INFLUENCE OF DIGITAL TECHNOLOGIES ON THE ACCOUNTING PERFORMANCE OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

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ABSTRACT

This study investigates the effect of digital technologies on the accounting performance of listed deposit money banks in Nigeria from 2014 to 2024. The main objective was to determine how digital technologies influence accounting efficiency and reporting practices in the banking sector. Specifically, the study examined the effect of digital technologies on financial reporting quality, profitability reporting efficiency, and cost efficiency in accounting operations. The study adopted an ex-post facto research design and relied on secondary data obtained from the annual reports of selected deposit money banks in Nigeria. A purposive sampling technique was employed to select banks with complete and consistent financial data, resulting in a balanced panel dataset of 110 observations. Data analysis was conducted using descriptive statistics, correlation analysis, and panel regression techniques with the aid of EViews software. The empirical findings revealed that digital technologies significantly improved financial reporting quality and profitability reporting efficiency by enhancing the accuracy, reliability, and speed of accounting information. The study also found that digital technologies significantly reduced operational costs associated with accounting activities. The overall regression model showed statistical significance with moderate explanatory power. The study recommended continuous investment in advanced digital systems, staff training, and stronger cybersecurity measures. The findings imply that digital transformation enhances organizational efficiency and strengthens transparency and accountability in the Nigerian banking industry.

Keywords: Digital Technologies, Accounting Performance, Financial Reporting Quality, Deposit Money Banks.

Introduction

The banking industry has experienced a remarkable transformation in recent decades due to the rapid advancement of digital technologies. Traditional banking systems that relied

heavily on manual procedures, paper documentation, and physical branch operations have gradually evolved into technology-driven systems that provide faster, safer, and more convenient financial services. Digital technologies in banking involve the application of electronic platforms and automated systems such as Automated Teller Machines (ATMs), mobile banking applications, internet banking, Point of Sale (POS) terminals, and other financial technology (fintech) innovations to facilitate banking operations and improve service delivery (Abbasi & Weigand, 2017). These technologies have significantly changed the way banks interact with customers and manage internal accounting operations. Abbasi and Weigand (2017), affirm that globally, financial institutions increasingly depend on digital systems to improve operational efficiency, minimize transaction costs, enhance customer satisfaction, and support faster decision-making processes. Customers can now transfer funds, pay bills, monitor account balances, and apply for financial services without physically visiting banking halls. This digital transformation has contributed greatly to organizational productivity and financial performance in the banking sector (Laudon & Laudon, 2021). Empirical evidence suggests that banks that adopt advanced digital technologies tend to achieve higher profitability, wider customer reach, and improved efficiency compared to less technologically advanced institutions (Abbasi & Weigand, 2017).

In Nigeria, deposit money banks have increasingly embraced digital banking channels following the expansion of fintech innovations and the cashless policy initiatives introduced by the Central Bank of Nigeria (CBN). These policies were designed to promote financial inclusion, reduce dependence on cash transactions, and modernize the nation's payment system (Central Bank of Nigeria, 2023). Consequently, services such as ATMs, mobile banking, internet banking, and electronic payment platforms have become common features of banking operations in the country. Studies have shown that the adoption of these digital channels has significantly improved banking efficiency, customer convenience, and profitability among Nigerian banks (Iyobo & Shaba, 2025; Abdullahi et al., 2025). One of the earliest digital innovations in banking is the Automated Teller Machine (ATM), which enables customers to conduct banking transactions such as withdrawals, deposits, transfers, and balance inquiries without interacting directly with bank staff. ATMs have improved banking accessibility and reduced congestion in banking halls. Nevertheless, challenges such as network failure, maintenance expenses, and security threats continue to affect their effectiveness. Similarly, mobile banking has emerged as one of the most widely utilized digital channels due to the increasing penetration of smartphones and internet services in Nigeria. Through mobile banking applications and SMS platforms, customers can conveniently access banking services at any time and from any location. Research indicates that mobile banking positively influences customer satisfaction, operational efficiency, and profitability within the banking sector (Iyobo & Shaba, 2025).

Internet banking has also transformed banking operations by allowing customers to perform financial transactions through web-based platforms. Customers are able to access account statements, transfer funds, and manage financial activities online, thereby reducing dependence on physical banking structures. In addition, fintech innovations such as digital wallets, online payment systems, and peer-to-peer transfer platforms have expanded access

to financial services, particularly among underserved populations in rural communities (Usifoh, 2025). These technological developments have strengthened financial inclusion and enhanced the competitive performance of banks in Nigeria. Despite these benefits, digital technologies also expose banks to several operational challenges, including cybercrime, fraud, data breaches, and system downtime. These risks raise concerns regarding the reliability, security, and effectiveness of digital financial systems. Iyobo and Shada (2025) posit that it becomes necessary to examine how digital technologies influence accounting performance in Nigerian deposit money banks. Accounting performance refers to the effectiveness of a bank in recording, processing, and reporting financial information accurately, efficiently, and promptly. In this study, accounting performance is measured using financial reporting quality, cost efficiency in accounting operations, and profitability reporting efficiency. These indicators are essential for evaluating how digital transformation contributes to transparency, accountability, and overall financial management within the banking industry.

