

**ELECTRONIC BANKING STRATEGY AND FINANCIAL PERFORMANCE OF
SELECTED COMMERCIAL BANKS IN KENYA**

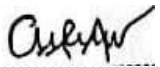
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**A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF BUSINESS,
ECONOMICS AND TOURISM IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF MASTER OF BUSINESS
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DECLARATION

This project is my original work and has not been presented for any award in any other University. No part of this project should be reproduced without authority of the author or/and Kenyatta University.

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DEDICATION

I dedicate this endeavour to my parents, Mr. and Mrs. Johnson Njau Wachira, my daughters Lindsey Nyokabi and Nikkita Wambui, my friends: Winnie Gitau and Janet Moraa for their constant support and encouragement. May God bless you all abundantly.

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OPERATIONAL DEFINITION OF TERMS

Agency Banking It is an e-banking strategy where banks establish small-scale representatives to offer some of the banking services closer to the customers.

Automatic Teller Machine Banking: This is where bank customers by the use of a plastic ATM card gain access to their bank account through automated machines to offer some banking services particularly cash withdrawals and account balance inquiries with minimal or no assistance of banking staff.

E-banking Strategy It is the approach that the bank utilizes to disseminate the digital/technology-based banking services. The main strategies of e-banking include mobile banking, internet banking, agency banking and Automatic Teller Machine banking.

E-Banking It is the process of providing banking services such as cash and cheque deposits, cash withdrawals, loan application and balance inquiries through electronic means or technology-based systems.

Financial performance This is the ability of a bank to meet the financial needs of the owners by maximizing its revenue generated to achieve more profitability. Financial performance can be assessed through the Return on Assets (ROA), Return on Investments (ROI) and profitability.

Internet Banking Strategy It is the e-banking strategy where banking services are offered through internet and web-based systems. The strategy helps customers to access the banking services remotely.

Mobile Banking Strategy It is an e-banking strategy where banking products are provided through mobile applications such as the downloadable applications for smart phones and tablets.

LIST OF ABBREVIATIONS AND ACRONYMS

AfDB:	African Development Bank
ATM	Automated Teller Machines
CBK:	Central Bank of Kenya
ICT	Information Communication Technology
IT:	Information Technology
KBA:	Kenya Bankers Association
MFIs:	Micro-Finance Institutions
NACOSTI	National Commission for Science, Technology and Innovation
OECD	Organisation for Economic Co-operation and Development
ROA:	Return on Assets
ROI:	Return on Investment
SACCOs:	Savings and credit cooperative societies
SPSS	Statistical package of social Sciences
TAM:	Technology Acceptance Model
UTAUT	Unified Theory of Acceptance and Use of Technology

ABSTRACT

Adoption of e-banking strategy in commercial banks is intended to ultimately increase banks profitability hence its financial performance. The innovations in Information Communication Technology have influenced every aspect of life, including the banking. E-banking can be described as the provision of banking products and services through electronic channels including Automatic Teller Machines, the internet and telecommunication devices. There have been concerns of decreased security, service quality and client trust on e-banking. This study sought to establish the effect of e-banking strategy on the financial performance of selected commercial banks in Kenya. The specific objectives of the study were; to assess the effect of mobile banking, agency banking, internet banking and Automatic Teller Machines on the financial performance of selected commercial banks in Kenya. The study was anchored on the following theories; Unified Theory of Acceptance and Use of Technology, Financial Intermediation Theory, Silber's Constraint Innovation Theory and the Diffusion of Innovation Theory. A descriptive research design was used. The study targeted 420 department managers from 30 tier two and tier three commercial banks in Kenya. Using a sampling formula, a sample size of 203 managers was sampled. A pilot study was carried out prior to the main data collection. Face and content validity was tested by expert opinions method and extant literature review, while reliability test was carried out by use of Cronbach's alpha coefficients at 0.7 threshold. The data acquired was cleaned and analysed utilizing the SPSS program. Frequency distributions, percentages, measures of central tendency and dispersion were computed and interpretations made. In addition, inferential statistics such as correlation and regression analysis were employed. The findings were presented in tables and figures which were accompanied by detailed explanations. A multiple regression model was used to explore the relationship between electronic banking (mobile banking, agency banking, internet banking, and automated teller machine) on financial performance. From the model, ($R^2 = .82.5$) showing that electronic banking account for 82.5% variation in financial performance. The study concluded that there was a positive statistical relationship between independent variables and dependent variables of the study. Therefore, this study recommends that Commercial Banks should allocate adequate financial resources to create maximum awareness of their electronic banking services, to advance technologies, and to continuously train their staff and ultimately enhance their performance in the changing business environment. The study will benefit directors, managers, policy makers and scholars to understand how electronic banking influences financial performance in banking industry.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

As the World is becoming more dynamic and business operations becoming more competitive, organizations are turning to more innovative and technology-based modes of operation that saves on costs and achieves the competitive advantage. As portrayed during the COVID-19 Pandemic period, technological innovations have been upheld as the main drivers of continued operations in many organizations across the globe (World Bank, 2022). The banking industry has also not been left behind in embracing innovations and Technology advancements to foster competitiveness and sustain their performance. One of these innovations is the embrace of electronic banking. Commonly known as e-banking, electronic banking is the mode of banking where technology is utilized as the main intermediary between the customers and the banks (Chauhan, Yadav & Choudhary, 2022).

E-banking involves use of the available technology to avail banking services to the people, thus enhancing efficiency, effectiveness and accessibility of the banking services (Khatoon, Zhengliang & Hussain, 2020). According to Uppal (2020), the introduction of electronic banking (e-banking) has altered and redefined the ways banks operate, by ensuring that the banking services are easily accessible and in a more personalized and effective approach. The main categories of electronic banking as described by Zhang, Weng, and Zhu (2018) are Automatic Teller Machine (ATM) banking, internet banking, mobile banking and agency banking. These banking modes are supported and offered through technology-based systems and mainly available electronically. According to Ibrahim (2022), the four major electronic banking methods have varied effect on the commercial banks' performance. This

is based on their level of acceptability and penetration into the market, their ease of use, and most importantly, their ability to minimize the operating costs for the banks. Ntyama and Maziku (2020) agree that as commercial banks are seeking to enhance their profitability and the overall performance, the electronic banking methods are integral in enabling the banks save on costs and enhance efficiency and effectiveness of service delivery.

1.1.1 Financial Performance

The performance of commercial banks is a multidimensional construct which can be measured using financial and non-financial measures (Kori, Muathe & Maina, 2020). Financial performance measures consider how well the bank is able to generate value for its owners. Various financial measures are used to determine financial performance such as profit after tax, return on owners' equity, earning per share (Kori *et al.*, 2020). Generally, the financial performance of commercial banks has been measured using a combination of financial ratio analysis, bench-marking and measuring performance against budget. Financial measures and qualitative measures which present bank's performance position by providing a short-term summary of the projected outcome in a short period time (Baabdullah *et al.*, 2019). Profitability is one of the primary goals of any business venture without which the business cannot survive in the long run. Adoption of e-banking strategy is intended to ultimately increase banks profitability.

Non-financial performance measures consider customer satisfaction, market position, resource employee satisfaction, organizational effectiveness and innovations. These measures, however, according to Prieto, Shin and Lee (2020), aim at enhancing profitability, which is a fundamental financial measure of performance. Any business seeks to expand its service quality, flexibility, resource utilization and innovation in order to increase its

profitability. Prieto *et al.* (2020), further state that non-financial measures are critical in establishing long term banks performance in terms of profitability, such that when a bank invests in customer satisfaction, it ought to come back and analyse how much in terms of profits it generated out of the investment in customer satisfaction. For instance, the level of customer satisfaction will largely impact on customer decision to continue using certain products from a certain bank or whether or not the account holder will be banking with certain banks (Maiyo, 2018). As such commercial banks are at times ready to forgo short-time financial performance for the sake of long term performance, and one of the essential long-term performance indicators is continued profitability.

Return on Investment (ROI) is one of financial measures of firm performance. It measures the extent to which a bank's asset is able to recoup the invested amount, thus making a profit after repaying the initial capital. A higher ROI implies that the investment is capable of repaying the invested capital and has the remainder as profits (Asia, 2015). Commercial banks invest huge amount of capital in e-banking strategies such as ATM banking and mobile banking. According to Mwangi (2019), the revenue generated from these modes of banking are expected to supersede the amount invested, so that a profit can be obtained. Return on Assets (ROA) on the other hand tells the ratio at which the bank is able to generate profits from its assets. ATM and products like agency banking are assets for the banks. It is expected that the bank generates revenue and profits from these assets. The higher the ROA, the better the financial performance of the bank. In this study, the financial performance measures which include Return on Investment (ROI), Return on Assets (ROA) and profitability will be used.

1.1.2 Electronic Banking Strategy

Increased accessibility to the internet and the continued desire to have easily accessible banking services have been the main drivers towards the continued adoption of electronic banking in many countries across the globe (Kaur, 2017). Globally, the embrace of e-banking has been extensive for more than three decades now (OECD, 2018). According to Liu, Chen and Chou (2011), the embrace of electronic banking in Chinese banks has been due to rapid advances in information and communication technology and intensive competitive banking markets. According to Kazimoto (2020), e-banking strategy enables commercial banks to increase profitability by minimizing their costs of operation, enhancing accessibility to the banking services and promoting efficiency of the services. Carranza, Díaz, Sánchez, Camacho and Martín (2021) posit that e-banking is essential in enhancing the satisfaction of customers through convenience of transactions, lower transaction charges and round-the-clock accessibility of the banking services.

Automatic Teller Machine (ATM) banking is one of the electronic banking strategies. In USA, Zyberi (2021) indicates that ATM banking is an electronic banking strategy that involves use of a machine that operates automatically to execute banking operations as the customers may need. The ATM machines are able to dispense cash through customer withdrawals as well process accounts balances for the clients. Zhu, Lyu, Long, and Wachenheim (2021) describe ATM banking as one of the e-banking strategies that has enabled the effectiveness of banking and transformed the entire process to the benefit of both the bank and the customers. According to Yakubiv et al. (2019), ATM banking enables timely accessibility of banking services thus enabling customer satisfaction, while at the same time saving the bank the operational costs.

Internet banking is the other electronic banking strategy that has been instrumental in enhancing performance of commercial banks. The internet banking has spread not only in the developed countries, but also in the developing countries like in the Sub-Saharan Africa (AfDB, 2019). In South Africa, Asgarnezhad, Soltani, and Beigi (2021) describe internet banking as one of the main e-banking strategies that is getting high acceptance among the customers and the banks. The authors define internet banking as the e-banking strategy where customers access the banking services through internet-assisted systems. Most banks in Nigeria as indicated by Yusuf and Bala (2021) have websites where customers can access key banking services including opening of accounts, transfer of funds and request for balances.

The other electronic banking strategy that has tremendously changed the banking industry particularly in Kenya is agency banking (CBK, 2019). According to Muthinja and Chipeta (2018), Kenyan commercial banks have highly embraced agency banking as a key e-banking strategy, and their level of acceptability among the consumers has been impressive. The authors define agency banking as where banks establish small-scale representatives to offer some of the banking services closer to the customers. It allows a “decentralization” of banking services to an agent, who uses technology-based mechanisms to intermediate between the bank and the customer (Chaimaa, Najib, & Rachid, 2021; Alabsy, 2018). This mode of banking ensures that the banking services are available and accessible at the close proximity of the consumer, and behold the normal banking hours, thus the customers are able to transact round the clock (Chaimaa et al., 2021). According to Koori, Wanjiku and Atheru (2020), agency banking allows banks to reach customers in many geographical segments including rural areas. This helps banks to operate in areas where establishing a

branch may not be economical. In such areas, the agents play a critical role in offering a wide range of banking services helping the banks achieve their one of their common objectives of increasing deposits at a minimum operation cost which significantly contributes to the overall bank's performance. Although the customer has to physically visit an agent as opposed to mobile and internet banking, the agent is able to transact on behalf of the bank and the customer through electronic based-systems, thus it is still an electronic banking method (CBK, 2018).

