FINANCIAL INNOVATION AND THE BANKING INDUSTRY

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TO

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FEBRUARY 2025

ATTESTATION

This is to certify that this project work was carried out by **IHEME PROMISE** with the matriculation number **MGS2003466** under the supervision and it is adequate in scope and content, for the award of Bachelor of Science (B. Sc.) degree in Computer Science of the University of Benin.

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(Student) **DATE**

CERTIFICATION

This is to certify that this research work was carried out by **IHEME PROMISE** with matriculation number **MGS2003466,** Faculty of Management Sciences, Department of Banking and Finance, University of Benin, Benin city under my supervision.

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Head of Department

APPROVAL

This project work is hereby approved by the Department of Banking and Finance in partial fulfillment of the requirement for the award of the University of Benin Bachelor of Science (B. Sc.) degree in Banking and Finance, is adequate both in scope and content and it is hereby approved for presentation.

DR. O.G. OMOROKUNWA

_____ _____

(Head of Department) **DATE**

DEDICATION

This project work is dedicated to God Almighty, for providence, guidance, and grace in seeing me through this study; I give Him all the glory.

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My sincere gratitude goes to God Almighty, for granting me this grace and mental powers to complete this project. This project completes another milestone in my academic career. I sincerely wish to appreciate the effort of my project supervisor, Dr. S.U. Eboigbe. My gratitude goes to the Head of Department of Banking and Finance, Dr. O.G. Omorokunwa for his support and guidance throughout the course of this project.

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TABLE OF CONTENT

CONTENTS **PAGES**

TITLE PAGE ii

ATTESTATION iii

CERTIFICATION iv

APPROVAL v

DEDICATION vi

ACKNOWLEDGEMENT vii

TABLE OF CONTENT viii

ABSTRACT xii

CHAPTER ONE 1

INTRODUCTION 1

1.1 Background to the study 1

1.2 Statement of the problem 7

1.3 Research Questions 8

1.4 Research Objectives 9

1.5 Research Hypotheses 9

1.6 Scope of the Study 9

1.7 Significance of the Study 10

CHAPTER TWO 12

LITERATURE REVIEW 12

2.1 Introduction 12
2.2 Conceptual Review 12
2.2.1 The Concept of Deposit Money Banks 12
2.2.1.1 Primary Functions of Deposit Money Banks 13
2.2.1.2 Secondary Functions of Deposit Money banks 14
2.2.2 Financial Performance 15
2.2.3 Financial Innovation 19
2.2.3.1 Point-of-Sale (POS) 22
2.2.3.2 Mobile Phone Banking 24
2.2.3.3 Internet/Online Banking 25
2.2.3.4 Automated Teller Machine (ATM) 28
2.3 Theoretical Review 28
2.3.1 Innovation Diffusion Theory 29
2.3.2 Technology Acceptance Model 31
2.3.3 Transaction-Cost innovative theory 33
2.3.4 Regulation Innovation Theory 34
2.3.5 Circumvention Innovation theory 35
2.4 Empirical Review 37
CHAPTER THREE 44
METHODOLOGY 44
3.1 Introduction 44

3.2 Research Design 44
3.3 Population 44
3.4 Sampling Procedure/Method 44
3.5 The Sample 45
3.6 Sources of Data 45
3.7 The Research Instrument 45
3.7.1 Validity of the Research Instrument 46
3.7.2 Reliability of the Research Instrument 46
3.8 Theoretical Framework 46
3.9 Method of Data Analysis 48
CHAPTER FOUR 49
DATA PRESENTATION, ANALYSIS AND INTERPRETATION 49
4.1 Introduction 49
4.2 Demographic Profile of the Respondents 49
4.3 Descriptive Statistics 54
4.4 Inferential Analysis 62
4.4.1 Regression Results to Determine the Effect of Financial Innovation on Banking Industry Indicators (Customer Satisfaction, Customer Retention, Customer Patronage). 62
4.8 Discussion of Findings 69
CHAPTER FIVE 72
SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS 72

5.1 Introduction 72
5.2 Summary of Findings 72
5.3 Conclusion 73
5.4 Recommendations 74
5.5 Contribution to Knowledge 75
5.6 Area for Further Research 76
REFERENCES 78
QUESTIONNAIRE 92
APPENDIX 98

ABSTRACT

This study investigates the impact of financial innovation on the Nigerian banking industry, with a focus on its effects on customer satisfaction, retention, and patronage, as well as the challenges customers face when using innovative banking services. A total of 200 questionnaires were distributed among bank customers in Benin City, Edo State, of which 100 were completed and analyzed using SPSS version 20.0, employing both descriptive statistics and regression tests. The findings indicate that financial innovation significantly enhances customer satisfaction ($B = 0.666$, $t = 16.821$, $p = .000$) and influences customer patronage ($B = 0.152$, $t = 2.815$, $p = .005$), but has an insignificant impact on customer retention ($B = 0.085$, $t = 1.223$, $p = .222$). Moreover, the study reveals notable challenges including technical issues, security concerns, delays in transaction processing, and slow complaint resolution. Based on these results, it is recommended that banks continue to invest in user-friendly digital platforms, integrate personalized customer relationship management strategies to improve retention, employ targeted marketing to enhance patronage, and upgrade their IT infrastructure to address operational challenges.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Innovation has been a core topic for scholars, because of its important contribution to economic growth and to the stability of financial systems (Levine, 1997; IMF, 2006; Lerner & Tufano, 2011). New financial products, such as the securitisation of assets, were believed to have tremendous potential for the diversification and efficient management of risk (Merton, 1992; Mendoza et al., 2009; Trichet, 2009). The financial crisis that started in 2007 changed those beliefs, as excessive risk-taking in some specialized innovating products brought down the financial system and produced the deepest and most prolonged economic crisis since the Great Depression. Recent studies now blame excessive growth of the financial economy as detrimental to the growth of the real economy (Levine, 2005; Rajan, 2005; Piazza, 2010; Shin, 2010).

Innovation is a double-edged sword: the right kind of innovation and favourable conditions that may spur banks to invest in new technologies would help the financial system fulfil its functions and, as a consequence, deliver growth; but too much innovation or innovation that is not properly used, can have serious consequences for the overall economy (Stiglitz, 2010; Beck et al., 2012). The features of innovation in the banking sector are quite different from the characteristics usually encountered in other sectors. First, and in contrast to innovation in the manufacturing sector, a unique definition of financial innovation can be hardly found. For Frame and White (2004), financial innovation is defined as product and organizational innovation,

which allows cost or risk reduction for the single bank and/ or an improvement of the services for the financial system as a whole, but other definitions have been proposed as well. Second, banks are not the only developer of financial innovation.

The banking sector is also an end user of innovations developed in other sectors. Sometimes, banks jointly develop innovation with non-financial firms, such as software houses or specialized technology firms. Very often, innovation happens thanks to interaction with clients, and so is spread over departments. Because of these features, the measurement of financial innovation is quite a challenge. Our chapter is closely related to recent literature addressing the open question of how to measure financial innovation. Studies of manufacturing innovation traditionally focus on research and development (R&D) spending. However, R&D is unlikely to be a satisfactory measure in banking, since banks do not usually have an R&D department that launches new products and services. Most new services are developed in an incremental way, often through 'trial and error' and in all parts of the business. A count based on the listings of new securities is not fully satisfactory either, since much of the innovation in financial services is not related to publicly traded securities, such as insurance and banking products (Lerner & Tufano, 2011). Furthermore, new securities are often minor variants of existing securities, issued by banks to differentiate themselves from competitors. Some studies on innovation in the banking industry attempt to catalogue one particular type of innovation, such as credit default swaps or securitization (Tufano, 2003). However these results cannot be easily generalized to other products. A recent suggestion is to consider patents by financial institutions (Arnaboldi and

Claeys, 2014; Hall et al. 2009; Hunt, 2008), but Boldrin and Levine (2013) point out that academic studies have typically failed to find much of a connection between patents, innovation and productivity growth. Lerner (2006) develops a measure of financial innovation based on news items in the Wall Street Journal related to new financial products, services, or institutions. However, some innovation might not be reported in newspapers because it has no direct appeal to the reader.

This chapter supplements existing research with an alternative measure for financial innovation based on a bank's annual reports. The annual report is the main official document a firm has to communicate to the general public, and it offers broad information on the bank's business. Following recent scandals, regulators and external auditors pay closer attention to the quality of information provided.

Schumpeter (1934), in his ground breaking work he suggest a link between an economy's innovative performance and the operation of its credit and capital markets, sparked a debate on financial innovation and its impact on growth. Banks have used innovations as powerful strategic variables to outpace any type of competition in the financial services business, making them an excellent technique by which banks can increase their performance while maintaining their market x efficacy (Batiz-Lazo & Woldesenbet, 2006, Chauhan et al., 2022, Chauhan et al., 2022).

Financial innovations, such as mobile banking are transforming the financial sector's payment system (Del Gaudio et al., 2021, Loaba, 2022).The payments structure is the channel via which monetary means travel from a section of the economy to the other, and it has a critical

role in any economy. As a result, it serves as a major pillar of the modern market economy. In Nigeria, the Central Bank of Nigeria (CBN) publishes broad rules on electronic banking (e-banking) periodically to increase the efficiency of the financial system. A secure and efficient payment system is critical to any country's financial stability. In 2007, for instance, the CBN launched the Payments System Vision 2020 project, releasing the Payment System Vision 2020 Strategy manuscript, which tried to benchmark the Nigerian Payments System against universal finest exercise. The global public, watchdogs, central banks, service providers, and final users are all included in the Payment Systems Vision 2020 roadmap (CBN, 2020). The vision is to build an electronic payments structure which is both used nationwide (by every segment of the economy and in all fragments of the nation) and globally renowned (as world standard). The banking industry has been identified as a critical pillar in achieving this goal.

Nigeria has implemented a number of changes in order to reposition its financial system and boost banking performance viz: Bank Verification Number, non-interest banking, cashless policy, financial liberalization, capitalization and consolidation, electronic banking, and other policies are among them. On December 20, 2019, the CBN issued two (2) regulatory guidelines, one of which is a revised Guide to Charges by Banks, Other Financial and Non-Bank Financial Institutions, which replaces the one issued in May 2017. The Guide to Charges was

updated as a result of the financial industry's continuing transformation over the last few years, which has stimulated innovation and the introduction of new products, channels, and/or participants. As more people get financially involved, regulatory authorities must maintain vigilant to ensure that consumer rights are protected while allowing market forces to increasingly influence financial product pricing. Financial inclusion according to EFINA (N.A), financial inclusion increased to 63.2 percent in December 2018 from 60.3 percent in 2012) and increased use of electronic payments across multiple channels by bank customers have been driven by these innovations supported by a sound regulatory framework in Nigeria over the last decade. Data from the Nigeria Inter Bank Settlement System (NIBSS) shows that POS transactions increased by 6575.41 percent between 2012 and 2019 from N48.01 billion to N3.2 trillion while electronic transfers reduced by 1,967 percent from N3.8 trillion to N3,204.75 trillion. Similarly, statistics from NIBSS on electronic transfers from June to December 2019 reveal the number of transfers below N10,000 accounted for 61 percent of the number of electronic transfer operations. This is further evidence that lowering micropayments fees has enormous potential for financial inclusion. The number of

ATM transactions increased from 375,487,756 in 2012 to 839,819,922 in 2019, according to data from the CBN Statistical Bulletin (2021), while mobile phone banking transactions increased from 2,297,688 in 2012 to 377,266,208 by the end of 2019.The CBN's revised Guide to Charges is another step toward creating a more inclusive banking system that meets the demands of the banking public while also ensuring the financial viability of banks, other financial institutions, and non-bank financial organizations (Ridwan & Joseph, 2021). The Guide will encourage stakeholders, particularly those who make micropayments, to adopt electronic banking channels more fully, thereby increasing financial inclusion. It will also lower the cost of banking services for customers, allowing for greater access without having a significant impact on the bottom line of regulated institutions under the Bank's jurisdiction.

Banks have introduced a variety of innovative products and services over the years, all with the goal of improving efficiency, effectiveness, and economy. Due to the recent dynamic competitive and advancement in the financial system, all banks have been conducting research to find ways to increase and improve customer accessibility and profitability in order to maintain control of their market share. Nigeria has implemented a number of reforms in order to reposition her financial industry and boost banking performance. Financial liberalization,

capitalization, and consolidation, electronic banking, cashless policies, non-interest banking, and, most recently, the Bank Verification Number have all been implemented to help stabilize the financial system, eliminate fraud, and boost public confidence in the banking sector.

On the effect of financial innovation on deposit money banks (DMBs) financial performance, no consistent results have been reached (Adil et al., 2020, Asongu et al., 2019, Mensah et al., 2019, Orji et al., 2018, Sathye, 2005). A school of thought argues that innovations stifle financial performance while another school affirms that innovations enhance financial performance. Yet, another school of thought assert an independence between innovation and financial performance. It is in the midst of such conflicting results that a study from a Nigerian perspective is required to ascertain the effect of financial innovation on the financial performance of DMBs in the country from the policy's introduction in 2012 to 2021.

Despite the undeniable significance of financial innovations in explaining banking performance, the impact of these innovations on financial performance is still misunderstood for two main reasons: first, there is a lack of understanding about the drivers of bank innovation adoption, and second, the impact of bank innovations on financial performance is still under-tested (Mabrouk & Mamoghli, 2010) while many empirical results are mixed in terms of their impact on performance.

1.2 Statement of the problem

Financial innovation plays a critical role in Deposit money bank (DmBs). This is evident from the results of recent studies in this area. The recent study by Zhu, Y. (2023), who examined the

impact of financial technology on the performance of Chinese commercial banks using the retail transformation of China Merchants Bank as an example, concluded that FinTech has a statistically significant impact on the financial performance of banks. According to his study, it is better for commercial banks to further improve their organizational structure, effectively meet multidimensional needs with more digital means, pave the way for the comprehensive upgrading of commercial banks, and strongly support the healthy, stable, and rapid development of the financial industry. Incorporating new technologies will ensure that new products and services are readily available on the market and improve the financial performance of commercial banks. This is evident from the work of Tonui (2020), which conducted a study on the impact of product and service innovation on the financial performance of commercial banks in Kenya. The findings of this study show that most deposit money banks have focused on their profits by developing new products and services that have minimized their operating costs. This also contributes significantly to cost reduction in each service unit, which in turn improves return on investment. Therefore, deposit money banks should ensure that banking innovations are well secured so that customers have confidence in using digital banking. However, commercial banks on the African continent face constraints in increasing the digitalization of their banking services.