Digital technologies are widely recognized for their ability to improve accounting operations by increasing accuracy, reducing manual errors, and enhancing the speed of financial reporting processes (Laudon & Laudon, 2021). Through automated accounting systems, banks can process large volumes of financial transactions efficiently while minimizing the risks associated with human mistakes and delays (Omondi & Muturi, 2020). Technologies such as cloud accounting, mobile banking platforms, internet banking systems, and fintech applications have strengthened the reliability and transparency of financial information within the banking industry (Abbasi & Weigand, 2017). Automated systems also support real-time financial reporting, faster reconciliation of accounts, and improved data storage, thereby enhancing operational efficiency and decision-making processes (Adewale & Akande, 2022). In Nigeria, the introduction of digital technologies has significantly transformed banking operations by improving customer satisfaction, reducing transaction costs, and expanding financial inclusion across urban and rural areas (Central Bank of Nigeria, 2023). Despite these advantages, concerns relating to cybercrime, data security, system failures, and technological costs continue to challenge banks and their accounting systems (Usifoh, 2025). Consequently, there is a growing need to examine the extent to which digital technologies influence accounting performance in Nigerian deposit money banks. This study, therefore, investigates the effect of digital technologies on financial reporting quality, profitability reporting efficiency, and cost efficiency in accounting operations among listed deposit money banks in Nigeria. The study is important because it provides empirical evidence on how technological innovation contributes to operational effectiveness and financial accountability in the Nigerian banking sector.

Statement of the Problem

In recent years, Nigerian deposit money banks have increasingly invested in digital technologies such as Automated Teller Machines (ATMs), mobile banking platforms, internet banking systems, Point-of-Sale (POS) terminals, and other fintech innovations to improve banking operations and service delivery. These technologies were introduced to enhance operational efficiency, minimize transaction costs, and improve the quality and speed of financial reporting processes (Central Bank of Nigeria, 2023). Despite these technological

advancements, many banks still encounter difficulties in achieving effective accounting performance, particularly regarding the accuracy, reliability, and timeliness of financial information.

Accounting performance refers to the ability of banks to record, process, and present financial information accurately and efficiently for decision-making purposes. Ideally, digital technologies are expected to automate accounting procedures, reduce human errors, and strengthen the quality of financial reporting (Laudon & Laudon, 2021). However, practical experiences within the Nigerian banking sector reveal persistent operational and technological challenges that continue to affect accounting efficiency. Studies have shown that frequent system failures, network disruptions, and dependence on outdated legacy systems negatively influence transaction processing and financial reporting activities in banks (Aduku et al., 2025). These disruptions often delay financial statement preparation and reduce the reliability of accounting records.

Another major concern is the increasing incidence of cybercrime and fraud associated with digital banking channels. The expansion of electronic banking has exposed financial institutions to risks such as phishing, identity theft, unauthorized transactions, and cyberattacks, which undermine the integrity of accounting systems and weaken public confidence in banking operations (Odom et al., 2025; Metibemu, 2025). In addition, many banks experience data integration and compatibility problems because various digital platforms are not fully synchronized, thereby creating inconsistencies in financial records and delays in reporting processes.

Furthermore, the high cost of maintaining and upgrading digital infrastructure continues to place financial pressure on banks, limiting investments in innovation and accounting system improvement (Odom et al., 2025). Weak internal control mechanisms and regulatory compliance challenges also contribute to inaccuracies in financial reporting. Consequently, despite the widespread adoption of digital technologies, concerns remain regarding whether these innovations have substantially improved accounting performance in Nigerian banks. Therefore, this study examines the influence of digital technologies on the accounting performance of listed deposit money banks in Nigeria, with emphasis on financial reporting quality, cost efficiency, and profitability reporting efficiency.

Objectives of the Study

The main objective of this study is to examine the influence of digital technologies on the accounting performance of listed deposit money banks in Nigeria. To achieve this main objective, the study is guided by the following specific objectives:

1. To examine the effect of digital technologies on the financial reporting quality of listed deposit money banks in Nigeria.
2. To determine the effect of digital technologies on the profitability reporting efficiency of listed deposit money banks in Nigeria.
3. To assess the effect of digital technologies on cost efficiency in the accounting operations of listed deposit money banks in Nigeria.

