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Fintech Payment Systems and Export Performance in Nigeria

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Abstract: This study empirically examined fintech payment systems and export performance in Nigeria between 2012Q1 and 2024Q4. The study proxied export performance by total export value while the proxies of fintech payment systems are web-based payment, point of sale, mobile payment and NIBSS instant payment. The study made use of quarterly data which were sourced from Central Bank of Nigeria (CBN) statistical bulletin and adopted the technique of Autoregressive Distributed Lag model (ARDL). The major findings showed that, web-based payment has a positive and non-significant impact on total export value in Nigeria, point of sale (POS) has positive and significant impact on total export value in Nigeria, mobile payment has a positive and significant impact on total export value in Nigeria while NIBSS instant payment also has a positive and significant impact on total export value in Nigeria. Based on the findings, the study concluded that, fintech payment systems play a significant positive role in improving export performance in Nigeria. It was recommended among others that, policymakers should invest in upgrading digital payment platforms, reducing transaction delays, and enhancing cyber-security. Improving trust, speed, and stability in web-based payment systems will encourage exporters to adopt them more widely, thereby increasing their contribution to export growth.

Keywords: Export, Fintech, Instant payment, NIBSS, Payment systems, POS.

INTRODUCTION

Export performance is a critical driver of economic growth and development in Nigeria, providing foreign exchange, employment opportunities, and revenue for national development. Historically, the country has relied heavily on crude oil exports, which account for a significant portion of its foreign exchange earnings. This overdependence on oil has exposed the economy to global price shocks and limited the growth of non-oil export sectors such as agriculture, manufacturing, and services. Improving export performance, particularly in non-oil sectors, is essential for diversifying the economy, enhancing competitiveness, and achieving sustainable development goals. Efficient payment systems play a vital role in facilitating international trade, ensuring timely and secure transactions, and reducing operational inefficiencies in the export process (Ekong & Onwioduokit, 2021; Benneh , N. D. 2025). In recent years, financial technology (Fintech) payment systems have emerged as a transformative solution for addressing inefficiencies in cross-border trade. Fintech encompasses digital financial services such as web-based payment platforms, mobile money, blockchain-based transactions, and electronic remittance solutions that simplify and expedite international payments (Eze & Ebere, 2024). Fintech payment systems, therefore, encompass technologies and platforms that facilitate electronic transactions, transfers, and settlements between buyers and sellers across digital channels. These systems include mobile payment solutions (such as Apple Pay, M-Pesa, and Paystack), online banking systems, cryptocurrency-based payments, peer-to-peer (P2P) transfer applications, and digital wallets. Their defining characteristics are accessibility, convenience, speed, and cost-effectiveness. Fintech Payment Systems integrate advanced technologies like blockchain, artificial intelligence, and big data analytics to ensure secure and transparent financial operations (Gomber, Koch, & Siering, 2017; Vives, 2019; Benneh , N. D. 2024). However, the emergence of fintech payment systems has radically changed how businesses, governments, and consumers engage in financial transactions. Digital payment platforms such as mobile banking applications, blockchain-based remittances, online escrow services, and automated clearing systems have not only increased the efficiency of domestic commerce but have also broadened opportunities for cross-border trade. In developing economies, especially in Nigeria, the adoption of Fintech has helped overcome long-standing barriers to financial inclusion, foreign exchange accessibility, and international payment bottlenecks (Ozili, 2023). By bridging traditional banking gaps, Fintech has enabled small and medium-sized enterprises (SMEs) and export-oriented firms to access global markets more conveniently, manage export receipts more securely, and conduct

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transactions in real-time. The dynamic and borderless nature of Fintech-based payment systems aligns perfectly with the modern digital economy, where speed, security, and accessibility of financial services determine competitiveness and export success. In emerging economies, export performance is often influenced by macroeconomic stability, infrastructure, exchange rate policy, institutional quality, and access to financing. However, in the digital age, financial intermediation and payment systems have become equally significant determinants of export success (Adegboye, Osabohien, & Okunlola, 2021; Clottey, F. A. 2024).