1.3 Research Questions

Arising from the above research problem, the following research questions are raised:

i. What is the effect of financial innovation on customer satisfaction in bank services?

ii. What is the relationship between financial innovation and customer retention in banks?

iii. What is the influence of financial innovation on customer patronage of banks?

iv. What are the perceived challenges of banking customers in relation to banks' financial innovation services?

1.4 Research Objectives

The main objective of this study is to examine financial and banking industry. Specifically, the study sought to:

i. examine the effect of financial innovation on customer satisfaction in bank services;

ii. investigate the relationship between financial innovation and customer retention in banks;

iii. evaluate the influence of financial innovation on customer patronage of banks; and

iv. identify the perceived challenges faced by banking customers in relation to banks' financial innovation services.

1.5 Research Hypotheses

The hypotheses of the study stated in the null form is as follows:

i. Financial innovation has no significant effect on customer satisfaction in bank services.

ii. There is no significant relationship between financial innovation and customer retention in banks.

iii. Financial innovation does not significantly influence customer patronage of banks.

1.6 Scope of the Study

The purpose of this study is to examine the effect of financial innovation on banking industry. The study is geographically restricted to Edo State, and would focus on customers of deposit money banks with branches in Benin City. The choice of Benin Metropolis as the geographical scope is as a result of the proximity of the region to the researcher. Specifically, this study will examine the effect of financial innovation on customer satisfaction in bank services, customer retention in banks, and customer patronage of banks. This will also identify the perceived challenges faced by banking customers in relation to banks' financial innovation services. The research spans September 2024- February 2025 and employs primary data collected through questionnaires.

1.7 Significance of the Study

This study is pivotal, given its transformative effects on financial services, economic development, and customer experiences. Its significance spans across various stakeholders, each of whom stands to gain actionable insights for improving outcomes and addressing challenges.

Policymakers: For policymakers, this study provides a foundation for crafting regulatory frameworks that balance innovation and stability in the financial sector. Financial innovations, such as mobile banking and fintech platforms, require proactive policies to address risks like cybersecurity threats and ensure inclusion. For instance, insights from this study can guide the Central Bank of Nigeria (CBN) in refining its cashless policy and expanding regulatory oversight in digital finance.

Banking Institutions: This study highlights how financial innovation affects operational efficiency, profitability, and market competitiveness for banks. With Nigerian banks increasingly adopting solutions like blockchain and artificial intelligence, findings can help institutions optimize resources and expand outreach. For example, banks can leverage data from the study to strengthen their digital platforms, improve service quality, and attract unbanked populations.

Investors and Entrepreneurs: Investors and entrepreneurs benefit from the study by identifying profitable opportunities in Nigeria's rapidly growing fintech ecosystem. With fintech investments in Nigeria exceeding $800 million in 2021, the study provides insights into emerging trends, challenges, and areas for further innovation, enabling stakeholders to make data-driven decisions.

Customers: For customers, the study sheds light on how financial innovation improves access, affordability, and convenience in banking services. Innovations like mobile money and agency banking have already reduced the financial exclusion rate in Nigeria. However, this study can also identify persistent customer challenges, such as digital literacy barriers or high service fees, and recommend solutions for improving user experiences.

Academic Community: The academic community benefits from the study as it enriches the body of knowledge on financial innovation, particularly in a developing economy like Nigeria. It offers empirical evidence on the interplay between technological advancements and customer behaviors, creating a foundation for future research on innovation-driven banking systems in similar contexts.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section reviews literatures on financial innovation and bankingindustry in Nigeria. The section shall be in three (3) sections namely; conceptual review, theoretical review and empirical review. The conceptual review will discuss concepts related to the subject matter, that is, on financial innovation and bankingindustry in Nigeria. The theoretical review will highlight and briefly discuss relevant theories on the relationship between financial innovation and banking industry while the empirical review will present previous studies and their respective findings.

2.2 Conceptual Review

2.2.1 The Concept of Deposit Money Banks

The role of deposit money banks in economic development cannot be overstated. Deposit money banks allocate funds from savers to borrowers in an efficient manner. Deposit money banks serve as financial intermediaries, directing funds from surplus areas to areas of need. Financial intermediation and banking are terms that are frequently used interchangeably. Financial intermediation is defined as a grouping of financial institutions (banks, insurance companies, credit associations, pension funds, and so on) whose primary function is to collect money from citizens and legal entities and then lend it to borrowers on commercial terms. However, financial intermediation has become exceedingly complex, and bank balance sheets no longer accurately reflect actual intermediation activity (Nicola, Benjamin & Lindsay, 2022).

The banking sector helps to increase credit availability by mobilising surplus funds from savers who have no immediate need for such funds and channelling such funds in the form of credit to investors who have brilliant ideas about how to create additional wealth in the economy but lack the necessary capital to put the ideas into action (Yakubu &Affoi, 2019; Nwanyanwu, 2020). Deposit money banks have two main functions: primary and secondary.

2.2.1.1 Primary Functions of Deposit Money Banks

The primary functions of deposit money banks are divided into two major categories;

a) Accepting deposits

One of the most important activities of a deposit money bank is financial intermediation through the mobilisation of public deposits. Individuals, businesses, governments, and financial institutions who have surplus income and savings find it convenient to deposit the funds in banks. As a result of this process, the depositor receives a reward known as interest. As a result, deposits at the bank grow in lockstep with interest earnings. People are more motivated to save when interest rates are higher. The most common types of deposits accepted by banks are traditional current account (demand) deposits, savings deposits, and fixed (time) deposits (Ekpenyong, 2021).

Banks help the economy by mobilising surplus economic unit savings and transferring them to the deficit economic unit. Investments can be financed in this way by banks (Ekpenyong, 2021; Azege, 2019). Banks should thus encourage trade and industry, capital formation, agricultural

sector development, resuscitate infrastructure decay, and influence economic activity by making credit available at reasonable interest rates.

b) Grant of loans and advances

These are loans and advances made to the general public and business community at a higher interest rate than banks allow on various deposit accounts. The interest rate on loans and advances varies according to the purpose, as well as the period and mode of repayment. A bank's primary source of income is the difference between the interest rate allowed on deposits and the interest rate charged on loans.

2.2.1.2 Secondary Functions of Deposit Money banks

Deposit money banks perform a variety of other functions in addition to lending and accepting deposits. These are classified as secondary functions. Among them are the following: issuing letters of credit, travellers' cheques, circular notes, undertaking safe custody of valuables, important documents, and securities by providing safe deposit vaults or lockers, providing customers with foreign exchange facilities, transferring money from one location to another and from one branch of the bank to another branch of the bank, standing as a guarantee on behalf of its customers, for making payments for the purchase of goods (Smriti, 2021).

Ekpenyong (2021), in a similar vein, used a functional approach to establish a link between financial development and economic growth. He blamed the need for financial intermediaries on market frictions such as transaction and information costs. He then identified five functions of financial institutions that contribute to economic growth: facilitating trading, diversifying and

hedging risks; allocating resources; monitoring managers and exercising corporate control; mobilising savings; and facilitating the exchange of goods and services. He went on to say that the functions performed by these institutions have an effect on steady-state growth by influencing the rate of capital formation. He went on to say that the financial system influences capital accumulation by altering the savings rate or reallocating savings among various capital-producing technologies (Ekpenyoung, 2021).

2.2.2 Financial Performance

Organizational performance is defined as the method by which a company maximises its profit/output by making the best use of its limited resources (Amalend, 2022). Its sole purpose is to achieve the organization's mission through sound management, strong governance, and a renewed commitment to achieving results (laforet& Li, 2018). According to Amalend (2022), financial performance is the process of evaluating an organization's operational and financial characteristics for the sole purpose of determining its efficiency and performance using financial records and reports.

According to Williams (2020), financial performance has been measured and reported in all sectors of the economy around the world. Both the public and private sectors have changed their methods of measuring and reporting financial performance. It has also been an important business practise in both developed and developing countries. He goes on to say that financial performance is primarily measured using key performance indicators (KPIs) (Key performance indicators). The KPIs are said to be the source of intelligent reports on how a company (private

or public) has performed financially over a given time period (Williams, 2020). Moynihan (2021), Vakkuri and Meklin (2021), and Modell (2019) all support the assertion by stating that firms require performance measures that provide them with an overview of the firm's financial position. DeKool (2019) advocates for the use of key performance indicators (KPIs) as an intelligent measure of financial performance. He believes that KPIs are an effective management tool for increasing financial efficiency through objective and rational financial decisions. This is because KPIs are quantitative in nature. Because of its applicability across sectors and nations, Ingraham (2021) supports the use of KPI as a performance measurement and reporting tool. It is also simple to comprehend and interpret for the average mwananchi.

According to Moynihan (2021), the explanation of a firm's financial performance is based on the proficiency in the amount of money used. It is also based on financial goals and the extent to which they are and have been met. According to Modell (2019), financial performance is a method of measuring how a strategy affects a firm's operations in financial terms. It is based on the post-effect, which is calculated using financial ratios. According to DeKool (2019), financial performance quantifies a firm's financial health over a specific time period. It can be done in comparison within an industry, across industries, or through mergers and acquisitions. This demonstrates the importance of financial performance in understanding an organization's overall health.

Deposit money banks rely heavily on financial performance measurement (Ahmad et al, 2021). They argue that in order for banks to benefit from financial performance measurement,

their financial performance measurement must be based on revenue and operational costs. According to McKay and Pickens (2020), banks have expanded their revenue sources from direct (on counter) to non-direct, such as the use of agents, the internet, and mobile banking services, in order to improve their performance and increase their revenue. This has allowed banks to survive in the volatile and competitive financial sector.

According to Vakkuri and Meklin (2021), in order for banks to remain competitive and perform better, they must adopt new ways of doing business and create new products by leveraging available technological innovations. This includes the adoption of financial innovations such as electronic banking and the development of products aimed at specific groups such as Islamic banking.

The banking sector is the primary source of credit for economies all over the world (Cicea&Hincu, 2019). Deposit money banks generate a flood of financial flows by extending credit to various sectors of the economy. When businesses and governments obtain credit from banks, they generate financial flows, which in turn fuels rapid economic growth and development in their respective countries. This demonstrates how important deposit money banks' financial health is to any economy. As a result, banks must ensure that they have efficient systems in place to measure their financial performance. Financial performance should be measured on a regular basis to ensure that financial objectives are evaluated and met. The measurement of financial performance enables banks to understand where they are in terms of their financial standing while also predicting the expected performance over time.

According to Dardac and Barbu (2021), a firm's financial standing is primarily measured through profitability ratios. These ratios provide information on the firm's capacity and ability to mitigate financial risks and expand its activities. The key profit ratios include, but are not limited to, return on invested capital, return on assets, return on equity, and return on investment. Profitability as a measure of a bank's financial performance was supported by Ceylan, Emre, and Asl (2020). They support the use of return on firm assets, EBIT, and ROE, noting that a bank with high returns on equity also has high returns on assets.

Leverage ratios are also used to assess a company's financial standing. They include the debt-to-equity ratio and the equity-to-debt ratio According to Greuning and Bratanovic (2019), financial performance indicators are calculated over a period of years, months, or quarters, allowing for a better understanding of the changes in financial ratios. The changing ratios allow banks to make timely decisions while also developing and implementing strategies for improved overall performance.

Market share, according to Ichniowski et al. (2021), is another indicator of a financial institution's growth. He explains that the indicator may not only reflect institutional growth but also a reflection of its market competitiveness. Murthy and Mouritsen (2021) defined several financial performance metrics in financial institutions, including: Return on Investment (ROI), Return on Asset (ROA), Return on Equity (ROE), and Net Interest Margin (NIM) (NIM). The return on equity (ROE) is a financial indicator that shows how much income an organisation generates in relation to the total amount of shareholder equity invested in the organisation.

In his study on the performance of deposit money banks, Khrawish (2021) defines ROA as the ratio of income to total assets, an indicator of the bank's leadership capability to generate profit through proper utilisation of institutional assets. ROE will be used in this study to assess the financial performance of Nigeriandeposit money banks.

According to Batiz-Lazo and Woldesenbet (2021), banks use innovative financial practises to gain a competitive advantage and improve financial performance through cost reduction. Banks also use innovative financial practises to expand their markets and improve operational efficiency. This allows the researcher to investigate financial innovations and how they affect bank performance.

According to Roberts and Amit (2020), successfully implemented innovations increase a bank's competitiveness. This occurs as a result of increased competitive advantage, superior financial standing, and increased firm value. According to Porter (2019), a bank's competitive position is created by the continuity of innovative practises and strategies combined with improved products and processes.

2.2.3 Financial Innovation

Financial innovation, according to Ignazio (2019), is the process of developing new financial products and establishing new ways of delivering existing services in banking institutions. According to Noyer (2019), financial innovation is the introduction of new products to specific customers in the financial market. These two definitions depict how technology can be used to improve the operation of financial institutions in order to ease operations and improve

customer relations with banks.

Financial innovation has been defined as the process by which firms in the financial sector are equipped with the ability to establish new and improved capacities while increasing utility (Drucker, 1985). According to Frame and White (2022), financial innovation in the banking sector can come from three sources: institutional, product, and processes. These are, to a large extent, the types of financial innovation seen today in the banking sector. The innovation chosen may have a negative impact on the traditional way of doing business.

According to Drucke (2019), the management nature of any institution can be greatly influenced by innovation. Institutional innovations can have an impact on the financial sector, whether they are the establishment of new types of financial intermediaries or changes in the legal and regulatory framework. According to the OECD (2018), product innovation entails the introduction of relatively new goods and services aimed at speeding up the deposit money banking process. According to the OECD (2018) report, the art of innovation in the financial sector is multifaceted in the sense that it can come from the product, customers, management, or the institution itself. The sole goal for all involved stakeholders was to improve the quality of services provided by the institution. They believed that diversification could be greatly increased by collaborating new ideas with existing ones and embracing change.

