondents is indicated in the subsequent sections below.

Gender

The gender distribution of the respondents is as shown in the Figure 4.1 below



From the findings, 70 of the respondents were male representing 57% and 52 of the respondents were female giving a representation of 43%. This indicates that all the commercial banks that operate in West Pokot County observe the gender equality rule hence all the genders are equally distributed.

Position

The position held by the staffs were distributed as indicated in the Figure 4.2 below

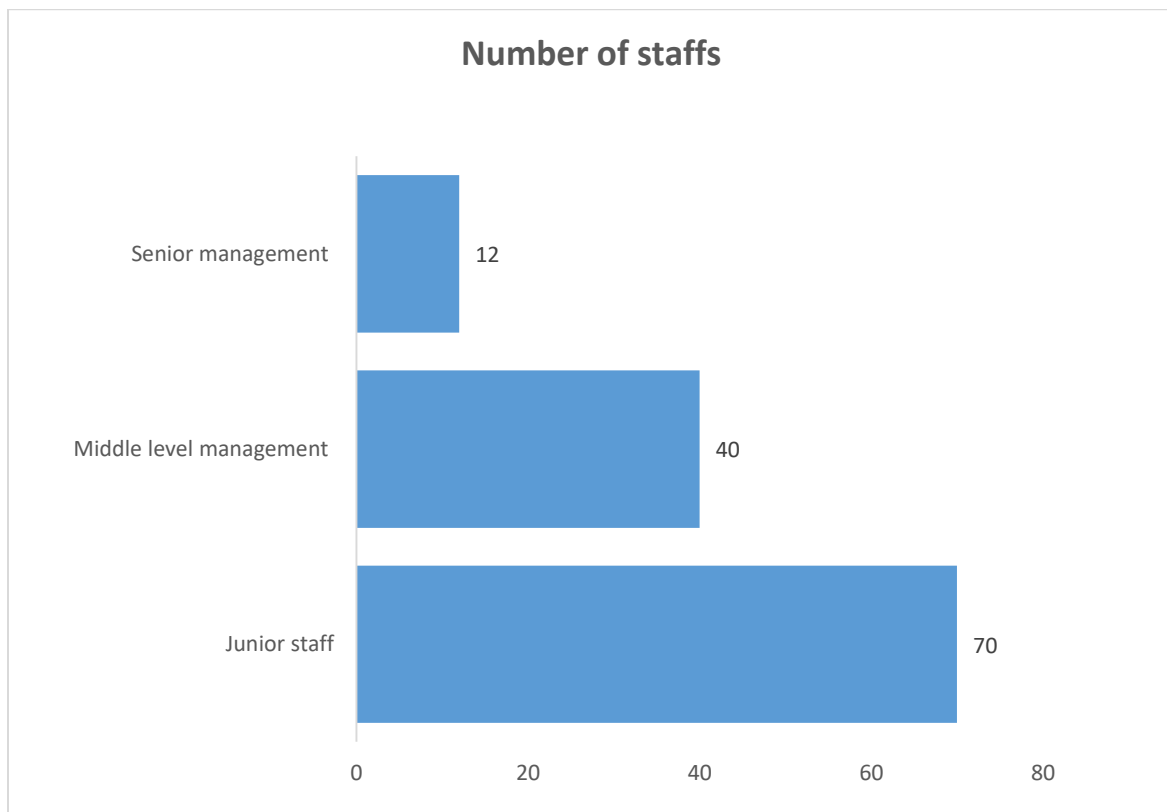


Figure 4.2: Position

From the findings, 57.4% were junior staffs, 32.8% were middle level managements and 9.8% were senior management staffs. This indicates that most of the respondents were middle and junior staffs, therefore the respondents were skilled and gave reliable data.