Mobile banking is another e-banking method that has strongly been embraced by the Kenyan commercial banks (CBK, 2017). This is a mode of banking where mobile money systems and programmes such as the MPesa, and Airtel money are integrated with commercial banks systems to provide banking services to the customers. This mode of banking is accessible anywhere and anytime through the mobile phones, thus it is one of the efficient and effective mode of e-banking. According to Nduta and Wanjira (2019), commercial banks are embracing mobile banking without intermediaries like MPesa and Airtel Money through smartphone applications, and this is enhancing the accessibility of banking services more efficiently and effectively. According to Jebarajakirthy and Shankar (2021), the low transaction charges, self-service and convenience are among the key drivers to the continued embrace of mobile banking among the customers. Through mobile banking, customers can easily and conveniently access services such as cash deposits, cash withdrawals, loan request and repayments, payment of utility bills and statement enquiry. Commercial banks in Kenya have branded their mobile banking services in varied ways such as the M-Coop Cash by Cooperative Bank, Eazzy Banking by Equity Bank and Pesa-Pap by Family Bank (CBK, 2019).

1.1.3 Commercial Banks in Kenya

Kenya has a total of 39 commercial banks with almost similar products. The Central Bank of Kenya (CBK) has grouped the banks based on market share, asset base and number of customer deposits resulting into three tiers. Tier 1 is made up of large banks with hundreds of billions in cumulative assets and millions of depositors, for instance, Co-operative Bank of Kenya, Kenya Commercial Bank (KCB) and Equity Bank. Tier 2 is made up of medium-sized banks such as; Family Bank, Ecobank, Prime Bank and Bank of Baroda. Tier 3 banks control a small market and include banks such as; Kingdom Bank, Equatorial Commercial Bank, Giro Bank and Guardian Bank. According to Muthee (2020), commercial banks compete with Savings and credit cooperative societies (SACCOs) and Micro-Finance Institutions (MFIs).

In an attempt to differentiate themselves and gain a competitive edge, all commercial banks are continuously seeking new ways of serving clients. Koori *et al.*, (2020) credit E-banking strategy is an emerging trend that has had a significant effect to the overall performance of commercial banks. Even though all commercial banks have adopted e-banking, these technologies have been adopted at different levels. For instance, all commercial banks have ATM machines and banking applications but not all banks have agents. Commercial banks in Kenya therefore have adopted different e-banking strategies that are suitable and fit in to their business models.

As the commercial banks have been extensively embracing electronic banking strategies, studies show a mixed results on the extent to which the strategies have contributed to the commercial banks' performance. According to Githira, Muturi, and Nasieku (2019), while

internet banking strategy has been embraced by more than 80% of the Kenya's commercial banks, most of the banks have been recording a decline in financial performance over the years, raising questions on the effectiveness of the strategy to their performance. Sandhu and Arora (2022) indicate that mobile banking and agency banking strategies have been embraced most of the banks, but majority of the banks especially those in tier three have not recorded significant increase in financial performance even after embracing the strategies. Barasa (2021) on the other hand indicates that most of the commercial banks in Kenya have varied contributions of electronic banking to financial performance, thus it may not be clear on which e-banking strategy contributes more to the commercial banks' financial performance. According to Kenya Bankers Association (2018), the e-banking strategies such as ATM banking have been instrumental in enabling commercial banks offer round-the clock services while saving on operational costs.

1.2 Statement of the Problem

The commercial banks in Kenya play a fundamental role in the country's economic growth and development (KBA, 2018). However, despite their immense contribution to country's economic success, performance of most of the commercial banks has been dwindling over the years (CBK, 2021). With a total of 39 licenced commercial banks, only 9 banks (the larger banks/tier one) command an overall market share of 74.76%, while the majority of banks (medium and small sized) share the rest (CBK, 2021). Out of the Kshs.197 billion in pre-tax profits recorded by the Kenya's banking sector, 86.9% of the profits were from the 9 large banks. Between the year 2020 and 2021, CBK (2021) reports that the medium sized banks recorded a drop in their market share from 17.21% to 16.41%. Moreover, between 2014 and 2020, over 8 banks have been incapacitated to operate mainly as a result of

insolvency and continued loss-making. Six banks (Habib Bank, Equatorial Bank, Fidelity Bank, K-Rep Bank, Giro Bank and National Bank) have been acquired by larger banks due to their incapacity to withstand competition (CBK, 2019). Charterhouse Bank Limited, Chase and Imperial Bank were recently put on statutory management or receivership as a result of inability to continue performing as expected by the regulator (KBA, 2020). This dynamism of the banking sector shows a matter of concern, as only a handful banks make profits while others continue to fumble between loss-making and exiting the market (Gichuki & Jagongo, 2017).

Embrace of electronic banking has been applauded as a major move to steer the performance of commercial banks in Kenya. However, this has not been the case to most of the banks, which have continued to record losses and declining profits even after embracing electronic banking strategies. Empirical evidence shows mixed results on the role played by e-banking on commercial banks' performance. Ataya and Ali (2019) established that while e-banking strategies enhance efficiency and saving on operational costs, their contribution to performance of commercial banks has been meagre as most customers are still hesitant to embrace the strategies. Ogbuabor, Eigbiremolen, Orji, Manasseh and Onuigbo (2020) contemplate that the security fears over loss of money through e-banking has led to decreased trust among the clients thus the declined effectiveness of e-banking strategies towards commercial banks' performance.

Anouze and Alamro (2019) posit that despite the wide availability of internet banking and electronic means to embrace e-banking, the level of uptake of e-banking remains low among the customers. Dimitrova and Öhman (2021) affirm that e-banking has not significantly contributed to superior performance of commercial banks, as its embrace remains low.

Winga and Ndede (2021) allude that agency banking, internet banking, mobile banking and ATM banking are essential e-banking strategies that have significantly contributed to the performance of tier one commercial banks. These studies have shown mixed results on the role played by e-banking strategies on commercial banks' performance. Moreover, the contexts of the studies are varied and are not replicated to the context of the current study especially in bringing out the exact relationship of the strategies with financial performance. This study therefore sought to fill these gaps by evaluating the influence of electronic banking strategies on the financial performance of selected commercial banks in Kenya.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of the study was to investigate the effect of electronic banking strategy on financial performance of selected commercial banks in Kenya.

1.3.1 Specific Objectives

The study were guided by the following specific objectives:

- i. To establish the effect of mobile banking strategy on financial performance of selected commercial banks in Kenya.
- ii. To investigate the influence of agency banking strategy on financial performance of selected commercial banks in Kenya.
- iii. To determine the effects of internet banking strategy on financial performance of selected commercial banks in Kenya.
- iv. To establish the effect of automated teller machines strategy on financial performance of selected commercial banks in Kenya.

1.4 Research Questions

The study sought to answer the following research questions

- i. What is the effect of mobile banking strategy on financial performance of selected commercial banks in Kenya?
- ii. What is the effect of agency banking strategy on financial performance of selected commercial banks in Kenya?
- iii. What is the effect of internet banking strategy on financial performance of selected commercial banks in Kenya?
- iv. What is the effect of Automated Teller Machine banking strategy on financial performance of selected commercial banks in Kenya?

1.5 Significance of the Study

The findings of this study are of great benefit primarily to commercial banks in Kenya. The findings also are of great value to commercial banks in other countries which have adopted similar e-banking innovation/strategies. The study clearly showed the effects of e-banking strategy on performance of commercial banks in Kenya and as a result assist banking institutions to make suitable changes through strategy formulation in order to improve firm performance.

Electronic transactions and performance is not a concern to commercial banks only but also to Microfinance institutions/banks which have adopted electronic transactions and therefore, the findings of this study were of great benefit to microfinance institutions as well. The top management of commercial banks found the findings of this study to be of great value since the findings helped them to appropriately make decisions related to e-banking strategies based on their contribution to the overall bank's financial performance. Consumers of the bank products also benefited from the knowledge about what products they can access through the various e-banking services provided by commercial banks. Researchers in

future also had a chance to make references to this study on issues related to e-banking strategy and therefore enrich their literature review and present reliable empirical evidence in their studies. The policy makers such as the parliament and the regulating body (Central Bank of Kenya) may also benefit from the findings of this study in that they gained knowledge on the key electronic banking strategies and how they influence the performance of commercial banks. Through this knowledge, the policy makers can formulate policies and improve the existing ones so as to support the performance of the banks and ensure a level operating ground for the banks.

1.6 Scope of the Study

The study sought determine the effect of electronic banking strategy on the financial performance of commercial banks in Kenya. The study considered the four main e-banking strategies adapted by commercial banks in Kenya and their contribution to their financial performance. These strategies are: mobile banking, agency banking, internet banking and automatic teller machines while the dependent variable was the financial performance of the selected commercial banks in Kenya. This research was conducted in selected commercial banks in Kenya. There are 39 licenced commercial banks in Kenya. However, the study narrowed down to 30 commercial banks which comprise of the 9 tier-two (medium sized) and 21 tier three (small sized) commercial banks. These banks have been characterized by declining performance and unstable competitive edge as compared to the large sized banks. The geographical scope of the research was Nairobi County. As the Kenya's capital city, Nairobi hosts all the commercial banks particularly their headquarters, thus focusing on the county was ideal for the study to focus on banks with the same geographical locale thus facing similar operating environment. The study used a mixed

method approach and narrow down to descriptive design. The time scope of the study was five years whereby the performances of the commercial banks were assessed for a period of five years which is from 2018 to 2022.

1.7 Limitations of the Study

Apprehensions about confidentiality were a restraining factor to the success of the study. There were some respondents who were unwilling to participate in the study due to fear of victimization. Through the introduction letter, the researcher made it clear to the respondents that the data collected was handled with utmost confidentiality and was used for the purpose of the study. The respondents were also assured that names and personal information were not included in the findings thereafter. Due to the busy nature of bank employees, there may be some delays in submission of the dully filled questionnaires. To overcome this, the researcher allowed the respondents to fill in the questionnaires during their own convenient time and place. Moreover, the researcher also allowed them adequate time in responding to the questions. After the time allowed has elapsed, the researcher made phone calls to the respondents and make physical visits to the banks encouraging respondents to fill and submit the questionnaires in time.

1.8 Organization of the Study

This study is made up of three distinct chapters. Chapter one is the introduction to the study and it covers; the background, problem statement, research objectives, research questions, significance of the study, scope of the study, limitations and organization of the study. Chapter two contains literature review covering; the theoretical review, empirical review, summary of literature review and research gaps and conceptual framework. Chapter three is the research methodology chapter covering; the research design, sampling procedure and

sample size, data collection instrument, validity and reliability, data collection procedure, data analysis and presentation and ethical consideration. Chapter four presents data analysis and interpretation and lastly chapter five presents summary, conclusion, recommendations and suggestions for further study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter, previous scholarly work done by other researchers on electronic banking strategies is reviewed. The chapter is divided into the following headings; theoretical review, empirical review, summary of the literature review and research gaps and the conceptual framework.

2.2 Theoretical Review

Theoretical review assisted in the understanding of the phenomena under inquiry (Post, Sarala, Gatrell & Prescott 2020). An in-depth review of relevant theories in a study was therefore critical in research. This study was guided by the following theories; Unified Theory of Acceptance and Use of Technology (UTAUT), Financial Intermediation Theory, Silber's Constraint Innovation Theory and the Diffusion of Innovation Theory.

2.2.1 Unified Theory of Acceptance and Use of Technology (UTAUT)

The study was mainly anchored on the Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh, Morris, Davis, and Davis (2003). The theory elaborates on the need for technology integration, and how the effectiveness of any embraced technology depends on its acceptability among the intended users. According to Venkatesh, Thong, and Xu (2012), people accept new technology based on; performance expectancy, effort expectancy, social influence and facilitating conditions. In the context of this theory: Performance expectancy refers to the degree to which a person believes that utilizing the technology will enable him/her attain the goal (Venkatesh & Davis, 2000). Effort expectancy is the degree of ease of use associated with a technology. Social

influence refers to the degree to which an individual thinks the opinions of others matter in the technology that is to be adopted while facilitation conditions refers to the degree to which individuals believe that technical infrastructure will support the use of the technology (Venkatesh et al., 2003).