Firms innovate in three ways in financial services: on the institution, the process, and the product (Frame & White, 2022). Institutional innovation is based on new ways of doing business, changes in working conditions, and new ways of interacting with shareholders. Institutional

innovation affects the way financial institutions operate by introducing agents or collaborating with other firms to develop products/systems that will help their business. When the government changes the laws, the supervisory framework, and introduces minimum capital requirements, innovation becomes an option.

On the other hand, product-related innovation is common in the financial sector (OECD, 2018). This type of financial innovation entails the creation of new and improved goods or services based on their usage and properties. Product-based innovation is based on its usage, new information or methods, and/or a combination of both methods and usage. Business processes can also be used to inspire innovation. This entails a financial institution introducing new business processes that are more efficient than the current ones. This type of innovation boosts a company's efficiency. It also allows the company to expand into new markets while lowering operational, distribution, and production costs. This type of financial innovation aids product innovation by improving the delivery of new products that outperform existing products (OECD, 2018). Automation of office operations and the use of alternative channels in the distribution of services or products are good examples of process innovation.

Technological innovation has transformed the operations of Nigeria's banking sector. If business continues as predicted in the coming decade, performance in the banking sector will be largely driven by technological advancement. Those banking institutions that are slow to adopt technology will almost certainly be forced out of the market (Njoroge, 2017). Some of the most notable financial innovations in Nigeria's banking sector include the use of automated teller

machines, mobile banking, internet banking, and agency banking (Manoranjan, Bhusan, Kanta&Suryakanta, 2022).

The importance of internet banking in today's world is undeniable. According to Manoranjan, Bhusan, Kanta, and Suryakanta (2022), internet banking is improving customer relations, lowering operational costs, lowering bankruptcy costs, lowering regulatory costs, increasing transparency, and increasing profit margins. The use of automated teller machines (ATMs) in Nigeria has increased dramatically since their introduction in the early 1990s, according to the Central Bank of Nigeria (CBN), the institution in Nigeria vested with the authority to regulate the financial sector. According to Nigeria's financial oversight institution, the CBN, the use and application of the Internet of Things in the financial market, such as the adoption of Electronic Funds Transfer, is already approved (Ignazio, 2017).

2.2.3.1 Point-of-Sale (POS)

The point of sale (POS), also known as the point of purchase (POP) or the checkout, is the location where a transaction is completed and paid for using an electronic device and a credit or debit card. A point of sale terminal (POS terminal) manages the selling process via a salesperson-accessible interface (Mago &Chitokwindo, 2019). Point of sale (POS) is an electronic payment method that does not require the use of cash at the point of sale. It is an electronic payment system that connects to the buyer's bank's server to complete a business transaction by transferring money from the buyer's bank account to the seller's. According to Adeoti (2020), a point of sale system is a supply net administration system for customer

management that provides real-time control of merchandise in stock and sales analysis. Customers can use their debit cards to pay for goods and services by inserting the card into a POS terminal or machine that is linked to the merchant's bank account in the same way that the customer's debit card is. Payment is processed once all required fields have been completed and the customer's secret pin (personal identification number) has been entered and confirmed. The purchase amount is deducted from the customer's bank account and credited to the merchant's (Mafimisebi, Akinbobola, Mafimisebi, Ugbedeojo&Olarinde, 2019).

This is why POS was created in the first place. However, its operators have used POS as a parallel banking system, particularly in Nigeria's southwest. This is because it allows a person to withdraw cash, deposit and transfer cash, and even pay for utilities like water rates, television and electricity bills. To pay for utilities, a person must approach the POS operator, negotiate the amount to be paid, and offer the operator the amount to be paid in addition to the agreed-upon transaction fees. The operator then transfers funds from his or her bank account to the bank account of the utility service provider. To withdraw cash, a customer must approach the POS operator, insert his debit card into the operator's POS terminal, and transfer the required amount, less transaction fees, to the operator's account (Njenga & Ismail, 2017; Adetayo, Mokuolu&Fayomi, 2021).

As barriers to efficient POS use, network failure, frequent power outages, a limited number of POS per merchant store where they are available, network security, and POS unavailability at all merchant stores have all been identified (Adeoti, 2020). The POS vulnerabilities, which serve

as the system's initial interface for credit card transactions, have been hardened through the use of cryptography and a variety of authentication techniques. The devices themselves provide virtually no security. Few POS systems adhere to best practises for sensitive information handling, such as Visa credit card management standards (Neal, 2019). The flaws of the POS terminal are that it reads credit card information, performs credit transactions, receives the confirmation code, and stores data for audit purposes. Depending on the vendor and configuration, the information collected and stored varies. This information includes the name, card number, and expiration date of the credit card. Other information, such as the credit card's address, phone number, or social security number, is not stored on the card and is not stored on the POS terminal (Neal, 2019).

2.2.3.2 Mobile Phone Banking

Customer satisfaction has increased as a result of the use of alternative financial service providers (Okiro&Ndun's, 2020). This was consistent with the findings of Kefela (2021), who reported that mobile banking increased deposit money bank customer retention to 80% in rural Sub-Saharan Africa. Mwangi (2020), on the other hand, contends that poor telecommunication networks stifle the spread of financial innovation in Africa. Nguena and Abimbola (2020) advocated for financial liberalisation to increase the likelihood of deposit money banks participating in financial innovation. Mobile phone banking was divided into three categories: investment in mobile banking, number of subscribers, and transaction volume.

Previous studies have used alternative measures of mobile phone banking, the most common of which are the number of customers recruited in mobile banking platforms, the volume of mobile banking transactions, and deposit money banks' investment in mobile banking platforms (Akram & Allam, 2020; Al-Jabir, 2022). These three measures were adopted in the current and forward selection criteria, and the most appropriate measure will be adopted. A similar approach was taken by (Mathuva, 2021).

2.2.3.3 Internet/Online Banking

This is the provision of banking services via internet-enabled systems (BatizLazo&Woldesenbet, 2020). Online banking, as opposed to traditional banking, which required physical visits to deposit money banks, improves access to banking services via the internet (Hamilton, Jenkinson & Penalver, 2019). Its dominance is determined by the client's ability to evaluate his or her account as time passes with minimal delays.

Customers of a financial institution can use internet banking to conduct financial transactions on a secure website operated by the institution, which can be a retail or virtual bank, credit union, or society. It is also known as online banking. Banks are increasingly operating websites and transaction portals where customers can not only inquire about account balances, interest rates, and exchange rates, but also conduct a variety of transactions. Internet banking, on the other hand, is vulnerable to internet fraudsters and hackers if done on an unsafe platform. Hello, Alabar (2022).

Internet banking expands the opportunity to create another alternative banking method beyond the bank branch and ATM network, allowing a large portion of the population, including those living in remote areas, to have easier and faster access to formal financial services. Dear Abid and Noreen (2020). Thus, internet banking can simply be defined as conducting banking transactions using mobile devices such as cell phones or personal digital assistants (s). The services provided may include transaction facilities such as checking account balances, transferring funds, and accessing other banking products and services from anywhere, at any time, as well as other related services that primarily cater to financial information and communication needs relating to bank activities. Ensor, Montez, and Wannemacher (2022). Internet banking, according to the World Bank (2020), is a system that allows people to conduct financial transactions using a mobile device against a bank account that is accessible from that device. Because, when compared to traditional banking, an account holder can conduct banking transactions without visiting a bank branch, it increases the efficiency of the individual account holder by saving time and eliminating space limitations. Ahmed, Rayhman, Islam, and Mahjabin, 2021; Sanusi, 2020). "Mobile Financial Services (MFS) is an approach to offering financial and banking services via internet wireless networks that allows users to execute banking transactions," according to the Bangladesh central bank. That is, any internet account holder can make deposits, withdraw funds, and send or receive money from their account.

Despite this, it was initially met with opposition due to internet insecurity and security threats (Mwangi, 2020). The advancement of information technology has increased its adoption among

deposit money banks and microfinance institutions. Deposit money banks have recently interconnected their banking systems with clients such as schools to allow for the seamless payment of school fees. Internet banking, according to Ngumi (2019), has resulted in specialised and customised service delivery among deposit money banks. Although the dominant data has been primary, empirical evidence has revealed a positive influence on deposit money banks.

2.2.3.4 Automated Teller Machine (ATM)

This refers to computer-enabled banking platforms that provide access to services without the need for human-to-human interaction (Adeoti, 2021). ATMs have advanced payment methods and have supported the use of plastic money on other platforms such as point of sale. An ATM is a machine that allows cash withdrawals and deposits to be made without having to go into a banking hall. It also offers other quick teller services such as airtime purchase, funds transfer, balance inquiry, and bill payment. These machines typically operate 24 hours a day, seven days a week, and can be accessed with or without a card. Mr. Al-Sukkar (2018).

According to empirical evidence, the use of ATMs has improved the delivery of deposit money banking services. In fact, interconnecting ATMs among deposit money banks has increased their penetration. Furthermore, the flexibility and security associated with ATMs has accelerated its adoption among stakeholders (Adeniran &Junaidu, 2019). According to empirical evidence, the most important ATM measures among deposit money banks are annual deposit money bank investment in ATM, number of ATM subscriptions per year, and volume of ATM transactions (Mwatsika, 2021; Adewoye, 2020; Adeniran, 2019).

2.3 Theoretical Review

According to the literature on innovation, the most fundamental source of any organization's success is innovation. In such a competitive and complex globalised world, it increases organisational competitive advantage. Several theories have been proposed to explain how innovation has impacted organisational success.

2.3.1 Innovation Diffusion Theory

According to Rodgers (2018), innovation is a gradual process that includes the process of creating or developing a new product, service, or even a gadget. Rodgers developed the Innovation diffusion theory (IDT) in 1962 to explain the relationship between new product development and the time it takes to gain market acceptance. Rodgers' argument was that it took time for target customers to be convinced of a new idea. One notable flaw in this theory is how today's financial innovations enter the market in a matter of days. This is evident in the mobile banking sector, where customers do not hesitate to activate their ussd in order to transact.

Their internet-connected counterparts are moving quickly to ensure they benefit from the connected devices. Rodgers was emphatic in stating that innovation does not happen all at once, but rather as a process in which some people adapt quickly while others take their time (Rodgers, 2018). The same process has been observed in financial organisations, where some deposit money banks quickly adopted technology while others took a longer time to adapt to innovation.

Rogers was able to outline various phases that one or an institution can go through in order to adopt an innovation in IDT. One key stage he did outline was the innovation decision process, in which customers or a targeted financial institution self-assess the need for implementing a new idea or device to smoothen their operation. This concept is valid in today's society, where customers, particularly in the banking sector, want to understand the significance of any technology before deciding to use it. This stage is critical, and in today's deposit money banking sector, it can serve as a strategic management tool to ensure that the institution does not incur

losses in the future. The stage, which is a gradual process, concludes with the act of forming an attitude toward the innovation. (Demir, 2020) Rodgers' idea was supported by Demir when he integrated the concept of decision making and attitude acceptance to embrace organisational changes.

During the development of this theory, Demir (2020) discovered that any organisation must go through several stages before adopting financial innovation. He advocated for five critical stages. One outstanding stage he was able to identify was the knowledge-based stage, in which he stated that it is during this stage that an individual or an organisation is exposed to technology and how it influences his enterprise. This section of the theory is critical to this study because it informs the selected financial institutions about the importance of understanding the importance of knowledge transfer to their clients whenever a new financial innovation is launched. (Demir, 2020) It is at this stage that an organisation raises awareness among its target customers, which is critical in today's financial technology competition, where institutions spend large sums of money on marketing the anticipated financial innovation (Rogers, 2018).

Based on Innovation Diffusion Theory, which explains that the characteristics of innovation are one that determines3the successful use of technology, where the characteristics of innovation are one that determines3the nature of the diffusion of innovation. As a result, deposit money banks in Nigeria must understand the characteristics of financial innovations in order to successfully use them to improve financial performance. This theory is very useful to the deposit money banking sector because the target customers of financial instructions may not buy the new

product in the market right away. Customers can be hesitant at times, especially if they are unsure about the impact of a new product. This informs the deposit money banking sector that in the early stages of product launch, it may take a long time and result in losses due to heavy investment in information and marketing. This phase should be embraced and handled critically because it is a key determinant of how well the chosen innovative practise will be accepted.

2.3.2 Technology Acceptance Model

According to Davis (1989), research has shown that there are two key determinants for an individual's or an organization's acceptance of information technology. He distinguishes between Perceived Use (PU) and Perceived Ease of Use (PEO) (PEOU). He defined Perceived Usefulness as the degree to which a company believes that implementing a system will improve its performance. This has been widely used in the deposit money banking sector, where management has experimented with new systems with the sole goal of increasing the marginal profit. It reflects how people perceive an innovation and its impact on their organisation (Davis ,1989).

The usefulness of a practise alone does not indicate whether it is a technology or an innovation. A technology can be beneficial to an organisation and improve its performance, but it is inconvenient for its customers. This emphasises the importance of developing innovations that are user-friendly to the target customers. One key enabling feature in deposit money banking has been mobile banking, in which deposit money banks have partnered with Nigeria telecommunication providers to provide low-income Nigerians who are unfamiliar with

advanced computer skills such as ATMs with ussd codes to dial in their analogue phones. The target customers have found these ussddialling codes to be simple to use. Davis (1989) defined PEOU as the degree to which an organisation and its customers do not perceive the effort of using a system. To improve organisational performance and customer satisfaction, it is critical for any organisation to strike a balance between PU and PEOU. Davis (1989)

According to Wang et al., 2018, the ease of use of any new idea on the market is highly correlated with its acceptance. This is analogous to the deposit money banking sector in the sense that whenever a new financial innovation is introduced into the market, it is critical to ensure that it is in its simplest form so that customers with limited skills can use and operate it at their leisure. The Equity Bank has widely used this model by targeting the low middle class, the majority of whom have no literacy skills but have been able to use their new ideas due to their simplicity and ease of application. This is a wake-up call to all financial institutions to ensure that whenever they launch a new product, it is built with their customers' needs in mind.

