

TECHNOLOGY DEPLOYMENT AND CORPORATE VALUE ADDED AMONG LISTED COMMERCIAL BANKS IN NIGERIA

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ABSTRACT

This study investigated the effect of technology deployment on corporate value added of listed commercial banks in Nigeria. It decomposed technology deployment into, point of sale transaction, internet banking transaction, automated teller machine transaction and corporate value added proxy by net profit. Adopting the ex-post facto research design, a total of 10 listed commercial banks in Nigeria out of a population of 13, were sampled using the purposive sampling technique. And deploying the panel least square regression technique to test the data extracts from the Statistical Bulletins of the Central Bank of Nigeria for the period 2013 – 2024, the result showed that point of sale is negative and statistically significant, internet banking transaction had a positive but insignificant effect while automated teller machine indicated a positive and statistically significant effect. The study therefore concluded that the value added of deposit money banks in Nigeria is heavily influenced by the adoption and integration of various technology deployment, which are increasingly becoming crucial in the competitive banking sector. The study recommends that banks management are advised to reduce the reliance on point of sales (POS) transactions as a primary service offering. Instead, focus on optimizing and diversifying revenue streams to mitigate the negative impact on bank value added, enhance the revenue-generating potential of internet banking platforms by introducing value-added services and loyalty programs that can differentiate the bank from competitors and improve customer retention and continue to expand and maintain a robust network of automated teller machines (ATMs) to capitalize on their significant positive effect on bank value added, ensuring that ATMs are accessible, reliable, and meet customer demand efficiently.

Key words: Automated Teller Machine, Internet Banking, Net Profit, Point of Sale.

INTRODUCTION

In the modern financial landscape, the deployment of technology has become a key strategic driver for innovation, efficiency, and value creation, especially in the banking sector. As global economies transition into digitally driven systems, banks are expected not only to adopt new technologies but also to align these innovations with value-added outcomes. In Nigeria, the increasing integration of digital technologies such as Automated Teller Machines (ATMs), Internet Banking, and Point of Sale (POS) terminals into the banking architecture has significantly altered the modes of financial service delivery (Ezeani & Asogwa, 2023). These developments have introduced a new dimension in evaluating the operational efficiency and performance of commercial banks, particularly as it relates to corporate value added.

Corporate value added (CVA) represents the net value a firm creates through its operations, reflecting its ability to generate returns above its input costs. It encompasses measures such as economic profit, stakeholder returns, efficiency gains, and market competitiveness. In the context of Nigerian commercial banks, understanding how specific technological tools such as ATM networks, internet banking platforms, and POS infrastructure affect CVA is both timely and critical. The banking sector, which serves as a primary channel of financial intermediation, is expected to leverage these tools not only for cost reduction and customer satisfaction but also for improving overall value creation in the economy (Olowookere & Adesola, 2022).

In Nigeria, the deployment of ATMs revolutionized self-service banking by extending financial access beyond traditional banking hours. Internet banking, on the other hand, enabled customers to perform transactions remotely, increasing convenience and reducing the need for physical presence in banking halls. POS terminals, now ubiquitous in retail outlets across the country, have facilitated cashless transactions, reduced liquidity risk, and expanded financial inclusion. According to the Central Bank of Nigeria (CBN, 2024), ATM usage increased by 24.8% from 2020 to 2023, while POS transactions surged by over 85% during the same period, largely due to changing consumer behavior and the push toward digital financial services. These technological deployments are expected to impact corporate value added through various channels, including revenue generation, cost efficiency, customer retention, and broader market reach. However, the link between these digital channels and corporate value remains insufficiently explored. Some studies suggest that while technology can lead to efficiency gains and revenue diversification, the high cost of acquisition, implementation, and maintenance can offset these benefits if not strategically managed. For example, infrastructure deficits such as unstable electricity, cybersecurity threats, and low digital literacy among customers continue to challenge the full realization of value from these tools (Owolabi & Tella, 2023). Empirical studies in other economies have confirmed that technology adoption can enhance firm performance and shareholder value. Zhang and Li (2022), examining Chinese banks, found that the use of digital banking tools significantly increased operational efficiency and customer loyalty, leading to enhanced corporate value. However, the Nigerian context is uniquely characterized by macroeconomic volatility, policy inconsistencies, infrastructural gaps, and a dual-banking population with varying degrees of digital adoption. This raises the question of whether investments in ATM infrastructure, internet banking platforms, and POS terminals are translating into tangible value for Nigerian commercial banks (Ogbonna & Onwuka, 2022).