With exponential development in information communication technology, new opportunities such as electronic banking are opening up with promises of smarter and faster services in every sector including banking. Many people have access to smart phones and users can conveniently access a wide range of services without time or place restrictions. Account holders use mobile banking to access services such as cash deposits, cash withdrawals, loan request and repayments, payment of utility bills (Jebarajakirthy & Shankar 2021). Electronic banking strategies such as mobile banking, ATM banking and internet banking have been widely embraced, thanks to penetration of information technology. The embrace of these e-banking strategies literally depends on the level of acceptance of technology among the target users (customers). As Williams, Rana, and Dwivedi (2015) elaborate, UTAUT theory upholds the need for the main stakeholders to be involved in order to embrace and accept the technology. This is exactly what commercial banks ought to do to steer the success of e-banking strategies among the customers for enhanced performance.

According to Riza and Hafizi (2020), many account holders also find it easy to navigate into their accounts and access whichever service they wish making it a preference to many. This however would be determined by the extent to which they have accepted the technology. Unified Theory of Acceptance and Use of Technology is thus relevant to this study in that it helps expound on the need for integration of technology such as e-banking strategies, and

how these strategies can be integrated successfully to contribute to the banks' performance. Through the UTAUT theory, a foundation is established that for the banks to benefit from the e-banking strategies, they ought to ensure that the customers are aware of what it entails to have the technology on-board, and ensure that the customers accept to uphold and use the e-banking technology.

2.2.2 Financial Intermediation Theory

The financial intermediation theory was developed by Gurley, Enthoven and Shaw (1960). The theory holds that financial institutions exist to link the savers and borrowers. That is, financial intermediation involves the actions of financial institutions accepting deposits from surplus units and consequently lending the same funds to deficit units in the economy. The key role of financial intermediaries therefore is to ensure that money flows steadily between the units with surplus and those with deficit. In order to do this, commercial banks must be reachable to both the savers and the borrowers (Do, Ngo & Phung, 2020). Being accessible ensures that commercial banks are able to create a large pool of financial resources and lend them in order to generate income through the interest.

People who want to save and those who want to borrow are scattered across all regions and in all industries. Commercial banks have originally tried reaching the surplus and deficit units by establishing branches in different regions offering full spectrum of the banks' services. Nonetheless, these efforts were limited as in some regions it was not economical to set up branches given the amount of cash flows in such regions and therefore not financially viable. This challenge was resolved by agency banking. This innovation involves the use of non-banking organisation rendering banks' services on behalf of commercial banks. This ensures that banks are able to have their presence at the grassroots and reach more people

(Ong'era & Omagwa, 2021). Some of the services offered by the agents include; cash deposits, cash withdraws, payments of bills and accounts balance inquiry. In Kenya, commercial banks have branded their agencies in order to differentiate themselves. For instance, KCB Mtaani, Co-op kwa Jirani, Pesa Pap and Equity agent for Kenya Commercial Bank, Cooperative Bank, Family Bank and Equity Bank respectively.

Financial Intermediation Theory is relevant to this study as it tries to explain the reason as to why commercial banks seek to have their presence in many regions and be closer to the people at the grassroots. It also helps to explain why commercial banks use non-banks organizations to offer financial services on their behalf. This theory is therefore hinged to the second objective of the study, “to find out the influence of agency banking strategy on financial performance of selected commercial banks in Kenya

2.2.3 Constraint Innovation Theory

The Constraint Innovation Theory was developed by Silber (1977). This theory holds that the main reason for innovation in financial services is to enhance the growth and profitability of financial institutions. This theory suggests that financial institutions could embrace or limit growth based on the extent to which they embrace innovations. This theory also notes that the internal and external environment influence the adoption of innovations by financial institution (Zhou & Dev, 2020). In dynamic business environment, an organisation's response to the changes can either enhance or hamper growth.

According to Shareef and Prabheesh (2020), commercial banks have had to respond to the changes in the global business environment to be competitive. Due to globalization, banks have to accommodate transactions involving people across the globe allowing account

holders to deposit money and make payments conveniently from any part of the world. Reaching such would have been difficult were it not for the intergraded information communication technologies. Commercial banks have rolled out internet banking which allows individuals with electronic devices with internet connectivity to access a wide range of bank services. The internet has underpinned internet banking which has enabled banks serve huge number of clients virtually and in real time (Lishomwa, 2020).

In the context of this study, the Silber's Constraint Innovation Theory helps in expounding the need for more advanced modes of banking such as internet banking as a way to enhance the efficiency of banking. This is a critical way of enhancing the profitability of the banks by reducing costs and enabling customers to transact more. The embrace of internet banking strategy as an innovation in the banking industry would enable commercial banks to have a more seamless banking method thus recording more profits. The theory is relevant to this study as it helps to explain why commercial banks adopt internet banking to complement the other banking e-banking strategies. As such, this theory was used to instigate the effect of internet banking strategy on financial performance of selected commercial banks in Kenya.

2.2.4 Diffusion of Innovation Theory

Diffusion of Innovation Theory was developed by Rogers (1962). This theory sought to explain how, over time, an innovation is spread and accepted by the social system. Rogers indicated that adoption of an innovative idea does not happen simultaneously in a social system; rather it occurs in stages in which some people adopt innovations much earlier than others. According to this theory, some people readily adopt innovations while others wait or are relatively reserved in trying out new innovations. Rogers (2003) indicate that when

people adopt new innovation, they use products that they previously did not with an expectation of a better performance or more satisfaction. Increasingly, this innovation gains momentum until a vast majority of people adopt such innovations. According to Halima and Wepukhulu (2020), people adopt new idea or products due to the presumed utility, which includes matching, complexity and testability of the innovation.

According to the diffusion of innovation theory, there are five categories of people in innovation adoption; innovators, early adopters, early majority, late majority and laggards (Rogers, 1983). Individuals in these groups have different characteristics that predispose them differently to innovations. As such, understanding these categories helps organisations to be in a position to present innovations in a manner that it will appeal to the people at different times in the adoption process: Innovators are enthusiastic and are willing to take risks to be the first to try new innovations. Early Adopters are opinion leaders who seek to understand the benefits of the innovation and then adopt it since they are aware that they need to embrace change. Early Majority wait to see the evidence that the innovation works and hear the testimonies from the innovators and early adopters before adopting new innovation. Late Majority are sceptical of change and adopt new innovation only when approved by the early majority. Strategies to appeal to this population include information on how many other people have tried the innovation and have adopted it successfully. Laggards are bound by tradition and very conservative and adopt new innovation only when forced by circumstances (Kwon, Woo, Sadachar & Huang, 2020).

Banks have had to introduce many innovations in order to remain competitive. According to Chungu (2021), Automatic Teller Machines were among the earlier innovations to be introduced by commercial banks. Before then, all banking services had to be accessed over

the counter. This required banks to have a large labour force to handle all the transactions. This was not only inconvenient to the customers; it was also costly to the banks. Nonetheless, ATMs were not entirely embraced by the entire customer base but some customers continued to withdraw money over the counter. According to Kariapper, Razeeth, Pirapuraj, and Nafrees (2020), the number of bank account holders who used the ATM continued to grow over time as many clients gained confidence in the ATMs for transactions such as cash withdrawals and checking account balances.

Rogers (1983) postulates, innovations such as the ATM banking strategy have been widely accepted over time, as the innovation continues to spread across the World. The banking industry in Kenya has been steadfast in embracing ATM banking, and as the years go by, its adoption among the customers has been increasing. This theory, therefore will be utilized in this study to expound on how embrace of ATM banking as a banking innovation has diffused to be accepted by the customers and how it has influenced the commercial banks' performance. The theory therefore was used to instigate the effect of automated teller machine (ATM) banking strategy on financial performance of selected commercial banks in Kenya

2.3 Empirical Review

Empirical review presents nexus between independent and dependent variables. Alternative research gaps are identified and how the current study bridged them has been detailed.

2.3.1 Mobile Banking Strategy and Financial Performance of Commercial Banks

Usman (2020) carried out a study on the Effect of Mobile Banking on Financial Performance of Commercial Banks in Maiduguri Borno State with a case study of United Bank of Africa (UBA). The study sought to establish how mobile banking was used to gain

a competitive advantage and thus lead to higher performance in commercial banks. The survey made use of a questionnaire that was administered to fifty (50) respondents and the quantitative data was analysed using descriptive statistics. The study established that mobile banking helped in improving service delivery in commercial banks by allowing account holders to conduct financial transactions remotely using mobile device. However, the study established that mobile banking did not have any positive effect on financial performance of commercial banks in Maiduguri. The study identified that as more people gain access to mobile phones, the performance of commercial banks reduced and therefore, another innovation needed to be adopted that would yield higher performance to the commercial banks. Adoption of mobile banking did not result to higher profits after tax. This contradicts what other studies have established, thus the current study is integral to confirm the findings.

Ntyama and Maziku (2020) conducted a study on the Effects of Electronic Banking Strategies on Business Performance of Commercial Banks in Dodoma City. The specific objectives of the study were to determine the effects of; internet banking, mobile bank, ATM and electronic fund transfer on the performance of commercial Banks. The study used a cross-sectional research design whereby six (6) commercial banks were included in the study from which sample of 100 respondents were selected using stratified sampling technique. Data was collected using interview, questionnaire and documentary review. This yielded both qualitative and quantitative data. Qualitative data was analysed using thematic analysis while quantitative data was analysed using data were analyzed using thematic analysis while the quantitative data were analyzed using descriptive statistics and multiple regression analysis. The study established that e-banking strategies significantly and positively impacted on the performance of commercial banks. Ntyama and Maziku

(2020) further established that e-banking strategies like mobile banking increased the clientele base from larger geographical areas and offered the convenience of service access. In turn, mobile banking resulted to increased profit after tax and returns of Assets. The study was carried out in Dodoma, Tanzania, hence the need for a study to confirm the findings in a Kenyan perspective.

Motondi and Bula (2020) conducted a study on Alternative banking channels and performance of commercial banks in Nairobi City County, Kenya. The specific objectives of the study were to determine the influence of agency banking and mobile banking on performance of commercial banks in Nairobi County, Kenya. The study employed a descriptive survey research design. A total of 188 respondents drawn from all commercial banks operating in Nairobi City County were included in the study from which a sample of size of 94 respondents was selected. The study made use of primary data collected with the aid of a questionnaire. The study established that the alternative banking strategies such as mobile banking helped to improve the banks' overall performance. Motondi and Bula (2020) further established that Mobile banking enabled customers to make informed choices on the banks' services to consume thus increasing clients' satisfaction with the bank and banks' products. Mobile banking thus contributed significantly to the increased profitability of commercial banks in Nairobi. Their study addresses e-banking as alternative banking and majors on agency banking and mobile banking unlike the current study that focuses on e-banking strategies.

2.3.2 Agency Banking Strategy and Financial Performance of Commercial Banks

Nyagadza (2019) conducted a study on Agency Banking in Competitive Markets with a case study of selected banks in Zimbabwe. The study adopted a cross-sectional research

design. Both questionnaires and interviews were used in data collection whereby 10 agency banking section managers, 70 active agency bank personnel, and 300 active account holders from the three commercial banks included in the study. Through structural equation modelling, the causal relationship between variables was established. The study established that the success of agency banking facilitates effective deposits and withdrawals by account holders. In addition, it was established that agency banking makes services more accessible to many customers in their localities. The findings ultimately indicated that implementation of agency banking led to the success of commercial banks in serving the needs of the customers and therefore resulted to higher performance. Notably, the contribution of agency banking was significant to the cumulative financial performance when measured, for instance, using return on assets. Their study is mainly on agency banking, unlike the current study that focuses on the major e-banking strategies.

Nimwesiga (2019) conducted a study on an Analysis of the Effect of Agency Banking on Bank Performance with a Case Study of Development Finance Company of *Uganda* (DFCU) Bank Limited DFCU Bank, Acacia Branch. The specific objectives of the study were; to assess the effect of accessibility of banking services through agency banking, low cost of service through agency banking, increased customer transactions through agency banking on the financial performance. A sample of 100 respondents was included in the study from whom data was collected through a semi-structured questionnaire. Descriptive and inferential statistics were used to draw findings from the data. The study established that there was a significant relationship between the accessibility of banking services through agency banking and the financial performance of DFCU bank. Further, the study revealed that there was no significant relationship between low cost of service through

agency banking and the financial performance of DFCU. In addition, the agency banking led to increased customer transactions and significantly contributed to higher bank financial performance.