Adeola and Evans (2019) stated that financial technology (fintech) has emerged as a transformative force in the Nigerian export sector, driving significant improvements in sector performance through enhanced accessibility, efficiency, and transparency. Prior to the advent of the financial technology (FinTech), it was evident that traditional banking has suffered from some fundamental economic forces such as decline in the source and supply of funds for financial intermediaries, diminishing deposits, and increasing cost of banking operations due to increased staff. The aftermath of the traditional banking challenges led to the birth of financial technology (FinTech) phases in the global financial service industry (Ogbuji, Ologundudu & Oluyomi, 2020). The effect of fintech payment systems on export performance can be explained through both theoretical and empirical lenses. Theoretically, Fintech enhances export performance by improving financial inclusion, lowering transaction costs, reducing information asymmetry, and accelerating trade finance (Beck, Senbet, & Simbanegavi, 2015). When exporters have access to affordable and secure payment infrastructure, they can interact more effectively with international buyers, receive export proceeds promptly, and minimize currency exchange risks. Fintech innovations also provide data-driven insights that enable firms to track global demand patterns and optimize pricing strategies.

However, Nigeria, despite its abundant natural and human resources, continues to face challenges in achieving robust export performance, particularly in the non-oil sector. The country's export sector has been historically constrained by inefficiencies in traditional banking and payment systems, which result in delayed payments, high transaction costs, and foreign exchange risks. These challenges reduce the competitiveness of Nigerian exporters in global markets and limit the country's ability to diversify away from crude oil dependence. According to Eze and Ebere (2024), such inefficiencies impede timely cross-border transactions, restrict liquidity for export operations, and create barriers for small and medium-sized enterprises (SMEs) seeking to penetrate international markets. This scenario underscores the need for innovative solutions to streamline export processes and improve overall performance. Furthermore, fintech payment systems, including platforms like Flutterwave, Paystack, and Remita, have emerged globally as effective tools for reducing transaction costs, improving payment efficiency, and mitigating financial risks in international trade. However, the adoption of these technologies among Nigerian exporters remains uneven. Many firms, especially SMEs, encounter barriers such as limited technical knowledge, low awareness, security concerns, and integration challenges with existing business processes. These issues create a disconnect between the potential benefits of Fintech solutions and their actual utilization, limiting their impact on improving export performance. **Hence, t**he aim of this study is to examine the effect of fintech payment systems on export performance in Nigeria. Specifically, the study examined the effects of web-based payment, point of sale (POS), mobile payment and NIBSS Instant Payment (NIP) on total export value in Nigeria.

LITERATURE REVIEW

Theoretical Review: Resource-Based View (RBV)

The Resource-Based View (RBV) of the firm was formally developed by Jay Barney in 1991, building on earlier concepts of firm resources and competitive advantage. Resource-Based View (RBV) posits that a firm's sustainable competitive advantage is derived from its unique resources and capabilities, which are valuable, rare, inimitable, and non-substitutable (VRIN framework). Unlike traditional theories that emphasize external market conditions, Resource-Based View (RBV) focuses on internal strengths and strategic assets as drivers of performance. According to Barney (1991), firms that effectively leverage these unique resources can achieve superior performance relative to competitors, as such resources enable the firm to create value, reduce costs, and adapt to changing market conditions. The theory is based on several key assumptions. First, it assumes that firms are heterogeneous in terms of resources and capabilities, meaning that each firm possesses

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distinct assets that competitors cannot perfectly replicate. Second, it assumes that resources are imperfectly mobile, which allows firms to maintain their competitive advantage over time. Third, Resource-Based View (RBV) presumes that resources and capabilities, including technological, organizational, and human assets, can be strategically managed to generate superior performance outcomes. These assumptions imply that a firm's ability to develop, acquire, and deploy valuable resources is central to achieving sustained competitive advantage in the market (Barney, 1991; Clottey, F. A. 2024).

Applying Resource-Based View to Fintech Payment Systems and export performance in Nigeria, the theory explains how technological resources can become strategic assets for exporters. Digital payment platforms such as Flutterwave, Paystack, and Remita represent valuable and rare resources that enhance the operational capabilities of Nigerian exporters. By providing secure, fast, and efficient cross-border payment solutions, these systems reduce transaction costs, mitigate foreign exchange risk, and facilitate timely settlement of international trade transactions. Firms that adopt and integrate Fintech systems effectively gain a competitive edge over those relying on traditional banking channels, which are often slower, more expensive, and prone to inefficiencies. In this way, Fintech platforms function as strategic resources that improve liquidity, operational efficiency, and overall export performance. Moreover, Resource-Based View emphasizes that resources must be effectively managed and leveraged to achieve performance benefits. Nigerian exporters that combine Fintech technologies with skilled personnel, robust organizational processes, and strong market knowledge can optimize the advantages offered by digital payment systems.