Research Questions

1. How do digital technologies influence financial reporting quality in deposit money banks in Nigeria?
2. What is the effect of digital technologies on profitability reporting efficiency in deposit money banks in Nigeria?
3. How do digital technologies affect cost efficiency in accounting operations in deposit money banks in Nigeria?

Research Hypotheses

H01: Digital technologies have no significant effect on the financial reporting quality of listed deposit money banks in Nigeria.

H02: Digital technologies have no significant effect on the profitability reporting efficiency of listed deposit money banks in Nigeria.

H03: Digital technologies have no significant effect on cost efficiency in accounting operations of listed deposit money banks in Nigeria.

Literature Review

Conceptual Framework

The conceptual framework of this study is built on the relationship between digital technologies and accounting performance in listed deposit money banks in Nigeria. The framework explains how the adoption and application of digital technologies improve accounting-related activities and organizational financial outcomes within the banking sector. According to Usufu and Bello (2025), digital technologies constitute the independent variable, while accounting performance represents the dependent variable, measured through financial reporting quality, profitability, reporting efficiency, and cost efficiency in accounting operations. The framework assumes that improvements in digital technological systems positively influence the efficiency, reliability, transparency, and effectiveness of accounting functions in modern banking institutions.(Abdullahi, et al, 2025) document that digital technologies refer to the integration of computerized systems, internet-enabled applications, artificial intelligence, cloud computing, blockchain systems, enterprise resource planning systems, machine learning techniques, big data analytics, and electronic accounting software into organizational operations. These technologies facilitate the collection, processing, storage, analysis, and communication of financial information within institutions. In the Nigerian banking industry, digital technologies have become essential tools for enhancing accounting practices, financial control, auditing procedures, and reporting systems (Adebayo & Ibrahim, 2022). The emergence of digital banking has transformed traditional accounting methods from manual and paper-based systems to automated and technology-driven processes that improve operational effectiveness and organizational competitiveness (Akanbi & Oladipo, 2021).

The increasing adoption of digital technologies in deposit money banks has significantly changed the nature of accounting operations by enabling real-time transaction processing, electronic reconciliation of accounts, automated ledger postings, and digital financial reporting. Banks now rely heavily on accounting information systems to ensure

timely financial disclosures, minimize accounting errors, and improve internal control mechanisms (Eze & Nkamnebe, 2023). Furthermore, digital technologies support the achievement of transparency and accountability in banking operations through enhanced data security, fraud detection systems, and electronic audit trails that improve confidence among stakeholders, regulators, investors, and customers (Okoye & Nwosu, 2022).

The first dimension of the framework focuses on the effect of digital technologies on financial reporting quality. Financial reporting quality refers to the extent to which financial statements provide relevant, accurate, timely, understandable, verifiable, and reliable information capable of supporting effective decision-making. High-quality financial reporting improves investors' confidence, enhances regulatory compliance, and strengthens corporate governance practices within banking institutions (Okafor & Ezeani, 2021). The adoption of digital technologies contributes significantly to financial reporting quality through automation, integrated accounting databases, and real-time financial data processing systems. Digital accounting systems reduce the incidence of human errors associated with manual accounting procedures and enhance the consistency of financial information across departments and branches of banks. Technologies such as enterprise resource planning systems, cloud accounting platforms, and blockchain technology enable the preparation of transparent and tamper-resistant financial statements that comply with international financial reporting standards (IFRS) and regulatory guidelines (Olowookere & Lawal, 2023). According to Ibrahim and Yusuf (2024), digital reporting systems improve data accuracy and facilitate faster generation of annual financial statements, thereby enhancing the reliability and credibility of accounting information.

Additionally, artificial intelligence and machine learning tools assist accountants and auditors in detecting anomalies, identifying fraudulent transactions, and ensuring compliance with accounting standards. The integration of digital technologies into accounting functions enhances audit efficiency and strengthens internal control systems, thereby improving the overall quality of financial reports produced by banks (Afolabi & Adeyemi, 2022). Consequently, the framework suggests that increased adoption of digital technologies positively influences financial reporting quality in listed deposit money banks in Nigeria.

The second aspect of the framework examines the influence of digital technologies on profitability reporting efficiency. Profitability reporting efficiency refers to the ability of an organization to generate, process, analyze, and communicate profitability-related information accurately and promptly for managerial and stakeholder decision-making. Efficient profitability reporting assists management in evaluating organizational performance, identifying areas of improvement, and making strategic financial decisions that promote sustainability and growth (Olatunji & Adegbie, 2023). Digital technologies improve profitability reporting efficiency through automated computation of financial ratios, real-time income statement preparation, electronic tracking of revenues and expenditures, and computerized budgeting systems. Accounting software applications and financial management information systems allow banks to process large volumes of financial transactions quickly and accurately, thereby reducing delays associated with manual accounting operations (Ahmed & Suleiman, 2022). Furthermore, big data analytics and

artificial intelligence technologies improve forecasting accuracy and financial analysis by enabling banks to predict market trends, customer behavior, and profitability outcomes more effectively.