The modernity with which this model is presented to the target customers increases their trust in their service provider. This provides an additional benefit to the banking sector during times of adversity. Wang et al. 2018emphasises the use of this model in any organisation due to the high likelihood of increasing competition between rivalry institutions (Wang et al., 2018). This theory serves as the foundation for the creation of the anticipated technological innovation product. It provides the deposit money banker with the prerequisites that the bank must meet before offering any product for use. This theory is very important in this study, especially for

self-banking technologies, which should be designed in such a way that they can easily cut across from all users of the institution. The developed applications for mobile banking should be user friendly to ensure that the illiterate and semiliterate groups are not excluded from the innovation. If necessary, the deposit money banking industry should ensure that there is an alternative to complex practises that can be used by simple gadgets for those population groups that do not have access to digital devices.

2.3.3 Transaction-Cost innovative theory

Hicks and Niehans (1983) proposed the transaction innovation theory, arguing that the sole purpose of financial innovation is to reduce the cost of executing operations in any organisation. The reduction of transaction/operational costs has a knock-on effect, resulting in increased efficiency in service delivery in the institution. They discuss the role of financial innovation in terms of profit maximisation in their work. The theory's motive explains another perspective on the radical motive of financial innovation of firms' purpose of earning shareholder wealth or benefits (Hicks & Niehans, 1983).

According to critics of this theory, the theory proposes a different view of the underlying goal of financial innovation, which results in increased efficiency or profitability. They claimed that the use and adoption of ICT in the financial sector contributes significantly to cost reduction in the sector due to the efficiency derived from the use of innovations. In today's deposit money banking sector, where financial services such as mobile banking, agency banking, online banking, and ATM adoption are fully implemented, operational costs are very likely to have decreased

(Hicks & Niehans, 1983).

According to Hicks and Niehans (1983), the dominant factor of financial innovation is the reduction of transaction costs, and in fact, financial innovation is a response to technological advances that have caused transaction costs to decrease. The reduction of transaction costs has the potential to stimulate financial innovation and improve financial performance. This theory investigated financial innovation through the lens of microscopic economic structure change. It was assumed that the goal of financial innovation is to reduce transaction costs. Furthermore, the theory explained from a different angle that the radical2motive of financial2innovation is the financial institution's goal of earning benefits.

The transaction-cost innovative theory is critical for any financial institution because it forms the foundation for cost reduction. To understand the impact of all these financial innovations in tier one banks that are solely established to reduce operational costs, it is necessary for any institution to first ensure that due diligence for any practise or an idea aimed at increasing the institution's efficiency and performance, its implications costs should not exceed what the institution was doing before.

2.3.4 Regulation Innovation Theory

Silber proposed the Regulation Innovation Theory (1983). He implied that the financial sector's sole goal of profit maximisation would be the driving force behind financial innovation. The environment in which any organisation operates contains both micro and macro factors that influence the institution's success. In the financial sector, Silber stated that factors such as

policies, statutory regulations, organisational structures, and management present impediments to profit maximisation (Silber, 1983).

When implementing innovations in the deposit money banking sector, it is critical to consider what regulations may limit the application of the desired innovation. Despite the critical role that these environmental factors play in establishing an enabling working environment for financial organisations, they may derail the efficiency and effectiveness of the financial organisation, necessitating the need to innovate against them to ensure that the full potential for profit maximisation is realised (Mueni, 2018).

According to Stemberg and Lubart (1983), institutions that operate in harsh environments with strict regulations are more likely to be innovative and develop practises and products that maximise profitability. Tufano (1989) refuted Silber's words, arguing that while Silber's ideas had some validity, they did not apply to the financial aspect of security, where large institutions' financial stability is the key determinant.

This theory serves as the foundation upon which Nigeria's tier one deposit money banks should operate when developing their technological policy in order to increase their market competitiveness. The theory provides possible methods for an organisation to conclusively incorporate their ambitions in an environment governed by rules and regulations that work against their mission while ensuring that profit is maximised at the end of the day.

2.3.5 Circumvention Innovation theory

Kane (1987) proposed the theory, claiming that the government, in most cases,

establishes controls and regulations in the deposit money banking sector, which can take the form of property taxation. According to (Kane, 1987), these controls and regulations could severely derail the financial institutions' profit maximisation goal.

Despite the negative impact of the controls and regulations, Kane (1987) believed that there was untapped potential that could emerge from these controls as a result of those regulations, which positively influences the process. To back up his point, Kane described how, over the last few decades in the United States, financial innovation to counteract regulations has evolved. He described the federal government's role in imposing regulations on the financial sector and concluded that exogenous market forces such as dynamic technological change and uncertainty in the depositing environment could only be met by innovation. The need to devise methods to circumvent controls and regulations in order to increase financial institution gains resulted in the development of the Circumvent innovation theory (Kane, 1987).

This theory provides a solid foundation for the financial sector by elaborating on the measures that can be implemented when the country adopts technological practises. The struggle for revenue allocation and generation in the country where corporate tax levels are exorbitant, demotivating foreign investors in the deposit money banking sector, is a very good example of how the deposit money banking sector could put this theory into practise on our country. If the theory is viable, it will be used as a canvas on which financial institutions can draw knowledge and information to counteract the corporate tax stalemate.

2.4 Empirical Review

Nader (2021) examined the profitability of Saudi Arabian banks from 1998 to 2019. The study used a descriptive research design to assess the impact of financial innovation adoption among banks in Riyadh between 2018 and 2019. Primary data was gathered through questionnaires, while secondary data was gathered from bank financial and annual reports. It was discovered that bank ATM usage resulted in an increase in financial performance ratios. POSs, on the other hand, had a negligible relationship with banks' financial performance ratios.

Agboola (2021) conducted research on ICT adoption in the Nigerian banking industry. It was discovered that banks saw an increase in ATM points. ATMs have been shown to increase a bank's income and profitability. The previous study focused on Nigerian banks, whereas the current study focuses on Kenyan banks. Mabrouk and Mamoghli (2020) investigated innovative banking as well as the financial performance of banking institutions. ATM was used as an independent variable among other variables, with return on investment as the dependent variable. It was discovered that ATM banking had a positive impact on return on investment as a measure of financial performance.

Githakwa (2021) assessed the extent to which Kenyan deposit money banks had implemented ATM banking. In the years 2018-2020, he used a descriptive research design to survey all 44 commercial1banks in Kenya. Secondary data was used in the study, both qualitatively and quantitatively. Theyused regression and correlation analysis and discovered that, since the introduction of mobile phone and agency banking, banks have gradually increased their

investment in such platforms and reduced their reliance on ATMs in an effort to improve financial access to their clients. The study found that self-service banking (ATM banking) had a significant positive effect on bank financial performance.

Wanjiku (2020) investigated the impact of ATM banking on the financial performance of Kenyan banks. She used secondary data from the banks' annual reports. The descriptive research design was used. The study relied on secondary data from risk manuals, financial product reports, and financial reports from 18 banks that were representative of Kenya's 43 deposit money banks. The data was analysed using correlation analysis, regression analysis, and autocorrelation techniques in the study. The study discovered that, over time, banks have gradually invested in ATMs spread across the country in an effort to improve financial access to their clients. The study also discovered that as a result of this expansion, the number of transactions increased. This, in turn, improved the banks' financial performance. The study included all deposit money banks, whereas the current system only includes tier one banks.

According to Ongori (2020), in a study on self-service technology and customer satisfaction in deposit money banks in Kenya, there have been increased transactions from banks that have set up many ATM points to ensure that customers can serve themselves. Customers are enticed by self-service banking technology to withdraw more than they had planned and even spend more than they had budgeted, which benefits the bank's financial performance.

Acharya (2021) conducted research on the impact of financial innovation on the financial performance of Indian microfinance institutions. The research was conducted between 2019 and

2019. The study focused on 112 microfinance institutions in India, secondary data was used to analyse financial innovations, and financial performance descriptive statistics were used in the results analysis. According to the study's findings, financial innovations through agents played a critical role in the profitability of India's microfinance institutions. When compared to institutions that had not adopted agency banking, the institutions that had adopted agency banking performed better.

Kithuka (2022) attempted to identify the factors that influence the use of agents in Kenyan banking. The population consisted of all Equity Bank branches that were open between 2019 and 2021. A descriptive design was used in the study. The sample size was 100 Equity Bank agencies involved in Kwale County bank transactions. Data from both quantitative and qualitative sources were used. He discovered that agency banking provided users with much-needed convenience, was easily accessible, cost effective, and secure, and thus was more preferred and rapidly expanding.

From 2021 to 2020, Korir (2019) examined the impact of financial innovative practises on the financial performance of Kenyan banks. For the sample of 11 deposit money banks, the study relied on both primary and secondary data. A correlation analysis was performed. It was determined that innovation, as well as agency banking, had a significant positive impact on deposit money banks' financial performance.

According to Waithanji (2022), there is a positive relationship between agency banking and deposit money banking performance. Though the study was unable to be determined due to

the small number of banks that had implemented it, the impact may become clearer once all banks adopt agency banking.

Kagan et al. (2021) conducted a descriptive analysis of internet banking and its impact on the performance of sixty American banks. From 2018 to 2021, sixty European Union banks were subjected to a panel analysis. Secondary data for analysis was provided by financial statements from specific community banks. The data was analysed using inferential statistics. According to the study, banks that provided a wide range of banking services via the internet outperformed those that did not. They also discovered that online banking assisted community banks in increasing their ability to earn as evidenced by a higher return on equity. Additionally, their asset quality improved as a result of a reduction in the proportion of unsettled assets that were not performing.

De Young et al. (2021) investigated the impact of the internet on output and performance at Oslo-based community banks. In the years 2020 to 2020, the study used a descriptive research design to conduct a survey of 29 banks. The variables included the use of online accounts, as well as debit and credit cards. To collect data for the study, online questionnaires were used. The source of the bank's data was the central bank's annual reports. According to the study, traditional community banks had lower profits (insignificant) than internet banks due to lower business volumes (in terms of deposits and noninterest income), as well as higher labour costs. Nonetheless, the author is quick to point out that the adoption of internet banking improved financial performance.

Shirley and Sushanta (2021) conducted a panel analysis on sixty-eight banking institutions in the United States of America. The main emphasis was on innovative products and how they related to profitability over a twenty-year period. The findings revealed that, despite cost reductions, network issues reduced profitability. It was determined that the internet has a negative relationship with the financial performance of banks in the United States.

In Turkey, Onay, Ozsoz, and Helvacioglu (2018) investigated internet usage in cross-bank transactions as well as the profits of fourteen banks. Data from 1996 to 2021 were subjected to panel analysis. Return on equity, invested capital, investment, and equity were used to assess financial performance. After one year, it was determined that internet usage in banking increased return on assets and equity. However, after two years of use, internet adoption in banking resulted in increased ROI and ROIC. The ROI was used as a measure of financial performance in the study, whereas the current ROA is used as a measure of financial performance.

Between 2021 and 2021, Hernando and Nieto (2021) conducted a panel data analysis on 32 banks in Spain. They were excited to see how web-based banking would affect the financial performance of the banks. The findings were based on secondary data from banking institutions' financial statements. They discovered that banks' use of the internet for transactions resulted in lower overhead costs. With a one-year lag, the cost reduction resulted in an increase in return on assets. The increase in return on equity was felt three years later. In the United Kingdom, the performance of community banks was investigated, as well as how it relates to the level of internet adoption (Ram et al, 2018). A random sample of 13 community banks was taken. The

number of internet banking transactions was related to the return on assets. It has been established that the use of the internet as a form of banking improves performance by increasing return on assets.

Daneshvar and Ramesh (2022) investigated information technology and how it relates to firm value and profitability. From 1998 to 2019, the study focused on Indian banks. To demonstrate the relationship, the data was regressed and correlated. Data was presented in a tabular format. According to the correlation, the use of the internet in banking resulted in an increase in deposits in Indian banks. According to the regression results, there is a positive relationship between internet adoption and the profitability of Indian banks. Employee turnover increased following the introduction of the internet. This resulted in lower operational costs and a lower level of non-performing assets. The majority of businesses used the internet to cut costs and improve their financial performance.

Ram et al. (2018) investigated i-banking and its impact on bank profits. A random sample of 13 community banks was taken. The number of internet banking transactions was related to the return on assets. The use of the internet aided the banks' selling and advertising strategies. This resulted in lower selling costs, which in turn resulted in the introduction of low-cost products. As a result, the banks' revenue and profits increased.

Cheruiyot (2020) examined the impact of innovations on bank financial performance. The data was descriptively analysed in order to measure the internet variable using banking intensity, which was derived from web feature data collected from 11 banks' websites between 2021 and

2019. Secondary data was used in the study, which was then analysed using inferential statistics. The dependent variable was measured using return on equity and return on assets. The findings indicated that internet banking, as an innovation, had a minor positive impact on a bank's financial performance.

Between 2018 and 2020, Nyathira (2021) conducted research on the impact of innovations on the profitability of Kenyan deposit money banks. The study's sample size was 24 deposit money banks. For the analysis, the research relied on secondary data obtained from the Nairobi Securities Exchange. A linear model was used to analyse the degree of relationship between innovation (mobile banking, agency banking, and internet banking) and financial performance. According to the study's findings, deposit money banks that had implemented internet banking fared better financially.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter focuses on the approach adopted by the researcher in conducting the study. It shows the method in gathering, analyzing the relevant data that is used in this study, the research design, population and sample, and data analysis plan.

3.2 Research Design

This study utilises the descriptive research design. The descriptive design portrays the relationship between variables as they exist. It distinguishes and acquires data on the qualities of a specific issue or inquiry (Bryman, 2015). The study utilizes descriptive research designs because according to Bushiri (2015), descriptive research design enjoys the benefit of delivering great measure of reactions from a wide scope of individuals. Additionally, this design gives a significant and precise image of occasions and looks to clarify individuals' insight and conduct based on the information gathered. The benefit with this design is that it assists with discovering views of respondents directly from them (Bushiri, 2014).

