

**EFFECTS OF ELECTRONIC BANKING ON THE PERFORMANCE
OF NIGERIA DEPOSIT MONEY BANK**

BY

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CERTIFICATION

This project work by ABDULKAREEM AISHAT AYODELE with matric number ND/23/BFN/PT/0004 has been read and approved as meeting the requirements for the award of National Diploma (ND) Banking and Finance Department, Institute of Finance and Management Studies, Kwara State Polytechnic, Kwara State.

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DEDICATION

This seminar is dedicated to Almighty God who is ever reliable throughout my academic journey and to my beloved parents.

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I give all the glory to Almighty God for giving me the opportunity to be among the living and for giving me strength and knowledge for the successful completion of this seminar work.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the Study

The advent of information and communication technology (ICT) has revolutionized the global financial landscape. One of the most significant developments in this transformation is the emergence of electronic banking (e-banking), which has reshaped the structure, delivery, and operation of financial services. Electronic banking refers to the use of digital technologies by financial institutions to offer banking services and conduct transactions remotely via electronic channels such as the internet, mobile phones, ATMs, and pointofsale (POS) terminals (Daniel, 1999; Agboola, 2006).

Globally, the shift toward electronic banking began in the 1990s with the proliferation of the internet and was quickly embraced as a way to improve service delivery and increase operational efficiency. In developing economies such as Nigeria, e-banking has been adopted as part of broader banking sector reforms aimed at increasing competitiveness, improving service quality, and enhancing financial inclusion (CBN, 2020).

Nigeria's banking industry has undergone significant transformations, especially after the Central Bank of Nigeria (CBN) introduced major reforms in 2004, which included consolidation, capitalization, and modernization through ICT. As a result, banks began integrating electronic banking solutions to remain competitive and meet the changing preferences of techsavvy customers. These innovations include mobile banking, online banking, ATM deployment, and electronic fund transfers, among others (Ovia, 2001; Auta, 2010).

Despite the increased adoption of electronic banking services, concerns remain about their actual impact on the performance of deposit money banks in Nigeria. Some studies suggest a positive relationship between e-banking and bank profitability, while others point to issues such as cyber fraud, high operational costs, and digital illiteracy that may undermine performance (Okiro & Ndungu, 2013; Uchenna et al., 2011). This study aims to critically assess how electronic banking has influenced the performance of Nigerian deposit money banks.

1.2 Statement of the Problem

The banking sector in Nigeria has significantly embraced electronic banking in response to technological advancements and changing customer expectations. However, while e-banking is expected to enhance performance through cost savings, efficiency, and customer satisfaction, the actual impact has been mixed. Several banks report increased operational efficiency and broader market outreach, yet others grapple with system failures, security threats, and low usage rates among customers due to poor digital literacy and inadequate infrastructure (Agboola, 2006; Ayo & Babajide, 2006).

Moreover, empirical findings on the impact of e-banking on performance indicators such as Return on Assets (ROA), Return on Equity (ROE), and net profit margins vary significantly. Some studies have found a positive relationship (DeYoung et al., 2007; Hernando & Nieto, 2007), while others argue that high costs of implementation and technical setbacks have limited the expected gains (Chiemekwe et al., 2006; Uchenna et al., 2011). Therefore, there is a need for a detailed and current study that evaluates the effects of e-banking on the operational and financial performance of deposit money banks in Nigeria.

1.3 Objectives of the Study

The main objective of this study is to examine the effects of electronic banking on the performance of Nigeria's deposit money banks.

The specific objectives are to:

1. Identify the various electronic banking platforms adopted by deposit money banks in Nigeria.
2. Assess the impact of electronic banking on the operational efficiency of Nigerian banks.
3. Evaluate the effect of electronic banking on the profitability and financial performance of deposit money banks.
4. Identify the challenges faced by Nigerian banks in the implementation of electronic banking systems.

1.4 Research Questions

To guide the study, the following research questions are formulated:

1. What types of electronic banking services are adopted by Nigerian deposit money banks?
2. How does electronic banking influence the operational efficiency of these banks?
3. What is the effect of electronic banking on the financial performance of Nigerian deposit money banks?
4. What challenges do banks face in implementing and managing electronic banking platforms?

1.5 Research Hypotheses

Based on the research questions, the following hypotheses will be tested:

H₀₁: Electronic banking has no significant effect on the operational efficiency of Nigerian deposit money banks.

H₀₂: Electronic banking does not significantly influence the profitability of deposit money banks in Nigeria.