Length of Position

Length of position distribution of the respondents is indicated as in the Figure 4.3 below

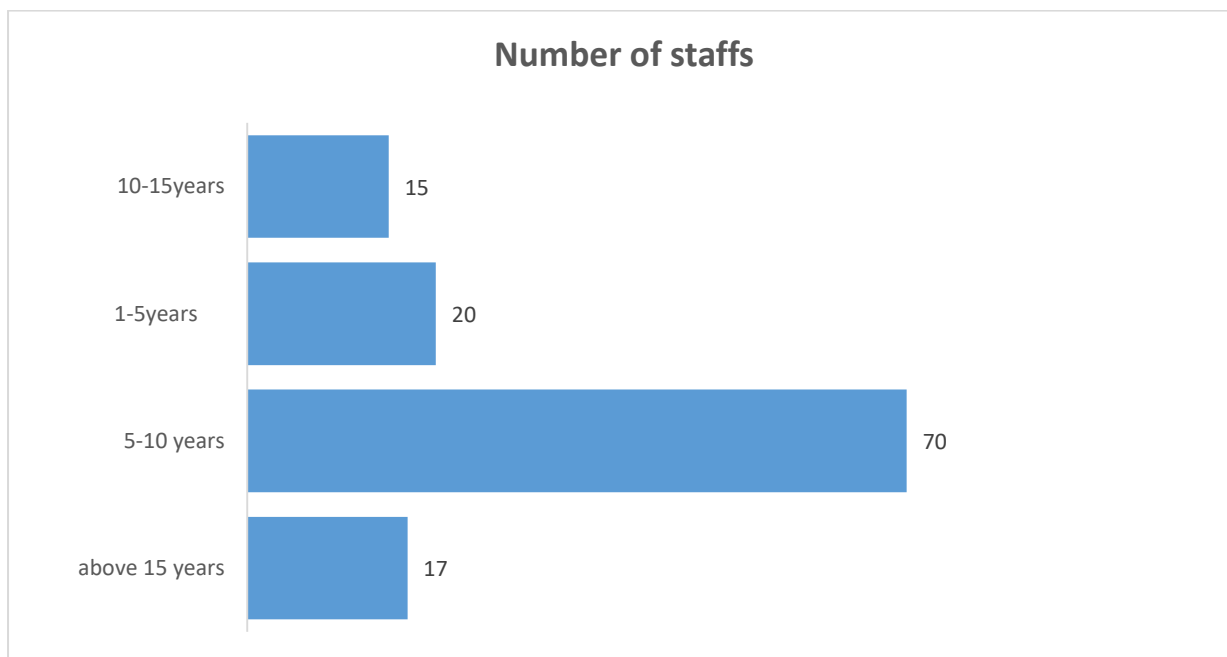


Figure 4.3: Length of Position

From the findings, 16.4% length of position was 1-5 years, 57.4% was 5-10 years, 12.3% was 10-15 years and 13.9 % length of position was above 15 years. Therefore, the findings indicate that most of the staffs were skilled in their positions and would therefore understand the questionnaires and give reliable data.

Length of service

The distribution of the length of service of the respondents is as indicated in the Figure 4.4 below.