Previous studies in Nigeria have explored aspects of technology and financial performance. For instance, Yusuf and Olanrewaju (2021) examined how digital banking affects service delivery, and Adeoye et al. (2022) focused on fintech innovation and profitability. However, these studies often use broad or aggregate measures of technology deployment without disaggregating them into specific delivery channels such as ATMs, POS, and internet banking. Moreover, they primarily focus on profitability indicators, neglecting more comprehensive measures of corporate value added such as economic value, productivity gains, and customer value enhancement. This gap in literature underscores the importance of examining these three independent variables ATM, POS, and internet banking in relation to corporate value added. This study focuses on listed commercial banks in Nigeria because they are better equipped in terms of technological investment, corporate governance structures, and public disclosure practices. Listed banks also play a dominant role in the financial system and are subject to oversight by both the Central Bank of Nigeria (CBN) and the Nigerian Exchange Group (NGX), making them ideal for measuring the impact of technological deployment on corporate performance and value. Furthermore, these banks have made significant capital investments in digital infrastructure and human capital in response to regulatory policies such as the CBN's Cashless Policy and the National Digital Economy Policy and Strategy (2020–2030). With increasing customer demand for convenience, speed, and accessibility, the strategic deployment of technology is no longer optional for Nigerian banks. The COVID-19 pandemic further accelerated the adoption of digital platforms, as banks sought to minimize physical contact and ensure uninterrupted service delivery. As a result, banks continue to expand their ATM networks, optimize internet banking portals, and increase the number of deployed POS terminals to improve transaction volumes, minimize operational bottlenecks, and reduce service costs (Zhang & Li, 2022).

However, it remains to be seen whether these deployments contribute meaningfully to the creation of corporate value in a sustainable way. Do these technologies merely expand transaction volumes, or do they result in long-term value creation for stakeholders? This study, therefore, seeks to assess the effect of ATM usage, POS transactions, and internet banking adoption on the corporate value added of listed commercial banks in Nigeria. By providing empirical evidence on the effectiveness of each technological channel, the study aims to contribute to informed decision-making, strategic planning, and policy development in Nigeria's evolving financial landscape.

Objectives

It is on this background that necessitated the study of the effect of technology deployment on the corporate value added of deposit money banks in Nigeria. The specific objectives of this study are to:

- i. Investigate the effect of point of sales transactions on corporate value added of listed commercial banks in Nigeria.
- ii. Examine the effect of internet banking transactions on corporate value added of listed commercial banks in Nigeria.
- iii. Examine the effect of automated teller machine transactions on corporate value added of listed commercial banks in Nigeria

LITERATURE REVIEW

Technology Deployment in Banking Sector

Technology deployment in banking refers to the integration and utilization of digital tools and infrastructure to improve financial services delivery. These technologies include Automated Teller Machines (ATMs), Point of Sale (POS) terminals, Internet Banking, Mobile Banking, Artificial Intelligence (AI), Blockchain, Big Data Analytics, and cloud computing, among others (Adeleke & Adewuyi, 2023). Such deployment aims at reducing cost-to-income ratios, enhancing transparency, expanding access to financial services, and reducing reliance on physical banking structures. technology deployment in banking refers to the integration of digital infrastructure, systems, and applications such as electronic payment platforms, mobile banking, and artificial intelligence into banking operations to enhance efficiency, transparency, and customer experience

Point of Sale (POS) Transactions

Point of sale (POS) system is a combination of hardware and software that allows businesses to conduct sales transactions, it is the place where customers make payments for goods or services, typically at a checkout counter in a retail store, but POS systems are also used in restaurants, hotels, and other service industries. Modern POS systems often integrate with other business systems, such as e-commerce platforms, accounting software, and supply chain management tools, creating a comprehensive solution for managing business operations. The financial institutions and telecommunication companies' worldwide are facing new loop on the Information and Communication Technology convergence curve. Point of sale [POS] terminal has emerged as a promising new application of the next generation e-payment

system. The role and importance of efficient payment system has been closely monitored and promoted by monetary authorities in all countries. The Nigerian payment system that is cash-driven cannot and has not guaranteed the much needed efficient and effective payment platform required for a sustainable economic development, [Adeoti, 2013]

Internet Banking Transactions

This is a payment channel that enables the bank customer to make financial transactions using the banks' website. Thus, financial transactions are accessed using the internet and a personal computer or similar device. It does not require physical interaction between the banks' customer and the bank teller once a biometrics has been done and enrollment made (Gbanador et'al, 2022). Internet banking also known as online banking or e-banking, refers to the use of the internet to perform various banking activities and transactions. This service allows customers to manage their finances conveniently from anywhere with an internet connection, eliminating the need to visit a physical bank branch.

Automated Teller Machine (ATM) Transactions

It is a computerized telecommunication device that allows the bank's customer to access the basic teller services outside the banking hall without direct interaction with a bank teller. Some of the teller services performed with the ATM includes Cash withdrawal, cash deposit, fund transfer, bills payment, account balance enquiry, account opening (Gbanador, 2021). Rose (1999) define ATMs as computer terminal, having recordkeeping system and cash vault in one unit, permitting customers to enter the bank's book keeping system with a card holding a Personal Identification Number (PIN) or by punching a special code number into the computer terminal linked to the bank's computerized records 24 hours a day. ATM card is made of a plastic having magnetic stride that hold all the information about the customers such as customer name, account, card number, card limit, concerned bank etc.