Empirical Review

Bamanga, Joshua, Abubakar and Usman (2025) evaluated the impact of Fintech financial services on financial inclusion in Nigeria. The study was conducted using Secondary Data which were collected and analysed using multiple regression. The findings revealed that mobile banking has the most significant effect on financial inclusion, followed by POS terminals. Internet banking and ATMs also contribute positively, though to a lesser extent.

Idanyingi and Egileoniso (2025) examined the relationship between payment system and economic development in Nigeria from 2009 to 2023. Secondary data were used while Ordinary Least Squares (OLS) regression technique and the Autoregressive Distributed Lag (ARDL) approach were employed. In the short run, automated teller machines, electronic fund transfers, and mobile payment exhibit positive but statistically non-significant impacts on per capital income, while point of sales usage has a significant negative effect. In the long run, mobile payment and automated teller machines maintain positive yet non-significant relationships with per capital income, whereas electronic fund transfers and point of sales have negative and non-significant relationships.

Bamanga, Joshua, Abubakar and Usman (2025) investigated the effect of electronic payment systems (EPS) on the performance of small and medium-sized enterprises (SMEs) in Ilorin Metropolis, Kwara State, Nigeria. The findings indicate a positive effect between EPS usage and SME performance across various dimensions. Specifically, the study reveals that EPS significantly enhances operational efficiency and boosts return on investment (ROI) of SMEs. With grand means of 3.82 and 3.76 respectively. The results underscore the crucial role of EPS in improving transaction efficiency, reducing cash handling risks, and increasing customer reach. Based on these findings, the study recommends that stakeholders, including government bodies and financial institutions organize training and awareness campaigns to optimize EPS benefits for SMEs.

Okoye, Okere, Ogechukwu, Ojiugo, Udeoba and Adegbite (2024) examines the role of fintech on the performance of deposit money banks and SMEs in Nigeria. The data generated from the secondary source were presented and analysed using quantitative method. The method of analysis used in this study was the Auto-regressive distributed lag technique (ARDL) method. The study found that financial technology has a significant impact on the performance of deposit money bank in Nigeria. The study found out that financial technology has a significant impact on the performance of small and medium enterprises in Nigeria.

Ojo and Oyinlola (2023) examined the effect of financial technology on bank sustainability in Nigeria. A total of three hundred and eighty-five were sampled from this population, using the Cochran formula (1997) as a determinant for the

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sample size. The study utilized a primary data collection approach, and the data collected were measured using a Likert scale. Simple descriptive and inferential statistical tools were utilized to present and analyze the data gathered from the field study. According to the test of hypotheses, it was revealed that bank sustainability in Nigeria is significantly influenced by financial technology.

Ogbonna, Akwam, Okonkwo, Okaro and Adigwe (2023) examined the relationship between financial technology and the performance of the financial institutions in Sub-Saharan African economies from 2005-2021. The study collated data from both the Central Bank of the selected countries and the World Bank Development Indicator (WDI) of various years, and were subjected to the panel data regression analysis. The results revealed a strongly significant impact of financial technology on the performance of the financial institution in the Sub-Saharan African economies.

Otonne, Melikam and Ige (2023) investigated the impact of FinTech on the performance of Nigerian banks, focusing on United Bank for Africa (UBA) and Zenith Bank as case studies. In this study, the secondary used data are collected from the banks' quarterly report and payment information system from the Central Bank of Nigeria statistical bulletin from 2012 to 2019. The ARDL technique estimation was employed to analyse the models. The findings revealed that payment technologies have both positive and negative effects on key financial indicators such as earnings per share, price earnings ratio, return on assets, and short- and long-term return on equity. However, the positive impact outweighs the negative impact.

Inusa, Shuaib, Gambo, Shehu and Shehu (2022) examined the effects of financial technology on Nigeria's national development amid COVID-19 recovery. 415 banks' customers were surveyed to determine the effects of FinTech on national development. PLS-SEM was employed to analyze the data using Smart PLS3. The findings revealed that the relationship between sustainability and national development is positive and significant. Similarly, the findings indicated a positive and significant relationship between transaction efficiency and national development.

Nteegah and Oladosu (2022) examined the effect of electronic payment system channels on the performance of deposit money banks in Nigeria from 2010Q1 to 2020Q4. Autoregressive Distributed Lag (ARDL) technique was used. The result of the ARDL estimation showed that: Automated Teller Machine, mobile payment and web-based payment had a positive and significant effect on deposit penetration while point of sale had a positive but non-significant effect on deposit penetration.

