

**EFFECT OF DIGITAL DISRUPTION ON THE FINANCIAL PERFORMANCE OF
COMMERCIAL BANKS IN KENYA: A CASE OF ECOBANK BANK KENYA
LIMITED**

BY:

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DECLARATION

This research project is my original work and has not been presented for award of degree in any other University.

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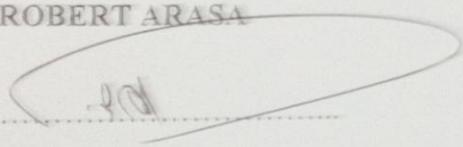
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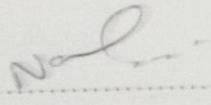
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DEDICATION

I dedicate this work to my parents. I thank them for their encouragement and support to ensure completion of my work.

May God bless abundantly.

ACKNOWLEDGEMENT

I would first like to thank my supervisors for their wonderful collaboration and guidance. You have supported me greatly and are always willing to help. I would particularly single out Prof. Robert Arasa, for the excellent cooperation. You definitely provided me with the support and guidance that I need to choose the right direction and successfully complete my dissertation.

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ABSTRACT

This study set out to establish the effect of digital disruption on the financial performance of commercial banks in Kenya, with a focus on Ecobank Kenya Limited. To achieve this, the study sought to identify the effect of Digital Competition, Industrial Convergence, Technological Innovation and Social Digital Trends on the financial performance of Ecobank measured by ROA. A total of 322 employees at Ecobank formed the target population of the study which adopted a descriptive research design that allowed them to provide as much information about the topic as possible. Data collected through questionnaires was analyzed using Statistical Packages for Social Sciences (SPSS). Demographic results indicate that the study was gender sensitive and that the respondents were of the right age, level of education, working experience and held a relevant working position in the bank as far as the topic of study is concerned. Results indicate that majority of the respondents believe that indeed Digital Competition (with mean of 4.22), Industrial Convergence (with mean of 4.06), Technological Innovation (with mean of 4.08) and Social Digital Trends (with mean of 4.13) affect financial performance at Ecobank Kenya to a great extent. A regression analysis indicates that an increase in industrial convergence, technological innovation and social digital trends increases the financial performance of the bank. However, an increase in digital competition reduces financial performance. Post regression diagnostics indicate that the regression equation adopted by the study is statistically significant (F calculated value of 26.480 < Critical value = 6.38823, $p=0.04 < 0.05$). Additionally, an R-Square of 0.687 implies that 68.7% of the independent variables used in the study explain the dependent variable. The study concluded that an increase in industrial convergence, technological innovation and social digital trends increases the financial performance of the bank. However, an increase in digital competition reduces financial performance. The study therefore recommends that commercial banks in Kenya should consider social digital trends as they seek to improve their financial performance. It also points out that banks need to be aware of technological innovations in the banking sector. Moreover, banks should know that the financial industry is converging towards a digital world and respond appropriately.

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ACCRINYMS AND ABBREVIATIONS

CBK	Central Bank of Kenya
EFT	Electronic Funds Transfer
ICT	Information Communication Technology
IFC	International Finance Corporation
KBA	Kenya Bankers Association
NIM	Net Interest Margin
PIC	Public Investment Corporation
ROA	Return on Assets
ROE	Return on Equity
SATM	Smart Automated Teller Machines
SSFIT	Social Security and Financial Insurance Trust of Ghana

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Globally, the banking industry has largely changed in the past few decades. This can partly be attributed to the emergence of a rather globalized economy which has led to the need for monetary unions, better as well as efficient financial services. Today, the Internet has offered a complete overhaul of how individuals and co-operations access financial services. Therefore, globalization, coupled with technological advances have seen the financial industry face increased competition which has led to the need to come up with different approaches to the way financial services are offered. Indeed, this has led to the emergence of mergers and acquisitions which have created global players in an industry that was initially controlled within specified regions/countries (Kalliala, 2012).

The modern banking industry has become wide and vast due to the global reach and comprehensive financial service associated with the sector. Products are easily imitable with many players in the industry being forced by competition to lower their prices, necessitating the need for adoption of other channels of creating a competitive advantage. In so doing, banking institutions have adopted different channels such as digitization or even mergers and acquisitions just to get ahead of others, while at the same time keeping up with a rapidly evolving financial market economy (Aker, and Mbiti, 2010). Additionally, technological advancement has forced the hand of the industry so much so that the industry and technology cannot be separated. Although retail and corporate financial institutions have been a powerful force in fueling global economic growth and innovation, their omnipresence as financial service providers is now at risk.

1.1.1 Digital Disruption

The banking industry flourished with the concept of branch network over the 19th and 20th centuries. Having emerged in the 1800's, this system created the need for consistency and efficiency, resulting to the need to standardize record keeping as well as accounting practices (Ancora, 2016). The advancement of technology led to the creation of tools such as the typewriter and the telegraph which in turn helped to increase the effectiveness of communication between the branches and their headquarters. However, this was not enough, because the need for efficiency grew with the increase in customer base. Successful initial relationship between the industry and technology meant that banks eventually embraced technologies as with it came more efficiency, which meant more profit. Incidentally, this relationship was also embraced by customers whose propositions lead to the improvement of customer satisfaction (Arnold, and Jeffery, 2016).

The 1960's came with the emergence of consumer rights and rapid technological advancements which created a significant shift in both retail and corporate banking. This meant that customers were in control as far as transformations to the industry were concerned. (Boland and Eastburn, 2015). The late 20th century brought about the emergence of the internet and mobile phones which exacerbated this shift. This unprecedented rates of technological development resulted to a change in consumer behaviour leading to higher consumer expectations for convenience, accessibility and instant gratification all at a lower price (Downes, 2009). Furthermore, the industry is undergoing a convergence so much so that players within the financial service provision industry are working together through mergers and acquisitions. This has opened doors to new competition, new ways of doing business and new revenue opportunities.

As a result, markets have become hyper competitive as questions on how relevant traditional intermediary financial institutions are to the access to financial services continue to be raised. The adoption of these new innovations by new and alternative financial service providers has also been fueled by intensified technological innovation as well as customer expectations and empowerment, resulting to a whole new market for financial services. Subsequently, these alternative financial service providers, also known as digital disruptors, have learnt to address customer needs in completely new ways thereby establishing themselves strongly in the industry. (Bloomfield, 2016).

In this context, the financial institutions have been threatened by the emergence of so many alternative forms of access to financial services that pose a significant potential to drastically change the industry (Chen, and Lam, 2014). These concurrent disruptive forces are PayPal, M-Pesa, Pesa-Link and Simba-Pay just to name but a few. They have generated a financial world dominated and shaped by the internet, constant connectivity, mobility and instant gratification, thus changing the game in the industry altogether. The internet has also brought about online banking that brings financial services to the customers as opposed to them taking these services to the banks (Banbury, and Berry, 2005).

In order to respond to this threat therefore, banks have had to advance so that they are able to meet the need of the consumers given an increase in their expectations with technological advancement. Banks have to become truly omni-channel by seamlessly integrating the customer experience across their branches through digital interactions (Corbet, and Gurdgiev, 2017). They also have to extend the banking ecosystem by offering a greater range of services for their customers. Finally, banks can offer personalized and customized financial services to specific

groups of customers depending on the nature of their financial needs. This will make banking personal, which is exactly what consumers are looking out for (Corbet, and Gurdgiev, 2017).

1.1.2 Financial Performance of Commercial Banks in Kenya

The Kenyan banking industry is regulated by the Central Bank of Kenya Act, Banking Act, and the Companies Act among other guidelines issued by the Central Bank of Kenya. The local banking industry was liberalized back in 1995 and exchange controls revoked.

The banking system comprises 42 commercial banks, 15 micro-finance institutions and 109 forex bureaus as at the end of Dec 2016. According to Central Bank of Kenya (2016) out of the forty two commercial banks twenty nine of them are domestically owned and thirteen are foreign owned. In terms of asset holding, foreign banks accounted for about 39% of the banking assets as of 2016. The banks have come together under the Kenya Bankers Association (KBA) which works as a lobby for the local banking industry. KBA also serves as a forum to address issues affecting the banking sector. The industry has over the past years enjoyed exponential growth in deposits, assets, profitability and products offering mainly attributed to automation of services and branch network expansion both locally and regionally.

Performance in the banking industry in Kenya is measured financially. Financial performance is a subjective measure of the use of a financial institution's assets in its pursuit to generate revenue (Greenwood and Jovanovic, 1990). The ultimate goal for all financial institutions in the industry is to make profit. This is measured using ratios such as Return on Assets (ROA), Return on Equity and Net Interest Margin. ROA is a ratio that takes into account the amount of income generated and the total assets owned by a bank (Khravish, 2011). It measures the ability of an

organization's ability to generate income by utilizing its assets. ROE on the other hand is a financial ratio that refers to how much profit a company earns compared to the total amount of shareholder equity invested. ROE therefore gives what the shareholders look in return for their investment. Finally, NIM is a measure of the difference between the amount of interest paid out to the financial institution's lenders and the interest income generated by the institutions, relative to the amount of their assets. This means that NIM can be expressed as a percentage of what the financial institution earns on loans within a specific time period less the interest paid on borrowed funds, divided by the average amount of the assets on which it earned income in that time period.

1.1.3 Ecobank Kenya Limited

As its slogan goes, Ecobank Transnational is a Pan African Bank that provides wholesale, retail, investment and transactional financial services to governments, other financial institutions, multinationals, local companies, SME's and individuals. Headquartered in Lomé, Togo, the bank is the largest bank in middle Africa, covering 33 countries from West Africa, through Central Africa to East Africa. The bank had employed 20, 331 employees as at December 2014, with over 10 million customers. Its total assets amount to US\$24.1 billion, while its total equity is US\$2.7 billion. As a group, the bank is entirely focused on providing world-class customer service by embracing technology to offer convenient, accessible and reliable banking services.

The bank's shareholding structure can be broken down into the following; 20.7% owned by Nedbank, 18% by Qatar National Bank, 13.8% owned by PIC (GEPF), IFC owns 9.2% (Managed funds) and 5.2% (direct funds), 4.0% is owned by SSNIT while 29.1% is owned by

others (Free Float). The shareholders are focused on building shareholder value by taking a long-term strategic view and monetizing the bank's unique presence in the region.

Ecobank Kenya Limited is a part of Ecobank Transnational that operates in Kenya. It is among the banks licensed by the Central Bank of Kenya. It was founded on 16th June 2008 after Ecobank Transnational Incorporated (ETI) acquired 75% of EABS bank. As at 3rd July 2013, Ecobank Kenya had acquired the whole of EABS, and its total assets were valued at US\$427.6 million, with shareholders' equity at US\$3.39 million. Today, the bank continues to shade light on Ecobank Transnational's vision, which is to provide world-class customer service by embracing technology to offer convenient, accessible and reliable banking services. To achieve this, the bank has embraced strategic alliances with leading international players such as MasterCard, Visa, Global Technology Partners (GTP) to facilitate pan-African payment solutions, Western Union, MoneyGram, Wari and Ria to facilitate money transfer and Airtel, Safaricom, MTN and Orange to offer mobile banking services. All these have helped the bank combat digital disruption, a threat that faces all modern banks today.

1.1.4 Digital Disruption and the Financial Performance of Ecobank Kenya.

Just like any other financial institution, Ecobank Kenya Limited faces the threat of digital disruption. The advancement of technology has resulted to the rise of so many concurrent disruptive forces that have changed the game in the banking industry. Banks such as Ecobank Kenya Limited have had to respond to this challenge by adapting to the industry's game.

As of August 2014, Ecobank Kenya Limited was maintaining 29 networked branches in the country. However, as a result of digital disruption, the bank announced in October 2016 that it

intends to reduce this number by 9 branches, to 20 (Ecobank Financial Report, 2017). This is considered a ripple effect to the digital disruption that is eating into the country's banking industry. The bank has had to keep up with rapidly changing technology that has resulted to the rise of alternative financial service providers such as M-Pesa, Airtel Money, Yu-Cash and Orange-Money, services offered by telco service providers Safaricom, Airtel, YU and Orange.

It is also important to note that the bank's human resource has been largely affected as a result of digital disruption. The bank had 402 of employees as at 2014. However, this number has been decreasing over the years, and 322 were reported by the end of March 2017 (Ecobank Financial Report, 2017). This is as a result of the reduced cost of offering financial services that improved financial technology has brought about. Additionally, the consumer's expectations have risen as a result of the increased competition leading to a further reduction in the costs of offering financial services. As a result, the bank has had to cop up with this rapid change in technology by embracing it and even forming strategic alliances with their competitors so as to ensure that they achieve consumer satisfaction.

1.2 Statement of the Problem

While the banking industry has been on a path towards digitization for a number of years, it is the advent of the computer and the mobile device that has dramatically accelerated the pace of change. Now millions use apps to handle majority of their transactions. This has changed the way people bank and the ways banks interact with their customers. Consequently, banks that do not keep up with these changes have suffered financial losses. In line with this, this study was set to investigate the main factors of digital disruption in the banking industry and how they affect a bank's financial performance.