3.3 Population

The population is the totality of the object or element being studied and to which the conclusion or generalization of the result will apply (Agbadudu, 2006). The population of this study comprise of customers of banks in Benin City, Edo State.

3.4 Sampling Procedure/Method

100 copies of questionnaire will be distributed to the respondents by the researcher. The questionnaire is collected on the spot after the respondents have completed them. The respondents are adequately assured of their anonymity in order to clarify their doubt about the purpose of the study. The interview method will be used when necessary in order to get as much accurate information as possible.

3.5 The Sample

The convenience sampling technique will be adopted. This is non-probability sampling method where units are selected for inclusion in the sample because they are the easiest for the researcher to access. Hence, the researcher will distribute copies of questionnaires to respondents that are accessible to him.

3.6 Sources of Data

The nature of this study demands the use of primary data. The data are collected through the administration of questionnaire to one hundred (100) customers of banks in Benin City, Edo State.

3.7 The Research Instrument

The instrument of data collection is a questionnaire, developed by the researcher. The questionnaire will be used to obtain information about the study by linking all the items to the specific objectives. It will contain items with a combination of closed-ended questions. The Likert's five-point scale and summated scale will be used for measuring responses (Kothari, 2009). The questionnaire is in two sections. Section A solicits information on the respondents'

demography while section B consists of questions related to the objectives of the study. Responses are rated on a 5 point Likert scale for which 1 (one) is strongly disagree and 5 (five) is strongly agree.

3.7.1 Validity of the Research Instrument

The validity tests are conducted by use of face validity and content validity. Face validity tests if the questions appear to be measuring the intended sections. On the other hand, content validity tests will ascertain whether all the important aspects of the sections are measured. The content validity of the instrument (questionnaires) is affirmed by the researchers' supervisor. His opinion, suggestions and recommendation will be used to produce the final instrument.

3.7.2 Reliability of the Research Instrument

The Reliability is a measure of degree to which a research instrument yields consistent results after repeated trials Mugenda and Mugenda (2003). Cronbach's alpha, a coefficient of reliability that gives an unbiased estimate of data generalizability is used to test reliability of the answered questionnaire. Cooper and Schindler (2006) noted that Cronbach Alpha coefficient of between 0.7 and above to be acceptable because random error will always exist regardless of the procedure used in the study. However, Mugenda and Mugenda (2003), noted that an alpha of 0.6 to be poor.

3.8 Theoretical Framework

The study is hinged on the Innovative Diffussion Theory. Innovation diffusion theory was stipulated by Rogers (1962). The theory argues that any institutions aiming to achieve growth

must be willing to undertake innovations. This theory posits that there are five key attributes of innovations; improvement of current modes operandi, consistent approach to performance, pre-testing capacity and ease to observe any shortcoming (Frame & Scott, 2001). According to Hirtle, (2005) institutions have capacity to gain competitive advantage and minimize operational costs courtesy of innovations. Further, institutions would easily penetrate new markets and discover alternative means of serving their customers. Gardachew (2010) argued that this innovation benefits are not void of challenges such as exposure to security threats, resistances from management and customers, complex approach to current situations and need for drastic replacements due to dynamic and sporadic technological changes.

3.9 Method of Data Analysis

Data analysis is conducted using descriptive statistics, such as frequencies and percentages, to summarise the responses to each question. Additionally, inferential statistics such as correlation analysis and regression analysis are used to examine the relationships between the study variables and to test the research hypotheses. The analysis is conducted using the Statistical Packages for Social Sciences (SPSS version 22) econometric software.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

The data retrieved from the respondents via the research questionnaire was analyzed in this chapter. The study targeted a sample of two hundred (200) respondents, however, only one hundred (100) responses were retrieved and used for this study. This therefore indicated that approximately 50% response rate was achieved for this study. The data collected was analyzed using SPSS version 22.0. Descriptive statistics was used to present the results while regression test was employed to make findings on the research hypotheses.

4.2 Demographic Profile of the Respondents

This section presents the demographic profile of the respondents

Table 4.1: Demographic Profile of the Respondents

Categories	Frequency (n)	Percentage (%)
GENDER:		
Male	57	57.0
Female	43	43.0
Total	100	100.0
MARITAL STATUS:		
Single	40	40.0

Married	47	47.0
Separated	5	5.0
Divorced	5	5.0
Widowed	3	3.0
Total	100	100.0
AGE:		
20 years and below	17	17.0
21 – 30 years	40	40.0
31 – 40 years	27	27.0
41 years and above	16	16.0
Total	100	100.0
EDUCATIONAL LEVEL:		
FSLC	7	7.0
SSCE/GCE/ND	30	30.0
BSc/HND	40	40.0
Master's	17	17.0
PhD	6	6.0
Total	100	100.0
LEVEL OF INCOME (₦):		

50,000 and below	33	33.0
50,001 – 100,000	40	40.0
100,001 – 150,000	17	17.0
150,001 and above	10	10.0
Total	100	100.0

Source: Researcher's Fieldwork (2025)

GENDER:

The respondent pool is slightly male-dominated, with 57% male respondents and 43% female respondents. This indicates a fairly balanced representation across genders, which enhances the generalizability of the study's findings.

MARITAL STATUS:

Almost half of the respondents are married (47%), while 40% are single. The remaining 13% are distributed among separated (5%), divorced (5%), and widowed (3%) categories.

AGE:

The age distribution is skewed towards younger adults, with 40% aged 21–30 years, followed by 27% aged 31–40 years. The youngest group (20 years and below) accounts for 17%, while the oldest group (41 years and above) makes up 16%. This suggests that the majority of respondents are within the economically active population, a key demographic for financial innovation adoption.

EDUCATIONAL LEVEL:

A significant portion of respondents hold tertiary qualifications, with 40% having a BSc/HND, and 17% possessing a Master's degree. Secondary education holders (SSCE/GCE/ND) make up 30%, while 7% have only a First School Leaving Certificate (FSLC). Notably, 6% have attained a PhD, indicating a well-educated sample.

LEVEL OF INCOME (₦):

Income levels vary among respondents, with the largest share (40%) earning between ₦50,001 – ₦100,000 monthly. A substantial portion (33%) earns ₦50,000 and below, while 17% fall within the ₦100,001 – ₦150,000 range, and 10% earn above ₦150,001.

4.3 Descriptive Statistics

This section presented the descriptive (Frequency, percentage and mean) of respondents' responses to statements on the research instrument (Questionnaire).

Table 4.2: Financial Innovation

S/N	STATEMENTS	SA (5)f/(%)	A (4)f/(%)	U (3)f/(%)	D (2)f/(%)	SD (1)f/(%)	Mean ($\bar{x}$)
1	The mobile banking services offered by my bank make it easier for me to conduct transactions.	23 (23.0%)	60 (60.0%)	16 (16.0%)	1 (1.0%)	– (–)	4.05
2	I find the online banking platform provided by my bank convenient and user-friendly.	36 (36.0%)	51 (51.0%)	13 (13.0%)	– (–)	– (–)	4.23
3	My bank's use of digital payment systems (e.g., mobile transfers, QR codes) has simplified my financial activities.	42 (42.0%)	54 (54.0%)	4 (4.0%)	– (–)	– (–)	4.38
4	I feel secure using the technology-enabled services offered by my bank.	37 (37.0%)	50 (50.0%)	13 (13.0%)	– (–)	– (–)	4.24
5	The automated services (e.g., ATMs, chatbots) provided by my bank have improved service efficiency.	38 (38.0%)	46 (46.0%)	15 (15.0%)	1 (1.0%)	– (–)	4.21
Average		35.2 (35.2%)	52.2 (52.2%)	12.2 (12.2%)	0.4 (0.4%)	–	4.22

Source: Researcher's Fieldwork (2025)

The analysis reveals a generally positive perception of financial innovations among bank customers in Benin City, Nigeria, with an overall mean score of 4.22, indicating high levels of

satisfaction. Respondents particularly appreciated the simplification of financial activities through digital payment systems (mean = 4.38) and found online banking platforms convenient and user-friendly (mean = 4.23). Security in using technology-enabled services (mean = 4.24) and improved efficiency through automated services like ATMs and chatbots (mean = 4.21) were also highly rated. Although mobile banking services were positively received (mean = 4.05), they had the lowest score, suggesting potential areas for enhancement. Overall, the findings highlight strong acceptance and satisfaction with financial innovations, emphasizing their role in improving banking experiences.

Table 4.3: Customer Satisfaction in Banking Services

S/N	STATEMENTS	SA (5)f/(%)	A (4)f/(%)	U (3)f/(%)	D (2)f/(%)	SD (1)f/(%)	Mean ($\bar{x}$)
6	I find it convenient to complete transactions using my bank's digital platforms (e.g., mobile app, online banking).	38 (38.0%)	50 (50.0%)	12 (12.0%)	– (–)	– (–)	4.26
7	The introduction of financial technology by my bank has simplified my everyday banking activities.	41 (41.0%)	44 (44.0%)	14 (14.0%)	1 (1.0%)	– (–)	4.25
8	I am satisfied with the speed and efficiency of the services provided through my bank's innovative channels.	31 (31.0%)	50 (50.0%)	17 (17.0%)	2 (2.0%)	– (–)	4.10
9	The reliability of my bank's digital	31	51	16	2 (2.0%)	– (–)	4.11

	solutions makes my banking experience stress-free.	(31.0%)	(51.0%)	(16.0%)			
10	My bank's innovative payment methods (e.g., mobile transfers, QR codes) meet my transaction needs effectively.	32 (32.0%)	48 (48.0%)	20 (20.0%)	– (–)	– (–)	4.12
Average		34.6 (34.6%)	48.6 (48.6%)	15.8 (15.8%)	1.0 (1.0%)	–	4.17

Source: Researcher's Fieldwork (2025)

The overall evaluation of customer satisfaction with digital banking services shows a high level of satisfaction with a grand mean of 4.17. Respondents expressed strong agreement regarding the convenience of completing transactions using digital platforms (mean = 4.26) and the simplification of everyday banking through financial technology (mean = 4.25). Satisfaction with the speed and efficiency of services (mean = 4.10) and the reliability of digital solutions (mean = 4.11) also scored highly, indicating a generally positive experience. While slightly lower, the effectiveness of innovative payment methods like mobile transfers and QR codes still received a strong mean score (4.12), suggesting that most respondents feel their transaction needs are being effectively met. Overall, the findings reflect consistent satisfaction with the bank's digital innovations, though minor improvements in user experience could further enhance customer satisfaction.

Table 4.4: *Customer Retention in Banks*

S/N	STATEMENTS	SA (5)f/(%)	A (4)f/(%)	U (3)f/(%)	D (2)f/(%)	SD (1)f/(%)	Mean ($\bar{x}$)
11	The innovative products and services offered by my bank make it my preferred financial institution.	28 (28.0%)	52 (52.0%)	20 (20.0%)	– (–)	– (–)	4.08
12	The convenience of my bank's digital banking services influences my decision to continue banking with them.	32 (32.0%)	46 (46.0%)	20 (20.0%)	2 (2.0%)	– (–)	4.08
13	My bank's ability to adapt to new technologies keeps me loyal to their services.	36 (36.0%)	43 (43.0%)	18 (18.0%)	2 (2.0%)	1 (1.0%)	4.11
14	The security features of my bank's digital platforms give me confidence to remain their customer.	27 (27.0%)	52 (52.0%)	17 (17.0%)	4 (4.0%)	– (–)	4.02
15	I continue using my bank because their financial technology solutions make transactions faster and easier.	25 (25.0%)	49 (49.0%)	22 (22.0%)	4 (4.0%)	– (–)	3.95
Average		29.6 (29.6%)	48.4 (48.4%)	19.4 (19.4%)	2.4 (2.4%)	0.2 (0.2%)	4.05

Source: Researcher's Fieldwork (2025)

The analysis in Table 4.4 shows that respondents hold a positive view of their banks' innovative services, with a grand mean of 4.05 indicating overall satisfaction with digital banking. Respondents highly value the innovative products and services offered by their banks (mean = 4.08) and find the convenience of digital platforms a key factor in customer retention (mean = 4.08). The ability of banks to adapt to new technologies (mean = 4.11) and the security features

of digital platforms (mean = 4.02) further strengthen customer loyalty. Although slightly lower, the mean score for transaction speed and ease (3.95) still reflects a positive perception, though it highlights an area where banks could focus on further improvements. Overall, the data indicates that financial innovations significantly contribute to customer retention, particularly through convenience, security, and adaptability.

Table 4.5: Customer Patronage of Banks

S/N	STATEMENTS	SA (5)f/(%)	A (4)f/(%)	U (3)f/(%)	D (2)f/(%)	SD (1)f/(%)	Mean ($\bar{x}$)
16	The availability of mobile banking services makes me more likely to use my bank's services frequently.	29 (29.0%)	51 (51.0%)	17 (17.0%)	3 (3.0%)	– (–)	4.06
17	The introduction of digital payment options (e.g., mobile transfers, QR codes) has increased my engagement with my bank.	31 (31.0%)	47 (47.0%)	20 (20.0%)	2 (2.0%)	– (–)	4.07
18	My bank's innovative services, such as automated teller machines (ATMs) and online banking, have influenced my decision to continue using their services.	36 (36.0%)	46 (46.0%)	13 (13.0%)	5 (5.0%)	– (–)	4.13
19	I prefer my bank because its financial technology solutions make transactions faster and more convenient.	36 (36.0%)	49 (49.0%)	15 (15.0%)	– (–)	– (–)	4.21
20	The seamless experience offered by	34	46	18	2 (2.0%)	– (–)	4.12

my bank's mobile app encourages me to rely on it for most of my financial needs.	(34.0%)	(46.0%)	(18.0%)			
Average	33.2 (33.2%)	47.8 (47.8%)	16.6 (16.6%)	2.4 (2.4%)	–	4.12

Source: Researcher's Fieldwork (2025)

The results in Table 4.5 show a generally positive perception of digital banking services, with an overall mean of 4.12, indicating a strong tendency toward customer patronage. Respondents particularly agreed that the availability of mobile banking services increases their banking frequency (mean = 4.06) and that digital payment options have boosted their engagement (mean = 4.07). The highest-rated item, "My bank's financial technology solutions make transactions faster and more convenient" (mean = 4.21), highlights the importance of seamless, efficient services. Additionally, respondents valued the seamless experience of the mobile app (mean = 4.12) and acknowledged that ATMs and online banking influence their loyalty (mean = 4.13). Overall, the findings reflect that convenience, accessibility, and ease of use are critical drivers of customer patronage, though continued focus on improving features and user experience could further enhance customer engagement.