Adam and Yusuf (2021) assessed the level of adoption of FinTech among Nigerian commercial banks. Results of a least square regression showed that FinTech innovation adoption and software technology acquisition have positive and significant impact on the banks' financial performance at 5% level of significant.

Ogbuji, Ologundudu and Oluyomi (2020) investigated the comparative analysis of financial technology (FinTech) operation and traditional bank operation performance in Nigeria, using ALAT by Wema Bank Plc as a case study. In this study, the secondary data used were obtained from WEMA bank annual reports from 2012 to 2018. The findings revealed that the digital FinTech operations, commonly called ALAT in WEMA bank resulted to a consistent positive impact on WEMA bank performance between 2017 and 2018 than the payment FinTech operations on WEMA bank performance between 2012 and 2016.

Nkwodimmah and Ochei (2019) investigated the impact of financial technology on the liquidity of the Nigerian banking sector from the first quarter of 2009 to the fourth quarter of 2017. Secondary data were also collected in order to estimate the model. A unit root test was employed as a pre-estimation technique for this study, hence the variables were stationary at first difference. The study employed the Auto Regressive Distributed Lag or Bounds test approach in order to establish the short run dynamics and long run relationship of the model. Findings from the study suggested that there was a notable impact of electronic payment (fin-tech) on liquidity among all deposit money banks in Nigeria.

Ololade and Ogbeide (2017) assessed issues and challenges of financial technology in Nigeria. The population consisted of all the customers and staff of three selected banks branches in the Benin metropolis. A sample of three hundred respondents was selected using the convenience random sampling techniques. The data analysis was carried out using summary statistics and ordinary least square regression analysis. The study findings indicate that employees' job security has a positive

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relationship with e-banking and significantly influences financial technology in Nigeria; customers' satisfaction was ascertained to have a positive relationship with e-banking and also influence financial technology penetration in Nigeria; security of financial transactions was found to have a positive relationship with e-banking, it however had inverse significant impact on e-banking; services delivery has a positive relationship with e-banking.

Gap Identification

Based on the empirical studies reviewed, some gaps in knowledge have been identified and this study aimed to bridge these gaps in knowledge. To start with, while some studies examined the effect of fintech payment systems on different variables in Nigeria, none of the studies examined the effect of fintech payment systems on export performance in Nigeria. Also, most of the studies made use of annual time series data which covered a short period of time believed to be inadequate for robust econometric data analysis while very few of these studies made use of quarterly data covered up to 2024 to carry out their analyses. As a result, this study bridged these gaps by empirically determining the effect of fintech payment systems on export performance in Nigeria. The study covered a period from 2012 to 2024, using quarterly data that generated fifty-two sample observations large enough for robust data analysis while inclusion of 2024 made this study to be more current and up-to-date than the previous related studies.

METHODOLOGY

For the purpose of this study, *ex-post facto* research design was adopted. *Ex-post facto* design is deemed appropriate for the study because the study is non-experimental, and seeks to investigate causal relationship between the independent variable (fintech payment systems) and the dependent variable (export performance. Also, the study employed quarterly data which ranged from 2012Q1 to 2024Q4. These data were sourced mainly from Central Bank of Nigeria (CBN) Statistical Bulletin.

In estimating the model, autoregressive distributed lag (ARDL) technique proposed by Pesaran, Shin and Smith (2001) was used given that the result of the unit root test showed evidence of mixed stationarity. That is, mixture of I(0) and I(1) series. In other words, the justification for the autoregressive distributed lag (ARDL) technique was based on the fact that the variables are mixed integrated of order zero and one.

Model Specification

The model for this study was adapted from the work Okoye, Okere, Ogechukwu, Ojiugo, Udeoba and Adegbite (2024) who assessed the linkages of financial technology (fintech) and the performance of firms in Nigeria. However, the model was modified not only to incorporate all the variables adopted in this study but also to remove variables that were not included in this study. Thus, the modified model is expressed in its functional, mathematical and econometric forms respectively:

The functional forms of the models are expressed as:

$$TEV = f(WBP, POS, MOB, NIP) \quad (1)$$

The mathematical form of the model is expressed as:

$$TEV_t = \delta_0 + \delta_1 WBP_t + \delta_2 POS_t + \delta_3 MOB_t + \delta_4 NIP_t + \mu_t \quad (2)$$

The econometric form of the model is expressed as:

$$TEV_t = \delta_0 + \delta_1 WBP_t + \delta_2 POS_t + \delta_3 MOB_t + \delta_4 NIP_t + \mu_t \quad (3)$$