Just like all commercial banks in Kenya, Ecobank Kenya Limited has been largely affected by digital disruption. Since people are accustomed to using digital applications in all areas of their life, they expect the same applications to work quickly, efficiently and seamlessly in their access their financial services. This has forced the bank to adopt new technology in virtually all the financial services it offers. As Mbogo (2010) points out, many digital market entrants are more relevant to the end-consumer hence serving them in a more convenient way. In Kenya for instance, companies such as Safaricom and Airtel are providing financial services that have thus far created new business model opportunities in digital ecosystems (Mbiti, and Weil, 2011). This study therefore was set to explore how this transformation has impacted traditional banks such as Ecobank Kenya Limited, who risk losing their revenues in the near future if they don't seize digital opportunities.

Studies reveal that digital sales have the potential to account for more than half of new inflow revenue in banks and other financial institutions (Broeders, and Khanna, 2015). Bank products such as savings and term deposits, as well as services to small and midsize enterprises, are expected to double the new inflow of revenue by integrating them in various digital platforms. However, digital disruption poses a great danger to this realization. It is important to note that a number of studies have been conducted to establish how the Financial Performance of financial institutions has been affected by the emergence of digital platforms. These studies have been inclusive of all banks in Kenya, not taking into consideration how individual banks have been affected. Additionally, they have not tackled the significant threat posed by the fast encroachment of alternative financial service providers. Being part of the Banking Industry in Kenya, Ecobank Kenya Limited faces these threats. As a result, this study intended to identify how commercial banks have coped with the threat and how they can overcome them.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective for this study was to examine the effect of Digital Disruption in the Financial Performance of commercial banks in Kenya, with a focus on Ecobank Kenya Limited.

1.3.2 Specific Objectives

The following were the specific objectives to be addressed by the study;

- i. To investigate the effect of Social Digital Trends on the financial performance of Ecobank Kenya Limited.
- ii. To establish the effect of technology innovation on financial performance of Ecobank Kenya Limited.
- iii. To assess the effect of digital competition on the financial performance of Ecobank Kenya Limited.
- iv. To examine the effect of elimination of industrial boundaries on the financial performance of Ecobank Kenya Limited

1.4 Research Questions

The study therefore answered the following research questions.

- i. How has Social Digital Trends affected the financial performance of Ecobank Kenya Limited?
- ii. How has technology innovation affected financial performance of Ecobank Kenya Limited?

- iii. How has digital competition affected the financial performance of Ecobank Kenya Limited?
- iv. What is the effect of the elimination of industrial boundaries on the financial performance of Ecobank Kenya Limited?

1.5 Justification and Significance of the Study

This study is important because highlighted the effect of digital disruption in the banking industry. The current rate of rapid advancement in technology means that more avenues for digital banking platforms are going to be exploited. Moreover, more consumers are looking towards a rather seamless financial service that is not only convenient but also accessible. This study therefore necessitated the need to understand the threat posed by digital disruption. Key beneficiaries being individuals banking with various banks in Kenya and owners of these banks as they will now be able to monitor trends in the industry as advised by the results from this study.

Moreover, the study also intended to suggest ways through which the banking industry can implement key strategies that would help mitigate this threat. This was done by providing the ingredients that facilitated a stable financial environment that not only allowed banks to flourish but also allowed for a peaceful co-existence with alternate financial service providers. This information would be useful in formulating long lasting strategies by owners and shareholders of banks in Kenya.

Finally, the study intended to add to the vast body of knowledge already in place as far as knowledge on the banking industry is concerned. Results obtained from this study can be used as

reference by undergraduate, masters and post-graduate students doing their proposals and dissertations related to this topic.

1.6 Scope of the Study

This study investigated the effect of digital disruption in the performance of the banking industry in Kenya by taking a case of Ecobank Kenya Limited. The population targeted by the study comprised of all Ecobank staff. However, the sample size targeted employees in branches located in Nairobi County because of the ease at which these banks would be accessed. As a result, the research was conducted at Ecobank Kenya's Branches in Nairobi County. Information regarding Social Digital Trends was obtained from employee's observation of Ecobank Kenya's customers. Information on technology innovation was restricted to those forms adopted by Ecobank Kenya limited. Information regarding digital competitions as well as industrial convergence was based on the banking industry trends in Kenya. Finally, the financial performance was restricted to that reported by Ecobank Kenya Limited. The study also used ROA reported at the end of the 2015-2016 financial year.

1.7 Theoretical Framework

This study was informed by three theories that helped the researcher to explain the advancement of digital financial technology and its role in digital disruption. These theories are the Disruptive Innovation Theory, the Diffusion of innovation theory and the Financial Intermediation Theory (Hang and Yu, 2010). The Disruptive Innovation Theory helped to develop the concept of how financial products and services have evolved so much so that traditional banking institutions have been displaced. This also helped to develop the conceptual framework adopted by the

study. The diffusion of innovation theory seeks to explain how, why and at what rate new ideas and technology spread. This was vital in explaining the fast encroaching technology adopted by banking institutions, an effect that results to digital disruption (Kaminski, 2011). Finally, the financial intermediation theory was used to explain how the financial performance of banks has been affected by changes in the financial market. This is because the theory asserts that modern financial intermediaries tend to focus more on new and evolved markets for financial futures and options as opposed to traditional financial intermediaries. (Scholtens and Van Wensveen, 2003)

1.8 Conceptual Framework

The conceptual framework adopted by the study was based on the Disruptive Innovation Theory. The theory explains how alternative product and service providers, with the help of digitization change so much so that they displace already established competitors. The main factors that comprise this change are technological innovation, digital competition and Social Digital Trends (Al-Jabri., and Sohail, 2012). All these factors have fueled digital disruption in their own unique ways. For instance, the digital era has and will continue to change Social Digital Trends, which in turn directly affects consumer behaviour and demands (Arthur, 2013). More specifically, consumer demands digital-consumer expectations for convenience of banking services are driven by these digital changes. Additionally, the ongoing industry convergence is opening doors to new competition, new ways of doing business and new revenue opportunities (Hang and Yu, 2010). McQuivey (2013) points out those technological advances are creating opportunities for more people than ever before to meet more customers' needs than ever before at lower costs than ever before –and that creates digital disruption. In addition, this increases the rate at which the technology designed to perform these tasks is created, thereby accelerating the entire process. In

so doing, people plus infrastructure equal disruption, which then means that digital innovators plus digital infrastructure equals digital disruption at a scale most industries, including the banking industry are not prepared to handle.

Thus the following conceptual framework presents the relationship between these factors and financial performance. This is what was adopted by the study.

Independent variables

Dependent Variable

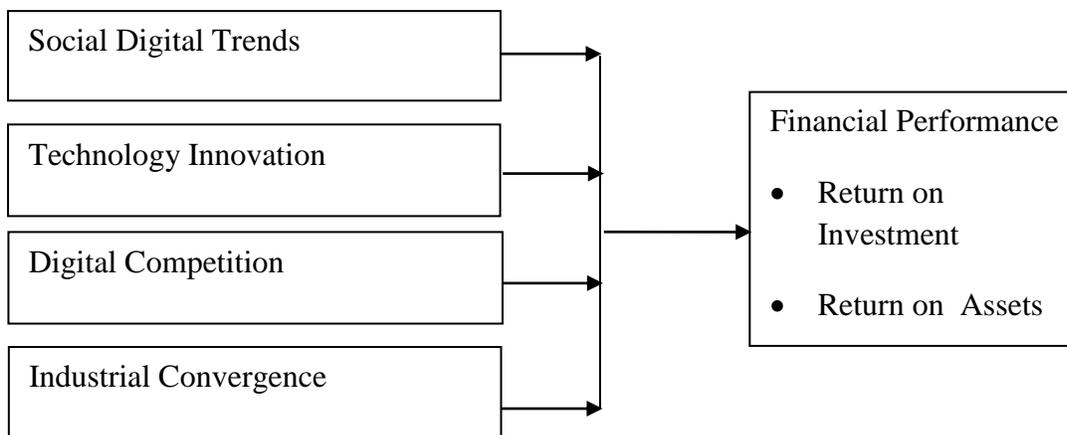


Figure 1. 1 Conceptual framework

1.9 Definition of Terms

Corporate banking: refers to the aspect of banking that deals with corporate customers

Digital Disruption: the change that occurs when new concurrent and disruptive digital financial technologies affect the value proposition of an existing form of financial service.

Financial Performance: a subjective measure of the use of a financial institution’s assets in its pursuit to generate revenue.

Globalization: This is a procedure of international economic and financial integration as a result of changes in world's financial ideas and products as a result of financial technological advancement

Online banking: an electronic payment system that allows consumers of financial services to access their financial institutions through the financial institution's website.

Mobile banking: A service provided by a financial institution/ a financial service provider, allowing consumers to perform financial transactions remotely via mobile phones.

Telco: A public utility that provides telephone service

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presented the literature review on the effect of digital disruption in the banking industry. It identified and discusses the relevant theories, scholarly arguments and all the relevant studies under which the proposed study is anchored.

2.2 Theoretical Review

This section identified and discussed the relevant theories and scholarly arguments that explain the emergence of digital disruption as well as the operations of the banking industry.

2.2.1 Disruptive Innovation Theory

The disruptive innovation theory is a theory developed by Clayton Christensen in 1995 that has been used to describe innovation driven growth. Christensen describes disruptive innovation as a process through which a product or service flourishes at the bottom level of a relatively mature market and then relentlessly moves up the market levels displacing established competitors in the process (Hang and Yu, 2010). This means that a whole new market and value network is created that ends up disrupting an existing market and value network along with established leading firms and alliances.

The theory asserts that disruptive innovations are produced by entrepreneurs and outsiders who are not part of existing market-leading companies (Corsi, and Di Minin, 2014). This is because more often than not, the existing business environment does not allow these established markets to pursue these innovations as they first arrive more so because they are not highly profitable at their debut. Moreover, their development requires investment that may end up taking scarce

resources away from sustaining innovations. Christensen also points out that the risk associated with investing in a disruptive innovation is higher than other evolutionary forms of innovation and that the whole process of developing it takes longer too (Corsi and Di Minin, 2014).

The theory identifies some characteristics of a disruptive business environment. First, established businesses are often associated with lower gross margins and smaller target markets. (Sultan and van de Bunt-Kokhuis, 2012). Additionally, their products and services appear simple compared to the disruptive innovators so much so that they may not appear as attractive as existing solutions. Because these lower tiers of the market offer lower gross margins, they are unattractive to consumers. Christensen also identifies low-end disruption which basically targets customers who do not need the full performance valued by customers on the high end. "Low-end disruption" occurs when the rate at which products improve exceeds the rate at which customers can adopt the new performance. It means that new-market disruptions often targets customers whose needs were unserved by existing incumbent firms (Sultan and van de Bunt-Kokhuis, 2012)

The above characteristics can be seen in the banking industry. The risk associated with engaging in innovations was too high at the beginning, thus traditional commercial banks did not venture into it. Telcos such as Safaricom and Airtel pursued this innovations and have thus far created a whole new market that has since threatened to displace traditional banking. As a result, existing banks have had to adapt to the new trend in the industry in an effort to meet customer expectations.

2.2.2 Diffusion of Innovation Theory

Diffusion of Innovation theory was developed by E.M. Rogers in 1962. The theory came about as a result of an explanation of how an idea is able to gain momentum in time and spread through a specific population. The end result of this diffusion is that people, as part of a social system, adopt a new idea, behavior, or product. According to Rogers (2010), innovation is described as an idea that is perceived to be new from another persons of institution's perspective. Diffusion of innovation therefore can be described as the process through which an innovation develops over a period of time often through certain channels among members of a social system.

The theory asserts that individuals tend to adopt things or behaviour that they did not possess previously such that they begin to do things differently. For instance, individuals may start purchasing new products or acquire a new behaviour altogether. The theory also insists that the reason for adoption is often pegged on the person's ability to perceive the idea, behaviour or product as being new. This is what drives the process of diffusion, in a process described as the Innovation-Decision Process (Kaminski, 2011).

The Innovation-Decision Process Model points out that the adoption of an innovation is not a single act, but a process that occurs over time. There are five stages that potential adopters undergo described by Stoneman, (2001). The first stage involves innovators. These are the people who want to be the first ones to try out the innovation. They are venturesome and interested in new ideas. The second stage involves early adopters who basically represent opinion leaders. They are very comfortable adopting the new innovation because they are well aware of the need to change. Next stage involves early majority, who are neither leaders nor the average people but get to adopt new ideas before the average person. Fourth stage includes the

late majority. These are skeptical to change and would only adopt new innovation if it works for a majority of the people. Finally, laggards are described in the fifth stage as they represent very skeptical and conservative individuals who are the most difficult to adopt any new innovation. Strategies to appeal to this population are statistics, fear appeals, and pressure from people in the other adopter groups (Stoneman, 2001)

The adoption of digitized banking in the world has practically evolved through the diffusion of innovation theory. Different sections of the society are still in different stages as far as their adoption is concerned. Greenhalgh et al., (2004) identifies some factors that may influence the adoption of an innovation. First is the relative advantage associated with the innovation in relation to the idea or program it is replacing. Next is the compatibility issue; the new idea has to be consistent with the values and needs of the potential adopters. The extent to which the innovation can be experimented with is the fourth factor while the last one involves the extent to which the innovation provides tangible results. All these factors play a critical role in explaining the adoption of innovation in the banking industry in the world.