Simboley (2017) conducted a Study on the Effects of Agency Banking on The Financial Performance of Commercial Banks in Kenya. The specific objectives of the study were; to determining the effect of agency banking on customer growth, determining the effect of agency banking on deposit growth and to determine the effect of agency banking on cost reduction. The study utilized a descriptive research design and a sample of 120 agents and 12 middle managers from the banks were included in the study. The respondents were selected using stratified sampling technique. A questionnaire was used to collect primary data which was analyzed using SPSS in order to come up with the findings reports. Inferential statistics were used to establish the effects of agency banking on the performance of commercial banks. The study established that agency banking resulted to a significant increase in the number of customers in commercial banks. This was as a result of agency banking eliminating huge travelling expenses which were much more than the transaction charges in the banks. Apart from the huge number of customers, agency banking led to extremely high number of transactions in terms of deposits and withdrawals per day which led to more income to the commercial banks. Further, Simboley (2017) affirmed that agency banking helped in improving the financial performance by reducing the operational costs. Commercial banks needed not to set-up branches but rather needed to use other businesses. However, agency banking was faulted of not giving customer service to bank customers as they would have been given by the banks' employees.

2.3.3 Internet Banking Strategy and Financial Performance of Commercial Banks

In the research carried out by Pramudya (2021) on The Impact of Internet Banking on Bank Performance in Indonesia, internet banking was found to play a critical role in enhancing the overall performance of commercial banks. A total of 36 banks were included in the study in which secondary data was collected through document analysis of the annual financial records maintained by the banks. The results of data analysis indicated that, many people especially those with high computer and internet proficiency preferred using internet banking because of its convenience. It was also established that internet banking allowed account holders to send money to digital wallets which came in handy especially when making digital payments. Further, the findings established that internet banking had a significant and positive effect on Return on Assets (ROA) which impacted on overall performance of the banks.

Haabazoka (2018) carried out a study on the Effects of Technological Innovations on the Performance of Commercial Banks in Developing Countries with a case study of the Zambian Banking Industry. The specific objectives of the study included; to assess the relationship between mobile banking transactions, internet banking transactions and ATM transactions and the financial performance of commercial banks in Zambia. The study utilized secondary data which was collected from audited financial statements and other records maintained by the various banks included in the study. The study concluded that, the e-banking strategy led to a positive change in the performance of the banks over the years under review. Nonetheless, the study revealed that internet banking had a weak influence on the financial performance of the banks in the Zambian context.

In the study carried out by Kimani (2021) on the Influence of Information Technology on the Banking Sector, ICT was found to have significantly changed how banks transact. The author reviewed secondary data to identify major themes on the influence of ICT on banks' performance. Internet banking is hinged on ICT and it facilitates a wide range of transaction by multiple accounts holders across the globe simultaneously. Internet banking facilitated cash transfer to bank accounts, cash transfers to mobile phone numbers, loan request, and statement enquiry among other services. It was also established that internet banking increased the clientele base and was also preferred by individual who were not very mobile for instance the sick and those recuperating. Convenient services across different demographics led to improve financial performance by the commercial banks.

2.3.4 ATM Strategy and Financial Performance of Commercial Banks

According to Carstens (2019), while the ATM banking was the earliest innovative solution in the e-banking sector, it still remains an integral driver of the commercial-banks' success. The ATM allows for customers to easily make cash withdrawals, view the bank statement, make cash deposits, request for salary advances and transfer money to mobile accounts (Chungu, 2021). This yields convenience, effectiveness and reliability to the customers, while the banks obtain more revenues through round-clock banking and at lower costs.

Hailu, Yadecha, and Teferi (2020) carried out a study on the effect of Automatic Teller Machine (ATM) banking as one of the e-banking strategies on performance of Ethiopian banking industry. The study aimed at establishing how ATM banking had enhanced the effectiveness of banking process towards steering the performance of commercial banks.

The study adopted quantitative research design in which secondary data gathered from annual reports of banks and the information from banks' websites. Descriptive and

inferential statistics were used in data analysis. Specifically, Pearson correlation analysis and linear regression were employed. The findings of the study indicated that there existed a positive relationship between the value of Automated Teller Machines (ATM) significantly influenced the overall performance of commercial banks in Ethiopia, in terms of customer satisfaction and customer withdrawals. The findings further revealed that ATMs led to reduced cost of operation while enabled the banks to offer cash withdrawal services round the clock. The authors however noted that most of the ATM banking did not sufficiently meet the Return On Assets (ROA), and indication that the mode of banking did not recoup the amount invested in the purchase, operating and maintenance of the machines. The study intended to investigate whether the findings would be relate with the findings of the current study on ATMs and financial performance of commercial banks in Ethiopia.

Onyimba and Ufodiana (2020) carried out a research on Cashless Economy and Performance of Banks in Nigeria. The study sought to determine the causality between Automatic Teller Machines, Point of sale terminals and internet banking on banks' financial performance in Nigeria. The data was collected secondary data an analysed using inferential statistics. The study established that e-banking strategies provided customers with a wide range of services to meet different customer needs. Specifically, the ATM was one of the commonest e-banking strategies that was adopted by all the commercial banks. Even though, ATMs enabled banks to serve huge numbers of customers within a short time, they required more financial investment compared to internet and agency banking. The context of the study is on commercial banks in Nigeria, which may not be replicated in a Kenyan context.

According to the study conducted by Mokaya (2020) on the Effects of Financial Technology on the Financial Performance of Tier II Banks in Kenya, technological innovation has played a major role in boosting banks' financial performance. The study was guided by the following specific objectives; To assess the effect of online banking, mobile banking and automated teller machines on the financial performance of tier two banks in Kenya. The study employed a descriptive causal research design in which a census was used in data collection from all the tier II banks. Secondary data collected was collected and analysed using descriptive and inferential statistics. The results indicated that ATM banking had a significant relationship with financial performance of commercial banks. The study focused on online banking and ATM banking which are not the only financial technologies in commercial banks, and narrowed down to only tier two commercial banks.

2.3.5 Financial Performance of Commercial Banks in Kenya

According to Ongore (2020) the financing performance of commercial banks in Kenya are mainly affected by the management's decisions while the effects of macroeconomic factors insignificantly affect financial performance. Commercial banks in the Sub-Saharan Africa (SSA) where Kenya lies were found to be more profitable than the rest of the world with an average Return on Assets (ROA) of 2 percent. Ongore (2020) further affirms that the board's decisions and strategies determine the financial performance in the dynamic business environment. Among these decisions is the adoption of innovative strategies such as the use of e-banking which has significantly contributed improved financial performance.

Ndungu and Bosire (2020) conducted a study on Determinants of Financial Performance of Commercial Banks Listed at Nairobi Securities Exchange in Kenya and noted a range of contributors to banks financial performance. The study targeted eleven, (11) listed

commercial banks and the secondary data was collected from audited financial reports of the respective banks. The data was collected using descriptive statistics such as means and standard deviations. The study established that banks derived profitability mainly from; government securities, loans, real estate and stocks. All of these sources depended on electronic techniques in order to be successful. As such, ICT innovation had a significant impact on the financial performance of commercial banks. Financial performance was measured using several metrics such returns of Equity, return on Assets and profitability before tax.

2.4 Summary of Literature Review and Study Gaps

Commercial banks have adopted e-banking strategy in an effort to enhance the financial performance. Mobile banking impacts on service delivery in commercial banks by allowing account holders to conduct financial transactions remotely using mobile device. The mobile phones positively and negatively impacted on the financial performance of commercial banks. Mobile banking increased the clientele base from larger geographical areas and offered the convenience of service access. Nonetheless, mobile phones also allow people to access credit from a wide range of non-banking-situations. Therefore, mobile banking yielded different financial results to different commercial banks.

Agency banking makes services more accessible to many customers in their localities. The implementation of agency banking led to the success of commercial banks in serving the needs of the customers and therefore resulted to higher performance. This e-banking strategy helped in eliminating huge travelling expenses which were much more than the transaction charges in the banks. Apart from the huge number of customers, agency banking led to extremely high number of transaction in terms of deposits and withdrawals per day

which led to more income to the commercial banks. However, agency banking was faulted on not giving customer service to bank customers as they would have been given by the banks' employees.

People with high computer and internet proficiency preferred using internet banking because of its convenience. This e-banking strategy allowed account holders to send money to digital wallets which came in handy especially when making digital payments. Further, the findings established that internet banking had a significant and positive effect on Return on Assets (ROA) which impacted on overall performance of the banks. Internet banking increased the clientele base and was also preferred by individuals who were not very mobile for instance the sick and those recuperating. Convenient services across different demographics led to improvement of financial performance by the commercial banks.

The performance of commercial banks is a multifaceted construct. This study will focus on the financial performance of commercial banks in Kenya. The financial performance can be measured effectively with metrics such as Return On Assets (ROA) and Returns On Equity (ROE). The board's decisions and strategies determine the financial performance in the dynamic business environment. Among these decisions is the adoption of innovative strategies such as the use of e-banking which has significantly contributed to improved financial performance. E-banking strategies help in enhancing financial performance among by; increasing the clientele base, increasing the transactions in a day and reducing the operating costs.

Table 2.1 Research Gaps

Author(s)	Title	Findings	Research Gaps	Contribution of the current study
Ntyama and Maziku (2020)	Effects of Electronic Banking Strategies on Business Performance of Commercial Banks in Dodoma City.	The findings revealed that electronic banking strategies such as mobile banking significantly influenced the business performance of commercial banks.	Evidence gap: There is a contradiction in the findings of the prior research work on the contribution of mobile banking on the financial performance of commercial banks.	This study showed to what extent mobile banking affects financial performance of commercial banks.
Usman (2020)	Effect of Mobile Banking on Financial Performance of Deposit Money Banks in Maiduguri Borno State	Mobile banking did not have any positive effect on financial performance of commercial banks.		

Motondi and Bula (2020)	Alternative banking channels and performance of commercial banks in Nairobi City County, Kenya	Mobile banking and agency banking play a significant role in promoting the performance of commercial banks.	Conceptual gap: The study only focused on mobile and agency banking as the key concepts of alternative banking channels.	The current study addressed four key strategies of e-banking which are agency banking, internet banking, mobile banking, and ATM banking.
Nyagadza (2019)	Effect of Agency Banking on Competitiveness of selected banks in Zimbabwe	Agency banking has a significant and positive effect on the competitiveness of commercial banks	Methodological gap: The study used a cross-sectional research approach which collects and analyses cross-sectional data.	The current study utilized a descriptive research design which enabled collection and analysis of both qualitative and quantitative data.
Nimwesiga (2019)	Effect of Agency Banking on the Performance of commercial banks: A Case Study of Development Finance Company of <i>Uganda</i>	Agency banks has a significant effect on the performance of commercial banks by minimizing operating costs and strengthening customer satisfaction	Conceptual gap: The study only focused on a single e-banking strategy which is agency banking	The study incorporated other electronic banking strategies which include mobile banking, internet banking and ATM banking
Simboley (2017)	Effects of Agency Banking on The Financial Performance of Commercial Banks In Kenya.	According to Simboley (2017), agency banking has a challenge of not giving customer service to bank customers as they would have been given by the banks' own employees. The dissatisfaction causes commercial banks lose some customers hence affecting the	Practical-knowledge conflict gap: There is a conflict between the findings of the study and what is commonly believed to be true concerning agency banking. It would have been expected that more outlets to provide services would	The study established the effects of agency banking on the financial performance of commercial banks.

		financial performance of the banks.	automatically translate to better financial performance	
Pramudya (2021)	The Impact of Internet Banking on Bank Performance in Indonesia.	According to Pramudya (2021), Internet banking had a significant and positive effect on Return on Assets (ROA) which impacted on overall performance of the banks.	Methodology gap: The study was conducted using only secondary data which could have limited the amount of information gathered.	A semi structured questionnaire was used in which the respondents were free to provide as much information as possible relevant to the study.
Haabazoka (2018).	Effects of Technological Innovations on the Performance of Commercial Banks in Developing Countries: A case study of the Zambian Banking	Internet banking, mobile banking and ATM banking were found to be essential banking technological innovations that had a significant influence on banks performance	Methodological gap: The study utilized secondary data sources which implies that only existing data was used to draw conclusions	This study used primary data where original and most current findings were drawn in regard to e-banking and performance of the commercial banks
Kimani (2021)	Influence Of Information Technology on the Performance of the Banking Sector in Kenya	Information technology through agency banking plays a significant role in enhancing the performance of commercial banks	Conceptual Gap: The study focused on a single concept of e-banking which is internet banking	The current study focused on the other three major e-banking strategies which include agency banking, mobile banking and ATM banking.
Hailu, Yadecha, and Teferi (2020)	The Effects of Electronic Banking on bank Performance of selected Commercial Banks in Ethiopia	According to Hailu, Yadecha, and Teferi (2020), ATMs have a negative significant linear relationship with Return On Assets (ROA).	Population gap: The study to explore the effects of ATMs on the financial performance of commercial banks in Ethiopia	The research was conducted in Kenya.