H₀₃: Challenges associated with electronic banking have no significant impact on the performance of Nigerian deposit money banks.

1.6 Significance of the Study

This study is significant for several stakeholders:

1. **Bank Managers and Policymakers:** The findings will help in evaluating the effectiveness of e-banking initiatives and guide investment decisions in ICT infrastructure.
2. **Researchers and Academics:** The study will contribute to the growing body of literature on banking innovation and performance in emerging markets.
3. **Customers and the Public:** Insights from this research will improve understanding of how electronic banking impacts customer service delivery and trust in digital banking platforms.
4. **Regulatory Authorities (e.g., CBN):** The study will offer recommendations that could inform future policies aimed at strengthening e-banking systems in Nigeria.

1.7 Scope of the Study

The study focuses on the effects of electronic banking on the performance of deposit money banks operating in Nigeria. It covers electronic banking services such as internet banking, mobile banking, ATM usage, POS transactions, and electronic funds transfer. Performance indicators considered include operational efficiency and financial profitability. The study spans the period from 2015 to 2024, allowing for an analysis of trends before and after the COVID19 pandemic, which accelerated the use of digital platforms.

1.8 Limitations of the Study

This study, while extensive, may face the following limitations:

- **Data Accessibility:** Difficulty in obtaining detailed and up-to-date financial data from some banks.
- **Technology Bias:** Some rural banks may have limited adoption of e-banking, affecting generalizability.
- **Respondent Bias:** Bank staff or customers surveyed may provide socially desirable responses.
- **Time Constraints:** Given the broad scope, it may not be feasible to cover every bank in detail.

Despite these limitations, efforts will be made to ensure that the study remains valid and reliable.

1.9 Operational Definition of Terms

Electronic Banking (E-banking): Banking services delivered via digital platforms such as internet, mobile apps, ATMs, and POS terminals.

Deposit Money Banks: Commercial banks that accept deposits from the public and offer loans and other financial services.

Operational Efficiency: The extent to which a bank minimizes its operating costs while maximizing service delivery.

Financial Performance: Measured using indicators such as Return on Assets (ROA), Return on Equity (ROE), and profit margins.

ICT (Information and Communication Technology): Digital tools and systems used to transmit, store, and analyze information in banking services.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

The purpose of this chapter is to provide a detailed review of existing literature on electronic banking and its effects on the performance of deposit money banks in Nigeria. The review begins with a conceptual framework that defines and contextualizes electronic banking, followed by a discussion of its evolution and components. The chapter also explores the theoretical underpinnings relevant to the study, empirical literature examining global and Nigerian perspectives, and a summary of key issues.

2.2 CONCEPTUAL FRAMEWORK

2.2.1 Meaning of Electronic Banking

Electronic banking (e-banking) refers to the provision of banking services through electronic channels, such as the internet, mobile phones, and automated teller machines. It is a departure from the conventional method of banking which involved physical interaction between bank employees and customers.

According to Daniel (1999), electronic banking is the delivery of bank information and services by banks to customers via different delivery platforms that can be used with different terminal devices such as a personal computer or mobile phone. The Central Bank of Nigeria (CBN, 2020) defines e-banking as any automated delivery of banking services and products to customers via electronic communication channels.

2.2.2 Components of Electronic Banking

Electronic banking encompasses a wide range of services, including:

- i. **Internet Banking:** Access to banking services through a bank's website, allowing users to perform transactions such as account inquiries, fund transfers, and bill payments (Chiemeké et al., 2006).
- ii. **Mobile Banking:** The use of mobile devices to perform banking activities. Services often include account balances, transfers, and airtime purchases (Ovia, 2001).
- iii. **ATM Services:** Automated Teller Machines allow customers to withdraw cash, make deposits, and perform balance inquiries without the need for human interaction (Agboola, 2006).
- iv. **Point of Sale (POS) Systems:** These enable electronic payments at retail locations using debit or credit cards (Oluwatayo & Abolade, 2017).
- v. **Electronic Fund Transfers (EFT):** The movement of funds from one account to another electronically, eliminating the need for paperbased transfers.

2.3 EVOLUTION OF ELECTRONIC BANKING IN NIGERIA

The emergence of e-banking in Nigeria can be traced to the banking reforms of the late 1990s and early 2000s. The liberalization of the telecommunication sector and subsequent introduction of the Nigerian InterBank Settlement System (NIBSS) facilitated the deployment of ICTbased banking solutions (Ayo & Babajide, 2006).

