

Fintech and the Growth of the Nigerian Financial Sector

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Article History	Abstract
Original Research Article	<i>This study was undertaken in order to analyze the effect of financial technology on growth of the Nigerian financial sector. Central Bank of Nigeria Statistical Bulletin (2009-2024)- Time series data the dependent variable was financial sector growth and the independent variables of financial technology were measured in monetary values as the ATMs, POS, Web Payment transactions, Mobile Payment transactions Electronic Fund Transfer. Data analyses were conducted with the use of Ordinary Least Squares (OLS). The analysis component comprised the R-square, adjusted R square, Durbin-Watson, probability value and regression coefficient of financial sector growth over financial technology as well as F-statistic and probability values. During the study, it was found that variation in financial technology variables explained 64.9% of the total variability of growth for the financial sector. Another finding of the study was that relationships Automated Teller Machine transactions and financial sector growth were negative but insignificant; Point of Sale transactions positively but insignificantly with financial sector growth. Web Payment transactions had a positive but not significant impact on financial sector growth as well. Mobile Payment transactions have a negative and significant effect; Electronic Fund Transfer has a positive and significant impact on the growth of financial sector. Conclusion and policy: Given the result presented above, in this study, we find that financial technology drives the expansion of the Nigerian financial system. The study recommended the implementation of policies preventive to the utilization and modernization of financial technology in commerce and financial transactions. To reinvigorate banking sector deepening, strengthen financial dissemination and promote financial inclusion, Central Bank of Nigeria should stimulate innovation in the space of Fintech. The sufficient evidence also called for a disaggregated evaluation of the independent impacts of each fintech measure on private sector credit in Nigeria. It also advised broadening the availability and accessibility of Automated Teller Machines so that they are widely used and assist in the expansion and deepening of the financial sector.</i> Keywords: Fintech, Growth, Nigerian Financial Sector, Automated Teller Machine, Point of Sale.
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Copyright © 2026 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited. Citation: Dr. E.N. Maduba, & Dr. J.C. Amadi. (2026). Fintech and the growth of the Nigerian financial sector. UKR Journal of Multidisciplinary Studies, 2(8), 229-244.	

Introduction

The financial market can broadly be divided into two main segments: short-term funds called the money Market and long-term funds which are deals under capital market. The liquidity level of the financial instruments traded in each market is a huge basis for differentiating money market from capital market. The capital market is classified further into two sub markets which are primary and secondary. The primary market deals with the raising of new funds through the sale of securities, while the secondary market exists to provide a place for existing (in terms of ownership)

investors in a security to buy and sell it. When they need funds, however, savers who bought bonds and shares when they have surplus money take this form of secondary market in transaction to sell such securities if they want their money back (Salawu et al., 2025).

In the last two decades, the financial sector began increasingly using new channels of service enabled by advances in information technology. The development of the financial marketplace has been largely driven by the

need for financial institutions to be give a constant response to three major overlapping factors susceptibility of customers to extra-focused service and age-related changes and changing social trends which would in turn affect changes in technical evolution, distribution channel strategies as well as deregulation towards marked expansion of many areas of nautical services from government/ through national and local measures at levels. The performance and challenges faced by financial institutions is thus partially reliant upon management's capacity to foresee and respond adaptively to shifts in the financial setting. To truly create sustainable competitive advantage in the tech-led financial services space, forces have realised that consumption happens wherever effective distribution channels exist. This has spurred the development and adoption of alternative customer access channels, especially in the context of applied artificial intelligence and other digital technologies.

Artificial intelligence technology has revolutionized the banking and finance industry. Traditional banking practices and financial services have changed with AI technology that allow institutions to analyze huge amounts of data, detect patterns, and assist in decision-making based on ultra-reliable analytics. The use of AI in banking and finance helps drive productivity, decision making, operational cost reduction and customer satisfaction. AI is one of the major contributors to developments that have taken place in recent years, altering operations, customer engagements and risk management in the banking industry. AI allows banks to leverage large amounts of data to take more informed decisions and derive insights that would be valuable. This has aided in more precise risk assessment, enhanced fraud detection and better investment techniques. For instance, this has made processing transactions faster due to easier account management making it easy for customers (Adegbite & Akinola, 2021). Fraud detection continues to be one of the key areas where AI is applied in banking and finance. Traditional rule-based systems have particular difficulty responding to rapidly scaling and ever-evolving fraud schemes. On the other hand, AI algorithms are capable of processing high volumes of transactional data, in real-time and with more accuracy in identifying abnormal patterns and potential fraud. By identifying and diverting fraudulent behavior, this skill ensures that both customers and financial institutions are safeguarded from fraud. Another area in the Banking sector whereby AI has improved credit scoring (Adebayo & Olawale, 2021). Conventional credit scoring techniques tend to rely on a small number of factors, which may result in poorer risk assessments of borrowers. Credit evaluation is far more accurate than traditional credit scoring process because AI-based credit scoring models uses machine learning algorithms to evaluate a larger variety of variables and

historical data. AI models act as assistive tools to lenders by identifying different patterns, combining multiple parameters to make better credit decisions, minimising the risk of defaults and helping banks manage their loan portfolios more efficiently.

Even though financial technology and AI have become the new buzz words in recent years, affinity towards financial technology is not a new concept; technologies like automated teller machines, mobile phone transactions etc. make it easy to forget this fact. But lately, the internet has provided another delivery channel wherein banking transactions get more straightforward for customers and financial institutions, thus improving & reshaping the scope of fintech. Financial technology services include the ability to make transactions, manage your accounts and access personalized information about your finances. Fintech, in a wider sense, is the technology and supporting system (such as software) that it uses to deliver financial services using final customers and communication technologies paired with telecom devices. Digital technology made its way into the Nigerian financial sector suddenly and it transformed speedily. However, there is ongoing debate as to how much these advances in technology have enhanced participation, access and efficient use of financial services in Nigeria.

So many studies have been conducted on the influence of financial technology and financial performance, for instance, Hussein and Elyjoy (2018) checked influence of internet banking on operational performance of banks. Akara and Asekome(2018) studied the impact of cashless policy adoption on commercial bank profitability performance in Nigeria. Jumba and Wepukhulu (2019) studied the impact of cashless payments on financial performance of supermarkets in Nairobi County while Ogutu and Fatoki (2019) investigated the effect of electronic banking on financial performance of listed commercial banks in Kenya. Consequently, the objective of the study was to investigate the impact of financial technology on the development of financial services in Nigeria. In the study the following null hypotheses were tested;

H₀₁: There is no significant relationship between Automated Teller Machines and financial sector growth in Nigeria

H₀₂: There is no significant relationship between point of sales and financial sector growth in Nigeria

H₀₃: There is no significant relationship between web pay and financial sector growth in Nigeria

H₀₄: There is no significant relationship between mobile pay financial sector growth in Nigeria

H05: There is no significant relationship between electronic fund transfer and affect financial sector growth in Nigeria

Literature Review

Conceptual Review

Financial Technology

Financial technology is the approach by which banks use information and communication technology (ICT) and other electronic means for transactions and interaction with stakeholders. It is broader than the definition of Daniel (2018), and it discloses the important role of information and communication technologies. Abid and Noreen also characterized financial technology as a cashless electronic payment system in which transactions are conducted electronically. According to Ali et al. Financial technology has a large fit for all sectors of finance, including both implications for traditional finance and Islamic finance (2019). Yet, the Islamic banking (IB) industry response to fintech rise and its future prospects has been much slower than that of conventional banks (CBs). This may be due to their different business models especially that Islamic banks work on profit-and-loss-sharing principle. It is important to remember that Islamic banks must also abide with Shari'ah principles where they receive assistance by establishing & implementing new financial services after confirmation from the Shari'ah supervisory boards.