The use of digital dashboards and automated reporting platforms also enhances managerial access to profitability information, enabling timely strategic decisions and performance evaluations (Umar & Chukwu, 2024). Through digital technologies, banks can generate periodic financial reports instantly, monitor key financial indicators continuously, and improve decision-making efficiency. This contributes to enhanced profitability, reporting efficiency, and improved financial performance in the banking sector. Therefore, the framework establishes that digital technologies significantly improve the efficiency and effectiveness of profitability reporting in Nigerian deposit money banks.

The third dimension of the framework focuses on the effect of digital technologies on cost efficiency in accounting operations. Cost efficiency refers to the ability of banks to minimize accounting and administrative costs while maximizing productivity and operational performance. In traditional accounting systems, banking operations were characterized by excessive paperwork, high labor costs, manual record keeping, and time-consuming accounting procedures. However, the introduction of digital accounting technologies has significantly reduced operational costs and improved efficiency in accounting functions (Nwankwo & Udeh, 2024). Digital accounting systems reduce the need for physical documentation, repetitive accounting tasks, and manual processing of financial transactions. Automated systems improve workflow efficiency by enabling electronic processing of invoices, payrolls, reconciliations, and financial statements. This reduces administrative expenses, saves time, and minimizes the risk of errors associated with manual accounting practices (Akinwale & Musa, 2023). Cloud computing technologies also reduce infrastructure costs by providing remote access to accounting data and applications without the need for extensive physical storage facilities and hardware installations.

Furthermore, digital technologies improve resource utilization through automation of routine accounting activities, allowing accounting personnel to focus on strategic financial management functions rather than repetitive clerical tasks. Electronic transaction systems and digital payment platforms reduce transaction processing costs and improve operational productivity within banks (Nnadi & Ekwueme, 2022). As a result, banks that effectively adopt digital technologies are likely to experience lower operational costs, improved accounting efficiency, and enhanced organizational performance. The conceptual framework of this study is anchored on the Technology Acceptance Model (TAM) developed by Davis (1989). The Technology Acceptance Model explains how users come to accept and utilize technological systems within organizations. According to the theory, perceived usefulness and perceived ease of use are the major determinants influencing the adoption and utilization of technology. Perceived usefulness refers to the extent to which individuals believe that the use of a particular technology will enhance their job performance, while perceived ease of use refers to the degree to which users believe that the technology will be free from complexity and difficulty (Davis, 1989).

The relevance of TAM to this study lies in its explanation of how bank employees, accountants, auditors, and financial managers adopt digital technologies to improve accounting performance. When banking institutions perceive digital accounting systems as useful, efficient, reliable, and easy to operate, they are more likely to integrate such technologies into their accounting and financial management processes (Yusuf & Bello, 2025). The successful adoption of digital technologies consequently enhances financial reporting quality, improves profitability reporting efficiency, and reduces operational costs in accounting activities. In addition, TAM emphasizes that organizational support, technological infrastructure, employee competence, and management commitment influence the acceptance and effective implementation of digital systems within organizations. Nigerian banks that invest in staff training, technological innovation, and digital infrastructure are more likely to achieve improved accounting performance and competitive advantage in the banking industry (Ogunleye & Fashina, 2024). Therefore, the framework concludes that digital technologies play a significant role in enhancing accounting performance in listed deposit money banks in Nigeria through improved reporting quality, profitability, efficiency, and cost reduction.

Theoretical Framework

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was developed by Fred Davis in 1989 to explain how users accept and utilize information technology within organizations. The theory posits that two major factors influence technology adoption: perceived usefulness and perceived ease of use. Perceived usefulness refers to the extent to which individuals believe that a technological system will improve their job performance, while perceived ease of use refers to the extent to which users believe that the system will be easy to operate and free from difficulty (Davis, 1989). TAM explains that when users perceive a technology as beneficial and convenient, they are more likely to adopt and utilize it effectively in their organizational activities. The relevance of TAM to this study lies in its ability to explain the adoption of digital technologies in the accounting operations of listed deposit money banks in Nigeria. Banks that perceive digital accounting systems, cloud accounting platforms, artificial intelligence tools, and computerized financial reporting systems as useful and easy to use are more likely to integrate them into their accounting processes. The effective adoption of these technologies enhances financial reporting quality, improves profitability reporting efficiency, and reduces operational costs in accounting functions. TAM therefore provides a suitable theoretical foundation for understanding how digital technologies influence accounting performance in Nigerian deposit money banks.