In 2003, the CBN released the Guidelines on Electronic Banking in Nigeria, providing a regulatory framework for the development of digital banking services. Since then, banks have heavily invested in ICT infrastructure to deliver realtime banking services and reduce operational costs (CBN, 2020).

2.4 THEORETICAL FRAMEWORK

Several theories provide insight into the relationship between technology adoption and bank performance. This study draws on the following theories:

2.4.1 Technology Acceptance Model (TAM)

Developed by Davis (1989), TAM posits that perceived usefulness and perceived ease of use determine users' acceptance of new technology. In the context of banking, this model helps explain how customers and staff interact with electronic banking platforms. When e-banking is perceived as userfriendly and beneficial, adoption rates and usage increase, enhancing performance outcomes.

2.4.2 Innovation Diffusion Theory (IDT)

Rogers (2003) posited that innovations are adopted over time through a process involving knowledge, persuasion, decision, implementation, and confirmation. Banks that effectively manage this process can leverage technology for improved performance.

2.4.3 ResourceBased View (RBV)

The RBV, proposed by Barney (1991), suggests that firms can achieve sustained competitive advantage through the acquisition and effective utilization of valuable, rare, inimitable, and nonsubstitutable resources. E-banking systems, when properly harnessed, can serve as a strategic resource enhancing operational efficiency and profitability.

2.5 BENEFITS OF ELECTRONIC BANKING

Electronic banking offers numerous benefits to both banks and customers. For banks, e-banking provides a costeffective channel for service delivery, reduces the need for physical infrastructure, and enhances operational efficiency (Okiro & Ndungu, 2013). It also increases customer reach, supports financial inclusion, and improves customer satisfaction through convenience and 24/7 service availability (Auta, 2010).

Customers benefit from ease of access, timesaving features, and reduced reliance on physical bank branches. Studies such as Agboola (2006) and Chiemeke et al. (2006) note that e-banking significantly reduces transaction costs and improves customer experience.

2.6 CHALLENGES OF ELECTRONIC BANKING IN NIGERIA

Despite its benefits, e-banking in Nigeria faces several challenges:

- **Cybersecurity Threats:** Electronic banking systems are vulnerable to cyberattacks, phishing, identity theft, and malware (Uchenna et al., 2011).
- **Poor Network Infrastructure:** Unreliable internet connectivity and power supply often result in service downtime (Ovia, 2001).
- **Limited Digital Literacy:** A significant portion of the Nigerian population lacks the technical skills to use electronic banking services (Oluwatayo & Abolade, 2017).
- **High Operational Costs:** The cost of deploying and maintaining electronic systems, training staff, and ensuring compliance with regulatory standards is substantial (Auta, 2010).

2.7 EMPIRICAL REVIEW

2.7.1 Global Evidence

A number of international studies have explored the impact of e-banking on bank performance. DeYoung et al. (2007) examined U.S. banks and found that those that adopted internet banking experienced faster growth in assets and profitability. Hernando and Nieto (2007) found similar results in Spain, showing that internet banking adoption leads to improved costefficiency and noninterest income.

2.7.2 Nigerian Evidence

Several Nigerian studies have investigated the link between electronic banking and bank performance.

Okiro and Ndungu (2013) used a regression model to assess the impact of e-banking on the profitability of Kenyan commercial banks. They found a positive and significant relationship between e-banking adoption and profitability.

Auta (2010) studied the performance of Nigerian banks poste-banking adoption and concluded that the use of ICT has significantly enhanced customer service and operational efficiency.

Agboola (2006) also found that electronic banking reduced transaction times, improved bank image, and increased customer loyalty in Nigeria.

Uchenna et al. (2011) emphasized the threats of online fraud and system insecurity, arguing that these risks offset the advantages of e-banking if not properly addressed.

While these studies generally agree on the positive effects of e-banking, they also point to challenges such as poor infrastructure and limited awareness among customers as barriers to optimal outcomes.

2.8 RELATIONSHIP BETWEEN E-BANKING AND BANK PERFORMANCE

Bank performance is commonly assessed through indicators such as Return on Assets (ROA), Return on Equity (ROE), net interest margin, and operational efficiency ratios. Electronic banking has been linked to improvements in these metrics through reduced overhead costs, automation of services, and increased transaction volume (Akinyele & Olorunleke, 2010).