Thakor (2020) contended that information technology could stimulate the creation of niche firms that have the ability to make markets with products aligned better with customer desire. Since the emergence of different technology, financial services have not been offered only by traditional financial institutions. Several companies have entered into the sector to operate with new fin tech services and provide competition to banks/commercial firms. Insurtech Solutions: The emergence of Fintech technology has made it possible for several tech businesses to use the Financial Technology platform with primarily insurance services managing crowdfunding, micro-lending other digital payments, money transfers, savings and robo-advisory services through native blockchain & cryptocurrency or wealth management solutions. These start-ups have widened their reach into various spheres of finance and turned services such as lending, payments and investment into technology-driven processes that are significantly faster, easier, and cheaper.

Measures of Financial Technology

E-banking

The links between the banking sector and financial technologies have existed for a long time and are unlikely to break down in the future. Recently, however, it has

mostly been linked with the internet although technological improvements from many decades ago were essential to the development of banking. This paper is not only talking about the impact of introducing new technology but also highlighted a significant technological invention such as during the 17th century, paper came into existence or punch cards in the 20th century. However, not all technological advancements were clear lines of progress or improvement in banking.

One of the reasons is managements have been very conservative for newer technologies. Beyond the sheer costs involved, one big caveat is that for changed business processes, solutions need to work at least as well as their predecessors. Consequently, Lamberti and Büger (2009:169) suggested that "disruption of high-tech in the banking industry is a matter of management rather than technology". As century was winding down, scalability, particularly the ability to handle more and more data grew in importance as a part of management's decision making processes concerning whether or not to adopt various technologies. This was mainly due to the fact that transaction and data volumes were increasing so much that they could no longer be handled without technological development (Lamberti & Büger, 2009). However, with the emergence and growth of e-banking, the problem of managing growing transaction volume has largely been addressed.

Internet Banking

E-banking can be divided into different types. Two popular types of e-banking services, i.e., internet banking and the comparatively newer mobile banking, are embraced in this study to explore their relative impact on bank performance. Internet banking is the ability for customers to carry out banking transactions using the internet as a remote channel. It allows clients to do multiple banking transactions from home, ranging from the opening of accounts and transferring money to making payments within the virtual environment. Tan and Teo (2000) viewed internet bank as a "one stop" service & information centre that has laid the groundwork for numerous other banking products and services. Many other studies (e.g. Hernando & Nieto, 2007) showed that internet banking is used mainly as a supplementary way of making transactions rather than being a total replacement for bank branches and ATMs. It's part of a deeper reality that can be seen as a positive for traditional banks — the fact that digital banking never entirely replaced physical branches.

Mobile Banking

Mobile banking is the use of a mobile device to conduct banking operations. Internet banking was introduced in the early 2000s as it was started while developing internet

banking. Early mobile banking services were quite simple with little interactivity, due in large part to the security issues of transferring critical banking services to mobile devices. SMS, which allowed customers to get basic information about their banks — like checking their account balance. Early doors there was uncertainty, and numerous thought the imaginable utilizes the advantages of portable banking would be fundamental. But it was mobile banking that only really started to gather steam from the onset of the smartphone. Smartphones allowed banks to deliver services which they could offer through computers but also it increased the customers' demand for mobile banking services. Mobile banking has evolved through various phases and includes several interconnected technologies, so it is essential to specify the technology and services being described by this concept.

Automated Teller Machine (ATM)

As per Ighoroje and Okoroyibo (2020), Automated Teller Machine (ATM): Automated teller machines are computer-controlled devices that allow customers to access cash and other bank services by entering a personal identification number (PIN). The creation of ATMs has massively decreased the need for clients to carry large amounts of money around with them and those consistent visits to bank branches. With the ATMs, cash can be drawn at any given point even during the late-night hours and the machines may or may not have to be within bank premises. You can also find them in stores, shopping malls and filling stations. This is different from the conventional banking system, where the customers wait in long queues to withdraw cash and transfer money. ATM one of the most used electronic transaction solutions in Nigeria since ATMs create more ease for cash withdrawal and also balance inquiry (Ighoroje & Okoroyibo, 2020).

However, in spite of the success enjoyed by ATMs, their impact has not been as pronounced as expected; many notes continue to circulate within the Nigerian economy. ATMs, as most Nigerians still primarily use them just as ATMs, so the only implication that has started cashless economy. Due to poor ATM infrastructure, most customers are not taking the advantage of other ATM services such as fund transfer, mobile phone credit recharge and bill payments.

Electronic Payment Systems

More than ever, folks all over the planet are using electronic payment (e-payment) systems where many transactions that used to be done with cash now get settled electronically. The Committee on Payments and Market Infrastructures (CPMI) says the innovations in instant electronic payment services, especially through mobile payment systems are forcing a growing domestically and cross-border pressure on the traditional bank-based payment system.

Manyika et al. (2017) noted that card payments (electronic payment systems) have gained more popularity across the globe. To illustrate, the share of electronic payment systems almost tripled through the years (13 per cent in 2000 to around 40 percent as of 2016). Additionally, in some countries (Germany or Japan or Mexico), the value of an annual transaction made using card payment methods was about 10% of all transactions for a year. 47It varied between 15% — 35% in the case of e-payment usage from countries such as Aristotle, Brazil, Canada, India, Korea Russia Singapore Sweden Switzerland Belgium China France Hong Kong Italy and Netherlands South Africa Turkey. That number was particularly important when it came to the adoption of electronic payments, with Saudi Arabia, the U.K. and the United States all averaging closer to 40% usage each.

Financial Sector Growth

As stated by Ikikii and Nzomoi (2013), financial development can be simply defined as an evolution of the financial system, which includes innovations in finance as well as institutional and organizational improvements. These processes work together to mitigate information asymmetry, enhance market completeness and contracting opportunities, reduce transaction costs and foster increased competition. Inanga and Emenuga (2007) noted that domestic financial development can be encouraged via domestic reforms designed to eliminate barriers to financial integration given that increased competition from more sophisticated or lower-cost foreign financial intermediaries will compel ultimate local intermediaries to reduce their markup. As a result, such competitive pressure lowers firms' and households' cost of financial services and therefore helps local financial markets grow in countries with less developed financial systems. Sometimes foreign financial institutions may also offer additional financial services. Consequently, the relationship surrounding financial development and also financial integration is held in high esteem owing to significant evidence linking financial development with economic growth as captured by Atoyebi (2013).