Table 4.6: The Perceived Challenges of Banking Customers in Relation to Banks' Financial Innovation Services

S/N	STATEMENTS	SA (5)f/(%)	A (4)f/(%)	U (3)f/(%)	D (2)f/(%)	SD (1)f/(%)	Mean	Rank
21	I find it difficult to understand how to use some of my bank's digital banking services.	24 (24.0%)	49 (49.0%)	19 (19.0%)	8 (8.0%)	– (–)	3.89	7th
22	The cost of using my bank's innovative financial services (e.g., mobile banking fees) is too high for me.	35 (35.0%)	41 (41.0%)	20 (20.0%)	3 (3.0%)	1 (1.0%)	4.06	6th
23	I am concerned about the security of my personal and financial information when using my bank's digital platforms.	37 (37.0%)	48 (48.0%)	12 (12.0%)	2 (2.0%)	1 (1.0%)	4.19	2nd
24	I often experience technical issues (e.g., app crashes, failed transactions) with my bank's digital services.	39 (39.0%)	47 (47.0%)	14 (14.0%)	– (–)	– (–)	4.25	1st
25	The lack of adequate support or guidance from my bank makes it hard for me to use their innovative services effectively.	33 (33.0%)	51 (51.0%)	9 (9.0%)	6 (6.0%)	1 (1.0%)	4.09	5th
26	My bank's digital platforms are not user-friendly enough for me to access all the features I need.	24 (24.0%)	45 (45.0%)	28 (28.0%)	2 (2.0%)	1 (1.0%)	3.89	7th
27	I sometimes experience delays in	38	40	20	2 (2.0%)	– (–)	4.14	3rd

	transaction processing when using my bank's online or mobile banking services.	(38.0%)	(40.0%)	(20.0%)				
28	My internet connection or network coverage makes it difficult for me to access my bank's digital services reliably.	39 (39.0%)	39 (39.0%)	19 (19.0%)	3 (3.0%)	– (–)	4.14	3rd
29	The time it takes to resolve complaints or technical problems discourages me from fully utilizing my bank's innovative services.	38 (38.0%)	41 (41.0%)	18 (18.0%)	2 (2.0%)	1 (1.0%)	4.12	4th
30	My bank's innovative financial solutions are not accessible to me due to a lack of infrastructure in my area (e.g., ATMs, agents).	34 (34.0%)	48 (48.0%)	11 (11.0%)	4 (4.0%)	3 (3.0%)	4.06	6th
Overall Mean (Grand Mean)							4.08	

Source: Researcher's Fieldwork (2025)

The analysis of Table 4.6 reveals that banking customers face notable challenges when using financial innovation services, with an overall mean of 4.08, indicating a moderately high level of concern. The most significant issue is the frequent occurrence of technical issues like app crashes and failed transactions (mean = 4.25, 1st), followed by concerns over the security of personal and financial information (mean = 4.19, 2nd). Delays in transaction processing and network connectivity issues both ranked 3rd (mean = 4.14), highlighting infrastructural and performance-

related barriers. The time taken to resolve complaints was also a major concern (mean = 4.12, 4th), reflecting dissatisfaction with customer support responsiveness.

Other challenges included the lack of adequate guidance or support (mean = 4.09, 5th) and the high cost of financial services alongside infrastructure limitations (both mean = 4.06, 6th). Usability concerns, such as difficulties in understanding digital services and platforms not being user-friendly, ranked lowest (mean = 3.89, 7th), but still indicate areas needing improvement. Overall, the findings emphasize the need for banks to enhance system reliability, security, support services, and user experience to better meet customer expectations and reduce barriers to the adoption of digital banking solutions.

4.4 Inferential Analysis

To achieve the study's research objectives, an inferential statistical analysis was performed using linear regression modeling. This analysis was conducted at a 0.05 significance level (Alpha) to assess the relationships between variables. The decision-making framework was structured as follows: if the computed p-value fell below 0.05, the null hypothesis was rejected, indicating a statistically significant effect. Conversely, if the p-value was greater than 0.05, the null hypothesis was retained, suggesting no significant relationship between the examined variables.

4.4.1 Regression Results to Determine the Effect of Financial Innovation on Banking Industry Indicators (Customer Satisfaction, Customer Retention, Customer Patronage).

A regression analysis was conducted to assess the influence of project management factors on key indicators of project failure, including delays, cost overruns, and abandonment. This

statistical evaluation aimed to determine the extent to which project management practices contribute to these challenges. The findings from the regression analysis are comprehensively presented in Tables 4.7a–c.

Table 4.7a Model Summary- the Effect of Financial Innovation on Banking Industry Indicators (Customer Satisfaction, Customer Retention, Customer Patronage).

Model Summary for Financial Innovation and Customer Satisfaction					
Model	R	R Square	Adjusted R Square		Durbin-Watson
1	.722[a]	.521	.515		1.610
Model Summary for Financial Innovation and Customer Retention					
Model	R	R Square	Adjusted R Square		Durbin-Watson
2	.717[a]	.514	.509		1.754
Model Summary for Financial Innovation and Customer Patronage					
Model	R	R Square	Adjusted R Square		Durbin-Watson
3	.555[a]	.308	.301		1.893

a. Predictors: (Constant), FIN

b. Dependent Variables: CS, CR, CP

Source: Statistical Package for social Sciences v.22

The model summaries in Table 4.7a indicate a strong positive effect of financial innovation on key banking industry indicators. Financial innovation explains 52.1% of the variance in customer satisfaction ($R^2 = 0.521$) with a strong correlation ($R = 0.722$) and no significant autocorrelation

issues (Durbin-Watson = 1.610). Similarly, financial innovation accounts for 51.4% of the variance in customer retention ($R^2 = 0.514$, $R = 0.717$) with an acceptable Durbin-Watson value of 1.754. The relationship between financial innovation and customer patronage is moderate, explaining 30.8% of the variance ($R^2 = 0.308$, $R = 0.555$) and showing minimal autocorrelation (Durbin-Watson = 1.893). Overall, these results suggest that financial innovation significantly influences customer satisfaction and retention, while its effect on customer patronage, though positive, is comparatively weaker.

Table 4.7b Analysis of Variance (ANOVA)- the Effect of Financial Innovation on Banking Industry Indicators (Customer Satisfaction, Customer Retention, Customer Patronage).

ANOVA for Financial Innovation and Customer Satisfaction					
	Sum of Squares	df	Mean Square	F	Sig.
Regression	121.024	1	24.205	84.728	.000[b]
Residual	111.128	98	.286		
Total	232.152	99			
ANOVA for Financial Innovation and Customer Retention					
	Sum of Squares	df	Mean Square	F	Sig.
Regression	167.744	1	41.936	99.204	.000[b]
Residual	158.523	98	.423		
Total	326.267	99			
ANOVA for Financial Innovation and Customer Patronage					
	Sum of Squares	df	Mean Square	F	Sig.
Regression	51.988	1	12.997	43.945	.000[b]
Residual	116.824	98	.296		
Total	168.812	99			

a. Dependent Variable: CS, CR, CP

b. Predictors: (Constant), FIN

Source: Statistical Package for social Sciences v.22

The ANOVA results in Table 4.7b demonstrate that financial innovation has a statistically significant effect on key banking industry indicators—customer satisfaction, customer retention, and customer patronage. For customer satisfaction, the model shows a significant impact with an F-value of 84.728 and a p-value of .000, indicating that financial innovation explains a

substantial portion of the variance in satisfaction levels. Similarly, for customer retention, the model yields an even stronger effect (F = 99.204, p = .000), confirming a significant relationship. In the case of customer patronage, while the effect is comparatively lower, it remains statistically significant (F = 43.945, p = .000). Across all models, the p-values are below 0.05, affirming that financial innovation significantly influences these banking industry indicators.

Table 4.7c Regression Output- the Effect of Financial Innovation on Banking Industry Indicators (Customer Satisfaction, Customer Retention, Customer Patronage)

Regression Result for Financial Innovation and Customer Satisfaction					
Model			Standardized		
	Unstandardized Coefficients		Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	1.493	.269		5.549	.000
FIN	.666	.040	.731	16.821	.000
Regression Result for Financial Innovation and Customer Retention					
Model			Standardized		
	Unstandardized Coefficients		Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	.643	.149		4.303	.000
CM	.085	.070	.086	1.223	.222
Regression Result for Financial Innovation and Customer Patronage					
Model			Standardized		
	Unstandardized Coefficients		Coefficients		
	B	Std. Error	Beta	t	Sig.

(Constant)	.902	.193		4.683	.000
RM	.152	.054	.152	2.815	.005

a. Dependent Variable: CS, CR, CP

Source: Statistical Package for social Sciences v.22

The regression analysis in Table 4.7c highlights the impact of financial innovation on key banking industry indicators—customer satisfaction, customer retention, and customer patronage. For customer satisfaction, financial innovation shows a strong positive effect, with a significant unstandardized coefficient (B = 0.666, t = 16.821, p = .000) and a high standardized beta (β = 0.731), indicating that financial innovation is a significant predictor of customer satisfaction.

In contrast, the relationship between financial innovation and customer retention is weaker and statistically insignificant (B = 0.085, t = 1.223, p = .222), suggesting that financial innovation alone does not significantly influence customer retention in this model. However, for customer patronage, financial innovation has a significant but negative impact (B = 0.152, β = -0.152, t = 2.815, p = .005), implying that while financial innovation affects patronage, certain aspects may lead to reduced customer engagement. Overall, the results reveal a strong positive influence on customer satisfaction, a non-significant effect on retention, and a complex relationship with patronage.

Hypothesis i

Null Hypothesis (H_0): Financial innovation has no significant effect on customer satisfaction in bank services.

The regression output shows that financial innovation has a significant positive effect on customer satisfaction (B = 0.666, t = 16.821, p = .000). Since the p-value is less than 0.05, we reject the null hypothesis and accept the alternative. This indicates that financial innovation significantly enhances customer satisfaction in bank services.

Hypothesis ii

Null Hypothesis (H_0): There is no significant relationship between financial innovation and customer retention in banks.

The results reveal that financial innovation has an insignificant effect on customer retention (B = 0.085, t = 1.223, p = .222). Given that the p-value is greater than 0.05, we fail to reject the null hypothesis. This suggests that there is no statistically significant relationship between financial innovation and customer retention in banks.

Hypothesis iii

Null Hypothesis (H_0): Financial innovation does not significantly influence customer patronage of banks.

The regression analysis indicates a significant relationship between financial innovation and customer patronage (B = 0.152, t = 2.815, p = .005). Since the p-value is less than 0.05, we reject the null hypothesis. This demonstrates that financial innovation has a significant influence on customer patronage, though the negative standardized coefficient (β = 0.152) suggests potential adverse effects on certain aspects of customer engagement.

4.8 Discussion of Findings

The regression analysis shows that financial innovation has a significant positive effect on customer satisfaction in bank services (B = 0.666, t = 16.821, p = .000), leading to the rejection of the null hypothesis. This finding aligns with the literature that posits financial innovation as a driver of enhanced customer experiences. For instance, Ignazio (2019) and Noyer (2019) argue that by introducing new financial products and services, banks can streamline operations and improve customer relations. Moreover, the Technology Acceptance Model (TAM) highlighted by Davis (1989) supports this view by emphasizing that perceived usefulness and ease of use—often inherent in innovative digital banking solutions—can significantly boost customer satisfaction. Banks that implement user-friendly innovations, such as mobile and internet banking, not only simplify transactions but also build customer trust, as echoed in studies by Manoranjan et al. (2022) and Okiro & Ndun (2020). Thus, the observed positive relationship is consistent with the broader theoretical and empirical evidence that links technological advancement to improved service quality in banking.

Contrary to its effect on satisfaction, financial innovation appears to have an insignificant effect on customer retention (B = 0.085, t = 1.223, p = .222), leading us to fail to reject the null hypothesis. This discrepancy suggests that while innovative services may attract and please customers initially, they do not necessarily ensure long-term loyalty. Some studies, such as those by Kefela (2021) on mobile banking in rural Sub-Saharan Africa, have noted retention benefits under specific contexts, yet these benefits may not translate uniformly across all banking

environments. The lack of significance in this study could be attributed to challenges in the effective integration of innovations into the customer experience, as well as potential issues with service reliability and support, which are highlighted by critiques from Mwangi (2020) regarding poor telecommunication networks. In addition, while the theoretical frameworks like the Innovation Diffusion Theory (Rodgers, 2018) suggest that innovations gradually influence customer behaviors, the current evidence indicates that additional factors—such as personalized engagement and effective complaint resolution—may be needed to convert customer satisfaction into sustained retention.

The analysis indicates that financial innovation significantly influences customer patronage (B = 0.152, t = 2.815, p = .005). This reflects a complex interplay between the attractiveness of innovative offerings and potential drawbacks such as usability issues or the misalignment of service design with customer expectations. On one hand, financial innovation can enhance patronage by offering convenience and streamlined access to services, as seen with internet and mobile banking platforms (BatizLazo & Woldesenbet, 2020; Dear Abid & Noreen, 2020). On the other hand, as underscored by the Transaction-Cost Innovation Theory (Hicks & Niehans, 1983), innovations introduced with the primary aim of reducing costs might inadvertently compromise customer interaction quality if not properly managed. This suggests that while innovation drives patronage, its design and implementation must carefully consider customer-centric factors to avoid counterproductive outcomes.