The log linear form of the model is expressed as:

$$InTEV_t = \delta_0 + \delta_1 InWBP_t + \delta_2 InPOS_t + \delta_3 InMOB_t + \delta_4 InNIP_t + \mu_t \quad (4)$$

Where:

TEV = Total Export Value, WBP = Web-based payment, POS = Point of Sale, MOB= Mobile payment, NIB = NIBSS Instant Payment, t = Timeframe, δ_0 = Constant variable in the model, δ_1 = Parameter of web-based payment, δ_2 = Parameter of Point of Sale, δ_3 = Parameter of mobile payment, δ_4 = Parameter of NIBSS Instant Payment, μ_t = disturbance or error term

A Priori Expectation

The a priori expectation tells the theoretical relationship that exists between financial technology and export performance. However, the proxies of Fintech payment system are expected to have a positive effect on measure of export performance. This is mathematically represented as: of deposit money banks in this study are systematically highlighted in table 3.1 below: $\delta_1 > 0$; $\delta_2 > 0$; $\delta_3 > 0$; $\delta_4 > 0$.

RESULTS AND DISCUSSION

Analysis of Pre-estimation Tests Results

The pre-estimation tests are the descriptive statistics and unit root test results

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Table 1: Descriptive Statistics Result

	TEV	**WBP**	**POS**	**MOB**	**NIB**
Mean	56798.29	516807.2	237420.0	1254.575	3198452.
Median	12924.39	530337.8	181208.5	410.5700	2002071.
Maximum	469206.3	866543.9	616033.0	4474.990	9909705.
Minimum	7457.110	151596.4	621.7900	1.080000	102239.1
Std. Dev.	126073.9	214729.2	214127.5	1419.242	2767206.
Skewness	2.701702	-0.051862	0.450880	0.877960	1.237018
Kurtosis	8.372507	1.886325	1.717561	2.360738	3.305903
Jarque-Bera	123.3788	2.658442	5.222867	7.420305	13.20567
Probability	0.000000	0.264683	0.073429	0.024474	0.001357
Sum	2896713.	26357165	12108421	63983.34	1.63E+08
Sum Sq. Dev.	7.95E+11	2.31E+12	2.29E+12	1.01E+08	3.83E+14
Observations	**52**	**52**	**52**	**52**	**52**

Source: *Authors' Computation from EViews 12.0 Output*

Table 1 above presents the descriptive statistics of total export value (TEV), web-based payment (WBP), point of sale (POS), mobile payment (MOB) and NIBSS instant payment (NIB) in Nigeria over a period of twelve years from 2012Q1 to 2024Q4. As shown in the table, the total export value (TEV) recorded a mean average of ₦56798.29 billion with a maximum value of ₦469206.3 billion and minimum value of ₦7457.11 billion per annum. The standard deviation of 126073.9 shows that there is high dispersion of total export value (TEV) from the mean. Total export value (TEV) is positively skewed at 2.701 with a Kurtosis value of 8.373. However, Jarque-Bera of 123.37 indicates that it is not normally distributed. In furtherance, web-based payment (WBP) had a mean value of ₦516807.2 billion while its maximum and minimum values are ₦866543.9 billion and ₦151596.4 billion respectively. The standard deviation of ₦214729.2 shows that there is high dispersion of web-based payment (WBP) from the mean. web-based payment (WBP) is negatively skewed at -0.052 with a Kurtosis value of 1.886. However, its Jarque-Bera of 2.658 indicates that it is normally distributed. In addition, point of sale (POS) had a mean value ₦237420 billion while its maximum and minimum values are ₦616033 billion and ₦621.79 billion respectively. The standard deviation of ₦214127.5 billion shows that there is low dispersion of point of sale (POS) from the mean. Point of sale (POS) is positively skewed at 0.451 with a Kurtosis value of 1.718. However, its Jarque-Bera of 5.222 indicates that it is not normally distributed.

More importantly, mobile payment had a mean value of ₦1254.56 billion with maximum and minimum values of ₦4474.99 billion and ₦1.08 billion respectively. The standard deviation 1419.242 shows that there is low dispersion of mobile payment from the mean. Mobile payment is positively skewed at 0.878 with a Kurtosis value of 2.36. However, Jarque-Bera of 7.42 indicates that it is not normally distributed. Lastly, NIBSS instant payment had a mean value of ₦3198452 billion with maximum and minimum values of ₦9909705 billion and ₦102239.1 billion respectively. The standard deviation of 2767206 billion shows that there is low dispersion of NIBSS instant payment from the mean NIBSS instant payment is positively skewed at 1.237 with a Kurtosis value of 3.305. However, Jarque-Bera of 13.205 indicates that it is normally distributed.