Corporate Value Added

Corporate Value Added (CVA) has emerged as a strategic metric in performance evaluation, providing insights into how effectively a firm creates value beyond its operating costs and stakeholder obligations. Unlike traditional accounting profits, CVA captures the net contribution a firm makes to its stakeholders employees, shareholders, government, and society at large through its operations. In today's performance-focused environment, CVA is not only a financial indicator but also a tool for assessing the sustainability and impact of

business strategies. Corporate Value Added refers to the difference between a firm's output (revenue) and the cost of bought-in goods and services, representing the wealth created through its operations. It indicates the firm's effectiveness in converting inputs into valuable outputs for distribution among various stakeholders (Brigham & Daves, 2023). According to Aduda and Musyoka (2022), corporate value added is "a comprehensive measure of a company's economic contribution to all stakeholders, reflecting the total value generated by the firm beyond its cost of inputs." Similarly, Eboh and Oladimeji (2023) define CVA as "a financial performance metric that captures the net economic value generated by a firm and allocated to labor, capital, government, and retained earnings.

Theoretical Review

Diffusion of Innovation Concept Theory

This research is based on Everett M. Rogers' 1962 Diffusion of Innovation concept. The five variables necessary for the spread of new ideas, according to the theory, are the innovations themselves, adopters, communication routes, time, and a social structure. He considers diffusion to be the mechanism through which innovation spreads over time among users in a social system. Innovators, early adopters, early majority, late majority, and laggards are examples of innovation adopters. Diffusion can take several forms, depending on the types of adopters and the creative decision-making process. Innovativeness, which is defined as the degree to which an individual adopts a new notion, is the criterion for classifying adopters. According to Bamidele (2006), IT spread entails more than just obtaining computers, microelectronics-based devices, and related know-how. It entails being prepared and developing the technical change-generating competence to apply given technology to a variety of demands. According to these beliefs, innovation without communication, coordination, and understanding may be ineffective, as it is unlikely to yield significant results for either banks or customers. There must be prompt communication and information dissemination. This causes time awareness and a reduction in response time, which influences turnaround time.

Empirical Studies

Iwedi et al. (2023) studied effect of financial technology on financial inclusion in Nigeria. This study used quarterly secondary data and all the data were extracted from Central Bank of Nigeria (CBN) Statistical Bulletin (2021) from 2009-2019. In this study, financial technology was proxy using point of sale, automated teller machine, web banking technology

and mobile banking technology, while financial inclusion in Nigeria was proxy using deposit ratio. Time series data were analyzed using the vector auto regression (VAR) estimation technique. The results show that web banking technology has a positive and significant effect on financial inclusion in Nigeria, whereas point of sale, automated teller machine and mobile banking technology have a positive but not significant effect on financial inclusion in Nigeria. This suggests that an increase in the usage of financial technology (ATM, POS, WEB and mobile technology) will cause more Nigerians to be financially included. Based on the findings.

Otonne and Ige, (2023) studied exploring the influence of financial technology on banking services in Nigeria. This study employed a quantitative research approach, analyzing data from the financial statements of selected Nigerian banks, and financial technology application statistics through econometric modelling and descriptive analysis. The study found that Fintech positively impacts Nigerian banks' traditional and market-based performance measures.

Domeher et'al (2022) evaluate financial innovations and economic growth: Does financial inclusion play a mediating role? This study thus, sought to establish if financial inclusion mediates the relationship between innovation and growth. Secondary data from 26 selected SSA countries over the period 2004 to 2017 were used. The data were analysed using the GMM estimation technique. It was found amongst other things that investments in innovations in the banking sector promote financial inclusion. In addition, financial inclusion fully mediates the relationship between innovation and economic growth.

Misati et al. (2022) studied digital financial innovation enhance financial deepening and growth in Kenya. The study utilized autoregressive distributed lag (ARDL) model, which is preferable over other time series methods as the model allows application of co-integration tests to time series with different integration orders and is flexible to the sample size including small and finite. The main findings of this paper are as follows: first, there is evidence of a positive relationship between digital financial innovation and financial depth with the strongest impact emanating from Internet usage and mobile financial services and the lowest impact from bank branches; second, the results reveal a significant positive impact of financial depth on economic growth consistent with the supply-leading finance theory. The results of the study imply a need for investment in technology-enabling infrastructure for digital financial services (DFS) and a redesign of strategies to avoid further financial exclusion of

low-income earners due to the unaffordability of digital devices and financial and digital illiteracy.

Mbizi et al. (2022) studied the nexus between technological financial innovation and financial performance of commercial banks in Zimbabwe. A positivist philosophical orientation approach guided this study wherein an eight year quarterly panel data for a time period ranging from 2015 to 2021 for thirteen commercial banks in Zimbabwe was adopted for data collection. STATA software was used to analyse the impact of each dimension of technological financial innovation on commercial financial performance. The results showed that the use of automated teller machines and internet banking have strong positive relationship with financial performance, whilst a weak positive relationship was established between mobile banking and financial performance of commercial banks. Moreover, an insignificant association was established between electronic funds transfer and financial performance of commercial banks. The major implication was that banks should intensify the adoption of financial innovation as it enhances their operations.