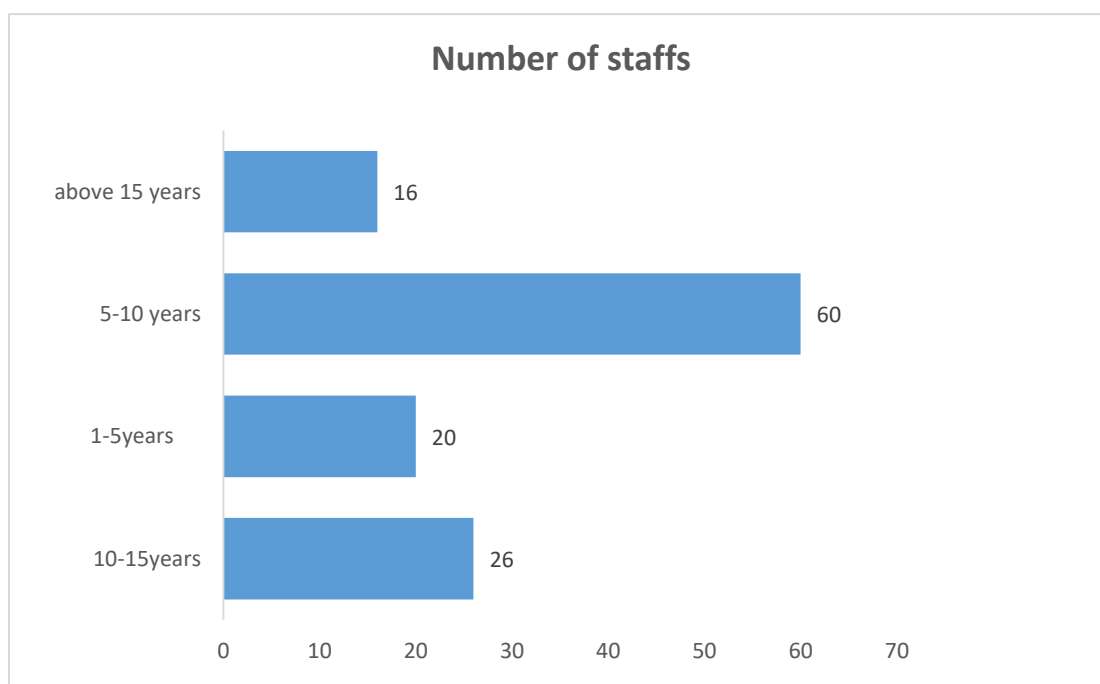


Figure 4.4: Length of service

From the findings, 16.4% length of service was 1-5 years, 49.2% was 5-10 years, 21.3% was 10-15 years and 13.1% length of service was above 15 years. This indicates that most of the respondents of commercial banks that operates in West Pokot County had served for a long duration of time hence were skilled enough to give reliable data.

Presentation of Variables

Value of mobile banking transactions

Statements on how value of mobile banking transactions impacted on the performance of commercial banks through financial inclusion were posed to the respondents who were then requested to indicate the extent of their agreement by the researcher. A Likert scale of 1-5 where: 1= Not at all; 2 = Little Extent; 3= Moderate Extent; 4= Large Extent and 5= Very Large Extent was used.

Table 4.3: Value of mobile money transactions

	Very large Extent	Large Extent	Moderate Extent
There is an increase in the value of deposits from mobile banking transactions	60(49.2%)	50(41%)	12(9.8%)
Mobile money has increased the savings rate of the locals in our bank	60(49.2%)	30(24.6%)	32(26.2%)
Diversified financial service offering has increased the number of customers in our Bank	55(45.1%)	40(32.8%)	27(22.1%)
Our ability to attract individual depositors through mobile banking has improved our loan issuance	40(32.8%)	50(41%)	32(26.2%)
Number of accounts opened via mobile phones has increased branch accounts	50(41%)	60(49.2%)	12(9.8%)
Mobile banking deposit policies have attracted more customers to our Bank	60(49.2%)	30(24.6%)	32(26.2%)
Average	54.2(44.4%)	43.3(35.5%)	24.5(20.1%)

From the findings, value of mobile money transactions had increased deposits to our bank with 60 respondents agreeing to a larger extent with a percentage of 49.2% which is almost half of the respondents, value of mobile money transactions have increased the savings rate of the locals likewise was also heavily agreed upon with 49.2% of the respondents agreeing. Value of mobile money transactions has led to diversified financial services being accessed by customer because of the availability of the different options on the mobile platform, 77.9% of the respondents agreed both on very large and large extents. Diversified financial services being offered by banks has led to attraction of individual depositors thus the improved the loan issuance in our bank due to availability of cheap deposits, 40 respondents agreed with the statements to a very large extent and 50 of the respondents agreed on a large extent. Number of accounts opened via mobile phones increased thus increasing the numbers of customers in our banks, this was because of the convenience and ease associated with the opening of the accounts, 110 of the respondents which is 90% of the respondents agreed on a very large extent and large extent and finally the policies on deposits that have been formulated by banks and regulated by Central Bank of Kenya have been favourable to the depositors thus attracting more customers to our bank, 49.2% of the respondents fully agreed with this.