Onyimba and Ufodiama (2020)	Effect of Cashless Economy and Performance of Banks in Nigeria	Modes of banking such as ATM banking are significant in promoting the performance of commercial banks	Contextual gap: The context of the study is on commercial banks in Nigeria, which may not be replicated in a Kenyan context	The current study focused on the commercial banks in Kenya.
Mokaya (2020)	Effects of Financial Technology on the Financial Performance of Tier II Banks in Kenya	Financial Technology through online banking and ATM banking has a significant effect on the financial performance of tier two commercial banks	Conceptual and contextual gap: The study focused on online banking and ATM banking which are not the only financial technologies in commercial banks, and narrowed down to only tier two commercial banks.	This study focused on four essential e-banking strategies and respondents were drawn from both tier two and tier three commercial banks.

Source: Researcher (2023)

2.5 Conceptual Framework

The conceptual framework illustrates the relationship that exists between the independent variables and the dependent variable in the study. The independent variables of this study include; mobile banking, agency banking, internet banking and Automatic Teller Machines. The dependent variable is performance of commercial banks in Kenya. The relationship can be represented in a diagram as shown in the figure below.

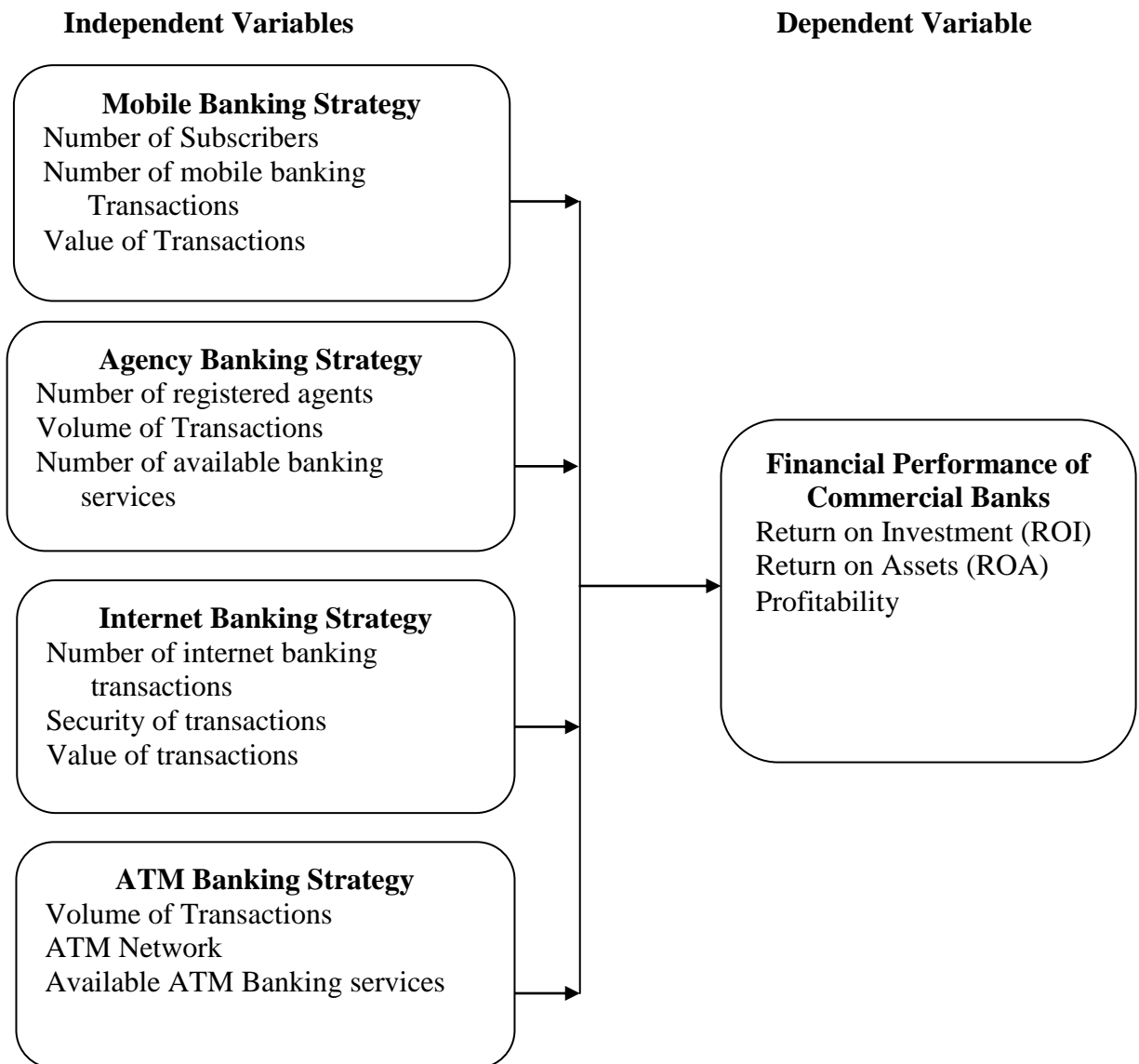


Figure 2.1: Conceptual Framework
Source: Researcher, (2023)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discussed the research design, target population, sampling procedure and sample size, data collection instruments, validity and reliability of the instrument, data analysis and presentation and ethical considerations.

3.2 Research Design

According to Orodho (2008), research design is a comprehensive plan for data collection and analysis. The researchers' beliefs and understanding of the world influence the research design. Kothari (2004) regard the research design as an arrangement of conditions for collection and analysis of data in a manner that aimed to combine relevance to the research purpose with economy in procedures. This study adopted a descriptive research design. This design enabled the researcher to collect data that describes the characteristics of the banks' e-banking strategies as they are. The descriptive study method was appropriate because it explores and describes the relationship between variables in their natural setting without manipulating them. According to Habanyati, Simui, Kanyamuna and Muleya (2020), a descriptive research design helps researchers to find out the characteristics of phenomena as they are. Therefore, this research design was ideal in gathering data on e-banking strategy and financial performance of selected commercial banks in Kenya.

3.3 Target Population

Population refers to all entities or items that a researcher wishes to understand while carrying out a study (Rahi, 2017). Target population is defined as “the population about which information is wanted” or the “totality of elements which are under discussion and

about which information is desired”. The word “target” emphasizes, however, that this population is not necessarily the same as the one that we end up sampling (Greenland, 2005). In this study, the target population comprised of 420 employees selected from 30 commercial banks. A list that contains the number of all employees was sourced from the human resource department of each commercial bank headquarter this was used as a sampling frame to identify every single element in the target population. Table 3.1 shows the distribution of the target population.

Table 3.1: Target Population

Category	Target Population	Percent (%)
Human Resources Managers	60	14.3%
Customer Service Managers	60	14.3%
Operations Managers	60	14.3%
Credit Managers	60	14.3%
Finance Managers	60	14.3%
ICT managers	60	14.3%
Compliance Managers	60	14.3%
Total	420	100.0%

Source: CBK (2021)

3.4 Sampling Procedure and Sample Size

3.4.1 Sampling Procedure

Sampling is the process of selecting individual items of the population to be investigated in the study (Berndt, 2020). Sampling was done as it would be extremely difficult to reach the entire population and give findings in good time to influence policies on E-Banking Strategy. The sampling frame was the 210 respondents drawn from key departments from the 30 selected commercial banks. The researcher used a purposive sampling technique to

arrive at the sample size for the study. The researcher stratified the population into key department managers. These are the main decision makers in terms of e-banking strategies and they are more knowledgeable on the extent to which the banks embrace the e-banking strategies.

3.4.2 Sample Size

According to Braun and Clark (2021), a sample is the group of specific items that are included in a study. To establish the appropriate sample size for the study, a sampling formula by Yamane (1967) was used. The formula as postulated by Preacher and Hayes (2008) provides an adequate sample size for the study and it is appropriate for both small and large population sizes. This justifies the choice of the formula in this study.

$$n = \frac{N}{1+N*e^2}$$

. Where:

n is the sample size

N is the target population (420)

e is the error margin (0.05)

$$n = \frac{420}{1+420*(0.05)^2}$$

$$n = 203$$

The study used stratified random sampling to pick the 203 respondents in the 30 tier three and tier two commercial banks in Kenya. The departments were the strata. The sample size was distributed as exhibited in Table 3.2.

Table 3.2 Sample Size Distribution

Category	Target Population	Sample Size	Percent(%)
Human Resources Managers	60	29	14.3%
Customer Service Managers	60	29	14.3%
Operations Managers	60	29	14.3%
Credit Managers	60	29	14.3%
Finance Managers	60	29	14.3%
ICT managers	60	29	14.3%
Compliance Managers	60	29	14.3%
Total	420	203	100.0%

Source: Researcher, (2023)

3.5 Data Collection Instrument

The researcher adopted a questionnaire to collect primary data. Arabiyat and Hasoneh (2020) affirm that the questionnaire is the most appropriate tool for data collection due to the busy nature of work of bank personnel. The questionnaire is also an ideal instrument for data collection for a descriptive research. The questionnaire comprises of questions which gathered data related to each specific objective of the study. The questionnaire contained both open-ended and close-ended questions which was arranged in sections as per the study variables. There were six sections on the questionnaire. The first section covered the background information of the respondents. The second, third, fourth and fifth sections covered the information regarding the four independent variables (agency banking, ATM banking, mobile banking and internet banking) respectively. The last section covered information regarding the financial performance of the selected commercial banks in Kenya, which was the dependent variable. The questionnaires were administered through drop and pick method whereby they were dropped at the respondents' places of work and picked at the agreed time.

3.6 Pilot Test

A pilot test was conducted to detect weakness in design and instrumentation of the research instrument. According to Young (2013), a pilot study can be done using between 5 to 15% of the sample size. This study applied 10% of the sample size which was in line with the suggestion by Creswell (2012) that a 10% of the sample size was adequate for the pilot study. The pilot study therefore was carried out using 14 respondents who were selected from the 9 tier one commercial banks in Kenya. The tier one commercial banks were excluded from the main study sample; hence they were appropriate for the pilot study.

3.6.1 Validity of the Instrument

Validity is the degree by which a sample of test items represents the content the test is designed to measure (Rahi, 2019). Validity is usually divided into content validity and construct validity. The questionnaire was tested against content validity and construct validity. This refers to the degree that the instrument covers the content that it is supposed to measure. It also refers to 'the adequacy of the sampling of the content that should be measured (Yaghmale, 2009). Therefore, content validity measures the comprehensiveness and representativeness of the content of a scale. Content validity in this study was measured using of two experts in the field of strategic management and banking. The experts were asked to read through the questions in the questionnaire and rate the content and ability of the questions to respond to the study problem. Their opinions and suggestions were considered and the questionnaire amended accordingly.

3.6.2 Reliability of the Research Instruments

Reliability refers to the extent in which a particular research instrument provides results that are consistent when used to measure similar items through repetitive trials (Bryman,

2013). In this research, reliability were assessed by measuring internal consistency of the elements under investigation. Cronbach's alpha were used to determine reliability of instrument of data collection. Cronbach's alpha coefficients range between zero and one. Internal consistency focuses on determining how items in a given construct are closely related to one another through interpreting Cronbach's alpha. The Cronbach's alpha (α) that is above 0.7 depicts good reliability (Creswell, 2012).