2.2.3 Financial Intermediation Theory

The financial Intermediation theory has for a long time been used to reconcile the behaviour of institutions involved in capital markets. This theory can be used to explain the financial performance of banks. While traditional theories of intermediation were based on transaction costs and asymmetric information solely for individuals, modern theories tend to focus more on new and evolved markets for financial futures and options (Diamond, 1984). Additionally, traditional intermediary theories were designed to account for institutions which take deposits or issue insurance policies and channel funds to firms. Due to significant changes, modern theories

now focus on markets for intermediaries rather than individuals or firms. These changes are difficult to reconcile with the traditional theories (DeYoung and Rice, 2004).

It is important to note that the most important function of intermediaries is to provide a steady flow of funds from surplus to deficit units. The theory is based on four principle criteria. The first one asserts that all categories of liabilities or deposits are specified for a specific or fixed sum. This fixed sum is not related in any way to the performance of a given portfolio associated to the liability/ deposit. The second standard states that deposits are supposed to be short-term. Thirdly, a high proportion of liabilities can be withdrawn on demand. Lastly, liabilities and assets are largely not transferable (Allen, & Santomero, 1997).

The financial intermediation theory asserts that investors or depositors are risk averse and uncertain about the timing of their future consumption need. Therefore without an intermediary, all investors are locked into illiquid long-term investments that yield high pay offs to those who consume later (Diamond and Dybvig, 1983). Additionally, the role of the financial intermediary is essentially seen as that of creating specialized financial commodities (Scholtens and Van Wensveen, 2003). This is achieved when an intermediary finds that it can sell them for prices which are expected to cover all costs of their production, both direct costs and opportunity costs.

Finally, it is equally important to note that financial intermediaries exist due to market imperfections. As such, in a 'perfect' market situation, with no transaction or information costs, financial intermediaries would not exist. Numerous markets are characterized by informational differences between buyers and sellers. In financial markets, information asymmetries are particularly pronounced. Borrowers typically know their collateral, industriousness, and moral

integrity better than do lenders. On the other hand, entrepreneurs possess inside information about their own projects for which they seek financing (Leland and Pyle, 1977).

2.3 Empirical Review

This section identified and discussed the relevant studies that have been done previously. The key findings of various studies will be identified. At the same time, the context and research design/methodology adopted by each author will be analyzed.

A descriptive study conducted by Agboola (2006) in 2006 on the Impact of ICT in banking functionalities in Nigeria revealed that innovation was a fundamental catalyst of contention in the financial world. Additionally, the study found out that there is an increase in the appropriation of automated teller machines, electronic funds transfer, smart cards, electronic home, office and cell phone banking. The study therefore concluded that ICT has largely affected the banking industry in Nigeria. This observation can be translated to most countries in the world, including Kenya.

Aker (2010) conducted a study on The Use of Mobile Phones in Niger. This study adopted a descriptive research design conducted in the year 2010. The study revealed that there was a reduced price dispersion in grain markets that adopted the use of mobile phones to make financial transactions in the country. This meant that the use of mobile phones made it easier for transactions to take place so much so that it reduced the change in price from region to region.

Al-Jabri (2012) on the other hand studied Mobile Banking Adoption by looking at the application of diffusion of innovation theory. This study was a literature review conducted in Saudi Arabia in the year 2012. Results concluded that Bank's attention should focus on

understanding customer behavior and designing reliable mobile banking systems that will meet their needs and provide useful and quality services. Additionally, the study reveals that complexity has a negative effect on mobile banking adoption. Relative advantage on the other hand has a positive effect on mobile banking adoption. Moreover, compatibility has a positive effect on mobile banking adoption while observability has a positive effect on mobile banking adoption. Perceived risk having a negative effect on mobile banking adoption while the ability to try new innovations has a positive effect on mobile banking adoption. The study recommends that banks should focus on communicating information that emphasizes the relative advantage and usefulness of mobile banking compared to other banking channels like physical presence to the bank or using ATM machines (Al-Jabri, 2012).

In 2015, Anyango, Kathuo and Rotich (2015) conducted a study on the impact of mobile banking on the financial achievements of Kenyan business banks. The study adopted a descriptive research design and found out that banks which grasped m-money administrations had an inconceivable level extended customer outreach, and along these lines had altogether upgraded their financial performance.

Ching et al (2011) also conducted an empirical study on the Factors affecting Malaysian mobile banking adoption. The study concluded that Perceived usefulness and ease of use, relative advantages, perceived risks and personal innovativeness were the factors affecting the behavioral intention of mobile users to adopt mobile banking services in Malaysia. However, social norms were the only factor found to be insignificant in this study. The discoveries from this study uncovered that apparent helpfulness, usability, relative favorable circumstances and individual

ingenuity were the elements influencing the behavioral aims of mobile clients to embrace versatile banking services in Malaysia.

Dew (2007) studies The Inclusion of e-banking in the banking sector throughout the world and concluded that financial innovations enable firms from all sectors to raise money in larger amounts and at a cheaper cost than they could elsewhere. According to the study, the major benefit from e-banking innovation is fee based income. For instance, joining a certain ATM network will create customer awareness of that bank and influence the market share thereby influencing the amount of income generated by the institution.

In their study on Mobile banking and economic development in Singapore, Donner and Tellez (2008) concluded through offering a way to lower the costs of moving money from place to place and offering a way to bring more users into contact with formal financial systems, m banking/m-payments systems could prove to be an important innovation for the developing world. On the other hand, Erickson (2010) asserted that mobile money can increase access to financial services and that microfinance institutions in particular can benefit from the use of mobile money. This was while conducting a study on mobile banking in developing countries.

Kigen (2010) conducted a descriptive research on the impact of mobile banking on transaction costs of microfinance institutions in Kenya. His conclusions asserted that mobile banking has reduced transaction costs considerably though they were not directly felt by the banks because of the then small mobile banking customer base. On the other hand, Kithaka (2014) studied how versatile banking affected budgetary performance of Kenyan business banks. This survey inferred that mobile banking positively and significantly influences the fiscal performance of business banks in Kenya.

Koivu (2002) also studied the uptake of mobile phone in Kenya. His study concluded that mobile banking in Kenya affects performance of organization, behavior and decision making of the entire economy. Additionally, the trend of continued reliance on mobile devices to execute monetary transaction is steadily gaining momentum. This confirms the fact that the adoption of mobile banking and other alternative forms of financial service provision is on the rise in the country.

Kozak (2005) studied on the influence of the evolution in Information Technology on the profit and cost effectiveness of the US banking sector during the period of 1992-2003. This cross sectional analysis indicates an optimistic relationship between Information Technology and the cost effectiveness of banking in the United States. This has so far turned out to be the case as banks are enjoying cost saving in their interaction with developments in the financial sector.

Malhotra and Singh (2009) on the other hand studied the impact of web based banking on bank achievements and hazards in India. The study adopted a descriptive research design. They discovered that large web banks are bigger, beneficial and have efficient operations. Moreover, web banks have higher resource quality and can bring down building and equipment expenses and that Indian internet banks depend considerably on savings. However, smaller banks which use internet banking had experienced a decrease in profitability.

Masinge (2010) examined the factors influencing the adoption of mobile banking services at the bottom of the Pyramid in South Africa. The research model includes the original variables of extended technology acceptance model (TAM). The study indicates that with the convergence of banking services and mobile technologies, users are able to conduct banking services at any

place and at any time through mobile banking. This has improved efficiency as far as conducting transactions is concerned.

Mbogo (2010) conducted a correlation analysis on the success factors attributable to the use of mobile payments by micro business operators in Kenya. The study results revealed positive correlation with the behavioral intention to use the mobile payment services and associated actual usage but low correlation between perceived support and actual usage. On the other hand, Morawczynski, (2009) studied the adoption, usage and outcomes of mobile money services using the case of M-PESA in Kenya. He discovered that over 7.5 million users, or 34% of the adult population, have registered with M-PESA. The study also revealed that the socio-technical systems framework was used to present M-PESA as a complex system rather than an isolated application; that M-PESA grew rapidly because it had a dedicated team of system builders and as a result a whole industry for mobile money developed as a result of M-PESA's success. This has resulted to digital disruption.

Munaye (2009) studied the application of mobile banking as a strategic response by Equity bank Kenya limited to the challenge in the external environment. The study revealed that indeed, the concept of mobile banking is a strategic response. On the other hand, Must and Ludewig, (2010) studied mobile money services and their potential to provide financial services to SMEs in Kenya. Study findings revealed that poor individuals without access to banking services are forced to rely on the informal cash economy like borrowing and family savings, making them more susceptible to risks and lacking means to efficiently save or borrow money.

Nadia, Anthony and Scholnick, (2003) studied the relationship between IT expenditures and bank's financial performance in USA. The study concluded that if the network effect is too low,

IT expenditures are likely to reduce payroll expenses, increase market share, and increase revenue and profit. The evidence however suggested that the network effect is relatively high in the US banking industry, implying that although banks use IT to improve competitive advantage, the net effect is not as positive as normally expected. The study therefore concluded that the innovation in information technology, deregulation and globalization in the banking industry could reduce the income streams of banks, and thus the strategic responses of the banks

Shu and Strassmann (2005) conducted a research on Information Technology and the performance of the banking sector in the USA. Study asserts that even though Information Technology has been one of the most essential dynamic factors relating all efforts, it cannot improve banks' earnings on its own. Tchouassi (2012) while studying the effects of mobile banking and the performance of commercial banks Sub-Saharan Africa (SSA), concluded that poor, vulnerable and low-income households in Sub-Saharan Africa (SSA) countries often lacked access to bank accounts. This therefore meant that mobile phone presented a great opportunity for the provision of financial services to the unbanked. In addition to technological and economic innovation, policy and regulatory innovation was needed to make these services a reality.

Tiwari, Buse and Herstatt (2006) studied impact of mobile technologies on Social Digital Trends and its implications for banks in Kenya. The study established that there are vast opportunities for banks to generate revenues by offering value added, innovative mobile financial services while retaining and even extending their base of technology-savvy customers. Study also concluded that there are open doors for banks to produce income through innovative and versatile related services and extending their base of technology to cognizance clients.

A study on Mobile money services as a variation of branchless banking in Kenya conducted by Wambari and Mwaura (2009) found useful benefits to SMEs including access to financial services like making deposits and savings and accessing the formal banking sector through mobile money services. Study also concluded that mobile money services have the potential for delivery of financial services outside conventional banking. On the other hand, Wambari (2009) studied mobile banking in developing countries using a case of Kenya. The study identified that the adoption and use of mobile phones is product of a social process, embedded in social practices such as SMEs Practices which leads to some economic benefits.

Zimmerman (2010) also conducted a study on mobile banking in developing world is an object of skepticism among financial insiders. The study concluded that cell phones could revolutionize personal finance in poorer country. However, regulators warned of money laundering and most bankers worried that low customer balances wouldn't be worth the transaction costs.

2.3.1 Operationalization of the Variables

2.3.1.1 Financial Performance

Financial performance is a subjective measure of the use of a financial institution's assets in its pursuit to generate revenue. This was the dependent variable. In order to measure this, two main indicators were used. These are Return on Equity and Return on Assets.

ROE is a financial ratio that refers to how much profit a company earned compared to the total amount of shareholder equity invested or found on the balance sheet. (Kusa and Ongore, 2013). This can be described as what shareholders look in return for their investment. A high ROE implies that the financial institution is capable of generating cash internally. This means that the banking institution is likely to be associated with profits. It is calculated as the ratio of Net

Income after Taxes divided by Total Equity Capital. ROE also reflects how effective a bank is using its shareholders' funds. This therefore means that higher ROE rates imply effective management of shareholders capital (DeYoung and Rice, 2004).

ROA mainly indicates the profitability of a bank. It is calculated as a ratio of Income to its total asset (Khrawish, 2011). It therefore measures the ability of the bank management to generate income by utilizing company assets at their disposal. It further indicates the efficiency of the management of a company in generating net income from all the resources of the institution. Wong (2004) stated that a higher ROA shows that the company is more efficient in using its resources.

2.3.1.2 Social Digital Trends

The digital era has and will continue to change Social Digital Trends, which in turn directly affects consumer behaviour and demands. Customers are no longer comparing brands with their direct competitors, but rather all brands they consume, no matter the industry or product. (Arthur, 2013). Many consumer oriented industries are facing new customer demands that are largely fueled by digital-customer expectations. Customers in the banking industry in particular have high expectations for convenience of banking services (McQuivey, 2013). This is because they are more empowered through social media and the prevalence of information which can give them an information edge over banks. Metawa and Almosawi (1998) assert that customer's banking behaviour has changed a great deal. Most of them are becoming digital, changing with the environment. They expect interactive and social channels of customer service.