When asked to suggest other ways which the value of mobile money has affected performance, most of respondents indicated that the high value of mobile money transactions automatically transpired into increase in performance of commercial banks. On the extent to which the value of mobile money transactions affected performance, most of the

respondents 87.7% said very great extent and great extent. This showed that respondents generally agreed that the value of mobile banking transactions affected performance of commercial banks. To further confirm if the repossess from the respondents was genuinely given, data from Central Bank of Kenya was obtained on the values of transactions within a period of one year from June 2018 to May 2019, a lot of money above Ksh 300 billion was transacted on a monthly basis and this in the end had an impact of the Commercial banks which also receive and pay out the monies transacted. These findings are echoed with Ochung (2013) who established that there was a very strong correlation between deposits of commercial banks and Financial Institutions and their individual and Fraser, et al (1974) who found out that the factor which had the greatest influence on bank performance was bank costs, followed by composition of deposits and composition of loans.

Model Summary

The coefficients of correlation R and coefficients of determination R² is indicated in the Table below as follows:

Table 4. 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.112 ^a	1.262	.589	.672

Predictors: (Constant) mobile banking services, number of mobile money transaction, network distribution and mobile money services enrolments and value of mobile money transactions. From the findings, coefficient of correlation R is 0.112 an indication of strong correlation between variables, coefficient of determination R² is 1.262, showing that 58.9% change in performance of commercial banks is explained by the independent variables; mobile banking services and products, number of mobile money transactions, network distribution and mobile money services enrolments, value of mobile money transactions. According to Ochung (2012), there was a very strong correlation between performance of commercial banks and Financial Institutions and their individual performances. 41.1% explains factors that affect mobile banking financial inclusion and performance of commercial banks in West Pokot that were not carried in the current study.

5. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

A summary of the analysed findings is clearly presented in this chapter based on specific objectives. Relevant conclusions are drawn from the summarized key findings of the study. Recommendations of the study emanate from the findings of the study relevant to policy makers. Suggestions for further studies are clearly indicated for future scholars and academicians.

Summary of the Findings

Value of mobile money transactions

The last objective of the study was to assess the value of mobile money transactions on performance of commercial banks in West Pokot County, Kenya. The findings of the study indicated that, value of mobile money transactions had increased deposits to our bank with 60 respondents agreeing to a larger extent with percentage of 49.2%, value of mobile money transactions have increased the savings rate of the locals with 49.2% of the respondents agreeing. Value of mobile money transactions has led to diversified financial services being accessed by customers, 77.9% of the respondents agreed both on very large and large extents. Diversified financial services being offered by banks has led to attraction of individual depositors thus improved the loan issuance, 40 respondents agreed with the statements to a very large extent and 50 of the respondents agreed on a large extent. Number of accounts opened via mobile phones increased thus increasing the numbers in our banks, 110 of the respondents which is 90% of the respondents agreed on a very large extent and large extent and finally the policies on deposits that have been formulated by banks and regulated by Central Bank of Kenya have been favorable to the depositors thus attracting, 49.2% of the respondents fully agreed with this.

On the extent to which the value of mobile money transactions affected performance, most of the respondents 87.7% said very great extent and great extent. This showed that respondents generally agreed that the value. Value of mobile money transactions $p=0.000<0.05$ significantly affect performance of commercial banks in west pokot county Kenya.

Conclusion

Value of mobile money transactions

The study also concludes that the number of new customers recruited via mobile phones has increased thus providing ready demand for goods and services. The values of loans disbursed through phones have increased the Branch's loan book with. Large deposits collected from customers has improved the interest income for our Bank and the transactions via mobile phones have increased the average transactions done by the bank .

Recommendations of the study

The study recommends that commercial banks should enhance the rate which customer's access mobile banking products and services like loans as this would significantly result into enhanced performance. Loan accessibility can be enhanced by reducing too much procedures and complications required to obtain loans.

Areas for further Research

Since the current study was restricted in the banking sector, future studies should be done in sub-sectors of the larger financial sector like Insurance, SACCOs and microfinance industry. Primary data was the main source of information in the current study and future studies should be done using secondary data from Communication authority of Kenya and Central Bank of Kenya. Regression results indicated a coefficient of determination of 61.9%, an indication that other factors exist that explain performance of commercial banks which can be examined by future scholars. Future studies can also be extended on current mobile credit facilities like Branch and Tala, which are technology based.

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