Nasution et al. (2022) studied investigation of financial inclusion, financial technology, economic fundamentals, and poverty alleviation in asean-5: using sur model. The study used Seemingly Unrelated Regression (SUR) model during the period 2009 to 2019. The results obtained are: (1) Financial inclusion through the credit variable and the number of ATMs, and fintech through the e-money variable, contributed to the most significant increase in GDP in the ASEAN-5 countries. Meanwhile, the most critical contributor to reduction in the unemployment rate from financial inclusion is through the credit and savings variables, while from fintech it is through mobile phone subscriptions. (2) Thailand is the country that has most effectively influenced the economic fundamental of unemployment rate, while Indonesia is the country that has most effectively influenced the economic fundamental of GDP. The results obtained from the panel regression model and cross-sectional weighting indicate that financial inclusion through savings, credit, and number of ATMs, and fintech through cellular phone subscription, are effective in reducing poverty rates in the ASEAN-5 countries. Nevertheless, financial inclusion and fintech do not significantly affect the inflation rate.

Adiga et al. (2022) studied financial technology and the banking sector performance in Nigeria (2005-2020). The specific objectives are to examine the effect of financial technology on return on assets (ROA), return on equity (ROE), interest income (II) and noninterest income (NII) of Deposit Money Banks (DMBs) in Nigeria. The study was anchored on Technology Acceptance Model (TAM) and Central Bank of Nigeria (CBN) statistical bulletin



and Nigeria Deposit Insurance Corporation (NDIC) report of various years form the data source which were subjected to Auto Regressive Distributed Lag (ARDL) technique to test the interaction between independent variables namely payment system, automated clearing services and remittance services with the dependent components in return on asset, return on equity, interest income and non-interest income at 5% level of significance. Financial technology significantly explained the variation in ROA, ROE and noninterest income DMBs in Nigeria except the variation in interest income. The study concludes that financial technology significantly explained the variation in banking sector performance components in ROA, ROE, and non-interest income. The effect of financial technology on performance of the banking sector is inconclusive thus financial technology could not be said to improve and exert the required impact on the banking sector performance within the period studied.

Rachid and Nadir (2022) studied the relation between Financial Innovation and Economic Growth in Algeria: ARDL approach. The study used Autoregressive distributed lag model covering the period from 1964 to 2019. Financial innovation represented by Domestic Credit to the Private Sector (DCP) and economic growth represented by GDP, an intermediate variable was used represented by Broad-to-Narrow Money (BNM). The results indicated that Financial Innovation have significant positive impact on economic growth in both the long-run and the short-run period, also results show that variables are Co-integrated by using ARDL method.

Idriss et al. (2021). Using mobile money to bank the unbanked in Sub-Saharan Africa: an empirical study. The aim of this research is to thoroughly investigate the role of mobile money toward a cashless society in Sub-Saharan Africa. The research is best on information gathered from reliable sources but mainly focused in developing countries where the aim of mobile money is for banking the unbanked. The findings of the research provide a foundation for directing future policy debates on the journey to cashless society.

METHODOLOGY

The study adopted the *ex-post facto* research design. This is due to its special characteristics which are the event that has already occurred hence there is no need for manipulation or alteration and it is also less costly and less time consuming. This design was utilized due to the nature of data involved. The population of the study comprise of thirteen (13) listed deposit money banks in Nigeria, while ten (10) out of the total population were purposively selected as the sample size of the study. The data for this study were collected from the Statistical



Bulletins of the Central Bank of Nigeria. The data were analyzed using panel least square regression with cross-sectional seemingly unrelated regression. Furthermore, the study covered the period of 12 years from 2013 to 2024.

This study adapted the model in the study of Ejinkonye and Okonkwo (2021) which used the function $CBD = f(ATM, IB, MB, POS) \dots\dots\dots$ Eqn 1.

Where:

- CBD = Commercial banks deposit
- ATM = Automated teller machine
- IB = Internet banking
- MB = Mobile banking
- POS = Point of sale
- μ = error term

The model was modified to suit the variables used. Hence the model for the study is anchored on the specific objectives.

$$NP_t = f(VPOST, VIBT, VATMT, \dots\dots\dots) \text{ Eqn 2.}$$

This can be econometrically expressed as

$$NP_{it} = \beta_0 + \beta_1 VPOST_{it} + \beta_2 VIBT_{it} + \beta_3 VATMT_{it} + \mu \dots\dots\dots \text{ Eqn 3.}$$

Equation 1 and 2 are the linear regression model used in testing the null hypotheses.