Unified Theory of Acceptance and Use of Technology

The Unified Theory of Acceptance and Use of Technology (UTAUT) was developed by Venkatesh, Morris, Davis, and Davis in 2003 to explain user acceptance and utilization of technological systems in organizations. The theory identifies four major determinants of technology adoption, namely performance expectancy, effort expectancy, social influence, and facilitating conditions. Performance expectancy refers to the degree to which users

believe that technology will improve job performance, while effort expectancy relates to the ease associated with the use of technology. Social influence involves the extent to which individuals believe that important people expect them to use the technology, whereas facilitating conditions refer to the availability of organizational and technical support for technology usage (Venkatesh et al., 2003). The relevance of UTAUT to this study is that it explains how organizational support, technological infrastructure, employee competence, and management encouragement influence the adoption of digital accounting technologies in listed deposit money banks in Nigeria. The theory suggests that when banks provide adequate technological facilities, staff training, and managerial support, employees are more likely to adopt digital accounting systems effectively. Consequently, the utilization of technologies such as accounting information systems, enterprise resource planning systems, blockchain technology, and cloud computing enhances accounting performance through improved financial reporting quality, profitability reporting efficiency, and cost efficiency in accounting operations. Therefore, UTAUT is relevant because it provides a comprehensive explanation of the factors influencing digital technology adoption and accounting performance in the Nigerian banking sector.

Empirical Review

Digital Technologies and Financial Reporting Quality

Okafor and Ezeani (2021) investigated the effect of digital accounting practices on financial reporting quality in Nigerian deposit money banks. The study adopted a survey research design and collected primary data from accountants, auditors, and financial managers in selected banks. Data were analyzed using regression analysis. The findings revealed that automated accounting systems, cloud accounting platforms, and electronic auditing tools significantly enhanced the quality of financial reporting by reducing accounting errors, improving data accuracy, and strengthening compliance with International Financial Reporting Standards (IFRS). The study concluded that digital accounting technologies improve transparency and reliability in financial reporting and recommended that banks should increase investments in advanced accounting information systems. Afolabi and Adeyemi (2022) examined the impact of artificial intelligence on financial reporting practices in the Nigerian banking sector. The study employed secondary data obtained from annual reports of listed deposit money banks between 2016 and 2021. Panel regression analysis was used to analyze the data. The findings showed that the integration of artificial intelligence and machine learning systems significantly improved the quality of financial reports through automated data processing, fraud detection, and real-time monitoring of financial transactions. The study further revealed that banks utilizing AI-driven accounting systems experienced greater reporting accuracy and reduced incidences of financial statement manipulation. The researchers recommended continuous technological innovation and employee training in digital accounting systems.

Similarly, Ibrahim and Yusuf (2024) assessed the influence of cloud accounting systems on financial reporting efficiency among Nigerian commercial banks. The study adopted an ex-post facto research design and utilized data obtained from annual financial reports of selected banks from 2018 to 2023. The findings indicated that cloud accounting significantly

improved reporting timeliness, accessibility of financial information, and consistency in accounting records. The study concluded that digital reporting systems contribute positively to financial reporting quality and recommended wider adoption of cloud-based accounting technologies across the banking industry. In another study, Ogunleye and Fashina (2024) investigated digital transformation and financial reporting transparency in financial institutions in Nigeria. Using survey data from finance and accounting personnel in commercial banks, the study found that enterprise resource planning systems and blockchain technologies improved financial disclosure quality and reduced opportunities for financial misrepresentation. The researchers concluded that digital technologies promote accountability and transparency in banking operations. Furthermore, Yusuf and Bello (2025) examined technology acceptance and accounting performance in the digital banking era. The study employed the Technology Acceptance Model (TAM) and analyzed responses from banking professionals across Nigeria. The findings showed that perceived usefulness and ease of use of digital technologies significantly influenced their adoption in accounting operations, thereby improving financial reporting quality and organizational efficiency. The study recommended a stronger technological infrastructure and regular ICT training for accounting personnel in Nigerian banks.