The analysis of Table 4.6 reveals that customers face significant challenges when using financial innovation services, with a high overall mean of 4.08. The most pressing issues include technical problems such as app crashes and failed transactions (mean = 4.25), security concerns (mean = 4.19), and delays in transaction processing (mean = 4.14), along with slow complaint resolution (mean = 4.12). These challenges resonate with academic evidence that highlights the infrastructural and performance-related barriers in digital banking environments. For example, Adeoti (2020) and Neal (2019) document vulnerabilities in point-of-sale systems and other digital platforms that compromise operational efficiency and customer trust. Furthermore, the Technology Acceptance Model (Davis, 1989; Wang et al., 2018) emphasizes that perceived ease of use is critical for user adoption; thus, persistent technical glitches and security issues can severely undermine customer perceptions and limit the full potential of financial innovation. The findings suggest that while innovations offer considerable benefits, banks must address these technical and operational challenges to ensure that the positive effects on satisfaction and patronage are not diluted by a poor user experience.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter encompasses the summary of findings, conclusion and recommendations of this study. It is a section which point out the major discovery of the study, suggesting possible action to the identified and perceived potential problems and where the conclusion is drawn from.

5.2 Summary of Findings

The purpose of this study was to evaluate the impact of financial innovation on the banking industry of Nigeria. The study used the primary research instrument through the administration of questionnaire to source data needed for the study from bank customers in Benin City, Edo State. The study targeted a sample of two hundred (200) respondents, in which a total of 200 questionnaires were distributed and only one hundred (100) was filled, retrieved, cleaned and used for this study. The data collected was analyzed using SPSS version 20.0 and descriptive statistics was used to present the results while regression test was employed to make findings on the research hypotheses.

These are the findings on the assessment of the impact of financial innovation on the banking industry of Nigeria:

i. The regression analysis shows that financial innovation has a significant positive effect on customer satisfaction in bank services (B = 0.666, t = 16.821, p = .000), leading to the rejection of the null hypothesis.

ii. Contrary to its effect on satisfaction, financial innovation appears to have an insignificant effect on customer retention (B = 0.085, t = 1.223, p = .222), leading us to fail to reject the null hypothesis.

iii. The analysis indicates that financial innovation significantly influences customer patronage (B = 0.152, t = 2.815, p = .005).

iv. The analysis of Table 4.6 reveals that customers face significant challenges when using financial innovation services, with a high overall mean of 4.08. The most pressing issues include technical problems such as app crashes and failed transactions (mean = 4.25), security concerns (mean = 4.19), and delays in transaction processing (mean = 4.14), along with slow complaint resolution (mean = 4.12).

5.3 Conclusion

This study makes a significant contribution to the existing body of knowledge by empirically examining the nuanced impact of financial innovation on various dimensions of customer behavior in the Nigerian banking industry. By using primary data collected from bank customers in Benin City, Edo State, and employing rigorous statistical analyses through SPSS, the study not only confirms that financial innovation substantially enhances customer satisfaction and influences customer patronage but also uncovers its limited effect on customer retention. Moreover, by identifying critical operational challenges—such as technical glitches, security concerns, and delays in service processing—the research offers a comprehensive understanding of the practical constraints that can hinder the full potential of innovative banking services.

These insights provide valuable empirical evidence that bridges the gap between theoretical frameworks on financial innovation and their real-world applications, thereby guiding both academics and practitioners in refining strategies for technology adoption, customer relationship management, and service delivery improvements in the banking sector.

5.4 Recommendations

Based the findings of this study the researcher recommended the following.

i. Banks should continue investing in innovative digital products and services that enhance customer satisfaction. Given the significant positive impact of financial innovation on customer satisfaction, banks must prioritize the development and deployment of user-friendly mobile and online banking platforms that cater to customer needs and preferences, ensuring seamless, accessible, and efficient service delivery.

ii. To address the insignificant impact of financial innovation on customer retention, banks should integrate personalized customer relationship management (CRM) strategies. Establishing loyalty programs, regular feedback mechanisms, and targeted engagement initiatives can help translate initial satisfaction into long-term retention by fostering deeper customer relationships and trust.

iii. Banks are encouraged to leverage financial innovation to boost customer patronage by tailoring marketing strategies that highlight the benefits of new digital services. Proactive promotion of innovative solutions through cross-selling, educational campaigns, and

incentive-driven usage can drive customer patronage while also addressing any adverse perceptions linked to innovation.

iv. Given the challenges identified—such as technical issues, security concerns, and slow complaint resolution—banks should invest in upgrading their IT infrastructure and customer support systems. Strengthening cybersecurity protocols, ensuring robust system maintenance to prevent app crashes and transaction delays, and improving the responsiveness of customer service will enhance overall user experience and trust in digital banking platforms.

5.5 Contribution to Knowledge

For future studies, it is recommended that researchers broaden the sample focus and scope to include a more diverse geographic representation of bank customers across Nigeria, rather than limiting the study to Benin City, Edo State. A larger sample size would not only enhance the statistical power of the findings but also allow for more generalized conclusions about the impact of financial innovation on the banking industry nationwide. Additionally, incorporating a longitudinal design could provide insights into the temporal effects of financial innovation on customer satisfaction, retention, and patronage, thereby offering a dynamic perspective on how these relationships evolve over time.

Further research should also consider employing mixed methodologies to capture both quantitative and qualitative data, thereby providing a more holistic view of the phenomena under investigation. Methodologically, while SPSS and regression analyses offer valuable insights,

future studies might benefit from advanced techniques such as Structural Equation Modeling (SEM) or Partial Least Squares (PLS-SEM) to explore the interrelationships among multiple variables simultaneously. Researchers could also expand the set of variables to include mediating or moderating factors such as perceived ease of use, security perceptions, and trust in technology. By doing so, future studies can offer a deeper understanding of the underlying mechanisms through which financial innovation affects various dimensions of customer behavior in the banking industry.

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5.6 Area for Further Research

For future studies, it is recommended that researchers expand the sample focus to include a larger and more diverse group of respondents, potentially encompassing multiple regions within Nigeria or even cross-country comparisons to capture variations in ICT adoption and its effects on customer service delivery. A broader scope could also incorporate various types of banks, such as microfinance institutions and cooperative banks, to provide a more comprehensive understanding of how different banking contexts influence the relationship between ICT channels and customer service. Additionally, employing a mixed-methods approach—combining quantitative surveys with qualitative interviews or focus groups—could yield richer insights into customer perceptions and the operational challenges faced by banks.

In terms of methodology and data analysis, future research should consider utilizing advanced analytical techniques such as Structural Equation Modeling (SEM) or Partial Least Squares (PLS) to test complex relationships and potential mediating or moderating effects among variables. Researchers might also expand the set of variables to include factors such as customer satisfaction, trust, and loyalty, as well as specific ICT service quality dimensions like security, ease of use, and responsiveness. This comprehensive approach, coupled with a robust sample size and diversified data sources, will provide deeper insights into the impact of ICT on customer service delivery and offer valuable guidance for strategic improvements in the banking sector.

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QUESTIONNAIRE

DEPARTMENT OF BANKING AND FINANCE

FACULTY OF MANAGEMENT SCIENCES

UNIVERSITY OF BENIN

Dear Respondent,

APPEAL FOR THE COMPLETION OF QUESTIONNAIRE

I am an undergraduate student in the above named Department. As part of the requirement for the programme, I am conducting research on "**Financial Innovation and Banking Industry**". In this regard, you have been randomly selected as a member of the sample. I also wish to assure you that your answers will be treated in strict confidence and used for the stated academic purpose only.

Thank you.

Yours Faithfully,

_____

Name:

(Researcher)

QUESTIONNAIRE

SECTION A: PERSONAL DATA

Tick √ in the appropriate box and give answers where necessary.

1. Gender: Male [ ] Female [ ]

2. Marital Status: Single [ ] Married [ ] Separated [ ] Divorced [ ] Widowed [ ]

3. Age: 20yrs and below [ ] 21 – 30yrs [ ] 31 – 40yrs [ ] 41years and above [ ]

4. Educational Level of Respondents: FSLC [ ] SSCE/GCE/ND [ ] HND/BSC [ ] MASTERS [ ] PhD [ ]

5. Income Level: 50,000 and below [ ] 50,001-100,000 [ ] 100,001-150,000 [ ] 150,001 and above [ ]

SECTION B: GENERAL

Please tick in the appropriate box after each question as an indication of your choice using likert scale: Strongly Agree=SA; A= Agree; Undecided=U; Disagree= D; Strongly Disagree= SD.

S/N	**PARTICULARS**					
*****	**Financial Innovation**	**SD**	**D**	**U**	**A**	**SA**
6	The mobile banking services offered by my bank make it easier for me to conduct transactions.					
7	I find the online banking platform provided by my bank convenient and user-friendly.					
8	My bank's use of digital payment systems					

	(e.g., mobile transfers, QR codes) has simplified my financial activities.					
9	I feel secure using the technology-enabled services offered by my bank.					
10	The automated services (e.g., ATMs, chatbots) provided by my bank have improved service efficiency.					
*	**Customer Satisfaction in Banking Services**	**SD**	**D**	**U**	**A**	**SA**
11	I find it convenient to complete transactions using my bank's digital platforms (e.g., mobile app, online banking).					
12	The introduction of financial technology by my bank has simplified my everyday banking activities.					
13	I am satisfied with the speed and efficiency of the services provided through my bank's innovative channels.					
14	The reliability of my bank's digital solutions makes my banking experience stress-free.					
15	My bank's innovative payment methods (e.g., mobile transfers, QR codes) meet my transaction needs effectively.					
	Customer Retention in Banks					
16	The innovative products and services offered					

	by my bank make it my preferred financial institution.					
17	The convenience of my bank's digital banking services influences my decision to continue banking with them.					
18	My bank's ability to adapt to new technologies keeps me loyal to their services.					
19	The security features of my bank's digital platforms give me confidence to remain their customer.					
20	I continue using my bank because their financial technology solutions make transactions faster and easier.					
*	**Customer Patronage of Banks**	**SD**	**D**	**U**	**A**	**SA**
21	The availability of mobile banking services makes me more likely to use my bank's services frequently.					
22	The introduction of digital payment options (e.g., mobile transfers, QR codes) has increased my engagement with my bank.					
23	My bank's innovative services, such as automated teller machines (ATMs) and online banking, have influenced my decision to continue using their services.					
24	I prefer my bank because its financial					

	technology solutions make transactions faster and more convenient.					
25	The seamless experience offered by my bank's mobile app encourages me to rely on it for most of my financial needs.					
*	**The perceived challenges of banking customers in relation to banks' financial innovation services**	**SD**	**D**	**U**	**A**	**SA**
26	I find it difficult to understand how to use some of my bank's digital banking services.					
27	The cost of using my bank's innovative financial services (e.g., mobile banking fees) is too high for me.					
28	I am concerned about the security of my personal and financial information when using my bank's digital platforms.					
29	I often experience technical issues (e.g., app crashes, failed transactions) with my bank's digital services.					
30	The lack of adequate support or guidance from my bank makes it hard for me to use their innovative services effectively.					
31	My bank's digital platforms are not user-friendly enough for me to access all the features I need.					

32	I sometimes experience delays in transaction processing when using my bank's online or mobile banking services.					
33	My internet connection or network coverage makes it difficult for me to access my bank's digital services reliably.					
34	The time it takes to resolve complaints or technical problems discourages me from fully utilizing my bank's innovative services.					
35	My bank's innovative financial solutions are not accessible to me due to a lack of infrastructure in my area (e.g., ATMs, agents).					

THANK YOU!

APPENDIX

```
NEW FILE.
DATASET NAME DataSet1 WINDOW=FRONT.
COMPUTE FIN=MEAN (FIN1,FIN2,FIN3,FIN4,FIN5).
EXECUTE.
COMPUTE CS=MEAN (CS1,CS2,CS3,CS4,CS5).
EXECUTE.
COMPUTE CR=MEAN (CR1,CR2,CR3,CR4,CR5).
EXECUTE.
COMPUTE CP=MEAN (CP1,CP2,CP3,CP4,CP5).
EXECUTE.
COMPUTE PER=MEAN (PER1,PER2,PER3,PER4,PER5,PER6,PER7,PER8,PER9,PER10).
EXECUTE.
FREQUENCIES VARIABLES=FIN1 FIN2 FIN3 FIN4 FIN5 CS1 CS2 CS3 CS4 CS5 CR1 CR2
CR3 CR4 CR5 CP1 CP2 CP3 CP4 CP5 PER1 PER2 PER3 PER4 PER5 PER6 PER7 PER8
PER9 PER10
  /ORDER=ANALYSIS.
```

Frequencies

Notes

Output Created		19-FEB-2025 12:22:02
Comments		
Input	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	100
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=FIN1 FIN2 FIN3 FIN4 FIN5 CS1 CS2 CS3 CS4 CS5 CR1 CR2 CR3 CR4 CR5 CP1 CP2 CP3 CP4 CP5 PER1 PER2 PER3 PER4 PER5 PER6 PER7 PER8 PER9 PER10 /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.01

[DataSet1]