Trend Analysis

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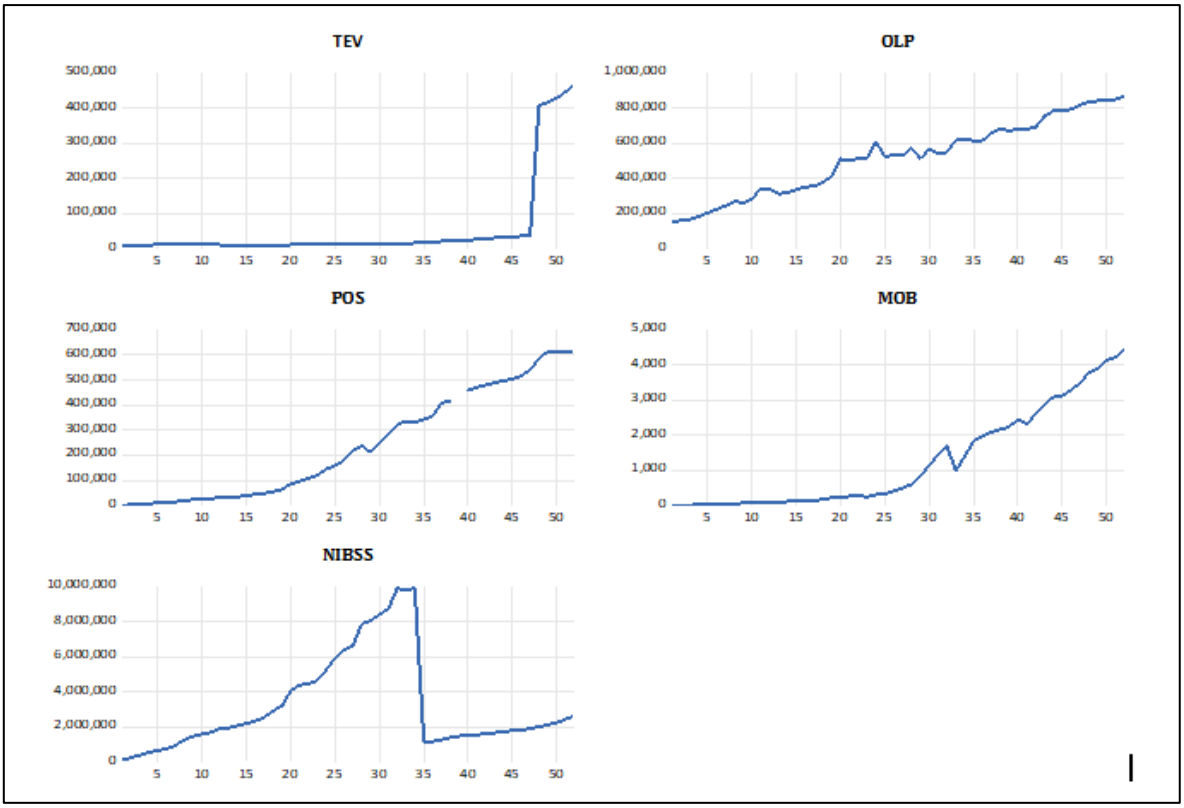


Figure 1: Line Graph Showing the Trends in the Research Variables

Figure 1 shows that unlike total export value (TEV) that followed a fairly consistent upward movements, web-based payment (WBP), point of sale (POS), mobile payment (MOB) and NIBSS instant payment (NIB) in Nigeria showed some levels of inconsistencies in the movements (upward and downward) throughout the research period (2012Q1 to 2023Q4).