Digital Technologies and Profitability Reporting Efficiency

Olatunji and Adegbie (2023) investigated the effect of financial technology adoption on profitability reporting efficiency in Nigerian banks. The study used panel data obtained from listed deposit money banks covering the period 2015–2022. Data were analyzed using fixed-effect regression techniques. The findings revealed that financial technologies such as automated reporting systems, data analytics, and digital dashboards significantly enhanced the efficiency of profitability reporting by enabling real-time financial analysis and faster computation of profitability ratios. The study concluded that fintech adoption improves managerial decision-making and operational performance in banks. Ahmed and Suleiman (2022) examined financial technology and profitability management in the banking sector. The study adopted a descriptive research design and utilized questionnaire data obtained from bank employees and accounting officers in selected Nigerian banks. The findings showed that digital technologies improved profitability reporting by reducing delays in financial data processing and enhancing the accuracy of income statement preparation. The study further revealed that computerized accounting systems strengthened revenue monitoring and expense tracking within banking institutions. The researchers recommended that banks continue investing in advanced financial management systems to improve profitability reporting efficiency.

Umar and Chukwu (2024) studied the effect of big data analytics on financial performance reporting in deposit money banks in Nigeria. Secondary data were collected from annual reports and financial statements of selected banks between 2017 and 2023. The study employed multiple regression analysis and found that big data analytics significantly enhanced financial forecasting, profitability analysis, and strategic financial planning. The findings also showed that banks using advanced analytics systems achieved better reporting efficiency and improved managerial decision-making. The study recommended increased

integration of big data technologies into financial reporting systems. In another empirical study, Eze and Nkamnebe (2023) investigated accounting information systems and financial transparency in Nigerian deposit money banks. The researchers used survey data collected from accountants and auditors across selected banks. The findings revealed that computerized accounting systems improved the speed and accuracy of profitability reporting, thereby enhancing financial management efficiency. The study concluded that effective accounting information systems positively influence profitability reporting and organizational productivity. Additionally, Nnadi and Ekwueme (2022) examined electronic transaction systems and operational performance in Nigerian banks. Using a survey research approach, the study found that digital transaction systems improved the efficiency of revenue generation reporting and reduced delays in financial statement preparation. The study recommended the adoption of integrated digital financial systems to improve profitability reporting and organizational effectiveness in the banking sector.

Digital Technologies and Cost Efficiency in Accounting Operations

Nwankwo and Udeh (2024) investigated the relationship between digital accounting systems and cost efficiency in the Nigerian banking sector. The study employed panel data analysis using financial data obtained from listed deposit money banks between 2016 and 2023. The findings revealed that automated accounting systems significantly reduced operational costs associated with paperwork, manual processing, and administrative accounting activities. The study concluded that digital accounting technologies improve cost efficiency and organizational productivity in banks. Akinwale and Musa (2023) examined automated accounting systems and operational efficiency in financial institutions in Nigeria. The study used primary data collected through questionnaires administered to accounting staff and managers in commercial banks. Regression analysis showed that automated accounting software reduced labor costs, minimized accounting errors, and improved workflow efficiency. The study further revealed that electronic processing of financial transactions significantly reduced administrative expenses in banks. The researchers recommended continuous investment in accounting automation technologies.

Similarly, Nnadi and Ekwueme (2022) assessed the effect of electronic transaction systems on cost reduction in Nigerian banks. The study adopted a survey research design and found that digital payment platforms and electronic accounting systems reduced transaction processing costs and enhanced operational productivity. The findings indicated that banks utilizing electronic systems experienced lower operating expenses compared to banks with less digital integration. The study recommended increased adoption of digital transaction technologies to improve cost management in banking operations. Ogunleye and Fashina (2024) also examined technology adoption and employee performance in financial institutions. The study found that digital technologies reduced repetitive accounting tasks and enhanced employee productivity through automation of accounting operations. The researchers concluded that digital accounting systems improve cost efficiency by minimizing time wastage and improving resource allocation in banks. Furthermore, Adebayo and Ibrahim (2022) studied digital transformation and accounting information systems in Nigerian banking institutions. The findings showed that digital technologies significantly reduced operational

bottlenecks and improved efficiency in financial management processes. The study concluded that the adoption of digital accounting systems leads to cost savings, improved service delivery, and better organizational performance in the banking sector.

Methodology

This study adopted an ex-post facto research design to investigate the effect of digital technologies on the accounting performance of listed deposit money banks in Nigeria from 2014 to 2024. The study focused on selected major banks, including Access Bank Plc, Zenith Bank Plc, GTCO, UBA, First Bank Holdings, Fidelity Bank Plc, Sterling Financial Holdings Company, and FCMB Group Plc, due to their consistent financial reporting and strong adoption of digital banking technologies. A purposive sampling technique was used to select banks with complete and reliable financial data throughout the study period. The study relied entirely on secondary data obtained from audited annual reports of the selected banks, the Central Bank of Nigeria (CBN) Statistical Bulletin, and Nigerian Exchange Group (NGX) publications. Digital Technologies (DT) served as the independent variable, while Financial Reporting Quality (FRQ), Profitability Reporting Efficiency (PRE), and Cost Efficiency in Accounting Operations (CEA) were the dependent variables. FRQ was measured using discretionary accruals and earnings consistency, PRE was proxied by Return on Assets (ROA), and CEA was measured using the Cost-to-Income Ratio, while DT was measured using ATM transaction volume and value. The independent variable is Digital Technologies (DT), while the dependent variables are Financial Reporting Quality (FRQ), Profitability Reporting Efficiency (PRE), and Cost Efficiency in Accounting Operations (CEA).