Artificial Intelligence in Financial Services in Nigeria

The global financial sector is undergoing a technological revolution led by Artificial Intelligence (AI), and Nigeria is not left in this dispensation. AI features includes advanced technologies like machine learning, natural language processing, robotics specific to the domain and predictive analytics works by simulating human intelligence to accomplish tasks in decision making, analysis of data and problem solving (Russell & Norvig 2021). AI technologies are being embraced to enhance operational efficiencies, risk management and customer engagement in Nigeria's financial sector. In Nigeria, for instance, banks and

financial institutions have been in the business of utilizing artificial intelligence to support operational decision-making in areas like credit scoring, fraud detection and compliance monitoring using AI-powered algorithms. Automated chatbots and virtual assistants provide support to customers for basic queries, whereas machine learning models study transaction trends to identify fraud as it occurs. AI-powered analytics also help financial institutions create personalized offerings for their customers. However, in Nigeria, numerous factors still limit AI adoption such as inadequate digital infrastructure, high costs of implementation and a shortage of skilled workforce creating uncertainty in the regulations around the technology. Additionally, the technologies that make use of AI have not been sufficiently built out in many financial institutions – especially smaller and more rural ones. Moreover, the twists and turns of data privacy, AI governance unease are added obstacles to many financial institutions (CBN 2023). The important point is to confront these barriers in order to completely unlock the power of AI for Nigeria's financial services sector.

The intersection of AI adoption in risk management and financial stability is particularly critical for emerging markets like Nigeria. Nigeria's financial system is vulnerable to external shocks, including oil price volatility, currency depreciation, and governance challenges (IMF, 2022). AI adoption enhances micro-prudential regulation by equipping financial institutions with tools to detect, assess, and manage risks more effectively, reducing the probability of institutional failures that could spill over into systemic crises (World Bank, 2021).

AI's contribution to financial stability extends to its role in fostering regulatory compliance. Regulatory technologies (RegTech) based on AI streamline compliance with complex regulatory frameworks, including anti-money laundering (AML), Know Your Customer (KYC), and Basel III capital adequacy requirements (Arner et al., 2017). These technologies enhance transparency, reduce compliance costs, and improve the accuracy of reporting processes, ultimately strengthening confidence in the integrity of Nigeria's financial system. In summary, the integration of AI into risk management practices addresses key vulnerabilities in Nigeria's financial sector, improves institutional soundness, and fosters a more resilient financial system. The convergence of AI and financial stability underscores the importance of leveraging technological advancements to achieve macroeconomic stability and safeguard financial sector integrity in Nigeria.

Theoretical Framework

Developer-Based (Diffusion) Theory

Rogers (1995) developed the Diffusion of Innovation Theory which includes factors interacting to explain the

diffusion of an innovation. Four major elements are deemed to influence the diffusion process: (1) the innovation itself, (2) communication about the innovation, (3) time, and (4) the social system within which it is introduced (Rogers in 1995). This suggests that also the theory can aid and strengthen our understanding on how financial innovations might affect financial performance. Human capital is also a decisive factor in the diffusion process. MacKenzie (1996) argues for an innovation to be considered self-sustaining, it must be widely adopted. MacKenzie (1996) built this concept on saying that in the process of adoption an innovation reaches a critical mass. Hence, diffusion can be varied in its form and is greatly dependent on the traits of adopters and the innovation-decision process. Research uses innovativeness to classify adopter types, which is the extent one is open to adapt a new idea.

Bank Focused Theory

The theory is based upon the premise that banks deploy nontraditional but classical low-cost distribution channels to supply services to their thousands of clients (Kapoor, 2010). These channels consist of Automated Teller Machines (ATMs), internet banking, Point of Sale (POS) terminals, and many others. Using these channels, banks can cross-sell everything to the customer with no regard for where he/she lives or which branch his/her accounts are domiciled. The transaction will be completed without not much effort needed from the customer, who needs to enter relevant information within the system. However, the bank focused model has some benefits and related issues such as financial institution visibility collar (Kapoor, 2010). The service experience quality, identity and transaction security, service reliability and reachability as well as personalization are the major concerns for customers. To these concerns, banks offer branchless banking services that are backed by simple to use and easy to understand interfaces (Kapoor, 2010).

Bank-Led Theory

This theory called "branchless banking by Lyman, Ivatury, and Stachen (2006)" is based on the bank-led type of branchless banking whose main role agents in this model are intermediaries between banks and customer. This model provides an intermediary between the agent and bank customers who deals with cash flows and deposits (Owens, 2006). The core bank-centric approach to branchless banking consists of the use of retail agents to deliver financial services on behalf of a licensed financial institution, typically a bank. The financial products and services are created by the bank, but the agents sell these and deal with most aspects of customer engagement. Yet the bank is still behind the financial services, and customers preserve their accounts with bank.

Non-Bank-Led Theory

This theory was propounded by Hogan in 1991. According to Lyman, Ivatury and Staschen (2006), the theory suggests that customers do not necessarily deal directly with a bank or maintain a conventional bank account. Instead, they interact with non-bank firms that provide financial services through alternative channels. Such non-bank firms may include mobile network operators, prepaid card issuers, or retail agents. Under this model of branchless banking, the bank may have little or no direct involvement in the customer relationship. Rather, customers access financial services through non-bank service providers, while mobile network operators, prepaid card issuers, and retail agents serve as the primary points of contact between customers and the financial service system.

Technology Acceptance Model (TAM) Theory

The Technology Acceptance Model (TAM), postulated by Davis (1989), states that perceived usefulness and perceived ease of use are the main determinants of technology acceptance and that these factors influence an individual's intention to adopt and use a particular technology. The theory was adapted from the Theory of Reasoned Action (TRA) developed by Ajzen and Fishbein (1980) and is also closely related to the Theory of Planned Behaviour (TPB) developed by Ajzen (1985). TAM is specifically tailored to explain individuals' acceptance and use of technology and, therefore, provides a suitable theoretical basis for understanding how cash-handling practices may influence financial performance. According to Bátiz-Lazo (2018), the intention to use technology serves as a mediator between an individual's perception and the actual adoption of the technology. The decision to adopt a technology follows several stages, beginning with external variables such as individual user beliefs, characteristics, and differences in Information Technology. These factors influence the user's evaluation of the technology, which is reflected in Perceived Usefulness (PU) and Perceived Ease of Use (PEU).