This therefore means that Social Digital Trends is a key ingredient in asserting how digital disruption has affected the banking industry in the country. It is composed of the number of

customers who have migrated to a digital banking platform as they will be the ones influencing those who have not joined a platform to do so. It is important to note that the digital banking platform being referred to is most likely going to be one offered by alternative financial service providers (McQuivey, 2013). Social Digital Trends is also composed of the willingness to embrace mobile banking applications by customers, which in turn allows banking institutions to develop them. It also includes the number of hours customers are willing to do business. Is it 24 hours a day? Finally, excellent customer service is also part of Social Digital Trends and how employees are trained to attend to customers. More customers prefer to use digital mobile platforms (Arthur, 2013). To measure Social Digital Trends therefore, the study will qualitatively analyze the above mentioned indicators using a Likert scaled questionnaire. Means and Standard deviation was then used to measure the extent of their implication to digital disruption as prescribed by Nemoto and Beglar (2014).

2.3.1.3 Technology Innovation

Technological innovation is also another factor that determines digitization in the banking industry. Evidently, innovation is fueled by intensified everyday technological innovation, empowerment as well as customer expectations. Becoming digital has become necessary for virtually all financial institutions in order to meet outside forces in the form of customer expectations as well as internally. Customers need more sophisticated channels that are interactive and social while the need to maintain a certain level of infrastructure and digital capabilities such as analytics, cloud, computing and a computer savvy and digital workforce continue to press (Corsi and Di Minin, 2014). These are the factors that the researcher was looking for in order to qualitatively assess how they affect the financial performance of the organization. As a result, statements regarding each and every factor mentioned above was

presented on a Likert Scaled questionnaire, where respondents will be expected to respond to it. Means and standard deviations will then be used to analyze the data obtained so as to assess the extent of technological innovation implication (Nemoto and Beglar, 2014).

2.3.1.4 Industrial Convergence

The banking industry is currently ongoing an industrial convergence. This, as described by Weill (2009) results to efficiency in the way financial transactions are made. Additionally, it results to a significant improvement in financial performance. The ongoing industry convergence is however, opening doors to new competition in its pursuit to bring payments, retail and telecom together with banking. Additionally, this has led to the emergence of new ways of doing business and new revenue opportunities that have affected the way traditional banking services are offered (Weill, 2009).

Factors that can be used to qualitatively measure industrial convergence include the number of alternative financial service providers the banks works alongside to make its service provision smooth. This implies the players collaborated in the industry. It can also be measured by looking at the profit or loss made as a result of collaborating with other players in the industry. If a loss is being incurred, then it means that the institution should be worried about industrial convergence. If they are making profits from such a collaboration then it implies that industrial convergence is working out well for the institution. The growth of the bank, both locally and internationally as a result of industrial convergence, can also be used to measure its effect on the financial performance of the institution.

The researcher therefore took into account all these factors, elaborate them in statements that can be responded to by respondents based on a Likert Scale. This data was then analyzed using

means and standard deviation to illustrate the extent of the effect of industrial convergence on the financial performance of Ecobank Kenya (Nemoto and Beglar, 2014).

2.3.1.5 Digital Competition

Digital competition from new entrants has also disrupted the market in the banking industry. Different industries have found an avenue to exploit and are thus eating into traditional bank's market share by adding value to customers and profitably serving traditionally unprofitable segments of this market. They address customer needs in completely new ways that are more convenient to them. Krozsner (2003) asserted that there is greater competition between traditional banking and emerging trends in financial service provision. This has largely affected the way traditional banking occurs. As a result, the study has included digital competition as a key ingredient of digitization that can be used to explain the effect of digital disruption on the financial performance of Ecobank Kenya limited.

Factors that can be used to measure this variable will be measured qualitatively. The study will assess whether the bank offers a seamless digital and intelligent Omni channel, whether digital competition has resulted to a significant reduction in operational costs at the bank and also whether other digital service providers have significantly reduced the number of customers at the bank. Additionally, the study will qualitatively determine the amount of competitive advantage lost as a result of the emergence of other digital financial service provider and also establish whether the bank has adopted modern technology platforms which allow them to quickly adapt to consumer demands in an effort to remain competitive. Digital competition can also escalate the growth of alternative digital payment that the bank has to offer its customers e.g. SATM, MASTERPASS. Identifying the extent to which all the above mentioned factors have affected the bank's financial performance will be used as the measure of digital competition. Similarly,

data obtained from Likert Scaled questionnaires was analyzed using means and standard deviation (Nemoto and Beglar (2014).

2.4 Research Gap

Many studies have done researches on digitization in the banking sector. They have highlighted the improvements that it has brought about in the financial sector. Specifically, they have focused on the adoption of mobile banking, relationship between IT expenditures and bank's financial performance, the influence of the evolution in Information Technology in the financial sector and the impact of web based banking on bank achievements and hazards (Malhotra and Singh, 2009).

From the empirical analysis, it is clear that the adoption of innovative financial service provision is widespread. New entrants are also changing the face of banking despite the fact that traditional financial institutions can still dominate by partnering and piloting new solutions that focus more on customer experience.

However, most researchers have not concerned themselves with how innovations will transform the legacy of banking operations as they are known to man. How will incumbent financial institutions fare on? Will they continue to dominate or will there be a disintermediation of banking organizations by the fin-tech start-ups? Moreover, it is important to understand how the legacy of financial institutions in general is going to be shaped going forward. With digitization came a whole new sector of financial intermediators and a cashless economy that has since threatened the existence of the traditional banking sector. All these factors affect Ecobank Kenya Limited, being a player in the industry. This study therefore intends to focus on the effect of

digital disruption on the financial performance of commercial banks by taking a case of Ecobank Kenya Limited.

2.5 Critique of Theories and Previous Studies

This section presented the critique of the literature review, both theoretical and empirical. Under the theoretical review, the study reviewed three main theories namely the disruptive innovation theory, diffusion of innovation theory and the financial inclusion theory. The study also reviewed various studies under the empirical review.

The disruptive innovation theory is a theory developed by Clayton Christensen in 1995 that has been used to describe innovation driven growth. The theory highlights how a new market produced by outsiders can grow so much so that it displaces existing market leaders. However, it is also associated with limitations. For instance, Gans, (2016) criticizes the theory by arguing that disruption is more of a predictor than a descriptor.

The theory of Diffusion of innovation developed by E.M. Rogers in 1962 describes diffusion as the process through which an innovation develops over a period of time often through certain channels among members of a social system. This theory defines how individuals adopt new innovation in different ways. However, critics are quick to point out that the theory works better with the adoption of new products as opposed to their cessation (Eyestone, 1977). Moreover, it does not take into account an individual's resources associated with the adoption of the new innovation. This can be seen in the way non-developed countries face challenges in the adoption of innovation of the banking sector.

The theory of financial intermediation helps explain how financial institutions bridge the gap between surplus units of funds and those who are in deficit. Its main role is to essentially create specialized financial commodities. It is important to note that in order for this to happen, information has to flow between both parties. However, critics identified moral hazard as a barrier that prevents the transfer of information between market participants, which is an important factor for projects of good quality to be financed.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology that was adopted by the study. This included the research design, target population, sampling and sampling procedures, the research instrument, validity and reliability of the instrument, data collection procedures and finally data processing and analysis.

3.2 Research Design

This study adopted a descriptive research design. This design was used because it allowed the researcher to seek information more directly regarding the topic of study by describing the situation (Lewis, 2004). This design also often depicts the participants in an accurate way, allowing them to give their responses freely by describing the aspects affecting them as far as the topic of study is concerned. Moreover, the descriptive research design facilitated the examination of why the observations of digital disruption exist and therefore allowed the researcher to identify the implications of these findings on the financial performance of commercial banks in Kenya by taking a case of Ecobank Kenya Limited (Creswell, 2013).

3.3 Target Population

This study targeted all employees at Ecobank Kenya Limited. As at March 2017, there were 322 employees working at the bank (Ecobank Financial Report, 2017). It is important to note that all these respondents were part of the study population because they were directly involved in the digital disruption phase Ecobank Kenya was involved in. This implies that they were knowledgeable on the topic of study.

3.4 Sampling and Sampling Procedure

Sampling is the process of obtaining a sub-population from a given population (Patton, 2005). This study adopted a stratified random sampling procedure. Stratified sampling involves dividing the target population into smaller groups called Strata. These strata are formed based on shared attributes or characteristics (Patton, 2005). This study formed strata based on the different departments in the institution. The main departments that were focused on by this study included the Operations and consumer department in the bank. This added up to a total of 100 employees (Ecobank Yearly Report, 2016) who fell under these three departments. This therefore means that employees were divided into three strata. A random sample was then taken from each stratum proportionally to its size. The subsets from each strata were then pooled to form a random sample as presented in table 3.1;

Table 3. 1 Population Category

Population Category	Target Population	Sample Size of strata
Operation Managers	20	4
Consumer Department	60	36
Direct Banking Department	20	16
Total	100	56

Source: Ecobank Annual Report (2016)

3.5 Research Instrument

The research instrument used by the study was the questionnaire. Questionnaires were a suitable instrument because they gave the researcher a larger scope under which to conduct the research. They were also preferable to use because they allowed the respondents to give more candid and objective responses to research questions.

The structure of the questionnaire consisted of both structured and unstructured questions. Structured questions were useful since they reduce variability in meanings possessed by questions. They also offered ways of ensuring comparability of the responses given by respondents. Unstructured questions on the other hand were useful because they helped respondents provide insightful information that was relevant while answering the research questions (Orodha, 2004). It consisted of three sections; section A was used to collect demographic information, section B to collect qualitative data on the variables and section C to collect data on mitigation strategies to be implemented by the study.

3.6 Validity and Reliability of the Instrument

3.6.1 Validity

Validity of the research instrument is concerned with establishing whether the instrument used measures all the variables it is supposed to measure (Creswell, 2013). In this case, the questionnaire was vetted to make sure that its content measures all the variables involved in the study. As a process, validation involves collecting and analyzing data to assess the accuracy of an instrument (Creswell, 2013). In order to assess the validity of the questionnaire, the researcher used pilot testing where 10% (4) of the total number of questionnaires to be issued were tested. These questionnaires were then analyzed in consultation with a supervisor for validity.

3.6.2 Reliability

Reliability refers to consistency. It determines whether the instrument consistently measures what it is intended to measure (Bernard, 2012). Assessing the reliability of study findings requires the researcher to make judgements about the 'soundness' of the research in relation to the application and appropriateness of the methods undertaken and the integrity of the final

conclusions. Being a qualitative research, this study designed and incorporated methodological strategies to ensure the ‘trustworthiness’ of the findings. Such strategies included accounting for personal biases which may have influenced findings, acknowledging biases in sampling and ongoing critical reflection of methods to ensure sufficient depth and relevance of data collection and analysis and ensuring interpretations of data are consistent and transparent (Creswell, 2013). Therefore, in order to test the reliability of the questionnaire, the study employed the test-retest reliability test, where the consistency of the questionnaire was evaluated over time. The researcher administered questionnaires to two groups; one contained individuals who took part in the study, while another had individuals who were not selected into the sample size. The study then used Cronbach’s alpha (Using SPSS version 22) to test for internal consistency. This revealed whether the content of the questionnaires were reliable (Bernard, 2012).

3.7 Data collection procedure

The data collection period involved a number of procedures. First, the researcher sought permission from Ecobank Kenya Limited beforehand. Once this permission was given, the researcher went on to inform all those individuals who were selected in the sample that they would partake in the research. The purpose of the study as well as the objectives was also communicated to the respondents in the sample size.

The next step involved distributing 40 questionnaires to the sample selected to take part in the study. Respondents were given time to fill and submit the questionnaires back for analysis. This process took approximately 2 weeks. After this process, the data collected was ready for analysis.

3.8 Data Processing and Analysis

Data processing and analysis involves the process of inspecting, cleansing, transforming, and modeling data with the goal of discovering useful information, suggesting conclusions, and supporting decision-making (Creswell, 2013). This study conducted data analysis after the process of data collection was complete. The data collected was grouped into two categories analyzed differently and separately depending on the category. Since the data was both quantitative and qualitative, the two parts were descriptive statistics and regression analysis. Descriptive statistics implies the use of means, frequencies, standard deviation and percentages. (Creswell, 2013). These were used to describe the demographic information obtained from the questionnaires so as to determine if the sample chosen to take part in the study fits the required description as far as demographic factors are concerned. This information was presented in form of tables. This is summarized in table 3.2

Table 3. 2 Data processing and analysis

Objective	Questionnaire	Data Analysis
Demographic Information	Section A	Descriptive Statistics such as means and standard deviations
Digital Disruption	Section B	Descriptive Statistics
Financial Performance	Section C	Regression Analysis

The second part of the analysis presented a regression analysis. This analysis showed the strength and direction of the relationship between the dependent and the independent variables. The strength of the relationship between the dependent and the independent variables was measured by carrying out statistical tests such as the F-test and student's t-distribution test at 5%

level of significance. This revealed whether the regression model adopted by the study was statistically significant (Miles, Huberman and Saldana, 2013).

The analytical model used by the study comprised the following regression equation.