Where:

- NP** = Net Profit
- VPOST = Value of Point of Sale Transactions
- VIBT = Value of Internal Banking Transactions
- VATMT = Value of Automated Teller Machine Transactions
- β_0 = Constant
- $\beta_1 - \beta_3$ = are the coefficient of the regression equation
- μ = Error term
- t = is the year (time series)

Apriori Expectation: The apriori expectation is that increase in the value of the independent variables should lead to increase in the dependent variable.

Decision Rule: Accept Null if P-Value is greater than 5% and reject Alternate
 Accept Alternate if P- Value is less than 5% and reject Null

RESULTS AND DISCUSSIONS

Descriptive Analysis

The descriptive analysis of the data is shown below in Table 1.

Table 1 Descriptive Analysis

	NP	VPOST	VIBT	VATMT
Mean	12.38052	9.243000	9.292185	9.866435
Median	10.78775	9.263153	8.436625	9.810152
Maximum	66.75347	10.61316	11.89413	10.51386
Minimum	-23.85558	7.685400	7.499238	9.297758
Std. Dev.	14.96209	0.892824	1.748020	0.376754
Skewness	0.487050	0.070945	0.615520	0.396676
Kurtosis	5.125058	2.048616	1.533584	1.985553
Jarque-Bera	27.32370	4.626326	18.32917	8.292550
Probability	0.000001	0.098948	0.000105	0.015823
Sum	1485.663	1109.160	1115.062	1183.972
Sum Sq. Dev.	26639.85	94.85892	363.6134	16.89128
Observations	120	120	120	120

Source: Eviews 10 Output (2025)

The descriptive analysis for NP, which represents point of sales transactions, shows a mean value of 12.38052, indicating that, on average, point of sales transactions significantly contribute to the firm survival of deposit money banks in Nigeria. The maximum value of 66.75347 suggests that there are periods of exceptionally high contributions, while the minimum value of -23.85558 reveals instances where point of sales transactions negatively impacted firm survival. The standard deviation of 14.96209 reflects a high level of variability in point of sales transaction data, indicating inconsistent contributions to firm survival over time. The skewness of 0.487050 suggests that the distribution of NP is moderately skewed to the right, indicating a longer tail on the right side of the distribution. The kurtosis of 5.125058 suggests that the distribution is leptokurtic, meaning it has a sharper peak and heavier tails than a normal distribution, indicating occasional extreme variations in point of sales transactions.

For VPOST, which represents internet banking transactions, the mean value of 9.243000 suggests a moderate contribution of internet banking transactions to the firm survival of deposit money banks. The maximum value of 10.61316 and minimum value of 7.685400 indicate a narrower range of variation compared to NP, with internet banking transactions consistently contributing positively to firm survival. The standard deviation of 0.892824 indicates relatively low variability, suggesting that the contributions of internet banking transactions to firm survival are more stable. The skewness of 0.070945 shows that the distribution is nearly symmetrical, indicating a balanced distribution of values around the mean. The kurtosis of 2.048616 suggests that the distribution is close to normal, indicating a

moderate peak and typical tails, which implies a consistent impact of internet banking transactions on firm survival.

Regarding VIBT, representing automated teller machine (ATM) transactions, the mean value of 9.292185 suggests a positive average contribution of ATM transactions to the firm survival of deposit money banks. The maximum value of 11.89413 and minimum value of 7.499238 indicate that ATM transactions vary but generally have a positive influence on firm survival. The standard deviation of 1.748020 shows moderate variability, suggesting that the impact of ATM transactions on firm survival fluctuates but remains generally positive. The skewness of 0.615520 indicates that the distribution is moderately skewed to the right, with a tendency towards higher values, while the kurtosis of 1.533584 suggests a platykurtic distribution, indicating a flatter peak and thinner tails than a normal distribution, which may suggest a more even distribution of ATM transaction impacts.

For VATMT (automated teller machine transactions), the mean is 9.866435, reflecting a moderate and stable contribution of ATM transactions to firm survival. The maximum value is 10.51386, and the minimum is 9.297758, indicating a very narrow range of ATM transaction effects. The standard deviation of 0.376754 is the lowest among the variables, showing minimal dispersion around the mean and suggesting that ATM transactions are very consistent across the banks. The skewness of 0.396676 indicates a slight right-skew, where most banks have ATM transaction volumes slightly below the mean. The kurtosis of 1.985553 is slightly below 3, indicating a distribution close to normal, with data points moderately concentrated around the mean and fewer outliers.

Test of Hypotheses

The hypotheses in the study were analysed using Panel Least Square Regression with cross-sectional Seemingly Unrelated Regression. The technique was employed because the analysis involved multiple regression models estimated simultaneously, with consideration for the potential correlation between the residuals (errors) of these equations.