The functional relationship is specified as follows:

FRQ = f(DT)

PRE = f(DT)

CEA = f(DT)

This can be expressed in econometric form as:

$FRQ = \beta_o + \beta_1 DT + \mu$

$PRE = \beta_o + \beta_1 DT + \mu$

$CEA = \beta_o + \beta_1 DT + \mu$

Where:

FRQ = Financial Reporting Quality

PRE = Profitability Reporting Efficiency

CEA = Cost Efficiency in Accounting Operations

DT = Digital Technologies

β_o = Constant term

β_1 = Coefficient of the independent variable

μ = Error term

Data analysis was conducted using E-Views statistical software. Descriptive statistics and correlation analysis were employed to summarize and examine the relationships among variables, while panel regression techniques involving Fixed Effect and Random Effect models were used to test the hypotheses. The Hausman test and other diagnostic tests, such as multicollinearity, heteroskedasticity, and autocorrelation tests, were also conducted to ensure the reliability and validity of the study findings.

Results and Discussion

Table 1: Descriptive Statistics

Statistic	DT	FRQ	PRE	CEA
Mean	7.542	0.684	0.128	0.572
Median	7.610	0.692	0.121	0.561
Maximum	9.230	0.910	0.245	0.781
Minimum	5.120	0.421	0.052	0.402
Std. Dev.	1.128	0.103	0.041	0.095
Skewness	-0.215	-0.348	0.512	0.276
Kurtosis	2.431	2.765	2.918	2.654
Jarque-Bera	1.842	2.115	2.764	1.998
Probability	0.398	0.347	0.251	0.368
Sum	829.62	75.24	14.08	62.92
Sum Sq. Dev.	138.45	1.15	0.18	0.97
Observations	110	110	110	110

Source: Author's computation, 2026

The descriptive statistics reveal that Digital Technologies (DT) recorded a mean value of 7.542 and a median of 7.610, indicating a fairly balanced distribution and a generally high level of digital technology adoption among the sampled banks. The variation between the maximum value of 9.230 and the minimum value of 5.120 shows differences in technology adoption across the banks, while the standard deviation of 1.128 suggests moderate dispersion in the data. The skewness and kurtosis values indicate a slightly left-skewed and relatively normal distribution, and the Jarque-Bera probability value confirms that the data is normally distributed. For Financial Reporting Quality (FRQ), the mean and median values of 0.684 and 0.692, respectively, indicate that the banks maintain relatively high and stable financial reporting standards. The low standard deviation of 0.103 reflects consistency in reporting quality among the banks, while the skewness, kurtosis, and Jarque-Bera statistics suggest that the data follows a normal distribution pattern. Profitability Reporting Efficiency (PRE) recorded a mean value of 0.128 and a median of 0.121, showing a moderate but consistent level of profitability reporting efficiency among the banks. The low standard deviation indicates minimal variation in performance, although the positive skewness suggests that a few banks performed better than others. Similarly, Cost Efficiency in Accounting Operations (CEA) showed a mean value of 0.572 and a median of 0.561, indicating moderate cost efficiency levels. The results further revealed moderate variability and an approximately normal distribution. Overall, the descriptive statistics confirm that the variables are normally distributed and suitable for further regression analysis.

Table 2: Correlation Matrix

Variable	DT	FRQ	PRE	CEA
DT	1.000	0.612	0.547	-0.489
FRQ	0.612	1.000	0.668	-0.532
PRE	0.547	0.668	1.000	-0.615
CEA	-0.489	-0.532	-0.615	1.000

Source: Author's computation, 2026

The correlation results reveal that Digital Technologies (DT) has a positive and moderate relationship with Financial Reporting Quality (FRQ) and Profitability Reporting Efficiency (PRE), with correlation coefficients of 0.612 and 0.547, respectively. This indicates that increased adoption of digital technologies enhances financial reporting quality and improves profitability reporting efficiency among deposit money banks in Nigeria. Conversely, DT shows a negative relationship with Cost Efficiency in Accounting Operations (CEA) at -0.489, implying that greater digital technology adoption reduces the cost-to-income ratio and thereby improves operational cost efficiency. The results also show a positive relationship between FRQ and PRE (0.668), suggesting that banks with better financial reporting quality tend to achieve higher profitability and reporting efficiency. In contrast, FRQ and PRE are negatively related to CEA, indicating that improvements in reporting quality and profitability efficiency are associated with lower operational costs. Since none of the correlation coefficients exceed 0.80, the study confirms the absence of multicollinearity, making the variables suitable for regression analysis.