Empirical Review

Okoye *et al.* (2024) examined "Accelerating SME Growth in the African Context: Harnessing Fintech, AI, and Cybersecurity for Economic Prosperity." The study focused on the rapidly changing African economic environment and the growing importance of small and medium-sized enterprises (SMEs) as drivers of sustainable development. It examined how financial technology (Fintech), artificial intelligence (AI), and cybersecurity could be utilized to promote SME growth and contribute to economic prosperity in Africa. The study noted that Fintech has the potential to transform financial services by improving SMEs' access to finance, facilitating seamless transactions,

and automating financial processes. The integration of AI further provides SMEs with data-driven insights that can improve operational efficiency, support informed decision-making, and create customized customer experiences. However, the increasing adoption of Fintech and AI also exposes SMEs to greater cybersecurity risks, making strong data protection, threat intelligence, and resilient digital infrastructure essential. The study therefore emphasized the need for policymakers, financial institutions, and technology companies to create an enabling environment that promotes innovation, improves digital literacy, and protects digital ecosystems. The review further reported that PayStack ($\beta = 0.705$), Branch ($\beta = 0.602$), PiggyVest ($\beta = 0.602$), and Mines ($\beta = 0.235$) had positive effects on the performance of deposit money banks, while NetPlus ($\beta = -0.227$) had a negative effect at the 5% level. Furthermore, digital innovation in the banking industry had a significant relationship with bank performance in Nigeria ($F = 532.13$, $R = 0.96$, $R^2 = 0.922$, $p < 0.05$). Overall, the study highlighted the strategic importance of integrating Fintech, AI, and cybersecurity to enable African SMEs to overcome contemporary business challenges, encourage innovation, create employment, and contribute to long-term economic development.

Similarly, Okoye, Okere, Ogechukwu-Onyema, Udeoba and Adegbite (2024) examined the role of Fintech in the performance of deposit money banks and SMEs in Nigeria. The study adopted an ex-post facto research design and utilized secondary data, which were presented and analyzed using quantitative techniques. The Auto-Regressive Distributed Lag (ARDL) technique was employed to examine the relationship between Fintech and the performance of deposit money banks and SMEs. The findings revealed that financial technology had a significant effect on the performance of deposit money banks in Nigeria, as indicated by an F-calculated value of 1234.17, which was greater than the F-critical value of 3.11. The study also found that financial technology had a significant impact on the performance of small and medium-sized enterprises in Nigeria. Based on these findings, the study recommended that deposit money banks should intensify efforts to encourage customers to increase their utilization of Fintech products. It further recommended that SMEs should be encouraged to adopt Fintech solutions because of their demonstrated potential to support business development and improve organizational performance.

Godwin (2024) empirically examined the relationship between financial technology (FinTech), proxied by Internet Banking and Mobile Payment, and business growth, measured through productivity and operational efficiency, among Small and Medium-scale Enterprises (SMEs) in Port Harcourt. The study was anchored on the

Technology Acceptance Model (TAM) and Diffusion of Innovation Theory (DIT). A cross-sectional research design was adopted, with a population of 1,016 registered SMEs in Port Harcourt and a sample size of 287 respondents. Spearman's Rank Correlation and Partial Correlation were employed to test the five hypotheses formulated for the study. The findings revealed a positive and significant relationship between financial technology innovation and business growth. Based on these findings, the study concluded that financial technology innovation serves as an effective business solution and a valuable management strategy that SMEs can utilize to improve business growth. The study therefore recommended that SMEs seeking to enhance their growth should invest more in FinTech innovations, particularly Internet banking and mobile payment solutions, because these digital technologies significantly improve productivity and operational efficiency.

Harrison (2024) investigated the contribution of Information and Communication Technology (ICT) to the growth of entrepreneurship in Nigeria. The study noted that the widespread adoption of social media and digital applications has made ICT an important component of the day-to-day operations of entrepreneurial activities. A desk research approach was adopted, through which relevant literature on the effects of ICT on entrepreneurship growth was reviewed. The findings revealed that ICT provides considerable opportunities for youth empowerment, employability, and employment creation through business development. However, the study identified several challenges, including inadequate entrepreneurship orientation, unstable electricity supply, insufficient ICT infrastructure, shortage of skilled technicians and technologists, limited access to finance, and weak marketing capabilities. These challenges constitute significant obstacles to the sustainability and growth of entrepreneurial ventures. The study therefore recommended that government and other stakeholders should create a supportive environment for ICT infrastructure development to facilitate entrepreneurship growth. It further recommended the establishment of ICT training facilities by relevant government agencies and stakeholders to improve entrepreneurs' technical and technological competencies, enabling them to increase output, retain existing customers, access wider markets, and improve their entrepreneurial activities, particularly through the development of innovative products that address societal challenges.

Emmanuel *et al.* (2024) examined the role of Information and Communication Technology (ICT) in the growth and development of Small and Medium Enterprises (SMEs) in Anambra State, Nigeria. The study emphasized that

information and communication technologies have become critical resources for modern business management and can enable organizations to gain competitive advantage. The benefits of ICT adoption among SMEs identified in the study include improved productivity, effectiveness, efficiency, and customer satisfaction. However, SMEs in Anambra State face several challenges in effectively utilizing ICT, including inadequate infrastructure, management information system constraints, and limited financial and other resources. The primary objective of the study was to assess the extent to which ICT contributes to the growth and success of SMEs in the state. The study adopted a stratified random sampling approach and collected data from SMEs operating across different sectors, including pharmaceutical, manufacturing, textile, telecommunications, and other business areas. The findings provided insights into the factors influencing ICT adoption and ownership patterns among SMEs, as well as the moderating effects of different business categories on technology utilization. The study concluded with recommendations for policymakers and SME owners to strengthen the effective integration of ICT as a means of promoting the growth and development of the SME sector in Anambra State.

Kifordu (2024) examined the impact of FinTech on the growth of Small and Medium-sized Enterprises (SMEs) in Nigeria from a management perspective. The study adopted survey, desk research, and ex-post facto research designs. Primary data were collected through a Google Form containing eighteen questions covering respondents' age, gender, and use of FinTech solutions, while secondary data were obtained from the Central Bank of Nigeria Statistical Bulletin for 2022. The study examined financial technology indicators provided by financial institutions in Nigeria between 2009 and 2021, including Automated Teller Machine (ATM) transactions, Mobile Banking Services, Internet Banking Services, Point of Sale (POS) transactions, and SME growth rate measured through SME contribution to GDP. The study concluded that FinTech solutions provide SMEs with improved tools for monitoring and organizing financial information, enabling better financial decision-making and enhancing their overall financial performance and contribution to the Nigerian economy. However, challenges remain within the sector. The study therefore recommended that Nigeria should develop policies that encourage SMEs to adopt FinTech solutions and that relevant government agencies should provide SMEs with adequate guidance and training on how to effectively utilize FinTech services.

Dermaku *et al.* (2023) examined the relationship between FinTech development and the performance of banks in Kosovo using 49 observations recorded at three-month

intervals. The study relied on secondary data, with net profit of selected banks used as a proxy for bank performance, while ATMs, POS transactions, and electronic payments were used as proxies for FinTech development. The study employed the Ordinary Least Squares (OLS) approach together with diagnostic tests for heteroscedasticity, specification errors, autocorrelation, and multicollinearity. The findings indicated that bank net profit was significantly influenced by variations in ATM transactions and electronic payments. ATM payments had a negative effect on bank net profit, while electronic payments had a positive effect. Specifically, a 1% increase in ATM payments was associated with a 0.30% reduction in bank net profit, whereas a 1% increase in electronic payments resulted in a 0.10% increase in bank net profit. POS payments were also found to have a negative effect on bank net profit.