Table 3.3 Reliability Statistics

Scale	Cronbach's Alpha	Number of Items	Comment
Mobile banking	0.777	10	Acceptable
Agency banking	0.765	11	Acceptable
Internet banking	0.797	10	Acceptable
Automated teller machine	0.756	11	Acceptable

Cooper& Schindler (2004) has shown 0.7 to be an acceptable reliability coefficient. Table 3.3 demonstrates that mobile banking ($\alpha =0.777$) agency banking ($\alpha =0.765$) internet banking had the most astounding dependability ($\alpha=0.797$) trailed by automated teller machine ($\alpha=0.756$) and the research instrument had correlation coefficient of [r] of 0.757. This delineates all the scales were dependable as their unwavering quality qualities surpassed the endorsed limit of 0.7

3.7 Data Analysis and Presentation

According to Robnik and Seljak (2020), data analysis is the process of systematically manipulating responses in order to obtain knowledge from the respondents and for inferences. Data analysis was done with the goal of discovering useful information relevant for decision making in the in commercial banks on matters related to e-banking strategy. The data was analysed using quantitative approach. The data was analysed using the Statistical Package for Social Sciences (SPSS) version 27. The researcher used descriptive

and inferential statistics in data analysis. Descriptive statistics included mean, standard deviation, frequencies and percentages.

On the other hand, inferential analysis through a regression model were used to establish the relationship between e-banking strategies (Mobile banking, Internet banking, Agency banking and ATM banking) and the financial performance of commercial banks in Kenya.

The model was as shown:

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

Where:

Y = Financial Performance of Commercial Banks in Kenya

X₁ = Mobile Banking Strategy

X₂ = Agency Banking Strategy

X₃ = Internet Banking Strategy

X₄ = ATM Banking Strategy

ε = Error Term

α = Constant Term

β₁, β₂, β₃, and β₄ = Coefficients for independent variables

The findings were presented using tables, pie-charts and bar-graphs.

3.8 Ethical Considerations

The researcher obtained permission to collect data from Kenyatta University, the National Commission for Science, Technology and Innovation (NACOSTI). In addition, the researcher wrote an introduction letter to the commercial banks and the specific respondents to be included in the study. The questionnaires that were used in data collection did not include questions that would antagonize the respondents for instance, seeking personal sensitive information. The respondents were allowed to opt out of the study should they wish to at any point. The data collected was treated with anonymity and was only used for the purpose for which it was collected.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSIONS

4.0 Introduction

This chapter presents the data findings, analysis, presentation, interpretation and discussion. Data was collected from selected commercial banks in Kenya. The study investigated the effect of electronic banking strategy on financial performance of selected commercial banks in Kenya. The key objectives were to assess effect of mobile banking strategy, agency banking strategy, internet banking strategy and automated teller machines strategy on financial performance of selected commercial banks in Kenya. The first section in this chapter is on the response rate of the respondents. The second section of this chapter presents the demographic information of the respondents. The third section presents findings on the study objectives and finally inferential statistics

4.1 Response Rate

The total number of questionnaires distributed was two hundred and three 203. These questionnaires were self-administered to employees of Commercial Banks, Kenya. A total of 203 questionnaires were significantly returned properly completed as shown below, 3 of them were not returned due to absenteeism in relation to their job related duties. This represented an overall response rate of 98.5 % as shown in Table 4.1. According to Kothari (2007), a response rate of 50 percent is acceptable to analyse and publish, 60 percent is good, 70 percent is very good and beyond 80 percent is an excellent response rate. Saunders, et al., (2003) on the other hand indicate that 30% to 50 % response rate is reasonable enough for statistical generalizations. Therefore, this good response rate 98.5 % was attributed to the data collection procedure, where the' researcher personally administered questionnaires to

the respondents who filled them. The researcher collected the filled questionnaires later. This response rate demonstrated willingness to respond to study.

Table 4.1: Response rate

Response rate	Sample size	Percent
Returned questionnaires	200	98.5
Unreturned questionnaires	3	1.5
Total	203	100.0

Source: Researcher, (2023)

4.2 Demographic Information

In this part of research presents the background information of the respondents which included positions of the respondents and period they had being in the bank.

4.2.1 Position of Respondents

The study sought to investigate the positions of the respondents and the findings are presented in Table 4.2. From the results, Human resource managers were 20%, customer service managers were 19.5%, operations manager were 10%, credit managers were 10%, finance managers being the majority were 20.5%, ICT managers were 10% while compliance managers were 10%. The results clearly show that all positions were adequately represented in this study.

Table 4.2 Position of Respondents

		Frequency	Percent
Valid	Human Resources Managers	40	20.0
	Customer Service Managers	39	19.5
	Operations Managers	20	10.0
	Credit Managers	20	10.0
	Finance Managers	41	20.5
	ICT managers	20	10.0
	Compliance Managers	20	10.0
Total		200	100.0

Source: Researcher, (2023)

4.2.2 Period worked in the banking industry

The study sought to find out the period the respondents had worked in banking industry the results are shown in Table 4.3. The results showed that 10% of the respondents had worked in banking industry for a period of less than 1 year, 20% had been in the industry for 1-5 yrs, those who had worked for a period between 6-10 yrs were 40.5% while above 10 yrs were 29.5%.

Table 4.3 Period worked in the banking industry

		Frequency	Percent
Valid	Less than one year	20	10.0
	Between 1 and 5 years	40	20.0
	Between 6 and 10 Years	81	40.5
	Above 10 years	59	29.5
Total		200	100.0

Source: Researcher, (2023)

4.2.3 How effective has your bank been focusing on mobile banking

The study investigated how effective the bank has been focusing on mobile banking and the results are shown in table below. Table 4.4 shows that 49.5% of the respondents agreed that is has been very effective, 30.5% agreed on moderately effective, 10% said not sure and 10% said not effective.

Table 4.4 How effective has your bank been focusing on mobile banking

		Frequency	Percent
Valid	Very Effective	99	49.5
	Moderately Effective	61	30.5
	I am not sure	20	10.0
	Not effective	20	10.0
Total		200	100.0

Source: Researcher, (2023)

4.3 Descriptive Analysis

Information below was obtained according to the study objectives. Likert based responses were in form of strongly agree, agree, don't know, disagree and strongly disagreed rated 1-5 in that order.

4.3.1 Mobile Banking

Table 4.5 Mobile Banking

Statement	Strongly agree		Agree		Don't know		Disagree		Strongly disagree		mean	Std. dv
	F	%	F	%	F	%	F	%	F	%		
Account holders have largely adopted mobile banking	79	39.5	80	40.0	21	10.5	20	10.0	0	0	4.090	0.9468
Account holders often check the balances via mobile	40	20.0	121	60.5	20	10.0	19	9.5	0	0	3.190	0.8218
Account holders often make cash mobile cash transfers from their accounts	20	10.0	140	70.0	20	10.0	20	10.0	0	0	3.800	0.7502
Account holders often deposit money via mobile	21	10.5	40	20.0	60	30.0	79	39.5	0	0	3.015	1.0099
Accounts holders find mobile banking easy	41	20.5	119	59.5	20	10.0	20	10.0	0	0	3.0905	0.8363
Accounts holders find mobile banking convenient	40	20.0	119	59.5	20	10.0	21	10.5	0	0	3.8900	0.8435
Account holders often pay utility bills using mobile banking	20	10.0	121	60.5	20	10.0	20	10.0	19	9.5	3.5150	1.1072

Source: Researcher, (2023)

The findings in table 4.5 shows that 39.5% of the respondents strongly believed that Account holders have largely adopted mobile banking, 40% of them agreed, 10.5% did not know what to say while 10% of them disagreed. 20% of the respondents strongly agreed that

account holders often check the balances via mobile, 60.5% of them were in agreement, 10% did not know what to say and 9.5% of the respondents disagreed. 10% of the respondents strongly agreed that account holders often make cash mobile cash transfers from their accounts, 70% were in agreement while 10% did not know what to say as 10% of them disagreed with the statement. On whether account holders often deposit money via mobile 10.5% of the respondents strongly agreed, 20% of them agreed as 30% of them did not know what to say and 39.5% of them disagreed but none of them strongly disagreed. 20.5% of the respondent strongly agreed that accounts holders find mobile banking easy, 59.5% agreed, 10% did not know what to say as 10% of the respondents disagreed. According to whether accounts holders find mobile banking convenient 20% of the respondents strongly agreed, 59.5% agreed while 10% did not know what to say and 10.5% of the respondents disagreed. 10% of the respondents strongly agreed that Account holders often pay utility bills using mobile banking, 60.5% of the respondents were in agreement as 10% did not know what to say while 10% of them disagreed as 9.5% strongly disagreed.

The findings clearly indicated that majority of the respondents believed that account holders have largely adopted mobile banking as shown by highest mean= 4.090, std dev. = 0.9468 and further believed so because they find mobile banking convenient (mean= 3.8900, std dev=0.8435). The findings are in line with the findings of Ntyama and Maziku (2020) who established that e-banking strategies like mobile banking increased the clientele base from larger geographical areas and offered the convenience of service access. In turn, mobile banking resulted to increased profit after tax and returns of Assets.

4.3.2 Agency Banking

Table 4.6 Agency Banking

Statement	Strongly agree		Agree		Don't know		Disagree		Strongly disagree		Mean	Std. dev
	F	%	F	%	F	%	F	%	F	%		
Many account holders withdraw cash through agencies	40	20.0	120	60.0	20	10.0	20	10.0	0	0	3.9000	0.8328
Many account holders deposit cash through agencies	61	30.5	99	49.5	20	10.0	20	10.0	0	0	4.0050	0.8995
Many account holders pay utility bills through agencies	40	20.0	120	60.0	20	10.0	20	10.0	0	0	3.9000	0.8328
Many account holders make general payments through agencies	20	10.0	121	60.5	20	10.0	39	19.5	0	0	3.6100	0.9122
Many account holders make accounts balance inquiry through agencies	20	10.0	80	40.0	40	20.0	40	20.0	20	10.0	3.2000	1.1691
Many account holders find agency banking easy	140	70.0	60	30.0	0	0	0	0	0	0	3.9100	0.8218

Source: Researcher, (2023)

Table 4.6 above shows the findings on agency banking, 20% of the respondents strongly agreed that many account holders withdraw cash through agencies, 60% were in agreement while 10% did not know as 10% were against the statement. 30.5% of the respondents strongly agreed that many account holders deposit cash through agencies, 49.5% of them agreed, 10% did not know while 10% disagreed on the statement. On whether many account holders pay utility bills through agencies 20% of them strongly agreed, 60% of them agreed while 10% did not know what to say while 10% were against the statement. 10% of the respondents strongly agreed that many account holders make general payments through

agencies, 60.5% agreed while 10% of them did not know what to say as 19.5% disagreed on the statement. 10% of the respondents strongly agreed that many account holders make accounts balance inquiry through agencies, 40% of them agreed while 20% did not know what to say, 20% of them disagreed as 10% strongly disagreed. On whether many account holders find agency banking easy 70% of the respondents strongly agreed with the statement while 30% of them agreed but none of the respondents were against the statement.