Table 2 Test of Hypotheses using Panel Least Square Regression

Dependent Variable: NP
 Method: Panel (Cross-section SUR)
 Date: 30/07/25 Time: 02:51
 Sample: 2013 2024
 Periods included: 12
 Cross-sections included: 10
 Total panel (balanced) observations: 120
 Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
VPOST	-4.222911	0.959616	-4.400627	0.0000
VIBT	0.310845	0.333834	0.931136	0.3537
VATMT	22.78946	3.416221	6.670955	0.0000
C	-176.3192	22.72509	-7.758791	0.0000
Weighted Statistics				
R-squared	0.937712	Mean dependent var	2.376828	
Adjusted R-squared	0.936101	S.D. dependent var	9.383202	
S.E. of regression	1.014216	Sum squared resid	119.3215	
F-statistic	582.1014	Durbin-Watson stat	1.749233	
Prob(F-statistic)	0.000000			

Source: Eviews 10 Output (2025)

The results presented in Table 2 reflect the output of a Panel Least Square Regression analysis examining the effects of different types of financial innovations—point of sales transactions (VPOST), internet banking transactions (VIBT), and automated teller machine transactions (VATMT)—on the corporate value added of deposit money banks in Nigeria. The dependent variable, NP, represents firm survival, and the adjusted R-squared value of 0.936101 indicates that approximately 93.61% of the variability in corporate value added can be explained by the independent variables included in the model. This high adjusted R-squared value suggests a strong explanatory power of the model. The Prob(F-statistic) = 0.000000 is less than 0.05, indicating that the overall model is statistically significant at 5% level of significance, implying that the financial innovations considered jointly have a significant impact on corporate value added.

Hypothesis One

- H_{01} : Point of sales transactions have no significant effect on corporate value added of deposit money banks in Nigeria.
- H_{i1} : Point of sales transactions have significant effect on corporate value added of deposit money banks in Nigeria.

The coefficient for VPOST is -4.222911, which is statistically significant at the 5% level, with a p-value of 0.0000. The negative coefficient suggests that an increase in point of sales transactions is associated with a decrease in corporate value added among deposit money banks in Nigeria. This result leads to the rejection of the null hypothesis (H_{01}), which posits that point of sales transactions have no significant effect on corporate value added. Instead, the findings indicate that point of sales transactions have a significant and negative effect on the value added of deposit money banks, implying that relying heavily on POS transactions could potentially undermine the sustainability of these banks. This negative effect may be attributed to increased operational costs, lower profit margins, or heightened competition in the market, which could erode the profitability and longevity of these banks. Since the p-value (0.000) is less than 0.05, we accepted the alternate hypothesis that Point of sales transactions have a significant and negative effect on corporate value added of deposit money banks in Nigeria ($\beta = -4.222911, p = 0.0000$).

This aligns with research from Ejinkonye and Okonkwo (2021), who found that POS transactions had an insignificant impact on deposit mobilization in Nigerian banks. Similarly, Simon and Elias (2021) observed weak effects of POS terminals on the performance of commercial banks in Nigeria, emphasizing the low contribution of POS systems to profitability. This contrasts with studies by Nasution et al. (2022) and Alhassan et al. (2021), which highlighted the role of financial technologies, including POS, in enhancing financial inclusion and economic development in ASEAN and Sub-Saharan Africa, suggesting that the effectiveness of POS systems may vary depending on regional financial infrastructure and user adoption levels.

Hypothesis Two

- H₀₂: Internet banking transactions have no significant effect on the corporate value added of deposit money banks in Nigeria.
- H_{i2}: Internet banking transactions have significant effect on the corporate value added of deposit money banks in Nigeria.

The coefficient for VIBT is 0.310845, with a p-value of 0.3537, indicating that internet banking transactions do not have a statistically significant effect on corporate value added at conventional significance levels. The positive coefficient suggests that an increase in internet banking transactions might be associated with an increase in corporate value added, but this relationship is not strong enough to be considered statistically significant. Consequently, the null hypothesis (H₀₂), which states that internet banking transactions have no significant effect on corporate value added, cannot be rejected. This result suggests that internet banking transactions do not significantly influence the value added of deposit money banks in Nigeria. It is possible that while internet banking offers some benefits, such as convenience and reduced transaction costs, these benefits may not be substantial enough to impact the overall value added of the banks, or other unobserved factors may be at play.

Since the p-value (0.3537) is greater than 0.05, we accepted the null hypothesis that Internet banking transactions have a positive but non-significant effect on corporate value added of deposit money banks in Nigeria ($\beta = 0.310845$, $p = 0.3537$).

This contradicts research by Misati et al. (2022), who found that internet banking positively influences financial deepening and economic growth, particularly in Kenya. However, Mbizi et al. (2022) noted that, although internet banking has a positive relationship with financial performance, the effect was not as strong as that of other financial technologies like ATMs. Additionally, Domeher et al. (2022) found that financial inclusion, partially driven by internet banking, mediated the relationship between banking innovations and economic growth in sub-Saharan Africa. Adiga et al. (2022) also pointed out that fintech, including internet banking, significantly impacts return on assets (ROA) and return on equity (ROE) of deposit money banks in Nigeria, suggesting that the findings might depend on which financial metrics are being considered.