Diyaolu and Oso (2023) proposed a conceptual model for assessing the factors influencing ICT use among SMEs and conducted a survey in the Oyo South Senatorial District of Oyo State, Nigeria. A total of 73 SME operators were randomly selected as the sample for the study. Descriptive statistics, including frequency counts and percentages, were used to describe the respondents and assess the level of ICT use, while regression analysis was employed to examine the relationship between technology, organizational, and environmental characteristics and ICT utilization. The findings revealed that ICT use had a significant positive relationship with the constructs of the Technology-Organization-Environment (TOE) framework. The study further established that the TOE constructs jointly influenced ICT adoption and utilization among SMEs.

Olukorede *et al.* (2023) investigated the effect of cashless policy channels on bank patronage using responses obtained from 410 customers of Stanbic IBTC Plc in Katsina town, Nigeria. The study employed descriptive statistics and multiple regression analysis to achieve its objectives. The findings revealed that ATM transactions had a significant negative effect on bank patronage, while POS transactions had no significant effect. Web transactions had a positive and significant effect on patronage, whereas mobile banking had a negative but significant effect on patronage at Stanbic IBTC Plc, Katsina. The authors concluded that if deposit money banks in Nigeria make cashless policy channels more functional, reliable, and secure, bank patronage could be enhanced. They recommended that Stanbic IBTC Plc should ensure that ATMs remain functional 24 hours a day and adequately funded to encourage customer patronage. They further recommended that deposit money banks should deploy information technology solutions to make POS and other cashless transactions safer and more secure, provide incentives for customers using Internet banking platforms,

and introduce mobile banking solutions compatible with all types of mobile phones.

Hajja (2023) investigated the effects of Information and Communication Technology (ICT) adoption on the performance of technology-based Small and Medium-sized Enterprises (SMEs) in the Maiduguri Metropolitan Area of Borno State, Nigeria. The study adopted descriptive and causal research designs, with a population comprising 1,595 ICT-based businesses, from which a sample of 350 respondents was selected using convenience sampling. Primary data were collected through a structured instrument based on a five-point Likert scale containing both open- and closed-ended questions. Data obtained from 335 respondents were analyzed using descriptive and inferential statistics with the aid of SPSS version 24. Descriptive statistics, including mean and standard deviation, were used to describe the characteristics of the study variables and answer the research questions, while multiple linear regression was employed to examine the relationships between the independent and dependent variables using the p-value as the basis for statistical inference.

Heman and Anna (2023) examined the impact of the cashless economy on small business operators in Borno State, Nigeria. The study adopted a mixed-method approach involving surveys, interviews, observations, and focus group discussions to collect information from small business operators across the state. The research questions examined the perceived impact of the transition to a cashless economy on business performance, the major challenges faced by small business operators in adapting to the cashless system, the extent to which government policies and initiatives support their growth, and the opportunities created by the cashless economy. Data were collected through questionnaires administered to small business operators and analyzed using descriptive statistics and hypothesis testing. The findings showed that the transition to a cashless economy had a perceived impact on the performance of small business operators. However, significant challenges were identified, including high transaction costs, limited access to digital infrastructure, network outages, lack of bank accounts among customers, low customer awareness, inadequate financial education, and limited support for acquiring and maintaining electronic payment devices. The study therefore recommended that government should intensify efforts to address these challenges in order to facilitate the effective implementation of the cashless policy.

Obi (2023) examined the impact of the government's cashless policy on the performance of small-scale enterprises in Southeast Nigeria. The study focused on the availability of required electronic payment facilities, the effectiveness of e-payment administration, and the effect of

the cashless policy on SME performance in the region. A descriptive survey design was adopted, and data were collected through a researcher-developed questionnaire administered to 500 respondents randomly selected from five states in Southeast Nigeria. The data were analyzed using percentages and SPSS statistical tools. The findings revealed inadequate availability of e-payment facilities and insufficient IT skills for managing electronic payment transactions among a large proportion of the respondents. The study further found that the e-payment system was ineffective in supporting SME management and had a significant negative impact on the performance of SMEs in Southeast Nigeria. The study recommended increased awareness and sensitization regarding the cashless economy, as well as adequate provision and modernization of e-payment facilities to improve the effectiveness of the policy.

Olaniyi (2022) examined the impact of Financial Innovation (FI) on the growth of Small and Medium-scale Enterprises (SMEs), using evidence from the North-Central States of Nigeria. The study specifically investigated the effects of Process Innovation (PrssI), Product Innovation (PrdtI), and Institutional Innovation (InsI) on Opening up of New Markets (ONM). Primary data were obtained through questionnaires administered to 251 respondents comprising employees and owners of 10 SMEs each in Jos, Lokoja, and Lafia in Plateau, Kogi, and Nasarawa States respectively. The reliability of the research instrument was established using Cronbach's Alpha, with each construct recording an alpha coefficient above 0.6. The correlation matrix showed that all explanatory variables were positively associated, with correlation coefficients below 0.7, indicating the absence of multicollinearity. The regression results further revealed that all the explanatory variables significantly influenced the opening of new markets, while their combined effect accounted for approximately 56% of the variation in ONM, as indicated by the coefficient of determination (R^2). The study concluded that financial innovation can significantly support SME growth and recommended its wider adoption among SMEs in Nigeria to enhance their competitiveness in the global market.

Nwankwo, Eze and Kanyangale (2022) examined the effect of cashless economy channels on entrepreneurship development in Anambra State, Nigeria. The descriptive study considered Internet banking services, Automated Teller Machines (ATMs), and crowdfunding as the explanatory variables, while entrepreneurship development served as the dependent variable. The study population comprised 3,574 owner-managers of manufacturing Small and Medium Enterprises (SMEs) in Anambra State, from which 344 owner-managers were selected using simple

random sampling. Data collected through structured questionnaires were analyzed using correlation and multiple regression analyses. The findings revealed that Internet banking services, ATM services, and crowdfunding had positive effects on entrepreneurship development. The study concluded that cashless economy channels significantly and positively influence entrepreneurship development. It recommended an integrated and intensive awareness campaign to educate citizens on the benefits of cashless economy channels for business performance, survival, and customer satisfaction. The campaign should also be supported by adequate security mechanisms, user-friendly services, reliable ATMs, affordable transaction fees, and ATM features that enable customers to make deposits.

Similarly, Ogunmuyiwa and Amida (2022) examined the impact of electronic payment systems on entrepreneurial activities in rural areas of Ogun State, Nigeria. The study adopted a survey research design and selected 385 owners of micro and small enterprises using purposive sampling. Data collected through questionnaires were analyzed using the Ordinary Least Squares (OLS) regression technique. The findings revealed that electronic payment systems through Automated Teller Machines ($\beta = .148$; $t = 2.587$; $p = .010$), Point of Sale systems ($\beta = .173$; $t = 3.461$; $p = .000$), and mobile banking ($\beta = .170$; $t = 2.949$; $p = .003$) significantly influenced entrepreneurial activities in rural areas. The results further showed that Point of Sale systems were the most significant electronic payment channel driving entrepreneurial activities. The study therefore recommended that owners of micro and small enterprises should make greater use of POS systems while also leveraging ATM and mobile banking platforms to improve their business activities.