The findings further showed that majority of the respondents agreed that many account holders deposit cash through agencies (Mean=4.0050, std dev = 0.8995) as they find agency banking easy (Mean= 3.9100, std dev = 0.8218). These findings are in agreement with the findings of Nimwesiga (2019) who noted that there was a significant relationship between the accessibility of banking services through agency banking and the financial performance of DFCU bank. Further, revealed that there was no significant relationship between low cost of service through agency banking and the financial performance of DFCU. In addition, the agency banking led to increased customer transactions and significantly contributed to higher bank financial performance

4.3.3 Internet Banking

Table 4.7 Internet Banking

Statement	Strongly agree		Agree		Don't know		Disagree		Strongly disagree		Mean	Std. dev
	F	%	F	%	F	%	F	%	F	%		
Account holders often transfers cash to bank accounts using banking internet services	20	10.0	80	40.0	20	10.0	40	20.0	40	20.0	4.3000	0.4594
Account holders often transfer mobile phone numbers using banking service cash to internet	0	0	101	50.5	20	10.0	79	39.5	0	0	3.0000	1.3450
Account holders often withdraw cash using internet banking service	20	10.0	61	30.5	40	20.0	60	30.0	19	9.5	3.1100	0.9447
Account holders often request for loans using internet banking service	60	30.0	99	49.5	0	0	20	10.0	21	10.5	3.0150	1.1797
Account holders often make account balance inquiry using internet banking service	40	20.0	99	49.5	20	10.0	41	20.5	0	0	3.3950	1.2912
Many account holders find internet banking easy	20	10.0	79	39.5	40	20.0	61	30.5	0	0	3.5850	1.8954
Many account holders find internet banking convenient	20	10.0	59	29.5	40	20.0	40	20.0	41	20.5	3.6900	1.0144

Source: Researcher, (2023)

Table 4.7 show that findings on internet services, 10% of the respondents strongly believed that Account holders often transfers cash to bank accounts using banking internet services, 20% of them were in support of the statement while 20% disagreed same as 20% who strongly disagreed as 10% of them did not know what to say. 50.5% agreed that account holders often transfer mobile phone numbers using banking service cash to internet, 10% of them did not know what to answer, 39.5% of them disagreed but none of them strongly

agreed or strongly disagreed. On whether account holders often withdraw cash using internet banking service, 10% of them strongly agreed, 30.5% of them agreed, 20% did not know while 30.0% disagreed with the statement and 9.5% also strongly disagreed. 30% of the respondents strongly agreed that account holders often request for loans using internet banking service, 49.5% agreed while 10% disagreed and 10.5% strongly disagreed. 20.0% of the respondents strongly agreed that account holders often make account balance inquiry using internet banking service, 49.5% were in agreement, 10.0% did not know as 20.5% disagreed with the statement. 10% of the respondents strongly believed that many account holders find internet banking easy, 39.5% were in agreement, 20% did not know while 30.5% disagreed with the statement. On whether many account holders find internet banking convenient 10% of the respondents strongly agreed, 29.5% were in agreement while 20% did not know as 20% disagreed and 20.5% of them strongly disagreed.

The study further showed that majority of the respondents agreed that account holders often transfers cash to bank accounts using banking internet services (Mean = 4.3000, Std dev= 0.4594) as they find internet banking convenient (Mean = 3.6900, Std dev= 1.0144). These findings are in support with the findings of Kimani (2021) who noted that internet banking facilitated cash transfer to bank accounts, cash transfers to mobile phone numbers, loan request, and statement enquiry among other services. He also established that internet banking increased the clientele base and was also preferred by individual who were not very mobile for instance the sick and those recuperating. Convenient services across different demographics led to improve financial performance by the commercial banks.

4.3.4 Automatic Teller Machine

Table 4.8 Automatic Teller Machine

Statement	Strongly agree		Agree		Don't know		Disagree		Strongly disagree		Mean	Std dev
	F	%	F	%	F	%	F	%	F	%		
Many account holders withdraw cash through ATM	40	20.0	141	70.5	0	0	19	9.5	0	0	4.0100	0.7634
Many account holders deposit cash through ATM	20	10.0	80	40.0	20	10.0	59	29.5	21	10.5	3.0950	1.2303
Many account holders view account mini statement via ATM	41	20.5	139	69.5	20	10.0	0	0	0	0	4.1050	0.5436
Many account holders request for salary advances via ATM	20	10.0	100	50.0	20	10.0	60	30.0	21	10.5	3.4000	1.0224
Many account holders find ATM easy use	59	29.5	141	70.5	0	0	0	0	0	0	4.2950	0.4572
Many account holders find ATM convenient	60	30.0	140	70.0	0	0	0	0	0	0	4.3000	0.4594

Source: Researcher, (2023)

The findings in Table 4.8 shows that, 20% of the respondents strongly believed that many account holders withdraw cash through ATM, 70.5% agreed with the statement while 9.5% of the respondents disagreed. According to whether many account holders deposit cash through ATM 10% of them strongly agreed, 40% agreed, 10% of them did not know the answer, while 29.5% disagreed as 10.5% strongly disagreed. 20.5% of the respondents strongly believed that many account holders view account mini statement via ATM, 68.5% agreed with the statement while 10% did not know but none of them were against the statement. According to whether many account holders request for salary advances via

ATM 10% of the respondents strongly agreed, 50% who were the majority agreed while 10% did not know what to say as 30% disagreed with 10.5% who strongly disagreed. 29.5% of the respondents strongly believed that many account holders find ATM easy use as 70.5% agreed with the statement but none was against it. According to whether many account holders find ATM convenient, 30% of the respondents strongly agreed as 70% of them were in agreement but none of the respondents were against the statement.

According to ATM majority of the respondents agreed that many account holders find ATM has very convenient (Mean= 4.3000, Std. dev = 0.4594) has it was easy to use (Mean= 4.2950, Std. dev = 0.4572). The findings are in line with the findings of Hailu, Yadecha, and Teferi (2020) who established that there existed a positive relationship between the value of Automated Teller Machines (ATM) significantly influenced the overall performance of commercial banks in Ethiopia, in terms of customer satisfaction and customer withdrawals. Their findings further revealed that ATMs led to reduced cost of operation while enabled the banks to offer cash withdrawal services round the clock

4.3.5 Financial Performance

Table 4.9 Financial Performance

Statement	Strongly agree		Agree		Don't know		Disagree		Strongly disagree		mean	Std. dev
	F	%	F	%	F	%	F	%	F	%		
E-Banking has enabled the bank to reduce capital expenses	39	19.5	100	50.0	20	10.0	41	20.5	0	0	3.6850	1.0104
E-Banking has enabled the bank to reduce recurrent salary expenses	60	30.0	140	70.0	0	0	0	0	0	0	4.3000	0.4594
E-Banking has enabled the bank to reduce rental expenses	20	10.0	101	50.5	20	10.0	59	29.5	0	0	3.4100	1.0184
E-Banking has enabled the bank to increased transactions by account holders	60	30.0	121	60.5	19	9.5	0	0	0	0	4.2050	0.5956
E-Banking has enabled the bank has led to reduced debt financing of bank projects	20	10.0	121	60.5	59	29.5	0	0	0	0	3.5100	1.0223
E-Banking has enabled the bank to increased profits	40	20.0	119	59.5	20	10.0	21	10.5	0	0	3.8900	0.84348

Source: Researcher, (2023)

According to table 4.9 the findings show that 19.5% strongly agreed that E-Banking has enabled the bank to reduce capital expenses, 20% agreed on the statement while 20.5% disagreed but 10% of them did not know.30% of the respondents strongly agreed that E-Banking has enabled the bank to reduce recurrent salary expenses while 70% of the agreed on the statement but none of them were against the statement. 10% of the respondents strongly believed that E-Banking has enabled the bank to reduce rental expenses, 50.5%

were in agreement while 29.5% disagreed but 10% did not know. On whether E-Banking has enabled the bank to increased transactions by account holders 30% of the respondents strongly agreed, 60.5% agreed while 9.5% did not know but none of them were against the statement. 10% of the respondents strongly believed that E-Banking has enabled the bank has led to reduced debt financing of bank projects, 60.5% were in agreement while 29.5% did not know but none of them went against the statement. On whether E-Banking has enabled the bank to increased profits 20% of the respondents strongly agreed, 59.5% were in agreement while 10% did not know as 10.5% disagreed but no one strongly disagreed.

The findings further showed that majority of the respondents believed that E-Banking has enabled the bank to reduce recurrent salary as presented with highest mean (Mean = 4.3000, Std. dev = 0.4594) and also that E-Banking has enabled the bank to increased transactions by account holders (Mean = 4.2050, Std. dev = 0.5956). These findings are supported by the findings of Ndungu and Bosire (2020), He established that banks derived profitability mainly from; government securities, loans, real estate and stocks. All of these sources depended on electronic techniques in order to be successful. As such, ICT innovation had a significant impact on the financial performance of commercial banks.

4.4 Regression Analysis

In addition, a multiple regression analysis was conducted so as to test the statistical relationship among variables (independent) on performance of selected commercial banks. The statistical package for social sciences (SPSS version 26) was applied to code, enter and compute the measurements of the multiple regressions for the study.

4.4.1 Regression Model

A multiple regression model was used to explore the relationship between electronic banking strategy (mobile banking, agency banking, internet banking and automated teller

machines strategy) on financial performance. The R^2 represented the measure of variability in financial performance at selected commercial banks that electronic banking strategies are accounted for. From the model, ($R^2 = 82.5$ showing that electronic banking strategy account for 82.5% variation in financial performance. The electronic banking strategy predictor used in the model captured the variation in the financial performance at selected commercial banks in

Table 4.10 Overall model summary

R	R square	Adjusted R Square	Std. Error of the Estimate
.908 ^a	.825	.821	.16727

Source: Researcher (2023)

4.4.2 ANOVA Model

The regression model with electronic banking strategy as a predictor was significant ($F=29.235$, p value =0.000) shows that there is a significant relationship between electronic banking strategy and financial performance.

Table 4:11 ANOVA Model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.655	4	6.414	29.235	.000 ^b
	Residual	5.456	195	.028		
	Total	31.111	199			

a. Dependent Variable: financial performance

b. Predictors: (Constant), mobile banking, agency banking, internet banking and automated teller machines strategy

Source: Researcher, (2023)

Table 4:12 Regression Coefficients

Model		Unstandardized Coefficients		Standardized
		B	Std. Error	Coefficients
1	(Constant)	.345	.146	
	Mobile banking	.549	.050	.556
	Agency banking	-.433	.027	-.571
	Internet banking	-.017	.008	-.066
	ATM	1.020	.066	.834

Source: Researcher, (2023)

In addition, the β coefficients for electronic banking strategy as independent variable were generated from the model, in order to check the relationship of the variables. Table 4.12 gave the estimates of β -value and the contribution of the each predictor to the model. The β -value for mobile banking, agency banking, internet banking and automated teller machines strategy and support had a positive coefficient, depicting positive relationship with financial performance as summarized in the model as:

$$Y = -0.345 + 0.549X_1 - 0.443X_2 + .017X_3 + 1.020X_4 + \varepsilon_1 \dots\dots\dots \text{Equation 4.1}$$

Where: Y = financial performance, X_1 = mobile banking, X_2 = agency banking, X_3 = internet banking, X_4 = automated teller machines, ε_1 = error term

From the findings the t-test associated with β -values was significant and the automated teller machine as the predictor was making a significant contribution to the model. The coefficients results showed that the predicted parameter in relation to the independent factors was significant. The study findings depicted that there was a positive significant relationship between electronic banking strategy and financial performance with automated teller machines making the highest impact.

4.5 Correlation Analysis

This section presents results of the correlation between the independent and dependent variables. Table 4.13 shows the outcome.

Table 4.13 Correlation between electronic banking and financial performance

	Financial performance	Mobile banking	Agency banking	Internet banking	ATM
Financial performance	1				
Mobile banking	.367** .000	1			
Agency banking	.781** .000	.435** .000	1		
Internet banking	.023** .000	-.061** .000	-.001** .000	1	
ATM	.696** .000	.801** .000	.538** .000	.063** .000	1

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

Source: Research Data (2023)

Table 4.13 shows that mobile banking and financial performance had a favorable and significant relationship ($r = 0.367$, $p = .000$). This denoted that mobile banking was positively related to with financial performance.

Results also reveal that Agency banking and financial performance had a favorable and significant association ($r = 0.781$, $p = .000$). This denoted that Agency banking was positively associated with financial performance.

Further, internet banking and financial performance had a favorable and significant association ($r = 0.023$, $p = .000$). This denoted that internet banking was positively associated with financial performance.

Finally, ATM and financial performance had a favorable and significant association ($r = 0.696$, $p = .000$). This denoted that ATM was positively associated with financial performance of commercial banks.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.0 Introduction

This chapter presents the summary of findings, conclusions and recommendations of the study. The study sought to establish the influence of electronic banking strategy (mobile banking, agency banking, internet banking and automated teller machines strategy) on financial performance. Data was analysed using regression methods to establish the relationship between variables of the study.

5.1 Summary of Findings

The overall objective of this study was to investigate the influence of electronic banking strategy and financial performance of Commercial Banks.