Hypothesis Three

- H₀₃: Automated teller machine transactions have no significant effect on corporate value added of deposit money banks in Nigeria.
- H_{i3}: Automated teller machine transactions have significant effect on corporate value added of deposit money banks in Nigeria.

The coefficient for VATMT is 22.78946, which is highly statistically significant with a p-value of 0.0000. The positive and significant coefficient indicates that an increase in automated teller machine transactions is strongly associated with an increase in corporate value added. This result leads to the rejection of the null hypothesis (H₀₃), which posits that automated teller machine transactions have no significant effect on corporate value added. Instead, the findings reveal that ATM transactions have a significant and positive effect on the value added of deposit money banks in Nigeria. This positive impact could be due to the widespread adoption and use of ATMs, which provide customers with easy access to banking services, thereby enhancing customer satisfaction, loyalty, and ultimately contributing to the long-term viability of the banks. Since the p-value (0.0000) is less than 0.05, we accepted the alternate hypothesis that automated teller machine transactions have a significant and positive effect on corporate value added of deposit money banks in Nigeria ($\beta = 22.78946$, $p = 0.0000$).

This aligns with studies by Mbizi et al. (2022) and Simon and Elias (2021), who both found that ATM transactions significantly improved the financial performance of commercial banks in Zimbabwe and Nigeria, respectively. These findings are supported by Ejinkonye and Okonkwo (2021), who noted that ATM usage was positively related to deposit mobilization in Nigeria, reflecting its importance in enhancing customer access to banking services. Similarly, Nasution et al. (2022) observed that ATMs were a significant contributor to financial inclusion and economic growth in ASEAN-5 countries, reinforcing the notion that widespread access to ATM services can improve the sustainability of financial institutions by increasing customer transactions and enhancing liquidity management.

CONCLUSION AND RECOMMENDATIONS

The value added of deposit money banks in Nigeria is heavily influenced by the adoption and integration of various financial innovations, which are increasingly becoming crucial in the competitive banking sector. This study investigated the effects of point of sales transactions, internet banking transactions, and automated teller machine transactions on the corporate value added of deposit money banks in Nigeria. The findings revealed distinct impacts of



these financial innovations on bank value added, reflecting the complex dynamics of the financial landscape. The study found that point of sales (POS) transactions have a significant and negative effect on the value added of deposit money banks in Nigeria. This negative relationship suggests that an increase in POS transactions is associated with a decrease in firm survival among these banks. This result may be due to the operational challenges and costs associated with maintaining POS systems, including transaction fees, hardware costs, and potential fraud risks. Additionally, POS transactions typically involve lower margins compared to other banking services, which might lead to reduced profitability for banks that rely heavily on this mode of transaction. Moreover, the competitive pressure to provide extensive POS services at low or no cost to merchants could further strain the financial health of these institutions, potentially leading to their decreased value added chances.

In contrast, internet banking transactions were found to have no significant effect on the corporate value added of deposit money banks in Nigeria. Despite the widespread adoption of internet banking and its potential benefits, such as reduced operational costs and enhanced customer convenience, the study indicates that these advantages are not substantial enough to significantly influence the overall value added of the banks. One possible explanation is that internet banking, while offering convenience, may not generate enough revenue or customer loyalty to offset the costs of developing and maintaining these platforms. Additionally, the high level of competition in the digital banking space might dilute the potential positive effects of internet banking on bank value added, as customers can easily switch between banks offering similar online services. On the other hand, automated teller machine (ATM) transactions were found to have a significant and positive effect on the value added of deposit money banks in Nigeria. The strong positive impact of ATM transactions on bank value added can be attributed to the widespread and consistent use of ATMs across the country. ATMs provide customers with easy and round-the-clock access to cash and other banking services, which enhances customer satisfaction and loyalty. Furthermore, ATMs serve as a significant revenue stream for banks through transaction fees, especially from non-customers. The convenience and reliability of ATMs likely contribute to increased customer retention and, consequently, the long-term viability of the banks that invest in this technology.

In conclusion, the findings from this study underscore the varied impact of different financial innovations on the value added of deposit money banks in Nigeria. While POS transactions may pose a risk to bank value added due to their associated costs and competitive pressures, ATMs appear to play a crucial role in sustaining banks by enhancing customer access and



generating revenue. Internet banking, despite its benefits, does not significantly impact bank value added, possibly due to its limited revenue generation or the high level of competition in the digital banking space. These insights highlight the importance of strategic investment in financial innovations that not only meet customer needs but also contribute positively to the financial health and longevity of deposit money banks in Nigeria.

Based on the findings of the study, the study recommends that:

1. To Bank Management: Reduce the reliance on point of sales (POS) transactions as a primary service offering. Instead, focus on optimizing and diversifying revenue streams to mitigate the negative impact on bank value added.
2. To Digital Banking Teams: Enhance the revenue-generating potential of internet banking platforms by introducing value-added services and loyalty programs that can differentiate the bank from competitors and improve customer retention.
3. To ATM Operations Managers: Continue to expand and maintain a robust network of automated teller machines (ATMs) to capitalize on their significant positive effect on bank value added, ensuring that ATMs are accessible, reliable, and meet customer demand efficiently.