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

Where;

Y= Financial Performance (ROA)

X₁= Digital Competition

X₂= Industrial Convergence

X₃ = Technological Innovation

X₄= Social Digital Trends

β= coefficients of determination

ε= is the error term

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents the analysis, presentation and interpretation of the data collected from the questionnaires. The collected questionnaires were checked for consistency before being coded. SPSS version 22 platform was used to facilitate analysis. Descriptive statistics such as frequency distribution and percentages were used to analyze general information. Means was used to analyze factors of digital disruption. Regression analysis was then used to explain the effect of financial disruption on financial performance. The findings are presented in form of tables and graphs.

4.2 Reliability Test Results

In order to test for reliability, this study used Cronbach's reliability test. Results are as indicated in table 4.1

Table 4. 1 Reliability Test

Reliability Test		
Cronbach's Alpha	Cronbach's alpha based on Standardized Items	N of Items
0.805	0.796	47

Source: Research Data (2017)

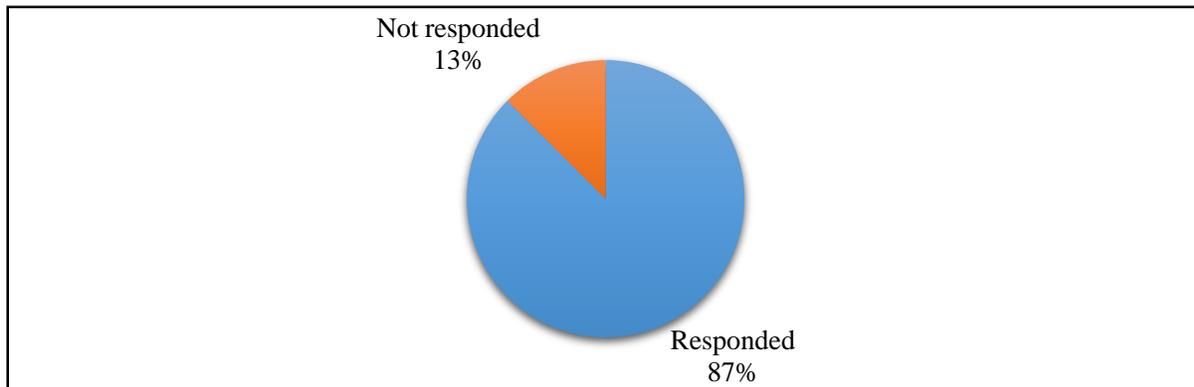
A Cronbach's alpha value of 0.805 indicates a high level of internal consistency for the scale used in the sample.

4.3 Response Rate

A total of 40 questionnaires were administered to employees selected to take part in the study.

Results are summarized in figure 4.1

Figure 4. 1 Response Rate



Source: Research data (2017).

The study managed to receive a total of 35 duly filled questionnaires which constituted a response rate of 87.5%. According to De Vaus, (2013) a response rate of 80% and above is considered adequate. This implies that response rate for this study was adequate to enable the researcher to perform the analysis.

4.3 Demographic Information

The respondents were asked to provide general information in regard to Gender, Age Bracket, Highest level of education, job position held and the duration in that position. The analysis of this information is presented in this section.

4.3.1 Gender of Respondents

The study sought to identify the gender of the respondents that took part in the research.

Table 4. 2 Gender

Gender	Frequency	Percent
Female	20	57.15
Male	15	42.85
Total	35	100.0

Source: Research data (2017).

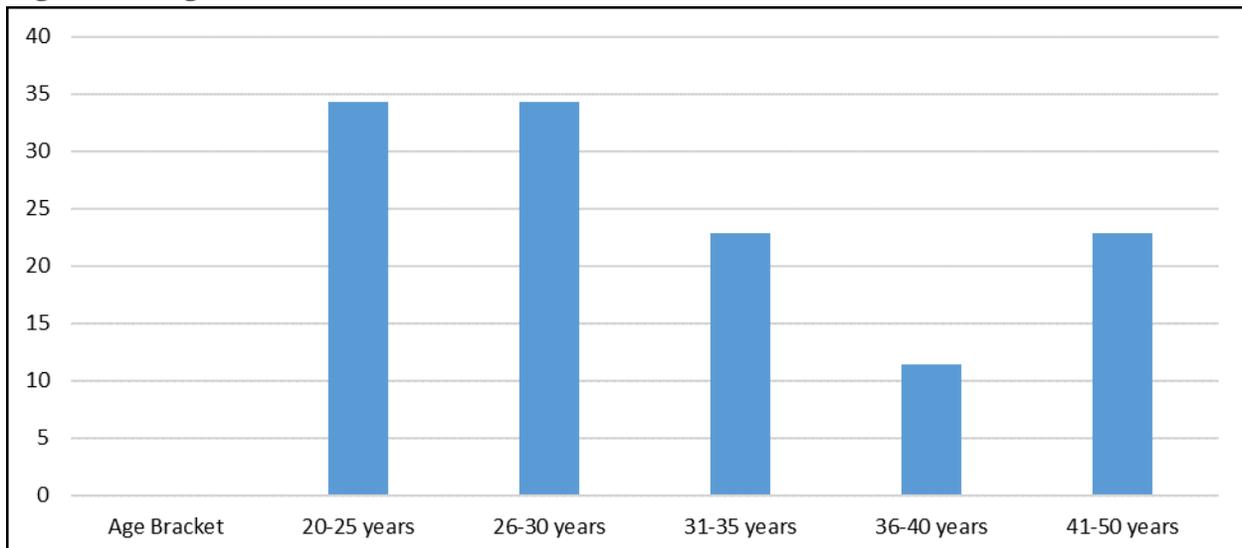
Table 4.3 reports that 57.15% (20) of the respondents were female while 42.85% (15) were male.

The significance of this is that gender parity was achieved during the study.

4.3.2 Age Bracket Respondents

The respondents were requested to indicate the age brackets they fitted into. Their responses were obtained and analyzed as represented in figure 4.2.

Figure 4. 2 Age Brackets



Source: Research data (2017).

The study found out that majority of the respondents was between the age of 20 and 30 years. Specifically, 34.28% of them were between 20-26 years and 26-30 years respectively. 22.85 were between 31-35 years and 41-50 years old. Only 11.4% were between 36 and 40 years. This implies that majority of the respondents were the right age which would translate to having the right level of financial innovation knowledge on the topic of study. It is also the right age of respondents who know how to best use some of the financial innovations adopted by banks today as a result of digital expansion.

4.3.3 Level of Education

The study also sought to identify the level of education possessed by each respondent that took part in the study. Results are summarized in table 4.3.

Table 4. 3 Level of education

Level of education	Frequency	Percent
Undergraduate	27	77.14
Post Graduate	8	22.86
Total	35	100.0

Source: Research Data (2017)

It was revealed that 77.7% of the respondents were undergraduates, while the remaining 22.86% were post graduate degree holders. The significance of this is that the study included respondents who were knowledgeable on the topic of study and would thus provide relevant answers to the research questions.

4.3.4 Job Position Held

In this section, the respondents were requested to indicate their job designations. The results of the study area as shown in table 4.4

Table 4. 4 Job Position Held

Level of education	Frequency	Percent
Direct Sales Agents	22	62.8
Branch Managers	8	22.8
Relationship Managers	5	14.4
Total	35	100.0

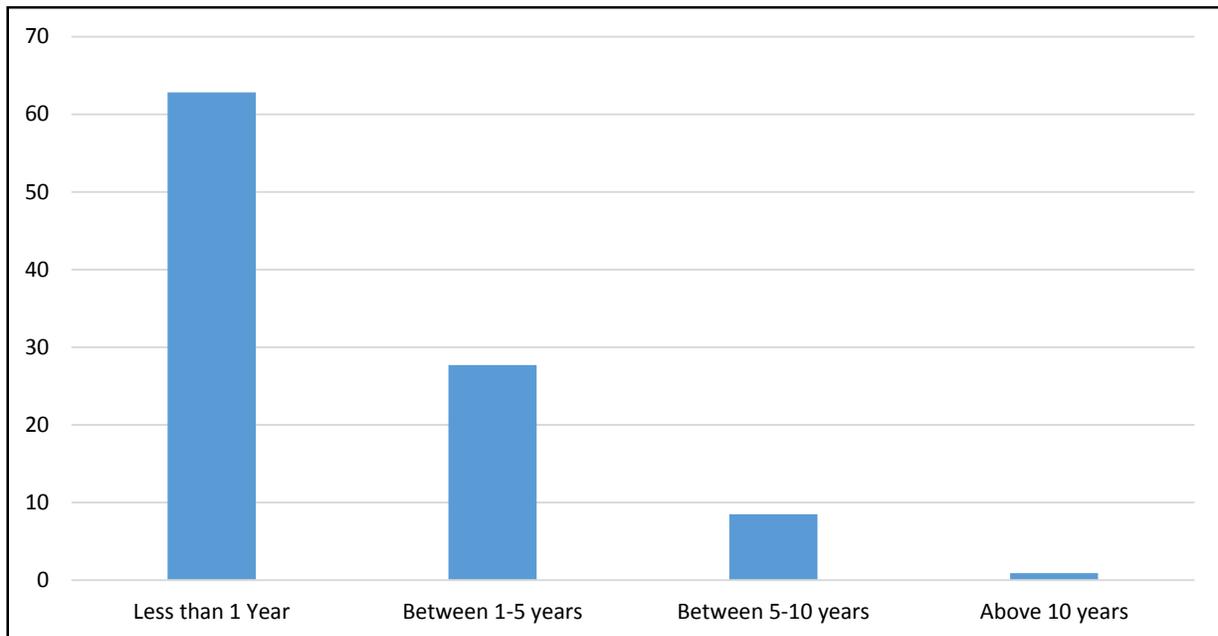
Source: Research Data (2017)

Majority of the respondents were Direct Sales Agents, accounting for 62.8%. 22.8% were branch managers while 14.4% were relationship managers. From this result, it is clear that the respondents comprised of the relevant target group that the study intended to question due to their relevance to the topic of study. This therefore further strengthens the argument that the answers to the questionnaire will be relevant to the topic of study. ‘

4.3.5 Work Experience

The study further sought to know the duration of time the respondents had been holding their job positions. The study findings are as shown in figure 4.3

Figure 4. 3 Working Experience



Source: Research data (2017).

The study found that majority of the respondents had been working at the bank for less than 1 year (62.8%). The remaining 22.7%, 8.5% and 0.9% have been working there for 1-5, 5-10 and above 10 years respectively. The significance of this is that the respondents have been in the bank long enough to understand various issues outlined in the topic of study, and as such, are in the best position to take part in the study. It further strengthens the claim that the respondents chosen were the best to take part in the study.

4.3.6 The use of Digital Platforms

The study inquired on the extent to which digital platforms were used at the bank. Results indicated that the respondent's mobile applications were the most used form of digital innovation by the bank's customers. The next digital platform used the most is USSD and finally internet banking is last. This is illustrated by table 4.8 which presents mean scores interpreted as follows: 1-1.49= No Extent; 1.5-2.49= Little Extent; 2.5-3.49= Moderate Extent; 3.5-4.49= Great Extent; 4.5-5=Very Great Extent

Table 4. 5 Extent of digital platforms

Digital Platform	Mean
Mobile applications	4.75
USSD	4.65
Internet	3.65
Average	

Source: Research data (2017).

A mean score of 4.75 implies that majority of the respondents believe that mobile applications are used to a very great extent compared to USSD with a mean of 4.65. A mean of 3.65 implies that the respondents believe that internet banking is used to a great extent.

4.4 Descriptive statistics results

The main objectives of this study were to identify the effect of digital disruption on financial performance of Ecobank Kenya. This section presents a summary of the responses from the respondents who took part in the study. The analysis of the mean score will be based on the following scale; 1-1.49= No Extent; 1.5-2.49= Little Extent; 2.5-3.49= Moderate Extent; 3.5-4.49= Great Extent; 4.5-5=Very Great Extent

4.4.1 The effect of Social Digital Trends on Financial Performance

Table 4.6 presents that respondent's feedback on the effect of social digital trends on financial performance of Ecobank Kenya.

Table 4. 6 The effect of Social Digital Trends on Financial Performance

Statement	Mean
Customers find ATMS easy to use	4.52
The bank offers a comprehensive benefits financial service package to its customers	4.48
The bank has a readily available mobile application for its customers	4.25
The Bank focuses on providing excellent customer service	4.23
The bank has a 24 hour 7 day customer service representatives who are also available online	4.15
The bank gets feedback from customers regarding the nature of digitized forms of transactions for purposes of upgrading them system.	4.12
More customers prefer to use digital mobile platforms	4.03
The bank has a readily available mobile application for its customers	4.02
More customers prefer to use digital mobile platforms	4.01
The bank has a 24 hour 7 day customer service representatives who are also available online	4.01
The bank has trained its employees to educate customers on new digitized ways of transacting.	4.00

The bank is pro-active in implementing changes to address challenges and opportunities	3.98
Customers no longer visit the branches once they have been on boarded on mobile banking.	3.87
Average	4.13

Source: Research Data (2017)

Based on the interpretation scale used by this study, (1-1.49= No Extent; 1.5-2.49= Little Extent; 2.5-3.49= Moderate Extent; 3.5-4.49= Great Extent; 4.5-5=Very Great Extent) an average mean score of 4.13 implies that majority of the respondents believe that social digital trends has an effect on the financial performance of Ecobank Kenya to a great extent.