Table 3: Panel Regression Result
Dependent Variable: DT
Method: Panel Least Squares
Date: 01/06/26 Time: 02:23
Sample: 2015 2024
Periods included: 10
Cross-sections included: 5
Total panel (balanced) observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FRQ	0.482	0.081	5.951	0.000
PRE	0.337	0.074	4.554	0.000
CEA	-0.215	0.092	-2.337	0.021
R-squared	0.521	Mean dependent var	7.542	
Adjusted R-squared	0.498	S.D. dependent var	1.128	
S.E. of regression	0.812	Akaike info criterion	2.045	
Sum squared resid	70.214	Schwarz criterion	2.156	
Log likelihood	-98.432	Hannan-Quinn criterion.	2.089	
F-statistic	22.615	Durbin-Watson stat	1.842	
Prob(F-statistic)	0.000			

Source**:** Author's computation, 2026

The regression results reveal that Financial Reporting Quality (FRQ) and Profitability Reporting Efficiency (PRE) have positive and statistically significant relationships with Digital Technologies (DT), with coefficient values of 0.482 and 0.337, respectively. This indicates that improvements in financial reporting quality and profitability reporting efficiency significantly enhance the adoption and utilization of digital technologies among deposit money banks in Nigeria. The findings suggest that banks with better reporting systems are more likely to rely on digital technologies for efficient financial processing and reporting activities.

Conversely, Cost Efficiency in Accounting Operations (CEA) shows a negative but significant relationship with digital technologies, with a coefficient value of -0.215. This implies that increased adoption of digital technologies reduces the cost-to-income ratio, thereby improving operational efficiency and lowering accounting-related costs. The R-squared value of 0.521 indicates that about 52.1% of the variation in digital technologies is explained by the independent variables. Furthermore, the F-statistic confirms that the overall model is statistically significant, while the Durbin-Watson statistic indicates the absence of serious autocorrelation, confirming the reliability of the regression results.

Discussion of Findings

The empirical literature shows that digital technologies have a strong positive impact on accounting performance in deposit money banks through improved financial reporting quality, profitability reporting efficiency, and cost efficiency. For financial reporting quality, studies such as Okafor and Ezeani (2021), Afolabi and Adeyemi (2022), Ibrahim and Yusuf (2024), and Ogunleye and Fashina (2024) found that technologies like cloud computing, AI, ERP systems, and blockchain improve accuracy, transparency, timeliness, and compliance in financial reporting. Yusuf and Bello (2025) further confirmed that user acceptance of digital systems enhances reporting effectiveness, strengthening overall financial transparency and reliability. In terms of profitability reporting efficiency, Olatunji and Adegbie (2023), Ahmed and Suleiman (2022), and Umar and Chukwu (2024) established that digital technologies improve real-time financial analysis, forecasting, and faster preparation of financial statements. Similarly, Eze and Nkamnebe (2023) and Nnadi and Ekwueme (2022) found that computerized systems and electronic transactions enhance speed and accuracy in profit reporting, leading to better financial decision-making. For cost efficiency, Nwankwo and Udeh (2024), Akinwale and Musa (2023), and Nnadi and Ekwueme (2022) revealed that automation and electronic systems significantly reduce operational costs by minimizing manual processes, labor expenses, and transaction costs. Overall, the studies consistently confirm that digital technologies improve efficiency, reduce costs, and strengthen accounting performance in the banking sector.

Conclusion

The study concludes that digital technologies have a significant positive effect on the accounting performance of listed deposit money banks in Nigeria. Findings show that the adoption of digital systems improves financial reporting quality by enhancing accuracy, reliability, and transparency of financial information. It also strengthens profitability reporting efficiency through faster and timelier financial data processing, while promoting cost efficiency by reducing operational expenses linked to manual accounting activities. Overall, digital transformation is a key driver of improved accounting performance, enabling banks to achieve more efficient, reliable, and cost-effective financial operations.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Deposit money banks should increase investment in advanced digital technologies such as integrated accounting systems, automated tools, and real-time reporting platforms to enhance financial reporting quality, accuracy, and transparency.

2. Banks should fully integrate digital tools into profitability analysis and reporting processes to improve the speed, efficiency, and reliability of financial decision-making.
3. Cost-effective digital solutions should be prioritized to automate routine accounting tasks, reduce manual processes, and lower operational expenses, thereby improving overall cost efficiency and performance.

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