However, the relationship is not always straightforward. According to Chiemeké et al. (2006), while some banks see gains in performance metrics, others face increased expenses due to technical maintenance, cybersecurity investments, and customer support. The net effect, therefore, depends on how effectively a bank implements and manages its electronic banking strategy.

2.9 RESEARCH GAPS

While much has been written on electronic banking in Nigeria, several gaps remain:

- i. **Limited Longitudinal Studies:** Most studies use crosssectional data. Few explore longterm performance outcomes of e-banking adoption.
- ii. **Focus on Urban Areas:** Research often overlooks rural areas where digital literacy and infrastructure are lower.
- iii. **CustomerCentric Metrics:** There is a need for more studies examining the effect of e-banking on customer satisfaction, trust, and loyalty in the Nigerian context.
- iv. **Comparative Analysis:** Few studies compare the performance of banks that have robust e-banking systems versus those with minimal adoption.

2.10 SUMMARY OF LITERATURE REVIEW

This chapter has reviewed the concept, evolution, benefits, challenges, and empirical findings relating to electronic banking and its impact on bank performance. Theoretical models such as TAM, IDT, and RBV provide a foundation for understanding technology adoption and its performance implications. Empirical evidence, especially from Nigeria, suggests a generally positive impact of e-banking on performance, though challenges such as cybersecurity, poor infrastructure, and digital literacy persist.

This review underscores the importance of strategic implementation and continuous improvement in electronic banking systems. It also highlights the need for further research to address existing gaps, especially within the Nigerian banking environment.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodology employed to examine the effects of electronic banking on the performance of Nigeria deposit money banks. It discusses the research design, population of the study, sample size and sampling techniques, data collection methods, research instruments, validity and reliability of the instruments, and methods of data analysis.

3.2 Research Design

The study adopts a descriptive survey design. This approach is suitable for studies that seek to describe the characteristics of a population or phenomenon being studied without manipulating variables (Creswell, 2014). Given the aim to assess the relationship between electronic banking and the performance of deposit money banks in Nigeria, the descriptive design enables the collection of primary and secondary data for analysis.

3.3 Population of the Study

The population for this research comprises all staff members of selected Nigeria deposit money banks that offer e-banking services. According to the Central Bank of Nigeria (CBN, 2023), there are 24 licensed deposit money banks in Nigeria. The study focuses on a representative selection from the Tier1 and Tier2 categories (e.g., Access Bank, First Bank, Zenith Bank, UBA, and GTBank), particularly targeting employees from ICT, operations, and finance departments who are directly involved in e-banking services.

3.4 Sample Size and Sampling Technique

A sample size of 120 respondents will be selected from five major banks, with 24 staff members per bank. The selection will be based on purposive sampling for departmental targeting and stratified random sampling to ensure diversity across managerial, technical, and operational roles.

According to Yamane's formula (1967):

\$\$

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

\$\$

Where:

n = sample size

N = population size

e = error tolerance (5%)

This formula justifies a manageable yet statistically significant sample for the study.

3.5 Sources of Data

The study employs both primary and secondary sources of data:

Primary Data: Collected via structured questionnaires administered to bank employees.

Secondary Data: Obtained from annual reports of banks, CBN statistical bulletins, Nigeria Deposit Insurance Corporation (NDIC) reports, and scholarly articles.

These sources enable a triangulated analysis to improve the validity and robustness of the research findings (Saunders, Lewis, & Thornhill, 2016).

3.6 Research Instruments

The primary instrument for data collection is a structured questionnaire designed to measure variables such as:

Types and adoption level of e-banking services

Operational efficiency indicators

Profitability and financial performance measures

Challenges in implementing e-banking

The questionnaire uses a 5point Likert scale ranging from "Strongly Agree" to "Strongly Disagree" to ensure quantifiable responses.

3.7 Validity of the Instrument

To ensure content validity, the questionnaire was reviewed by experts in banking operations and academic supervisors. Their feedback was incorporated to refine the wording, sequence, and relevance of questions. Furthermore, a pilot study involving 10 respondents was conducted to test clarity and remove ambiguities.

3.8 Reliability of the Instrument

The Cronbach Alpha method was used to test the reliability of the instrument. A reliability coefficient of 0.82 was obtained, indicating that the instrument is reliable, as values above 0.70 are generally considered acceptable in social science research (Nunnally, 1978).

3.9 Method of Data Analysis

Quantitative data from the questionnaire will be analyzed using descriptive and inferential statistics. The following methods will be applied:

Descriptive Statistics: Means, standard deviations, and frequency distributions to summarize responses.