4.4.2 The effect of Technology Innovation on Financial Performance

Additionally, table 4.7 presents the findings as reported by the respondents regarding the effect of technology innovation on Financial Performance of Ecobank Kenya.

Table 4. 7 The effect of Technology Innovation on Financial Performance

Statement	Mean
Technological innovations have increased the outreach of the bank by improving the number of customers	4.23
The bank faces competition from other technologically advanced financial service providers such as Telcos in Kenya.	4.12
The number of new products and services that facilitate banking are being developed by the bank e.g. mobile application, SMART	4.11
The use of technology innovations reduces operational costs	4.10
Technological innovation is at the heart of Ecobank's operations	4.06
The bank keeps trends on technological advancement through its ICT Department	4.05
Innovation has helped Ecobank achieve customer-centricity, optimize channel experience and take advantage of alternative distribution channels.	4.03
All financial services offered by the bank are available alternatively on a digital	4.01

platform.	
The bank has a competitive advantage over other banks when they are first to adopt a type of banking technological innovation such as M-Visa and Master pass	4.01
Average	4.08

Source: Research Data (2017)

Similarly, based on the mean score scale, (1-1.49= No Extent; 1.5-2.49= Little Extent; 2.5-3.49= Moderate Extent; 3.5-4.49= Great Extent; 4.5-5=Very Great Extent) an average mean score of 4.08 implies that majority of the respondents believe that technology innovation affects financial performance of Ecobank to a great extent.

4.4.3 The effect of Digital Competition on Financial Performance

The study also investigated the effect of digital competition on financial performance of Ecobank Kenya. Table 4.8 presents the findings.

Table 4. 8 The effect of Digital Competition on Financial Performance

Statement	Mean
Merging with other financial service providers has created a coherent customer experience at the bank	4.45
The move towards universal bank has escalated the growth of alternative digital payment options, resulting to competition	4.44
Ecobank works with other financial service providers in order to Provide an end-to-end customer experience	4.41
The bank is still the preferred mode of transaction for its customers despite new entrants into the market	4.22
When Ecobank works alongside other financial service providers such as M-Pesa, they gain a competitive advantage over other commercial banks.	4.20
Rising consumer expectations, technology innovation and new competition is unlocking new business opportunities in financial services.	4.14
Working with other financial service providers reduces operational costs	4.11

Working alongside other financial service providers increases profitability	4.03
Industrial convergence has resulted to an increase in outreach as far as the number of new customers joining the bank is concerned	4.01
Average	4.22

Source: Research Data (2017)

Based on the mean score scale, (1-1.49= No Extent; 1.5-2.49= Little Extent; 2.5-3.49= Moderate Extent; 3.5-4.49= Great Extent; 4.5-5=Very Great Extent) an average mean score of 4.22 implies that majority of the respondents believe that digital competition affects financial performance of Ecobank to a great extent.

4.4.4 The effect of Elimination of Industrial Boundaries on Financial Performance

Finally, the study sought to find out the effect of elimination of industrial boundaries on Financial Performance

Table 4. 9 The effect of Elimination of Industrial Boundaries on Financial Performance

Statement	Mean
Digital competition has resulted to a significant reduction in operational costs at the bank	4.25
The bank has lost competitive advantage as a result of the emergence of other digital financial service providers	4.25
Ecobank offers a seamless digital and intelligent Omni channel	4.11
The bank has adopted modern technology platforms which allow them to quickly adapt to consumer demands in an effort to remain competitive.	4.11
Other digital service providers have significantly reduced the number of customers at the bank	4.01
Aggregators in investment and lending services have resulted to competition by allow customers to pick and choose their own product bundled from several service providers reducing customer base at the bank	4.01
Digital competition has escalated growth of alternative digital payments Ecobank has to	3.98

offer its customers e.g. SATM, MASTERPASS	
Direct asset investment and brokerage portals have emerged as a result of digital disruption	3.95
Digital competition has also resulted to low cost current account and deposit substitutes	3.87
Average	4.06

Source: Research Data (2017)

From the analysis, a mean score of 4.06 implies that a majority of the respondents believe that the financial performance at Ecobank Kenya is affected by the elimination of industrial boundaries to a great extent.

4.5 Regression Analysis results

Finally, the study conducted a multiple regression analysis to determine the relationship between the independent and the dependent variables. The findings are summarised in tables 4.10, 4.11 and 4.12.

Table 4. 10 Regression Coefficients results

Model		Coefficients ^a			t	Sig.
		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	-.926	1.974		-.469	.663
	Digital Competition	-.640	.217	-.104	-2.949	.022
	Industrial Convergence	.820	.306	.798	2.679	.035
	Technological Innovation	.729	.471	.770	1.547	.047
	Social Digital Trends	.425	.151	.335	2.814	.029

a. Dependent Variable: Financial Performance (ROA), Critical value = 1.85955

Source: Research Data (2017)

From table 4.10, the following regression equation is derived:

$$Y = -0.926 - 0.640X_1 + 0.820X_2 + 0.729X_3 + 0.425X_4$$

Where Y= Financial Performance (ROA)

X₁= Digital Competition

X₂= Industrial Convergence

X₃ = Technological Innovation

X₄= Social Digital Trends

The coefficients are interpreted as follows:

Constant value = -0.926: the expected value of financial performance will be less than 0 when all independent/predictor variables are set to 0. However, this value is not significant as indicated by absolute t-calculated = -0.469 < t-critical = 1.85955. As a result, it means that the constant will not significantly differ from zero when other variables are zero.

β₁ = -0.640: A unit increase in digital competition results to a decrease in the financial performance by 0.640 units holding all other factors constant. This decrease is significant as indicated by absolute t-calculated = 2.949 > t-critical = 1.85955.

β₂ = + 0.820: A unit increase in industrial convergence increases financial performance by 0.820 units holding all other factors constant. This increase is significant as indicated by absolute t-calculated = 2.679 > t-critical = 1.85955.

β₃ = + 0.729: A unit increase in technology innovation increases financial performance by 0.729 units holding all other factors constant. This increase is significant as indicated by absolute t-calculated = 1.547 > t-critical = 1.85955.

$\beta_2 = +0.425$: A unit increase in social digital trends increases financial performance by 0.425 units holding all other factors constant. This increase is significant as indicated by absolute t-calculated = 2.814 > t-critical = 1.85955.

Table 4. 11 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.829 ^a	.687	.659	.04770

a. Predictors: (Constant), Social Digital Trends, Technological Innovation, Industrial Convergence, Digital Competition

Source: Research Data (2017)

The model summary table 4.11 indicates an R-Square of 0.687. This implies that 68.7% of the independent variable can be used to explain the independent variable.

Table 4. 12 ANOVA Test Results

ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.241	4	.060	26.480	.004 ^b
	Residual	.009	4	.002		
	Total	.250	8			

a. Dependent Variable: Financial Performance (ROA)

b. Predictors: (Constant), Social Digital Trends, Technological Innovation, Industrial Convergence, Digital Competition

Critical F value = 6.38823

Source: Research Data (2017)

Finally, the ANOVA table 4.12 indicates an F calculated value of 26.480 which is less than Critical value = 6.38823. The significance of this is that the regression equation generated by the study is statistically significant ($p=0.04 < 0.05$).

4.6 Interpretation and discussion of results

This section presented the interpretation of the findings for each study objective based on the descriptive and regression analysis conducted. .

4.6.1 The effect of Social Digital Trends on Financial Performance

Based on the descriptive statistics conducted by the study, it was interpreted that social digital trends affect financial performance of Ecobank Kenya Limited. This interpretation was based on the finding that on average, most respondents believed that statements provided to them regarding social digital trends in the banking sector affect financial performance of banks to a great extent (with a mean of 4.13). Further, regression analysis results indicated a positive relationship such that an increase in social digital trend results to an increase in financial performance of banks. This relationship is also statistically significant.

4.6.2 The effect of Technology Innovation on Financial Performance

The second objective sought by the study was to identify the effect of Technology Innovation on Financial Performance. Descriptive statistics revealed that majority of the respondents believe that technology innovation affects financial performance to a great extent as depicted by a mean score of 4.08. The interpretation for this is that technology innovation affects financial performance. This stand is strengthened by results from regression equation which indicate that an increase in technology innovation results to a significant increase in financial performance.

4.6.3 The effect of Digital Competition on Financial Performance

The study also investigated how digital competition affected financial performance at Ecobank Kenya. Descriptive results obtained from the analysis of the respondent's responses reported an average mean score of 4.22. This is interpreted to mean that majority of the respondents believed

that digital competition affects financial performance to a great extent. Regression analysis results further strengthen this position by indicating that its increase results to a significant decrease in financial performance. It is important to note that this was the only digital disruption factor with a negative effect on financial performance.

4.6.4 The effect of Elimination of Industrial Boundaries on Financial Performance

Finally, the study also identified the relationship between financial performance and industrial convergence in the banking sector. Industrial convergence is achieved by eliminating industrial boundaries that exist between different banks. Descriptive statistics revealed that respondents agreed that this would affect performance to a great extent. Furthermore, regression analysis revealed that eliminating these boundaries further serves to significantly increase financial performance.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the study, conclusions, recommendations, limitations of the study and suggestions for further study.

5.2 Summary of Findings

The study was set to investigate the effect of digital disruption on the financial performance of Ecobank Kenya. To achieve this, the study sought to identify the effect of Digital Competition, Industrial Convergence, Technological Innovation and Social Digital Trends on the financial performance of Ecobank measured by ROA.

5.2.1 The effect of Social Digital Trends on Financial Performance

The study used both descriptive and regression analysis to evaluate the effect of social digital trends on financial performance. On one hand, descriptive statistics revealed that social digital trends affect financial performance of Ecobank Kenya Limited. This was based on the finding that on average, most respondents believed that statements provided to them regarding social digital trends in the banking sector affect financial performance of banks to a great extent (with a mean of 4.13). On the other hand, regression analysis results indicated a positive relationship such that an increase in social digital trend results to a statistically significant increase in financial performance of banks.

5.2.2 The effect of Technology Innovation on Financial Performance

The study also identified that technology innovation has a statistically significant effect on financial performance. Descriptive statistics revealed that majority of the respondents believe that technology innovation affects financial performance to a great extent as depicted by a mean score of 4.08. This stand is strengthened by results from regression equation which indicate that an increase in technology innovation results to a significant increase in financial performance.

5.2.3 The effect of Digital Competition on Financial Performance

The study also investigated how digital competition affected financial performance at Ecobank Kenya. Descriptive results obtained from the analysis of the respondent's responses reported an average mean score of 4.22. This is interpreted to mean that majority of the respondents believed that digital competition affects financial performance to a great extent. Regression analysis results further strengthen this position by indicating that its increase results to a significant decrease in financial performance. It is important to note that this was the only digital disruption factor with a negative effect on financial performance.

5.2.4 The effect of Elimination of Industrial Boundaries on Financial Performance

Finally, the study also identified that there exists a direct relationship between financial performance and the elimination of industrial boundaries. Descriptive statistics revealed that respondents agreed that this would affect performance to a great extent. Furthermore, regression analysis revealed that eliminating these boundaries further serves to significantly increase financial performance.

Post regression diagnostics indicate that the regression equation adopted by the study is statistically significant (F calculated value of 26.480 < Critical value = 6.38823, $p=0.04 < 0.05$).

Additionally, an R-Square of 0.687 implies that 68.7% of the independent variables used in the study explain the dependent variable.

5.3 Conclusion

Based on the summary, the study therefore concludes that an increase in industrial convergence, technological innovation and social digital trends increases the financial performance of the bank. However, an increase in digital competition reduces financial performance. As indicated by descriptive statistics, social digital trends affect financial performance of Ecobank Kenya Limited to a great extent. Regression analysis results indicated a positive relationship such that an increase in social digital trend results to a statistically significant increase in financial performance of banks. This study therefore concludes that social digital trends positively affect financial performance of banks.

Both descriptive and regression analysis results also point towards a positive effect of technological innovation on financial performance. This is as reported by descriptive statistics, which revealed that majority of the respondents believe that technology innovation affects financial performance to a great extent as depicted by a mean score of 4.08. This stand is strengthened by results from regression equation which indicate that an increase in technology innovation results to a significant increase in financial performance.

5.4 Recommendations

The study therefore recommends commercial banks in Kenya to consider social digital trends as they seek to improve their financial performance. Customers in the banking industry in particular have high expectations for convenience of banking services. This is because they are more empowered through social media and the prevalence of information which can give them

an information edge over banks, as such; they expect interactive and social channels of customer service. Keeping up to date with these trends will give these banks a competitive edge in the highly competitive financial industry.

Secondly, banks need to beware of technological innovations in the banking sector. Customers need more sophisticated channels that are interactive and social while the need to maintain a certain level of infrastructure and digital capabilities such as analytics, cloud, computing and a computer savvy and digital workforce continue to press. Keeping a closer eye on this will go a long way in ensuring that banks perform well financially.