5.1.1 Mobile Banking Strategy and Financial Performance

The study's first objective was to establish the effect of mobile banking strategy on financial performance of selected commercial banks. The results indicated that customers of Commercial Banks adopted mobile banking practices on a large extent despite challenges of consumer awareness on how to use electronic services. Most of the customers preferred mobile banking services as it enables them check the balances via mobile make cash mobile cash transfers from their accounts, often deposit money via mobile and in these they find mobile banking convenient. In addition, the regression analysis reveals that the financial performance of commercial banks is positively and significantly impacted by mobile banking strategy.

5.1.2 Agency banking Strategy and Financial Performance

The study's second objective was to determine the effect of agency banking strategy on financial performance. Agency banking strategy have an effect in performance in that many

account holders withdraw cash through agencies, account holders deposit cash through agencies, many account holders pay utility bills through agencies, many account holders make general payments through agencies, many account holders make accounts balance inquiry through agencies also many account holders find agency banking easy. Further regression analysis reveals that the financial performance of commercial banks is positively and significantly impacted by agency banking strategy

5.1.3 Internet banking Strategy and Financial Performance

The study's third objective was to determine the effect of internet banking strategy and financial Performance. The study showed that account holders often transfers cash to bank accounts using banking internet services, account holders often transfer mobile phone numbers using banking service cash to internet, account holders often withdraw cash using internet banking service, account holders often request for loans using internet banking service, account holders often make account balance inquiry using internet banking service, many account holders find internet banking easy and finally finds internet banking convenient. In establishing the relationship the study found that financial performance of commercial banks is positively and significantly impacted by internet banking strategy

5.1.4 Automated teller machines strategy and Financial Performance

The study's fourth objective was to determine the Automated teller machines strategy and Financial Performance. The study established that with ATM as the strategy, many account holders withdraw cash through ATM, deposit cash through ATM , they view account mini statement via ATM, they can request for salary advances via ATM as they find ATM easy use and very convenient. From the regression analysis the study also established that financial performance of commercial banks is positively and most significantly impacted by ATM strategy.

5.2 Conclusion

The first goal of this study was to determine the effect of mobile banking on financial performance. The study's regression analysis revealed a positive and significant relationship between mobile banking and financial performance. Furthermore, this study found that mobile banking strategy has a positive and significant effect on the financial performance. It is concluded that mobile banking was mostly preferred by customers as it enables them check the balances, transfers cash from their accounts, deposit money via mobile and in these they find mobile banking convenient.

Secondly, the research was to establish agency banking effects on the financial performance. From the regression analysis, established that agency banking significantly relates to the financial performance. In conclusion, agency banking plays a role in financial performance as mostly used in cash deposits, paying utility bills, balance inquiry and other general payments this was successful as most of the account holders found it agency banking easy.

The third goal of this study was to find out how internet banking affected financial performance. Regression analysis revealed a positive and significant relationship between internet banking and financial performance. This study concluded that internet banking is very effective among its users as they find it easy through internet banking account holders often transfers cash to bank accounts, account holders often transfer mobile phone numbers, account holders often withdraw cash, account holders often request for loans and account holders often make account balance inquiry.

On the effect of ATM on financial performance, it was established that ATM positively impacts financial performance as most of the respondents agreed that it was easy and very convenient to use. The study concluded that ATM was mostly used for withdrawals, deposit cash, view account mini statement via ATM, request for salary advances.

5.3 Recommendations of the Study

The study established that the extent of electronic banking influence on financial performance was large. The study established that the most significant variable to financial performance were mobile banking and ATM strategy while agency and internet had some influence to a small extent. Therefore this study recommends that;

The banks should improve the security of electronic banking especially internet, mobile and agency banking, according to the study, because this will solve the problem of fraud and hacking, which would otherwise drive users away from electronic banking. They should come up with extensive measures for protecting the customers' money their accounts as well as their personal information. This can be done through the right customer verification method and by providing courtesy calls where there is suspicion of fraud or hacking.

The right strategies that will encourage customers to make use of electronic banking should be formulated. These may include transaction costs that are affordable and lesser than the cost involved in the conventional method of banking. Banks should also make sure that the procedure and process for electronic banking is simple which will increase the convenience and efficiency of electronic banking by customers

To increase the usage of internet banking commercial Banks should increase awareness of internet banking and advocate for the provision of fast, safe, and secure internet for customers to access and utilize in accessing banking services.

To ensure the clients keep on usage of electronic banking the commercial banks should keep updating and improving the security tools and also do extensive investigations concerning the effectiveness of these tools. They should also follow the policies and guidelines provided by the government through the central bank of Kenya as their regulator regarding the handling of customers' complaints as it will improve the issue of trust and security among the customers

5.4 Suggestions for Further Research

The research investigated the effects of electronic banking on financial performance of commercial banks in Kenya. The focus was on four independent variables (mobile banking, agency banking, internet banking and ATM strategy) which accounted for 82.5% of variations in financial performance. Future studies should explore other factors that can explain the remaining percentage of variations. Also the research suggest for further studies to be carried on each variable independently to explore how they affect the financial performance independently.

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APPENDICES

Appendix I: Introduction Letter

Dear respondent

I am Catherine Wangui, a student at Kenyatta University pursuing Master of Business Administration (Strategic Management Option) course. As part of the requirement for the award of the master degree, I am conducting a research on the “*E-Banking strategy and Financial Performance of Selected Banks in Kenya*” Your bank has been included in the sample and therefore, I am requesting you to participate by filling the attached questionnaire. Your responses will be used for academic purposes only and will be held with utmost confidentiality.

Yours truly,

Catherine Wangui

Appendix II: Questionnaire

PART ONE

1. Which of the following positions do you hold at the bank?

- Human Resources Managers []
- Customer Service Managers []
- Operations Managers []
- Credit Managers []
- Finance Managers []
- ICT managers []
- Compliance Managers []
- Any other (specify)

2. How long have you worked in the banking industry?

- Less than one year []
- Between 1 and 5 years []
- Between 6 and 10 Years []
- Above 10 years []

PART TWO

Section A: Mobile Banking

How effective has your bank been focusing on mobile banking?

- Very Effective []
- Moderately Effective []
- I am not sure []
- Not effective []
- We do not have mobile banking []

Please indicate your level of agreement with the following statements regarding mobile banking as it applies in your bank.

	Strongly disagree	Disagree	Don't know	Agree	Strongly Agree
1. Account holders have largely adopted mobile banking.					
2. Account holders often check the balances via mobile.					
3. Account holders often make cash mobile cash transfers from their accounts					
4. Account holders often deposit money via mobile					
5. Accounts holders find mobile banking easy.					
6. Accounts holders find mobile banking convenient.					
7. Account holders often pay utility bills using mobile banking.					

8. What specific service of mobile banking do you think make account holders use mobile banking?

.....
.....
.....

In your current position at the bank, what are some of the roles that you play in enhancing mobile banking?

.....
.....

Section B: Agency Banking

Answer the following questions by marking in a mark (✓) in the boxes provided

	Strongly disagree	Disagree	Don't know	Agree	Strongly Agree
1. Many account holders withdraw cash through agencies.					
2. Many account holders deposit cash through agencies.					
3. Many account holders pay utility bills through agencies.					
4. Many account holders make general payments through agencies.					
5. Many account holders make accounts balance inquiry through agencies.					
6. Many account holders find agency banking easy.					
7. Many account holders find agency banking convenient.					

8. What specific service of agency banking do you think make account holders use agency banking?

.....

.....

Section C: Internet Banking

Answer the following questions by marking in a mark (✓) in the boxes provided

	Strongly disagree	Disagree	Don't know	Agree	Strongly Agree
1. Account holders often transfer cash to banks accounts using banking internet service.					
2. Account holders often transfer mobile phone numbers using banking service cash to internet					
3. Account holders often withdraw cash using internet banking service.					
4. Account holders often request for loans using internet banking service.					
5. Account holders often make account balance inquiry using internet banking service.					
6. Many account holders find internet banking easy.					
7. Many account holders find internet banking convenient.					

9. What specific service of internet banking do you think make account holders use internet banking?

.....

.....

Section D: Automatic Teller Machine

Answer the following questions by marking in a mark (✓) in the boxes provided

	Strongly disagree	Disagree	Don't know	Agree	Strongly Agree
1. Many account holders withdraw cash through ATM.					
2. Many account holders deposit cash through ATM.					
3. Many account holders view account mini statement via ATM.					
4. Many account holders request for salary advances via ATM.					
5. Many account holders find ATM easy use.					
6. Many account holders find ATM convenient.					

7. What specific service of ATM do you think make account holders use ATMs?

.....

.....

Section E: Financial Performance

Answer the following questions by marking in a mark (✓) in the boxes provided

	Strongly disagree	Disagree	Don't know	Agree	Strongly Agree
1. E-Banking has enabled the bank to reduce capital expenses.					
2. E-Banking has enabled the bank to reduce recurrent salary expenses.					
3. E-Banking has enabled the bank to reduce rental expenses.					
4. E-Banking has enabled the bank to increased transactions by account holders.					
5. E-Banking has enabled the bank has led to reduced debt financing of bank projects.					
6. E-Banking has enabled the bank to increased profits					

7. What other effects has e-banking had on the financial performance of the bank?

.....

.....

Thanks for taking your time to fill in this questionnaire

Appendix III: List of Commercial Banks in Kenya

1. Absa Bank Kenya Plc
2. Access Bank Plc
3. African Banking Corporation Ltd
4. Bank of Africa (K) Ltd
5. Bank of Baroda (Kenya) Limited
6. Bank of India
7. Citibank N.A. Kenya
8. Consolidated Bank of Kenya
9. Co-operative Bank of Kenya Ltd
10. Credit Bank Ltd
11. Development Bank of Kenya
12. Diamond Trust Bank Kenya Ltd
13. DIB Bank Kenya Ltd
14. Ecobank Kenya Ltd
15. Equity Bank Kenya Ltd
16. Family Bank Ltd
17. First Community Bank
18. Guaranty Trust Bank
19. Guardian Bank Ltd
20. Gulf African Bank Ltd
21. Habib AG Zurich
22. HFC Ltd
23. I&M Bank Ltd
24. KCB Bank Kenya Ltd
25. Kingdom Bank Ltd
26. Mayfair CIB Bank Ltd
27. Middle East Bank (K) Ltd
28. M-Oriental Commercial Bank Ltd
29. National Bank of Kenya Ltd
30. NCBA Bank Kenya PLC
31. Paramount Bank Ltd
32. Prime Bank Ltd
33. SBM Bank Kenya Ltd
34. Sidian Bank Ltd
35. Spire Bank Limited
36. Stanbic Bank Kenya Ltd
37. Standard Chartered Bank Kenya Ltd
38. UBA Kenya Bank Ltd
39. Victoria Commercial Bank Limited

Appendix IV: Research Authorization from Graduate School



KENYATTA UNIVERSITY GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke

Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 57530

Internal Memo

Our Ref: D53/OL/CTY/32317/2017

Date: 18th August, 2023

The Director General,
National Commission for Science, Technology & Innovation,
P.O. Box 30623-00100,
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR CATHERINE W. NJAU REG. NO. D53/OL/CTY/32317/2017

I write to introduce **Ms. Njau** who is a Postgraduate Student of this University. She is registered for M.B.A Project degree programme in the **Department of Business Administration** in the School of Business, Economics & Tourism.

Ms. Njau intends to conduct research for a Project proposal entitled, "Electronic Banking Strategy and Financial Performance of Selected Commercial Banks in Kenya"

Any assistance given will be highly appreciated.

Yours faithfully,


A handwritten signature in blue ink, appearing to be 'Enshiba Kimani', written over a blue line.

PROF. ENSHIBA KIMANI
EXECUTIVE DEAN, GRADUATE SCHOOL

AM/cao

Committed to Creativity, Excellence & Self-Reliance

Appendix V: Research Permit from NACOSTI

 <p>REPUBLIC OF KENYA</p>	 <p>NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION</p>
Ref No: 433184	Date of Issue: 25/August/2023
RESEARCH LICENSE	
	
<p>This is to Certify that Ms., CATHERINE WANGUI NJAU of Kenyatta University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: ELECTRONIC BANKING STRATEGY AND FINANCIAL PERFORMANCE OF SELECTED COMMERCIAL BANKS IN KENYA for the period ending : 25/August/2024.</p>	
License No: NACOSTI/P/23/28991	
433184	
Applicant Identification Number	Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
	Verification QR Code
	
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