Table 2: Augmented Dickey-Fuller (ADF) Test Results

	At Levels		At First Difference			
Variables	ADF	Mackinnon Critical Value @ 5%	ADF	Mackinnon Critical Value @ 5%	Remark	Order of Integration
TEV_t	-1.135562	-2.925169	4.1037491	-2.926622	Stationary at 1st Difference	I(1)
WBP_t	-0.632551	-2.925169	-7.008830	-2.926622	Stationary at 1st Difference	I(1)
POS_t	2.028360	-2.928142	-4.649211	-2.931404	Stationary at 1st Difference	I(1)
MOB_t	2.014159	-2.925169	-6.264532	-2.926622	Stationary at 1st Difference	I(1)
NIP_t	-6.505467	-2.925169	-	-	Stationary at Level	I(0)

Source: *Authors' Computation, 2026, EViews 12.0 Result.*

The results of the ADF Unit Root Test as shown in Table 2 indicated that, at 5% level of significance, the Augmented Dickey Fuller (ADF) test statistics for NIBSS instant payment (NIB) is greater in absolute value than the individual critical values. This therefore indicates that NIBSS instant payment (NIB) was stationary at level and was therefore integrated at order zero [that is, I(0)]. On the other hand, total export value (TEV), web-based payment (WBP), point of sale (POS) and mobile payment (MOB) stationary at first difference and were therefore integrated at order one [that is, I(1)]. However, given that all the variables were stationary at levels and at first difference, that is, mixed of integrated at orders zero [I(0)] and one [I(1)], we therefore proceed to

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establish or ascertain the existence or nonexistence of long-run cointegrating relationship among the variables in the equation using bound cointegration test.

Analysis of Estimation Test Results

The ARDL long run and short run test are the tests considered as the estimation test. Thus, the bound test cointegration, the short run and long run dynamic Autoregressive Distributed Lag (ARDL) estimation of total export value (TEV) model are presented in Table 3 and Table 4:

Table 3: Bounds Cointegration Test

Null Hypothesis: No Long-Run Relationships Exist				
Critical Value Bounds				
T-statistic	Value	Significance	I(0)	I(1)
F-statistic	10.11165	10%	2.2	3.09
K	4	5%	2.56	3.49
		2.5%	2.88	3.87
		1%	3.29	4.37

Source: *Authors' Computation, 2026, EViews 12.0 Result.*

Since the computed F-statistic (10.11165) is greater than upper bound critical value (3.49) at 5% significant level, there is sufficient statistical evidence to conclude that there exists a long run relationship or cointegration among total export value (TEV), web-based payment (WBP), point of sale (POS), mobile payment (MOB) and NIBSS instant payment (NIB). However, the existence of long run relationship together with mixed order of stationarity is a pre-condition for fitting the Autoregressive Distributed Lag (ARDL) model.

Table 4: Result of Long-Run ARDL Coefficients

	Dependent Variable = $D(InTEV_t)$			
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.***
$D(InTEV_{t-1})$	0.065112	0.068646	0.948520	0.5168
$D(InTEV_{t-2})$	-1.828560	0.134936	-13.55134	0.0469
$D(InWBP_t)$	0.277911	0.054230	5.124667	0.1227
$D(InWBP_{t-1})$	0.203779	0.030065	6.778044	0.0933
$D(InWEB_{t-2})$	0.331500	0.135568	2.445264	0.0345
$D(InPOS_t)$	0.087835	0.037595	2.336323	0.0416
$D(InPOS_{t-1})$	2.307320	0.137437	16.78821	0.0379
$D(InPOS_{t-2})$	1.029906	0.076687	13.43000	0.0473
$D(InMOB_t)$	0.458970	0.182424	2.515948	0.0306
$D(InMOB_{t-1})$	-0.964028	0.053832	-17.90813	0.0355
$D(InMOB_{t-2})$	0.807921	0.068476	11.79861	0.0538
$D(InMOB_{t-3})$	0.048184	0.019533	2.466858	0.2452
$D(InNIP_t)$	0.662697	0.138697	4.778006	0.0007
ECM(-1)*	-0.247906	0.019032	-13.02582	0.0000
Adjusted R-squared = 0.728752 Durbin-Watson stat = 2.174396				
Dependent Variable = $InTEV_t$				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.***
$InWBP_t$	0.251018	0.040459	6.204218	0.1017
$InPOS_t$	0.604955	0.109998	5.499684	0.0003
$InMOB_t$	0.747937	0.143996	5.194161	0.0004
$InNIP_t$	1.531103	0.077280	19.81235	0.0321
C	11.33964	4.852940	2.336654	0.0337

Source: Authors' Computation, 2026, EViews 12.0 Result.