Adiga *et al.* (2022) examined the effect of FinTech on the performance of the Nigerian banking sector. The study utilized data obtained from the Central Bank of Nigeria (CBN) and reports of the Nigeria Deposit Insurance Corporation (NDIC) covering different years. The Auto-Regressive Distributed Lag (ARDL) method was employed to examine the relationship between FinTech indicators, including payment systems, automated clearing services, and remittance services, and bank performance measured through Return on Assets (ROA) and Return on Equity (ROE). The findings revealed that financial technology significantly affected bank performance in terms of both ROA and ROE. Similarly, Xu (2022) examined the role of FinTech adoption in the banking industry using indicators from the CAMEL rating system to assess the relationship between FinTech and bank performance. The study covered 45 commercial banks in Europe over the period 2015–2021, with data obtained from the annual reports and accounts of

the selected banks. The findings indicated that FinTech adoption plays a significant role in maintaining adequate capital, quality assets, effective management, income-generating capacity, and liquidity. The study concluded that the adoption of FinTech generally provides significant benefits to banking institutions.

Azeez, Madukoma, and Yila (2022) examined the role of Information and Communication Technology (ICT) as a tool that Small and Medium Enterprises (SMEs) can utilize to promote Nigeria's economic development. A questionnaire was administered to 175 SMEs randomly selected from five sectors of the Nigerian economy, namely education, microfinance, transportation, commerce, and hospitality. The Chi-square test was used to evaluate the hypothesis, and the findings revealed that low awareness of the benefits of incorporating ICT into SME management processes was a major factor responsible for its low adoption. The study also found that poor communication infrastructure, high costs of ICT hardware, inadequate government support, and insufficient legislation for e-business have hindered ICT adoption among SMEs. Furthermore, the high cost of funds in Nigeria has made it difficult for SMEs to obtain financing for ICT expansion and implementation. The study recommended increased investment in infrastructure and the provision of adequate incentives to promote ICT utilization among SMEs. It also recommended that investment banks and other specialized financial institutions should strengthen their support for local industries by providing affordable credit schemes.

Bakare, Madukoma, and Musa (2022) examined the influence of ICT use on SME performance in the North-Central geopolitical zone of Nigeria. The study adopted a survey research design, with a population comprising 651 owners of mini-rice milling SMEs. A sample of 248 rice-milling SME owners was selected from four states using a simple random sampling technique. The findings revealed that ICT use had a significant influence on SME performance in the North-Central geopolitical zone. The study also established that the level of SME performance in the region was average, while the level of ICT utilization among SMEs was low. Based on these findings, the study recommended that SMEs in the North-Central geopolitical zone should improve their overall performance by increasing their adoption and utilization of ICT tools that enhance business processes, as this would contribute to improved business performance.

Gaol *et al.* (2022) examined the relationship between digital finance and entrepreneurship using the Digital Finance Index developed by Peking University to measure digital finance and the number of newly registered enterprises to measure entrepreneurship across 284 Chinese districts from 2011 to 2019. The study employed Fixed Effects (FE) and

Instrumental Variable (IV) models for analysis and found that digital finance significantly promoted entrepreneurship through greater breadth of coverage, depth of usage, and level of digitalization. Similarly, Zhang and Pang (2023) found that digital finance significantly promoted urban entrepreneurship, measured by the number of newly established private enterprises, as well as household entrepreneurship, measured by newly registered self-employed households, in China. Sun and You (2023) used China Regional Innovation and Entrepreneurship Index data to investigate the effect of digital finance on innovation and entrepreneurial activities across 41 districts from 2011 to 2020. Using multiple regression analysis, the study established that digital finance significantly increased innovation and entrepreneurial activities in Chinese districts.

Ibekwe (2021) examined bank performance and financial innovation in Nigeria using secondary data obtained from the Central Bank of Nigeria. Return on Assets (ROA) was used to measure bank performance, while Automated Teller Machines (ATM), Point of Sale (POS), mobile banking, and online banking were used as measures of financial innovation. The data were analyzed using unit root tests and Ordinary Least Squares (OLS) regression. The findings demonstrated that ATM, POS, and Internet banking had favourable effects on the performance of Nigerian banks. Similarly, Aduaka and Awolusi (2020) examined the relationship between electronic banking (FinTech) and bank profitability in Nigeria using both primary and secondary data. Primary data were obtained through surveys, while secondary data were sourced from audited financial records of banks. After conducting relevant pre-estimation tests, the hypotheses were tested using multiple regression analysis. The findings revealed that electronic banking had a significant effect on bank profitability.

Akinroluyo and Opeyemi (2021) carried out a study in Ekiti State on the effect of mobile money adoption on the performance of micro family enterprises during the COVID-19 lockdown. The study administered questionnaires to 150 respondents and retrieved 100 completed questionnaires using purposive and accidental sampling techniques. The collected data were analyzed using descriptive statistics, while the hypothesis was tested using Analysis of Variance (ANOVA). The findings revealed that mobile money adoption significantly affected the performance of family enterprises in Ekiti State, Nigeria. The study further concluded that the adoption of mobile money significantly influenced the performance of the selected family enterprises during the COVID-19 lockdown period in Ekiti State.

Aduaka and Awolusi (2020) evaluated the impact of electronic banking on the profitability of the Nigerian

banking industry. Primary and secondary data were collected through questionnaires and audited financial reports of selected banks. Using multiple regression analysis, the study found that bank cards played a significant role in bank profitability compared with other electronic banking channels, followed closely by Automated Teller Machines (ATMs). The study further established that electronic banking channels contributed significantly to the profitability of banks. Similarly, Ibekwe (2021) examined financial innovation and the performance of Deposit Money Banks (DMBs) in Nigeria using data obtained from the Central Bank of Nigeria. The study employed the Augmented Dickey-Fuller (ADF) test for stationarity and Ordinary Least Squares (OLS) regression for analysis. The findings revealed that ATM, Point of Sale (POS), mobile payment, and Internet banking had positive effects on the performance of DMBs in Nigeria.

Effiom and Edet (2020) employed the Auto-Regressive Distributed Lag (ARDL) methodology on quarterly data to examine the effect of financial innovation on SMEs' productivity in Nigeria. The findings indicated that financial innovation had a positive and significant effect on SME productivity. Specifically, seven financial innovation instruments were examined, namely Automated Teller Machine (ATM), Point of Sale (POS), Web or Internet Banking, Cheques, Nigeria Inter-Bank Settlement System Electronic Fund Transfer (NIBSS-EFT), Nigeria Inter-Bank Settlement System Instant Payment (NIBSS-IPP), and Mobile Money Operations. The results showed that all but one of these financial innovation instruments were significant predictors of SME performance in both the short run and long run. Furthermore, the Toda-Yamamoto causality test revealed a unidirectional causal relationship running from financial innovation instruments to SME performance. These findings have important implications for SME growth and the implementation of the cashless policy of the Central Bank of Nigeria.