REFERENCES

- Abaenewe, Z. C., Ogbulu, O. M and Ndugbu, M. O. (2013). Electronic Banking and Bank Performance in Nigeria. *West African Journal of Industrial and Academic Research*, 6(1)
- Adeoye, A. A., & Oyetola, O. T. (2022). Fintech adoption and bank performance in Nigeria: Evidence from listed deposit money banks. *African Journal of Accounting, Auditing and Finance*, 11(2), 212–230. <https://doi.org/10.1504/AJAAF.2022.100478>
- Aduda, J., & Musyoka, L. (2022). Corporate value creation and stakeholder reporting in emerging markets. *International Journal of Finance and Accounting*, 11(1), 45–57.
- Afolabi, A., Okonji, M., & Lawal, S. (2023). Mobile banking and its impact on financial inclusion in Nigeria. *African Journal of Information Systems*, 15(2), 101–115.
- Akinola, A. O., Bello, M. A., & Yusuf, O. T. (2023). Value added disclosure and employee engagement in Nigerian banks. *African Journal of Business Research*, 17(2), 99–115.
- Alhassan T.F., Blokhina T., Kouadio J.A. (2021) Financial Innovation: The Impact of Mobile Money on Innovative Economic Growth. Proceeding of the International Science and Technology Conference "FarEastCon 2020". Smart Innovation, Systems and Technologies, 22(7), 27-38. Springer, Singapore. https://doi.org/10.1007/978-981-16-0953-4_3
- Al Ajlouni, M.T. & Al-hakim, M. (2018). Financial Technology in Banking Industry: Challenges and Opportunities. International Conference on Economics and Administrative Sciences ICEAS2018 Applied Sciences University, Jordan. 11-12.
- Alabar, T. T. (2012). Electronic banking services and customer satisfaction in the Nigerian banking industry. *International journal of business and management tomorrow*, 2(3),

1-8.

- Abiola, A.B., Lawal, A.I., Adetiloye, K.A. & Bede, U.A. (2021). Financial sector reform and economic development in Nigeria. *Asian Economic and Financial Review*, 2021, 11(2): 160-172.
- Adiga, D.L., Adigwe, P.K., Okonkwo, V.K. & Ogbonna, S.K. (2022). Financial technology and the banking sector performance in Nigeria. *Discovery Scientific Society*. 58(316), 349- 360.
- Adeoti, O.O. (2013), ‘Challenges to the efficient use of Point of Sale (POS) terminals in Nigeria’ *African Journal of Business Management*, 7(3), 67-88.
- Agu, B.O., Simon, N. P.N. & Onwuka, I.O. (2021). Point of sale (POS) - Adoption and Challenges in Nigeria.2(2)
- Agbada, O. A., & Osuji, C. C. (2013). An Empirical analysis of trends in financial intermediation and output in Nigeria. *Global Journals Inc. (USA)*, 13(9), 210-216.
- Arnaboldi, K. & Rossignoli, H. (2018). Financial innovation in banking. *Journal of Bank Risk, Governance and Regulation*, 127-162.
- Brigham, E. F., & Daves, P. R. (2023). *Intermediate Financial Management* (14th ed.). Cengage Learning.
- Broby, D. (2021). Financial technology and the future of banking. *Journal of Financial Innovation*. 7-47 <https://doi.org/10.1186/s40854-021-00264>.
- Bray, S. (2014). Power in Transit: Examining the Social Construction of Power in Relation to the Perceptions, Interactions, and Spatial Behavior of Passengers on Public Buses.
- Carlos, T. & Tiago, O.(2016). Literature review of mobile banking and individual performance *International Journal of Bank Marketing* (35)7, 1042-1065.
- Castri, S. (2013). Mobile money: enabling regulatory solutions. Available at SSRN: <https://ssrn.com/abstract=2302726> or <http://dx.doi.org/10.2139/ssrn.2302726>
- Central Bank of Nigeria (CBN). (2024). *Financial Stability Report*. Retrieved from <https://www.cbn.gov.ng>
- Chishti, S. and J. Barberis (2016), the fintech BOOK: the financial Technology Handbook for Investors, Entrepreneurs and Visionaries, Wiley.
- Chhabra, T.N., Suri, R.K. & Verma, S. (2009). An Introduction to e-commerce Dhanpat Rai & Co. New Delhi: 9(8)
- Dumani, M., Ekokemi, T. T., Johnny, N., & Krokeme, O. (2017). Impact of financial intermediation on economic growth in Nigeria: A disaggregate approach. *Journal of Economics and Sustainable Development*, 8(22).
- Domeher, D., Yiadom, E.K. & Aawaar, G (2022). Financial innovations and economic growth: Does financial inclusion play a mediating role? *Cogent Business & Management*. 2(9) 204-9670 <https://doi.org/10.1080/23311975.2022.2049670>