Thirdly, banks should know that the financial industry is converging towards a digital world. This is however opening doors to new competition in its pursuit to bring payments, retail and telecom together with banking. Additionally, this has led to the emergence of new ways of doing business and new revenue opportunities that have affected the way traditional banking services are offered. As such, banks and their managers need to understand this if they are going to stay competitive in the industry.

Finally, banks also need to understand that digital competition is real. Different industries have found an avenue to exploit and are thus eating into traditional bank's market share by adding value to customers and profitably serving traditionally unprofitable segments of this market. They address customer needs in completely new ways that are more convenient to them. This has largely affected the way traditional banking occurs. Understanding the needs of their customers is therefore key to improving performance in the banking industry.

5.5 Limitations of the Study

Further, the respondents had busy working schedules in their branches which derailed the process of data collection. The researcher tackled the limitations by emphasizing to the respondents that the data was needed urgently in order to meet the academic deadlines.

The accuracy of the data collected was mainly dependent on what was provided by the respondents from Ecobank Kenya Limited. The researcher handled the limitation from answering the respondents' queries on the questions that the respondents didn't understand.

5.6 Area for Further Research

The study recommends a study to be undertaken on the same topic using more banks to allow for a more general conclusion that would cover all banks.

REFERENCES

- Aker, J. C., & Mbiti, I. M. (2010). Mobile phones and economic development in Africa. *The Journal of Economic Perspectives*, 24(3), 207-232.
- Alinejadi, B., Arbab, H., & Mehrabi, J. (2013). The Effect of the New Electronic Payment Instruments in the Liquidity of Banks. *Technical Journal of Engineering and Applied Sciences*, 3, 3747-3751.
- Al-Jabri, I. M., & Sohail, M. S. (2012). Mobile banking adoption: Application of diffusion of innovation theory.
- Allen, F., & Santomero, A. M. (1997). The theory of financial intermediation. *Journal of Banking & Finance*, 21(11), 1461-1485.
- Ancora, L. (2016). Digital disruption: impacts on organizational strategy and structure: ING bank case study.
- Arnold, D., & Jeffery, P. (2016). 5 The digital disruption of banking and payment services. *Research Handbook on Digital Transformations*, 103.
- Arthur, L. (2013). Big data marketing: engage your customers more effectively and drive value. John Wiley & Sons.
- Banbury, S. P., & Berry, D. C. (2005). Office noise and employee concentration: Identifying causes of disruption and potential improvements. *Ergonomics*, 48(1), 25-37.
- Bernard, H. R., & Bernard, H. R. (2012). *Social research methods: Qualitative and quantitative approaches*. Sage.
- Bloomfield, T. (2016). Digital disruption in the registry services industry. *Governance Directions*, 68(4), 222.
- Broeders, H., & Khanna, S. (2015). Strategic choices for banks in the digital age.

- Chen, J., & Lam, K. (2014). How to prepare for Asia's digital-banking boom. *McKinsey and Company*, available at: www.mckinsey.com/insights/financial_services/how_to_prepare_for_asias_digital_banking_boom (accessed 21 August 2014).
- Corbet, S., & Gurdgiev, C. (2017). Financial Digital Disruptors and Cyber-Security Risks: Paired and Systemic.
- Corsi, S., & Di Minin, A. (2014). Disruptive innovation... in reverse: Adding a geographical dimension to disruptive innovation theory. *Creativity and Innovation Management*, 23(1), 76-90.
- Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- De Vaus, D. (2013). *Surveys in social research*. Routledge.
- DeYoung, R., & Rice, T. (2004). Noninterest income and financial performance at US commercial banks. *Financial Review*, 39(1), 101-127.
- Diamond, D. W. (1984). Financial intermediation and delegated monitoring. *The Review of Economic Studies*, 51(3), 393-414.
- Downes, L. (2009). *The laws of disruption: Harnessing the new forces that govern life and business in the digital age*. Basic Books.
- Downes, L., & Mui, C. (2000). *Unleashing the killer app: Digital strategies for market dominance*. Harvard Business Press.
- Eastburn, R. W., & Boland, R. J. (2015). Inside banks' information and control systems: Post-decision surprise and corporate disruption. *Information and Organization*, 25(3), 160-190.

- Eyestone, R. (1977). Confusion, diffusion, and innovation. *American Political Science Review*, 71(02), 441-447.
- Gans, J. (2016). *The Disruption Dilemma*. MIT Press
- Garrie, D., & Griver, Y. M. (2014). Digital Issues in Mergers & Acquisitions, E-Discovery, & Information Technology Systems. *Browser Download This Paper*.
- Geng, D., Abhishek, V., & Li, B. (2015). When the bank comes to you: Branch network and customer multi-channel banking behavior.
- Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P., & Kyriakidou, O. (2004). Diffusion of innovations in service organizations: systematic review and recommendations. *Milbank Quarterly*, 82(4), 581-629.
- Hirt, M., & Willmott, P. (2014). Strategic principles for competing in the digital age. *McKinsey Quarterly*, 2, 93-108.
- Kaminski, J. (2011). Diffusion of innovation theory. *Canadian Journal of Nursing Informatics*, 6(2), 1-6.
- Kreitshstein, A. (2017). Digital transformation and its effects on the competency framework: a case study of digital banking.
- Kroszner, R. S. (2003). Currency competition in the digital age. *Evolution and Procedures in Central Banking*, 275-99.
- Mahajan, P., & Singla, A. EFFECT OF DEMONETIZATION ON FINANCIAL INCLUSION IN INDIA.
- Mbiti, I., & Weil, D. N. (2011). *Mobile banking: The impact of M-Pesa in Kenya* (No. w17129). National Bureau of Economic Research.

- Mbogo, M. (2010). The impact of mobile payments on the success and growth of micro-business: The case of M-Pesa in Kenya. *Journal of Language, Technology & Entrepreneurship in Africa*, 2(1), 182-203.
- McFall, L. (2015). Is Digital Disruption the End of Health Insurance? Some Thoughts on the Devising of Risk. *Economic Sociology_the European Electronic Newsletter*, 17(1), 32-44.
- McQuivey, J. (2013). Digital disruption: Unleashing the next wave of innovation.
- Metawa, S. A., & Almosawi, M. (1998). Banking behavior of Islamic bank customers: perspectives and implications. *International Journal of Bank Marketing*, 16(7), 299-313.
- Miles, M. B., Huberman, A. M., & Saldana, J. (2013). *Qualitative data analysis*. Sage.
- Myrthianos, V., Vendrel Herrero, F., Parry, G., & Bustinza, O. F. (2014). Firm profitability during the servitization process in the music industry. *Strategic Change*, 23(5-6), 317-328.
- Nemoto, T., & Beglar, D. (2014). Likert-Scale Questionnaires.
- Ogunsola, L. A. (2005). Information and communication technologies and the effects of globalization: twenty-first century "digital slavery" for developing countries--myth or reality. *Electronic Journal of Academic and Special Librarianship*, 6(1-2), 1-10.
- Ondrus, J., & Pigneur, Y. (2005, January). A disruption analysis in the mobile payment market. In *System Sciences, 2005. HICSS'05. Proceedings of the 38th Annual Hawaii International Conference on* (pp. 84c-84c). IEEE.
- Ongore, V. O., & Kusa, G. B. (2013). Determinants of financial performance of commercial banks in Kenya. *International Journal of Economics and Financial Issues*, 3(1), 237.

- Qi, Y. (2011, July). Risk of social disruption and integration function development of news products of traditional media in the digital age. In *Product Innovation Management (ICPIM), 2011 6th International Conference on* (pp. 70-74). IEEE.
- Rogers, E. M. (2010). *Diffusion of innovations*. Simon and Schuster.
- Rötheli, T. F. (2010). Causes of the financial crisis: Risk misperception, policy mistakes, and banks' bounded rationality. *The journal of socio-economics*, 39(2), 119-126.
- Schmidt, E., & Cohen, J. (2010). The Digital Disruption-Connectivity and the Diffusion of Power. *Foreign Aff.*, 89, 75.
- Selwyn, N. (2013). Discourses of digital "Disruption" in education: A critical analysis. *Fifth International Roundtable on Discourse Analysis, City University, Hong Kong*, 23-25.
- Sia, S. K., Soh, C., & Weill, P. (2016). How DBS Bank Pursued a Digital Business Strategy. *MIS Quarterly Executive*, 15(2).
- Stentiford, G. D., & Feist, S. W. (2005). First reported cases of intersex (ovotestis) in the flatfish species dab *Limanda*: Dogger Bank, North Sea. *Marine Ecology Progress Series*, 301, 307-310.
- Stoneman, P. (2001). *The economics of technological diffusion*. Wiley-Blackwell.
- Sultan, N., & van de Bunt-Kokhuis, S. (2012). Organisational culture and cloud computing: coping with a disruptive innovation. *Technology Analysis and Strategic Management*, 24(2), 167-179.
- Tafti, A. (2011). *Integration and information technology effects on merger value in the US commercial banking industry*. Working paper.

- Wagner, V. E., Balda, J. C., Griffith, D. C., McEachern, A., Barnes, T. M., Hartmann, D. P., & Ferraro, R. J. (1993). Effects of harmonics on equipment. *IEEE Transactions on Power Delivery*, 8(2), 672-680.
- Walker, A. (2014). Banking without banks: Exploring the disruptive effects of converging technologies that will shape the future of banking. *Journal of Securities Operations & Custody*, 7(1), 69-80.
- Weill, L. (2009). Convergence in banking efficiency across European countries. *Journal of International Financial Markets, Institutions and Money*, 19(5), 818-833.
- Weill, P., & Werner, S. L. (2015). Thriving in an increasingly digital ecosystem. *MIT Sloan Management Review*, 56(4), 27.
- Yu, D., & Hang, C. C. (2010). A reflective review of disruptive innovation theory. *International Journal of Management Reviews*, 12(4), 435-452.

APPENDIX I: THE QUESTIONNAIRE

INTRODUCTION TO THE QUESTIONNAIRE

Dear respondent,

My name is Lilian Aoko Peters, a student at CUEA, carrying out a study on the effect of Digital Disruption on the Performance of commercial Banks in Kenya; A case of Ecobank Kenya Limited. This is a partial fulfillment of the Requirement for the Award of a degree in Master's in Business Administration (MBA)

The attached questionnaire contains three sections, 'A', 'B' and 'C'. Section 'A' contains questions about yourself while Section 'B' taps feelings you may have in regard to the effect of digital disruption in the banking industry. Section C highlights some of the mitigating strategies that can be implemented to reduce the effect of digital disruption in the industry. Please attempt all questions; there are no right and wrong answers.

Your responses will be treated with the utmost confidentiality and used for research purpose only. All questionnaires are to be collected within (2) weeks of receipt thereof.

Regards

Lilian Aoko Peters

SECTION A: DEMOGRAPHIC INFORMATION

Please tick as appropriate in the boxes using a tick (√) or cross mark (x).

1. Gender

Male Female

2. Age Bracket in years

20-25 26-30

31-35 36-40

41 -50 51 and Above

3. Highest level of education

a) Undergraduate Level b) Post-Graduate Level

c) Any other (Specify)

4. What position do you hold in this organization?

a) Branch Operations Manager

b) Daily Sales Agent

c) Customer Service Officer

d) Others Positions (please specify).....

5. How long have you been in this position?

- a) Less than 1 year [] b) 1 - 5 years []
- c) 6 – 10 years [] d) above 10 years []

6. To what extent has Ecobank use the following digital platforms?

Tick as appropriate using the following Likert scale of 1-5 where: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4= Great Extent; 5=Very Great Extent

Digital Platform	1	2	3	4	5
Mobile applications					
USSD					
Internet					

SECTION B: EFFECT OF DIGITAL DISRUPTION

This section has statements regarding the effect of Digital Disruption on the performance of the bank. Kindly respond with the response that matches you opinion. Please tick as appropriate in the boxes using a tick (√) or cross mark (x).

a) Social Digital Trends

Tick as appropriate using the following Likert scale of 1-5 where: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4= Great Extent; 5=Very Great Extent

Social Digital Trends	Respondents
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	Ratings				
	1	2	3	4	5
More customers prefer to use digital mobile platforms					
The bank has a readily available mobile application for its customers					
The bank has a 24 hour 7 day customer service representatives who are also available online					
The Bank focuses on providing excellent customer service					
The bank has trained its employees to educate customers on new digitized ways of transacting.					
The bank offers a comprehensive benefits financial service package to its customers					
Customers find ATMS easy to use					
The bank gets feedback from customers regarding the nature of digitized forms of transactions for purposes of upgrading them system.					
The bank is pro-active in implementing changes to address challenges and opportunities					
Customers no longer visit the branches once they have been on boarded on mobile banking.					

b) Technological Innovation

Tick as appropriate using the following Likert scale of 1-5 where: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4= Great Extent; 5=Very Great Extent

Technological Innovation	Respondents Ratings				
	1	2	3	4	5
All financial services offered by the bank are available alternatively on a digital platform.					