Ighoroje and Okoroyibo (2020) investigated the effect of the cashless policy on the performance of Nigerian Deposit Money Banks. The study adopted a descriptive and ex-post facto research design and relied on secondary data obtained mainly from the Central Bank of Nigeria data browser and The Global Economy.com. The Augmented Dickey-Fuller and Phillips-Perron tests were used to examine the stationarity of the variables, while the Auto-Regressive Distributed Lag (ARDL) technique was employed for coefficient estimation and cointegration analysis. ATMs, POS machines, mobile banking, and Internet banking served as proxies for cashless policy, while Return on Equity (ROE) was used as a measure of bank performance. The findings revealed that ATM and Internet banking had positive and significant effects on ROE. POS had a positive

but insignificant effect, while mobile banking had a statistically significant negative effect on ROE. The study concluded that the cashless policy had a positive overall impact on the performance of Nigerian deposit money banks and recommended that government should ensure continuous electricity supply and adequate communication infrastructure, while banks should develop effective backup arrangements to maintain operations during power outages.

Godhy (2020) discussed the impact of Information and Communication Technology (ICT) on Small and Medium-scale Enterprises (SMEs) in Nigeria. The study observed that contemporary society is increasingly information-driven, requiring individuals and organizations to manage growing volumes of information through technological support. Electronic technology and information are mutually reinforcing, resulting in increased interaction with complex and increasingly digital environments. Consequently, SMEs must adopt new tools for managing information and business activities at organizational and societal levels. The computer remains a primary tool of the information society, while microprocessors are increasingly integrated into other technologies, including television, radio, and telephone systems. The study emphasized that these technological tools can significantly influence the operation and development of SMEs when purposefully adopted and effectively utilized. While previous studies largely focused on the effect of financial technology on corporate performance, the study further considered the effect of financial technology on the growth of Nigeria's financial sector.

Methodology

The study adopted an ex-post facto research design to examine the relationship between financial technology and the growth of the financial sector in Nigeria. Data for the study were obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin covering the period from 2009 to 2024. The study employed regression analysis, with linear regression serving as the major analytical technique. The model specification assumes that the independent variables have a linear relationship with the parameters of the model, although the parameters do not necessarily have to be independent variables (Friedman, 2005). Linear regression can generally be categorized into two forms, namely simple linear regression and multiple linear regression. Since the present study involves more than one independent variable, the study specifies and presents the following multiple regression model:

$$FSG = f(\text{ATM, POS, WP, MP, EFT}) \quad (1)$$

It is empirically stated as

$$FSG_{it} = f(\beta_1 AMT + \beta_2 POS + \beta_3 WP + \beta_4 MP + \beta_5 EFT + . \quad \varepsilon_{it} \quad (2)$$

Where

- FSG = Financial sector growth proxy by of broad money supply to gross domestic product
- ATM = Automated teller machine proxy by log value of ATM transaction
- POS = Point of sales transaction proxy by log value of POS transaction
- WP = Web Payment transactions proxy by log value of web payment transaction
- MP = Mobile payment transactions proxy by log value of mobile payment transaction
- EFT = Electronic fund transfer proxy by log value of electronic fund transfer transaction
- β_0 = Regression Intercept
- $\beta_1 - \beta_6$ = Coefficient of the independent variables to the Dependent variable
- μ = Error term

Data Analysis Techniques

The study involves the use of exploratory survey hence the empirical method which adopts regression analysis, was used to test the stated hypotheses.

Regression Analysis

Regression analysis is any technique for modeling and analyzing numerous variables when the focus is on the connection between a dependent variable and one or more independent variables. Regression analysis helps to understand more accurately how the typical value of dependent variable is varied while the order independent variables are held fixed (Friedman, 2005).

Reasons for the Use of Regression

- It estimates the conditional expectation of the dependent variables given the independent variables that is the average of the dependent variables when the independent variables held fixed.
- It is widely used from prediction and forecasting, where it's use has substantially overlap with the field of machine learning.
- It is also used to understand which among the independent variable are related to the dependent variable and to explore the forms of these relationships.
- In restricted circumstances, regression analysis can be used to infer causal relationship between the independent and dependent variable (Wikipedia. Org).

Analysis And Discussions of Findings

Table 1: Regression Results

Augmented Dickey-Fuller Test Equation				
Dependent Variable: FSG				
Method: Least Squares				
Date: 06/21/26 Time: 21:11				
Sample (adjusted): 2009 2024				
Included observations: 16				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
ATM	-0.189123	0.136130	-1.389287	0.1740
POS	1.423719	4.418669	0.322205	0.7493
WP	0.829984	5.512319	0.513393	0.6111
MP	-37.82058	5.584050	-6.772966	0.0000
EFT	34.77355	4.848258	7.172381	0.0000
C	0.295014	0.162406	1.816526	0.0784
R-squared	0.695494	Mean dependent var		-0.016922
Adjusted R-squared	0.649357	S.D. dependent var		0.258222
S.E. of regression	0.152906	Akaike info criterion		-0.777345
Sum squared resid	0.771550	Schwarz criterion		-0.521413
Log likelihood	21.15824	Hannan-Quinn criter.		-0.685519
F-statistic	15.07448	Durbin-Watson stat		1.857513
Prob(F-statistic)	0.000000			

Source: E-view 12.0

Analysis of Results

F-Test: The F-calculated value is 15.07448 from the regression results whilst the P-value of F-statistics are 0.000000 at 5% level of significance, regarding the P-value, the chosen level of significance $\alpha = 0.05$ [5%] is smaller than the P-value of F-statistic. The regression model was found to be statistically significant. This signifies that the explanatory variables have a statistically significant joint effect on the dependent variable.

Coefficient of Multiple Determinations (R^2): The calculated coefficient of multiple determinations of 0.649357 from the model suggest that 64.9 percent of the total variations in the financial sector growth is explained by the explanatory variables while the balance is attributed to variable that is affected by other factors not included in the regression model.

Durbin Watson statistics (DW): The computed DW is 1.857513 from the model findings; prove at 5% level of significance with two explanatory variables and data. Computed DW has a value greater than the lower limit. Therefore there is no evidence of positive first order serial correlation.

Regression Coefficient and T-Statistics: The t-statistics shows that automated teller machine have negative but no significant effect on financial sector growth, a unit increase reduces financial sector growth by 0.18 percent, point of sales have positive but no significant effect on financial sector growth, a unit increase increases financial sector growth by 1.4 percent, web payment have positive but no significant effect on financial sector growth, a unit increase increases financial sector growth by 0.82 percent, mobile payment have negative and significant effect on financial sector growth, a unit increase reduces financial sector growth by 37.8 percent while electronic fund transfer have positive and significant effect on financial sector growth, a unit increase increases financial sector growth by 34.7 percent.