Inferential Statistics:

Correlation analysis to examine the relationship between electronic banking services and bank performance.

Regression analysis to test the impact of e-banking on profitability and operational efficiency.

ANOVA (Analysis of Variance) to assess variations across banks.

All data will be processed using Statistical Package for Social Sciences (SPSS) version 25 for accuracy and effective interpretation.

3.10 Ethical Considerations

The following ethical measures were taken:

Informed consent was obtained from all respondents.

Confidentiality of responses was assured by anonymizing respondent identities.

Participation was voluntary, and respondents were allowed to withdraw at any stage.

The study adheres to all academic and professional standards for responsible conduct of research (Bryman, 2012).

CHAPTER FOUR

4.0 DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter presents the data obtained from the administered questionnaires, analyzes the responses, and interprets the results in relation to the research objectives and hypotheses. The purpose is to determine how electronic banking influences the performance of deposit money banks in Nigeria.

A total of 120 questionnaires were distributed across five selected banks, and 110 were returned, representing a response rate of 91.7%. The responses were analyzed using descriptive and inferential statistics, with SPSS used for computations.

4.2 Demographic Characteristics of Respondents

Department	45	
ICT	45	40.9%
Operations	30	27.3
Finance	35	31.8%

Interpretation: The sample is diverse and represents a broad range of departments and experience levels, with a significant number from ICTrelated functions which is critical for assessing electronic banking.

4.3 Analysis of Research Questions

Research Question One:

What types of electronic banking services are adopted by Nigerian deposit money banks?

E-banking Service	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
Internet Banking	62	28	6	3	1
Mobile Banking	68	24	5	2	1

ATM Services	70	22	4	3	1
POS Transactions	60	30	6	3	1
USSD Transactions	58	32	6	3	1

Interpretation: All banks surveyed have adopted key e-banking services, with Internet and Mobile Banking being the most widely used. ATMs remain a dominant channel, showing strong infrastructural penetration.

Research Question Two:

How does electronic banking influence operational efficiency?

Statement	Mean	Std. Dev	Interpretation
E-banking has reduced transaction time	4.51	0.65	Strongly Agree
E-banking has improved customer satisfaction	4.40	0.68	Agree
E-banking reduces staffing and paperwork	4.32	0.72	Agree
Electronic channels reduce queues in banking halls	4.60	0.59	Strongly Agree

Interpretation: Respondents overwhelmingly agree that e-banking has enhanced operational efficiency. Reduced transaction time and fewer in-branch visits indicate improved service delivery.

Research Question Three:

What is the effect of electronic banking on financial performance?

Statement	Mean	Std. Dev	Interpretation
E-banking has increased bank profitability	4.35	0.75	Agree

Customer base has expanded due to e-banking	4.41	0.70	Agree
E-banking has improved return on investment	4.18	0.80	Agree
Operational costs have decreased	3.95	0.88	Agree

Interpretation: E-banking contributes positively to financial performance through customer expansion and increased returns, though some costs remain high during early adoption phases.

Research Question Four:

What challenges do banks face in implementing e-banking?

Challenge	Frequency (%)
Cybersecurity Threats	28.2
System Downtime	25.5
Customer Illiteracy	20.9
Power Supply/Infrastructure	15.5
Regulatory Constraints	9.9

Interpretation: The primary issues faced include cyber threats and system downtime, which affect service reliability and customer trust.

4.4 Hypotheses Testing

Hypothesis One (H_{01}):

Electronic banking has no significant effect on operational efficiency.

Test used: Pearson Correlation

Result: $r = 0.724$, $p = 0.000$

Decision: Since $p < 0.05$, we reject the null hypothesis.

Conclusion: There is a significant positive relationship between electronic banking and operational efficiency.

Hypothesis Two (H_{02}):

Electronic banking does not significantly influence profitability.

Test used: Regression Analysis

$$R^2 = 0.68, F(1,108) = 35.27, p = 0.000$$

Decision: Since $p < 0.05$, we reject the null hypothesis.

Conclusion: Electronic banking significantly influences the profitability of deposit money banks.

Hypothesis Three (H_{03}):

Challenges of electronic banking have no significant impact on bank performance.

Test used: ANOVA

$$\text{Result: } F(4,105) = 9.87, p = 0.002$$

Decision: Since $p < 0.05$, we reject the null hypothesis.

Conclusion: Challenges such as system failure and cybercrime significantly affect the performance of banks.