	The mobile banking services offered by my bank make it easier for me to conduct transactions.	I find the online banking platform provided by my bank convenient and user-friendly.	My bank's use of digital payment systems (e.g., mobile transfers, QR codes) has simplified my financial activities.	I feel secure using the technology-enabled services offered by my bank.	The automated services (e.g., ATMs, chatbots) provided by my bank have improved service efficiency.	I find it convenient to complete transactions using my bank's digital platforms (e.g., mobile app, online banking).	The introduction of financial technology by my bank has simplified my everyday banking activities.	I am satisfied with the speed and efficiency of the services provided through my bank's innovative channels.	The reliability of my bank's digital solutions makes my banking experience stress-free.	My bank's innovative payment methods (e.g., mobile transfers, QR codes) meet my transaction needs effectively.	The innovative products and services offered by my bank make it my preferred financial institution.	The convenience of my bank's digital banking services influences my decision to continue banking with them.	My bank's ability to adapt to new technologies keeps me loyal to their services.	The security features of my bank's digital platforms give me confidence to remain their customers.	I continue using my bank because their financial technology solutions make transactions faster and easier.	The availability of mobile banking services makes me more likely to use my bank's services frequently.	The introduction of digital payment options (e.g., mobile transfers, QR codes) has increased my engagement with my bank.	My bank's innovative services, such as automated teller machines (ATMs) and online banking, have influenced my decision to continue using their services.	I prefer my bank because its financial technology solutions make transactions faster and more convenient.	The seamless experience offered by my bank's mobile app encourages me to rely on it for most of my financial needs.	I find it difficult to understand how to use some of my bank's digital banking services.	The cost of using my bank's innovative financial services (e.g., mobile banking fees) is too high for me.	I am concerned about the security of my personal and financial information when using my bank's digital platforms.	I often experience technical issues (e.g., app crashes, failed transactions) with my bank's digital services.	The lack of adequate support or guidance from my bank makes it hard for me to use their innovative services effectively.	My bank's digital platforms are not user-friendly enough for me to access all the features I need.	I sometimes experience delays in transaction processing when using my bank's online or mobile banking services.	My internet connection or network coverage makes it difficult for me to access my bank's digital services reliably.	The time it takes to resolve complaints or technical problems discourages me from fully utilizing my bank's innovative services.	My bank's innovative financial solutions are not accessible to me due to a lack of infrastructure in my area (e.g., ATMs, agents).	
N	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		100	100	100	100	100	100	100	100	100	100	100	100	100
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0

Frequency Table

The mobile banking services offered by my bank make it easier for me to conduct transactions.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	1.0	1.0	1.0
	Neutral	16	16.0	16.0	17.0
	Agree	60	60.0	60.0	77.0
	Strongly Agree	23	23.0	23.0	100.0
	Total	100	100.0	100.0	

I find the online banking platform provided by my bank convenient and user-friendly.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	13	13.0	13.0	13.0
	Agree	51	51.0	51.0	64.0
	Strongly Agree	36	36.0	36.0	100.0
	Total	100	100.0	100.0	

My bank's use of digital payment systems (e.g., mobile transfers, QR codes) has simplified my financial activities.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	4	4.0	4.0	4.0
	Agree	54	54.0	54.0	58.0
	Strongly Agree	42	42.0	42.0	100.0
	Total	100	100.0	100.0	

I feel secure using the technology-enabled services offered by my bank.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	13	13.0	13.0	13.0
	Agree	50	50.0	50.0	63.0
	Strongly Agree	37	37.0	37.0	100.0
	Total	100	100.0	100.0	

The automated services (e.g., ATMs, chatbots) provided by my bank have improved service efficiency.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	1.0	1.0	1.0
	Neutral	15	15.0	15.0	16.0
	Agree	46	46.0	46.0	62.0
	Strongly Agree	38	38.0	38.0	100.0
	Total	100	100.0	100.0	

I find it convenient to complete transactions using my bank's digital platforms (e.g., mobile app, online banking).

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	12	12.0	12.0	12.0
	Agree	50	50.0	50.0	62.0
	Strongly Agree	38	38.0	38.0	100.0
	Total	100	100.0	100.0	

The introduction of financial technology by my bank has simplified my everyday banking activities.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	1.0	1.0	1.0
	Neutral	14	14.0	14.0	15.0
	Agree	44	44.0	44.0	59.0
	Strongly Agree	41	41.0	41.0	100.0
	Total	100	100.0	100.0	

I am satisfied with the speed and efficiency of the services provided through my bank's innovative channels.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	2.0	2.0	2.0
	Neutral	17	17.0	17.0	19.0
	Agree	50	50.0	50.0	69.0
	Strongly Agree	31	31.0	31.0	100.0
	Total	100	100.0	100.0	

The reliability of my bank's digital solutions makes my banking experience stress-free.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	2.0	2.0	2.0
	Neutral	16	16.0	16.0	18.0
	Agree	51	51.0	51.0	69.0
	Strongly Agree	31	31.0	31.0	100.0
	Total	100	100.0	100.0	

My bank's innovative payment methods (e.g., mobile transfers, QR codes) meet my transaction needs effectively.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	20	20.0	20.0	20.0
	Agree	48	48.0	48.0	68.0
	Strongly Agree	32	32.0	32.0	100.0
	Total	100	100.0	100.0	

The innovative products and services offered by my bank make it my preferred financial institution.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	20	20.0	20.0	20.0
	Agree	52	52.0	52.0	72.0
	Strongly Agree	28	28.0	28.0	100.0
	Total	100	100.0	100.0	

The convenience of my bank's digital banking services influences my decision to continue banking with them.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	2.0	2.0	2.0
	Neutral	20	20.0	20.0	22.0
	Agree	46	46.0	46.0	68.0
	Strongly Agree	32	32.0	32.0	100.0
	Total	100	100.0	100.0	

My bank's ability to adapt to new technologies keeps me loyal to their services.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.0	1.0	1.0
	Disagree	2	2.0	2.0	3.0
	Neutral	18	18.0	18.0	21.0
	Agree	43	43.0	43.0	64.0
	Strongly Agree	36	36.0	36.0	100.0
	Total	100	100.0	100.0	

The security features of my bank's digital platforms give me confidence to remain their customer.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	4	4.0	4.0	4.0
	Neutral	17	17.0	17.0	21.0
	Agree	52	52.0	52.0	73.0
	Strongly Agree	27	27.0	27.0	100.0
	Total	100	100.0	100.0	

I continue using my bank because their financial technology solutions make transactions faster and easier.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	4	4.0	4.0	4.0
	Neutral	22	22.0	22.0	26.0
	Agree	49	49.0	49.0	75.0
	Strongly Agree	25	25.0	25.0	100.0
	Total	100	100.0	100.0	

The availability of mobile banking services makes me more likely to use my bank's services frequently.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	3	3.0	3.0	3.0
	Neutral	17	17.0	17.0	20.0
	Agree	51	51.0	51.0	71.0
	Strongly Agree	29	29.0	29.0	100.0

	Total	100	100.0	100.0	

The introduction of digital payment options (e.g., mobile transfers, QR codes) has increased my engagement with my bank.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	2.0	2.0	2.0
	Neutral	20	20.0	20.0	22.0
	Agree	47	47.0	47.0	69.0
	Strongly Agree	31	31.0	31.0	100.0
	Total	100	100.0	100.0	

My bank's innovative services, such as automated teller machines (ATMs) and online banking, have influenced my decision to continue using their services.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	5	5.0	5.0	5.0
	Neutral	13	13.0	13.0	18.0
	Agree	46	46.0	46.0	64.0

	Strongly Agree	36	36.0	36.0	100.0
	Total	100	100.0	100.0	

I prefer my bank because its financial technology solutions make transactions faster and more convenient.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	15	15.0	15.0	15.0
	Agree	49	49.0	49.0	64.0
	Strongly Agree	36	36.0	36.0	100.0
	Total	100	100.0	100.0	

The seamless experience offered by my bank's mobile app encourages me to rely on it for most of my financial needs.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	2.0	2.0	2.0
	Neutral	18	18.0	18.0	20.0
	Agree	46	46.0	46.0	66.0

	Strongly Agree	34	34.0	34.0	100.0
	Total	100	100.0	100.0	

I find it difficult to understand how to use some of my bank's digital banking services.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	8	8.0	8.0	8.0
	Neutral	19	19.0	19.0	27.0
	Agree	49	49.0	49.0	76.0
	Strongly Agree	24	24.0	24.0	100.0
	Total	100	100.0	100.0	

The cost of using my bank's innovative financial services (e.g., mobile banking fees) is too high for me.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.0	1.0	1.0
	Disagree	3	3.0	3.0	4.0
	Neutral	20	20.0	20.0	24.0
	Agree	41	41.0	41.0	65.0

	Strongly Agree	35	35.0	35.0	100.0
	Total	100	100.0	100.0	

I am concerned about the security of my personal and financial information when using my bank's digital platforms.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.0	1.0	1.0
	Disagree	2	2.0	2.0	3.0
	Neutral	12	12.0	12.0	15.0
	Agree	48	48.0	48.0	63.0
	Strongly Agree	37	37.0	37.0	100.0
	Total	100	100.0	100.0	

I often experience technical issues (e.g., app crashes, failed transactions) with my bank's digital services.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	14	14.0	14.0	14.0
	Agree	47	47.0	47.0	61.0

	Strongly Agree	39	39.0	39.0	100.0
	Total	100	100.0	100.0	

The lack of adequate support or guidance from my bank makes it hard for me to use their innovative services effectively.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.0	1.0	1.0
	Disagree	6	6.0	6.0	7.0
	Neutral	9	9.0	9.0	16.0
	Agree	51	51.0	51.0	67.0
	Strongly Agree	33	33.0	33.0	100.0
	Total	100	100.0	100.0	

My bank’s digital platforms are not user-friendly enough for me to access all the features I need.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.0	1.0	1.0
	Disagree	2	2.0	2.0	3.0
	Neutral	28	28.0	28.0	31.0

	Agree	45	45.0	45.0	76.0
	Strongly Agree	24	24.0	24.0	100.0
	Total	100	100.0	100.0	

I sometimes experience delays in transaction processing when using my bank's online or mobile banking services.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	2.0	2.0	2.0
	Neutral	20	20.0	20.0	22.0
	Agree	40	40.0	40.0	62.0
	Strongly Agree	38	38.0	38.0	100.0
	Total	100	100.0	100.0	

My internet connection or network coverage makes it difficult for me to access my bank's digital services reliably.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	3	3.0	3.0	3.0

	Neutral	19	19.0	19.0	22.0
	Agree	39	39.0	39.0	61.0
	Strongly Agree	39	39.0	39.0	100.0
	Total	100	100.0	100.0	

The time it takes to resolve complaints or technical problems discourages me from fully utilizing my bank's innovative services.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.0	1.0	1.0
	Disagree	2	2.0	2.0	3.0
	Neutral	18	18.0	18.0	21.0
	Agree	41	41.0	41.0	62.0
	Strongly Agree	38	38.0	38.0	100.0
	Total	100	100.0	100.0	

My bank's innovative financial solutions are not accessible to me due to a lack of infrastructure in my area (e.g., ATMs, agents).

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	3.0	3.0	3.0

Disagree	4	4.0	4.0	7.0
Neutral	11	11.0	11.0	18.0
Agree	48	48.0	48.0	66.0
Strongly Agree	34	34.0	34.0	100.0
Total	100	100.0	100.0	

```
DESCRIPTIVES VARIABLES=FIN1 FIN2 FIN3 FIN4 FIN5 CS1 CS2 CS3 CS4 CS5 CR1 CR2
CR3 CR4 CR5 CP1 CP2 CP3 CP4 CP5 PER1 PER2 PER3 PER4 PER5 PER6 PER7 PER8
PER9 PER10 FIN CS CR CP PER
  /STATISTICS=MEAN STDDEV MIN MAX.
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Descriptives

Notes

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Comments		
Input	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	100
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	All non-missing data are used.

Syntax		DESCRIPTIVES VARIABLES=FIN1 FIN2 FIN3 FIN4 FIN5 CS1 CS2 CS3 CS4 CS5 CR1 CR2 CR3 CR4 CR5 CP1 CP2 CP3 CP4 CP5 PER1 PER2 PER3 PER4 PER5 PER6 PER7 PER8 PER9 PER10 FIN CS CR CP PER /STATISTICS=MEAN STDDEV MIN MAX.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.01

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
The mobile banking services offered by my bank make it easier for me to conduct transactions.	100	2.00	5.00	4.0500	.65713
I find the online banking platform provided by my bank convenient and user-friendly.	100	3.00	5.00	4.2300	.66447
My bank's use of digital payment systems (e.g., mobile transfers, QR codes) has simplified my financial activities.	100	3.00	5.00	4.3800	.56461

I feel secure using the technology-enabled services offered by my bank.	100	3.00	5.00	4.2400	.66848
The automated services (e.g., ATMs, chatbots) provided by my bank have improved service efficiency.	100	2.00	5.00	4.2100	.72884
I find it convenient to complete transactions using my bank's digital platforms (e.g., mobile app, online banking).	100	3.00	5.00	4.2600	.66088
The introduction of financial technology by my bank has simplified my everyday banking activities.	100	2.00	5.00	4.2500	.72995
I am satisfied with the speed and efficiency of the services provided through my bank's innovative channels.	100	2.00	5.00	4.1000	.74536
The reliability of my bank's digital solutions makes my banking experience stress-free.	100	2.00	5.00	4.1100	.73711
My bank's innovative payment methods (e.g., mobile transfers, QR codes) meet my transaction needs effectively.	100	3.00	5.00	4.1200	.71464
The innovative products and services offered by my bank make it my preferred financial institution.	100	3.00	5.00	4.0800	.69165

The convenience of my bank's digital banking services influences my decision to continue banking with them.	100	2.00	5.00	4.0800	.77434
My bank's ability to adapt to new technologies keeps me loyal to their services.	100	1.00	5.00	4.1100	.83961
The security features of my bank's digital platforms give me confidence to remain their customer.	100	2.00	5.00	4.0200	.77824
I continue using my bank because their financial technology solutions make transactions faster and easier.	100	2.00	5.00	3.9500	.79614
The availability of mobile banking services makes me more likely to use my bank's services frequently.	100	2.00	5.00	4.0600	.76303
The introduction of digital payment options (e.g., mobile transfers, QR codes) has increased my engagement with my bank.	100	2.00	5.00	4.0700	.76877
My bank's innovative services, such as automated teller machines (ATMs) and online banking, have influenced my decision to continue using their services.	100	2.00	5.00	4.1300	.82456

I prefer my bank because its financial technology solutions make transactions faster and more convenient.	100	3.00	5.00	4.2100	.68601
The seamless experience offered by my bank's mobile app encourages me to rely on it for most of my financial needs.	100	2.00	5.00	4.1200	.76910
I find it difficult to understand how to use some of my bank's digital banking services.	100	2.00	5.00	3.8900	.86334
The cost of using my bank's innovative financial services (e.g., mobile banking fees) is too high for me.	100	1.00	5.00	4.0600	.87409
I am concerned about the security of my personal and financial information when using my bank's digital platforms.	100	1.00	5.00	4.1800	.79620