Test of Hypotheses

H₀₁: There is no significant relationship between Automated Teller Machines and affect financial sector growth in Nigeria

Table 4.2 shows that although there was a negative correlation between Automated Teller Machines and financial sector growth (-0.189123) the association was statistically significant (P-value of 0.1740 at the 5% significance level). This finding, which is statistically not significant, indicates that Automated Teller Machines and the financial sector growth in Nigeria have a negative and significant relationship. As a result, we reject the alternate and accept the null hypothesis.

H₀₂: There is no significant relationship between point of sales and affect financial sector growth in Nigeria

Table 4.2 shows that although there was a negative correlation between point of sales and financial sector growth (1.423719) the association was statistically significant (P-value of 0.7493 at the 5% significance level). This finding, which is statistically not significant, indicates that point of sales and the financial sector growth in Nigeria have a negative and significant relationship. As a result, we reject the alternate and accept the null hypothesis.

H₀₃: There is no significant relationship between web pay and affect financial sector growth in Nigeria

Table 4.2 shows that although there was a positive correlation between web pay and financial sector growth (0.829984) the association was statistically significant (P-value of 0.6111 at the 5% significance level). This finding, which is statistically not significant, indicates that web pay and the financial sector growth in Nigeria have a negative and significant relationship. As a result, we reject the alternate and accept the null hypothesis.

H₀₄: There is no significant relationship between mobile pay affect financial sector growth in Nigeria

Table 4.2 shows that although there was a negative correlation between mobile pay and financial sector growth (-37.82058) the association was statistically significant (P-value of 0.0000 at the 5% significance level). This finding, which is statistically significant, indicates that mobile pay and the financial sector growth in Nigeria have a negative and significant relationship. As a result, we reject the null and accept the alternate hypothesis.

H₀₅: There is no significant relationship between electronic fund transfer and affect financial sector growth in Nigeria

Table 4.2 shows that although there was a negative correlation between electronic fund transfer and financial sector growth (34.77355) the association was statistically significant (P-value of 0.0000 at the 5% significance level). This finding, which is statistically significant, indicates that electronic fund transfer and the financial sector growth in Nigeria have a negative and significant relationship. As a result, we reject the null and accept the alternate hypothesis.

Discussion of Findings

The estimated model revealed that 64.9 percent of the total variation in financial sector growth was explained by variations in financial technology variables during the period covered by the study. Specifically, the findings showed that Automated Teller Machine (ATM) transactions had a negative but insignificant effect on financial sector growth, as a unit increase in ATM transactions reduced financial sector growth by 0.18

percent. Point of Sale (POS) transactions had a positive but insignificant effect, with a unit increase associated with a 1.4 percent increase in financial sector growth. Similarly, web payments had a positive but insignificant effect, with a unit increase increasing financial sector growth by 0.82 percent. Mobile payments had a negative and significant effect on financial sector growth, as a unit increase reduced financial sector growth by 37.8 percent, while electronic fund transfers had a positive and significant effect, with a unit increase increasing financial sector growth by 34.7 percent. The negative relationship observed for some financial technology variables contradicts the expected outcome and may be attributed to market shocks and other economic disruptions experienced during the period under review. This finding is not consistent with Igoni *et al.* (2021), who found that web-based digital finance had a negative and insignificant impact on stock market capitalization in Nigeria. However, the findings contradict the results of Babarinde, Onyejiaku, Obadire, Priddy and Onwumere (2024), who reported that ATM, POS, mobile-based, and web-based digital finance transactions had positive and significant effects on the stock market capitalization ratio in Nigeria, while they support the findings of Olofin, Yada, Gambo and Muhammad (2024), who found that ATM transactions had a negative but significant relationship with financial performance.

The positive relationships observed between some of the financial technology variables and financial sector growth are consistent with expectations and may reflect the impact of financial sector reforms and increasing digitalization of financial services. Empirically, the findings are consistent with Suleymanov *et al.* (2019), who found that payment system channels affected profitability; Yao *et al.* (2018), who established that Third-Party Payment (TPP) enhanced industry synergy in China's financial development by increasing money turnover and positively influencing financial sector earnings growth; and Dong *et al.* (2020), who found that although Internet finance had a detrimental effect on liquidity, it positively affected banks' growth, security, and profitability, thereby improving overall business performance in China. The findings are also in line with Nwakoby *et al.* (2020), who reported that POS and mobile payments had positive effects on Return on Equity (ROE), while ATM transactions had a negative effect on the ROE of Deposit Money Banks. Similarly, Akwam and Yua (2021) established a strong positive relationship between mobile payments and POS transactions and bank performance indicators, including ROE and Return on Assets (ROA), using annual time-series data from 2005 to 2019. Furthermore, the findings are consistent with Okwu (2016), who reported that mobile telephone usage had a positive and significant effect on various market indicators. Overall, the evidence from the study indicates that the

aggregate effect of ICT proxies and the moderating variables on the financial market indices was statistically significant, demonstrating the important role of financial technology in shaping the growth and development of Nigeria's financial sector.

Conclusion And Recommendations

Conclusion

This study was motivated by the need to examine the extent to which financial technology affects the growth of Nigeria's financial sector using time-series data obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin covering the period from 2009 to 2024. The findings revealed that 64.9 percent of the total variation in financial sector growth was explained by variations in financial technology variables during the period under review. Specifically, Automated Teller Machine (ATM) transactions had a negative but insignificant effect on financial sector growth, while Point of Sale (POS) transactions had a positive but insignificant effect. Web payments also had a positive but insignificant effect on financial sector growth, whereas mobile payments had a negative and significant effect. Electronic fund transfers, on the other hand, had a positive and significant effect on financial sector growth. Based on these findings, the study concludes that financial technology has a significant role in influencing the growth and development of Nigeria's financial sector.

Recommendations

- i. Central bank should encourage the development of financial technology so as to strengthen the deepening of the financial sector in terms of enhancing the volatility of money in circulation or achieving financial inclusion of the sector.
- ii. A critical assessment of the influence of individual fintech measures should be adopted on the credit to private sector of fintech in Nigeria. The study therefore recommends that there should be expansion in the deployment of ATMs such that its usage is encouraged for growth and deepening of the financial sector.
- iii. Point of sales devices should be deployed and simplified and specially configured for stock market transactions and as such a development of special POS machines for all financial transaction transactions particularly for financial transactions and other key market participants will be a good step in this direction. In the same spirit, technology companies should work in close collaboration with stock market experts to achieve this.
- iv. The use of mobile devices in the provision of financial services, particularly, digital finance

transactions should be encouraged the more by the Nigerian populace and as such potential and actual investors should be encouraged to embrace the mobile-based digital finance transactions that enhance financial market growth

- v. The website infrastructure and security should be further improved to enhanced web-based digital finance transactions. Intensive and extensive public enlightenment and strong government policy in the direction of cyber-security will further facilitate the implementation of this recommendation.

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