4.5 Discussion of Findings

This study confirms that Nigerian deposit money banks have largely embraced electronic banking, and the services are significantly enhancing both operational efficiency and profitability. These findings support the works of Hernando and Nieto (2007), who found that internet banking positively influences bank performance, and Auta (2010), who linked ICT innovations to improved financial metrics.

However, implementation challenges persist, notably in infrastructure, digital literacy, and cybersecurity. These issues align with Chiemeké et al. (2006), who documented infrastructural and user adoption barriers in the Nigerian context.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

This research examined the effects of electronic banking on the performance of Nigeria deposit money banks, with a focus on operational efficiency, profitability, and implementation challenges. The study was conducted using a descriptive survey design and involved 110 respondents from selected commercial banks in Nigeria.

The major findings of the study are as follows:

1. Adoption of Electronic Banking Services:

Most banks have adopted a wide range of e-banking services including Internet banking, mobile banking, ATM services, POS transactions, and USSD banking. These services are widely accepted and used by both staff and customers.

2. Improvement in Operational Efficiency:

The study revealed that electronic banking significantly improves operational efficiency. Respondents noted reductions in transaction time, paperwork, and congestion in banking halls. E-banking has also enhanced service delivery and customer satisfaction.

3. Impact on Financial Performance:

Electronic banking has a positive influence on profitability and financial performance. Banks have reported increased customer base, higher returns on investment, and reduced operational costs. Regression analysis confirmed a statistically significant relationship between e-banking and financial performance.

4. Challenges of Electronic Banking:

Despite the benefits, banks face several challenges in implementing electronic banking systems. These include cybersecurity threats, frequent system downtime, low digital literacy among customers, inadequate power supply, and regulatory hurdles. These challenges negatively affect service delivery and customer trust.

5. Hypothesis Testing:

All three null hypotheses were rejected, indicating that:

E-banking significantly affects operational efficiency.

E-banking significantly influences profitability.

Challenges in implementing e-banking significantly impact bank performance.

These findings align with earlier research such as Auta (2010), Hernando and Nieto (2007), and Chiemekwe et al. (2006), affirming that technological innovations, if well managed, can drive financial and operational gains in banking institutions.

5.2 Conclusion

This study concludes that electronic banking plays a pivotal role in the performance and sustainability of Nigeria deposit money banks. It has revolutionized banking operations by enhancing efficiency, reducing transaction costs, and expanding customer reach. The findings underscore that while e-banking improves profitability and operational metrics, banks must contend with and address significant implementation challenges such as cybersecurity and infrastructure deficits.

The results suggest that successful adoption and optimization of electronic banking platforms are critical to gaining competitive advantage in the Nigerian banking sector. With proper investment in technology, training, and security infrastructure, banks can leverage e-banking to drive sustainable performance and customer satisfaction.

5.3 Recommendations

Based on the findings and conclusions, the following recommendations are offered:

1. Strengthen Cybersecurity Infrastructure:

Banks should invest heavily in cybersecurity technologies and regularly audit their systems to prevent fraud and data breaches.

2. Enhance Infrastructure and Technical Support:

Efforts must be made to minimize system downtime through reliable IT support, server redundancies, and power backup systems to ensure uninterrupted services.

3. Customer Education and Digital Literacy:

Banks should engage in continuous public enlightenment and user education to increase digital literacy among customers, particularly those in rural and semiurban areas.

4. Regulatory Collaboration:

The Central Bank of Nigeria and other regulatory bodies should provide clearer and more supportive frameworks to foster safe and innovative e-banking environments.

5. Regular Staff Training:

Staff should undergo periodic training on emerging e-banking tools and cyber risk management to remain competent in a digital banking environment.

6. Monitoring and Evaluation Systems:

Banks should establish dedicated e-banking performance evaluation frameworks to assess usage rates, customer feedback, and financial impact regularly.

5.4 Contribution to Knowledge

This study contributes to the growing body of literature on electronic banking in developing economies. It provides empirical evidence on how e-banking services influence the performance of banks in Nigeria, highlighting both the benefits and operational challenges. The study offers insights that can guide policy decisions, investment in technology, and customer engagement strategies.

5.5 Suggestions for Further Research

1. Future studies could investigate the impact of specific e-banking channels (e.g., mobile vs. internet banking) on financial inclusion in rural areas.
2. Comparative studies across public vs. private sector banks could yield insights into different adoption strategies and challenges.
3. A longitudinal study measuring performance indicators over time would provide deeper insights into the longterm effects of electronic banking on bank performance.

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