Innovation has helped Ecobank achieve customer-centricity, optimize channel experience and take advantage of alternative distribution channels.					
The bank keeps trends on technological advancement through its ICT Department					
Technological innovation is at the heart of Ecobank's operations					
The bank faces competition from other technologically advanced financial service providers such as Telcos in Kenya.					
The number of new products and services that facilitate banking are being developed by the bank e.g. mobile application, SMART					
The use of technology innovations reduces operational costs					
Technological innovations have increased the outreach of the bank by improving the number of customers					
The bank has a competitive advantage over other banks when they are first to adopt a type of banking technological innovation such as M-Visa and Masterpass					

c) Industrial Convergence

Tick as appropriate using the following Likert scale of 1-5 where: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4= Great Extent; 5=Very Great Extent

Industrial Convergence	Respondents Ratings				
	1	2	3	4	5
Working with other financial service providers reduces operational costs					
Industrial convergence has resulted to an increase in outreach as far as the number of new customers joining the bank is concerned					
Working alongside other financial service providers increases profitability					
When Ecobank works alongside other financial service providers such as M-Pesa, they gain a competitive advantage over other commercial banks.					

The bank is still the preferred mode of transaction for its customers despite new entrants into the market					
Rising consumer expectations, technology innovation and new competition is unlocking new business opportunities in financial services.					
The move towards universal bank has escalated the growth of alternative digital payment options, resulting to competition					
Merging with other financial service providers has created a coherent customer experience at the bank					
Ecobank works with other financial service providers in order to Provide an end-to-end customer experience					

a) Digital Competition

Tick as appropriate using the following Likert scale of 1-5 where: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4= Great Extent; 5=Very Great Extent

Statement	Respondents Ratings				
	1	2	3	4	5
Ecobank offers a seamless digital and intelligent Omni channel					
Digital competition has resulted to a significant reduction in operational costs at the bank					
Other digital service providers have significantly reduced the number of customers at the bank					
The bank has lost competitive advantage as a result of the emergence of other digital financial service providers					
The bank has adopted modern technology platforms which allow them to quickly adapt to consumer demands in an effort to remain competitive.					
Aggregators in investment and lending services have resulted to competition by allow customers to pick and choose their own product bundled from several service providers reducing customer base at the bank					

Digital competition has escalated growth of alternative digital payments Ecobank has to offer its customers e.g. SATM, MASTERPASS					
Digital competition has also resulted to low cost current account and deposit substitutes					
Direct asset investment and brokerage portals have emerged as a result of digital disruption					

SECTION C: MITIGATING THE THREATS POSED BY DIGITAL DISRUPTION.

Tick as appropriate using the following Likert scale of 1-5 where: 1= No Extent; 2= Little Extent; 3= Moderate Extent; 4= Great Extent; 5=Very Great Extent

Statement	Respondents Ratings				
	1	2	3	4	5
The Bank is utilizing data to tailor its products more effectively based on deep knowledge by using analytics and purchasing algorithms to better understand customers.					
The bank uses digital platform to maintain the balance between helping clients choose the right financial product and ensuring they have a digital paper trail to use as evidence for regulators.					
The bank uses digital platform to ensure all financial channels in the ban provide customers with one synchronized service					
The bank uses technology such as biometrics to provide better services					
The bank invests in forward-facing development to identify the disruptions ahead.					
The bank is working to create a faster adoption cycle for new solutions.					
The bank is evolving branch-based banking propositions to create a seamless service that delivers the product efficiently using digital platforms					
The bank creates value through personalized offerings and specific buying suggestions of services that best match individual need					

The bank is changing the cultural balance within banks to a more agile system e.g. evolution in product design and committing to rapid technological change.					
The bank has invested in resilient technologies, and simplifying the processes and services that underpin its core product sets					

Thank You

APPENDIX II: LITERATURE REVIEW

Author/year	Focus/title	Context (geographical location, industry)	Design and methodology	Key findings and recommendations
Agboola (2006)	Impact of ICT in banking functionalities	Nigeria	Descriptive research	<p>The study observed that innovation was a fundamental catalyst of contention in the financial world.</p> <p>There is an increase in the appropriation of automated teller machines, electronic funds transfer, smart cards, electronic home, office and cell phone banking.</p>
Aker (2010)	The Use of mobile phones in Niger	Niger	Descriptive research	Reduced price dispersion in grain markets
Al-Jabri (2012)	Mobile banking adoption by looking at the application of diffusion of innovation theory.	Saudi Arabia	Literature Review	<p>Bank's attention should focus on understanding customer behavior and designing reliable mobile banking systems that will meet their needs and provide useful and quality services.</p> <p>Complexity has a negative effect on mobile banking adoption;</p> <p>Relative advantage has a positive effect on mobile banking adoption;</p> <p>Compatibility has a positive effect on mobile banking adoption;</p>

				<p>Observability has a positive effect on mobile banking adoption;</p> <p>Perceived risk having a negative effect on mobile banking adoption.</p> <p>Trialability has a positive effect on mobile banking adoption;</p> <p>Banks should focus on communicating information that emphasizes the relative advantage and usefulness of mobile banking compared to other banking channels like physical presence to the bank or using ATM machines.</p>
Anyango, Kathuo and Rotich (2015)	The impact of mobile banking on the financial achievements of Kenyan business banks	Kenya	Descriptive design	They deduced that banks which grasped m-money administrations had an inconceivable level extended customer outreach, and along these lines had altogether upgraded their financial performance
Ching et al (2011)	Factors affecting Malaysian mobile banking adoption	Malaysia	Empirical Analysis	<p>Perceived usefulness and ease of use, relative advantages, perceived risks and personal innovativeness were the factors affecting the behavioral intention of mobile users to adopt mobile banking services in Malaysia.</p> <p>Social norms were the only factor found to be</p>

				insignificant in this study.
Chinget, Chuan, Sim, Kam and Tan (2011)	The elements influencing mobile banking reception	Malaysia	Descriptive Research	<p>The study reviewed the expansion of technology acceptance frameworks to research on mobile banking reception in Malaysia.</p> <p>The discoveries from this study uncovered that apparent helpfulness, usability, relative favorable circumstances, saw dangers and individual ingenuity were the elements influencing the behavioral aims of mobile clients to embrace versatile banking services in Malaysia.</p>
Dew, 2007	The Inclusion of e-banking in the banking sector	Worldwide (general)	Descriptive research	<p>Financial innovations enable firms from all sectors to raise money in larger amounts and at a cheaper cost than they could elsewhere</p> <p>The other major benefit from e-banking innovation is fee based income</p> <p>Joining a certain ATM network will also create customer awareness of that bank and influence the market share</p>
Donner and Tellez (2008)	Mobile banking and economic development	Singapore	Descriptive research	Through offering a way to lower the costs of moving money from place to place and offering a way to bring more users into contact

				with formal financial systems, m banking/m-payments systems could prove to be an important innovation for the developing world.
Erickson (2010)	Mobile money: cell phone banking in developing countries		Descriptive studies	Mobile money can increase access to financial services Microfinance institutions in particular can benefit from the use of mobile money.
Jensen (2007)	Introduction of mobile phones	India	Descriptive research	Reduced price dispersion in fish markets in India
Kigen (2010)	Impact of mobile banking on transaction costs of microfinance institutions	Kenya	Descriptive Research	Mobile banking has reduced transaction costs considerably though they were not directly felt by the banks because of the then small mobile banking customer base.
Kingoo (2011)	The relationship between electronic banking and financial performance of commercial banks in Kenya	Kenya	Descriptive Research	Must seek to reduce risk perceived by their customers by offering specific guarantees protecting them and taking their complaints seriously and urgently.
Kithaka (2014)	How versatile banking affected budgetary performance of Kenyan business banks	Kenya	Cross sectional survey research	The study inferred that mobile banking positively and significantly influences the fiscal performance of business banks in Kenya.
Koivu (2002)	Uptake of mobile phone in Kenya	Kenya	Descriptive research	Mobile banking in Kenya affects performance of organization, behavior and decision making of

				<p>the entire economy.</p> <p>The trend of continued reliance on mobile devices to execute monetary transaction is steadily gaining momentum.</p>
Kozak (2005)	The influence of the evolution in Information Technology on the profit and cost effectiveness of the US banking sector during the period of 1992-2003.	USA	Cross sectional analysis	The study indicates optimistic relationship among the executed Information Technology and together productivity and cost savings
Malhotra and Singh (2009)	The impact of web based banking on bank achievements and hazards.	India	Descriptive research	<p>He study discovered that large web banks are bigger, beneficial and have efficient operations.</p> <p>Web banks have higher resource quality and can bring down building and equipment expenses</p> <p>Indian internet banks depend considerably on savings.</p> <p>Smaller banks which use internet banking had experienced a decrease in profitability.</p>
Masinge (2010)	The factors influencing the adoption of mobile banking services at the bottom of the Pyramid in South Africa	South Africa	<p>Descriptive studies</p> <p>The research model includes the original variables of extended technology acceptance</p>	With the convergence of banking services and mobile technologies, users are able to conduct banking services at any place and at any time through mobile banking.

			model (TAM).	
Mbogo (2010)	The success factors attributable to the use of mobile payments by micro business operators.	Kenya	Correlation analysis	The study results revealed positive correlation with the behavioral intention to use the mobile payment services and associated actual usage but low correlation between perceived support and actual usage.
Morawczynski, (2009)	The adoption, usage and outcomes of mobile money services using the case of M-PESA in Kenya	Kenya	Descriptive	<p>Over 7.5 million users, or 34% of the adult population, have registered with M-PESA.</p> <p>The socio-technical systems framework was used to present M-PESA as a complex system rather than an isolated application.</p> <p>M-PESA grew rapidly because it had a dedicated team of system builders.</p> <p>A whole industry for mobile money developed as a result of M-PESA's success.</p>
Munaye (2009)	The application of mobile banking as a strategic response by Equity bank Kenya limited to the challenge in the external environment.	Kenya	Descriptive Research	The concept of mobile banking is a strategic response
Must and Ludewig, (2010)	Mobile money services and their potential to provide financial services to SMEs	Kenya	Descriptive	Poor individuals without access to banking services are forced to rely on the informal cash economy like borrowing and

				family savings, making them more susceptible to risks and lacking means to efficiently save or borrow money.
Nadia, Anthony and Scholnick, 2003	The relationship between IT expenditures and bank's financial performance	USA	Descriptive Research	<p>If the network effect is too low, IT expenditures are likely to (1) reduce payroll expenses, (2) increase market share, and (3) increase revenue and profit.</p> <p>The evidence however suggested that the network effect is relatively high in the US banking industry, implying that although banks use IT to improve competitive advantage, the net effect is not as positive as normally expected.</p> <p>The innovation in information technology, deregulation and globalization in the banking industry could reduce the income streams of banks, and thus the strategic responses of the banks</p>
Rachel (2013)	The impact of versatile savings upon the monetary performance of business banks in Kenya	Kenya	Descriptive research	The research established that there exists a feeble positive correlation amongst mobile savings and the monetary execution of business banks in Kenya.
Shu and Strassmann (2005)	Information Technology and the performance of the banking sector in the	USA	Survey	Even though Information Technology has been one of the most

	USA.			essential dynamic factors relating all efforts, it cannot improve banks' earnings on its own.
Tchouassi (2012)	Effects of mobile banking and the performance of commercial banks	Sub- Saharan Africa (SSA)	Descriptive Research Design	<p>Poor, vulnerable and low-income households in Sub- Saharan Africa (SSA) countries often lacked access to bank accounts.</p> <p>Mobile phone presented a great opportunity for the provision of financial services to the unbanked.</p> <p>In addition to technological and economic innovation, policy and regulatory innovation was needed to make these services a reality.</p>
Tiwari, Buse and Herstatt (2006)	Mobile banking as business strategy: impact of mobile technologies on Social Digital Trends and its implications for banks.	Kenya	Descriptive Research	There are vast opportunities for banks to generate revenues by offering value added, innovative mobile financial services while retaining and even extending their base of technology-savvy customers
Tiwari, Buse and Herstatt (2006)	Effect of versatile inventions on client conduct and suggestions for financial institutions			Study concluded that there are open doors for banks to produce income through innovative and versatile related services and extending their base of technology to cognizance clients
Wambari and Mwaura (2009)	Mobile money services as a variation of	Kenya	Descriptive studies	Useful benefits to SMEs include access to financial services like making deposits and

	branchless banking			<p>savings, accessing the formal banking sector through mobile money services and many others.</p> <p>Mobile money services have the potential for delivery of financial services outside conventional banking</p>
Wambari (2009)	Mobile banking in developing countries using a case of Kenya.	Kenya	Descriptive Research	The adoption and use of mobile phones is product of a social process, embedded in social practices such as SMEs Practices which leads to some economic benefits.
Zimmerman (2010)				<p>Mobile banking in developing world is an object of skepticism among financial insiders.</p> <p>Cell phones could revolutionize personal finance in poorer country.</p> <p>Regulators warned of money laundering.</p> <p>Most bankers worried that low customer balances wouldn't be worth the transaction costs.</p>