The results short-run and long-run ARDL in Table 4 revealed that, web-based payment (WBP) has a positive and non-significant relationship with the total export value in Nigeria in both short-run and

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long-run. This is because of its coefficient value is positively signed and its p-values are greater than 0.05. This implies that, a percentage increase in web-based payment (WBP) transactions will lead to 27.8% and 25.1% increase in total export value in the short run and the long run respectively. Also, point of sale (POS) has positive and significant effect on total export value in Nigeria in both short-run and long-run. This is because of its coefficient value is positively signed and its p-value is less than 0.05. This implies that, a percentage increase in point of sale (POS) will lead to 87.8% and 60.5% increase in total export value in the short run and the long run respectively. Moreover, mobile payment (MOB) has positive and significant effect on total export value in Nigeria in both short-run and long-run. This is because of its coefficient value is positively signed and its p-value is less than 0.05. This implies that, a percentage increase in mobile payment (MOB) will lead to 45.9% and 74.8% increase in total export value in the short run and the long run respectively. Furthermore, NIBSS instant payment (NIP) has positive and significant effect on total export value in Nigeria in both short-run and long-run. This is because of its coefficient value is positively signed and its p-value is greater than 0.05. This implies that, a percentage increase in NIBSS instant payment (NIP) will lead to 66.3% and 153.1% increase in total export value in the short run and the long run respectively. More importantly, the Adjusted R-squared (Adj. R^2) value of 0.728752 indicated that, about 73 percent of the systematic variation in total export value is explained by web-based payment (WBP), point of sale (POS), mobile payment (MOB) and NIBSS instant payment (NIP) in the short-run while the remaining 27 percent of the variation in the model is captured by the error term (unknown factors/variables outside the model). Finally, the coefficient of the ECM(-1) at -0.247906 indicated that the speed of adjustment to long run equilibrium is 25% when any past deviation will be corrected in the present period. This means that total export value adjusts rather rapidly to changes in web-based payment (WBP), point of sale (POS), mobile payment (MOB) and NIBSS instant payment (NIP).

Diagnostic Tests of the Estimated Model

The diagnostic tests for the estimated model are conducted to test the proficiency of the model which must be consistent with the standard assumptions of Ordinary Least Square (OLS) such as serial correlation, functional form, normality, heteroscedasticity, etc. However, the results of the diagnostic tests are presented and discussed below:

Table 5: ARDL Model Diagnostic Tests

Test	Statistics	P-Value	Null Hypothesis	Decision
A. Serial Correlation	1.833794	0.1857	**H_0:** No serial correlation	Do not Reject H_0
B. Functional Form	0.928330	0.62866	**H_0:** Correctly specified	Do not Reject H_0
C. Normality	1.331488	0.2615	**H_0:** Normally Distributed	Do not Reject H_0
D. Heteroskedasticity	1.034629	0.4482	**H_0:** Homoscedasticity	Do not Reject H_0

Source: *Authors' Computation, 2026, EViews 12.0 Result.*

NB:

A: Lagrange multiplier test of residual serial correlation

B: Ramsey's RESET test using the square of the fitted values

C: Based on a test of skewness and kurtosis of residuals

D: Based on the regression of squared residuals on squared fitted values

However, the outcome of the Lagrange multiplier test of residual serial correlation, Ramsey's RESET test, Jarque Bera normality test and Heteroscedasticity test as presented in Table 4.6 indicates the model passed all the tests. This further implies that it has a correct functional form, its residuals are serially uncorrelated, normally distributed and homoscedastic.

Discussion of Findings

The findings that emerged from this study that indicated web-based payment (WBP) has a positive and non-significant effect on total export value in Nigeria. This implies that increase in web-based payment (WBP) will lead to increase in total export value in Nigeria in both short-run and long-run while decrease in web-based payment (WBP) will lead to decrease in total export value in Nigeria in both short-run and long-run. It can therefore be inferred that web-based payment (WBP) as a proxy of fintech payment systems has an insignificant positive effect on export performance in Nigeria. This result conformed to the result of Bingilar and Bariweni (2019) who found that there is a positive relationship between

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web-based payment (WBP) transactions and the assets base of commercial banks in Nigeria.

Moreover, point of sale (POS) has a positive and significant effect on total export value in Nigeria. This implies that increase in point of sale (POS) will lead to increase in total export value in Nigeria in both short-run and long-run while decrease in point of sale (POS) will lead to decrease in total export value in Nigeria in both short-run and long-run. It can therefore be inferred that point of sale (POS) as a proxy of fintech payment systems has a significant positive effect on export performance in Nigeria. This finding relates to that of Bingilar and Bariweni (2019) who found that point of sales machines has a positive effect on bank performance.

Furthermore, the finding emanating from this study showed that mobile payment has a positive and significant effect on total export value in Nigeria. This implies that increase in mobile payment will lead to increase in total export value in Nigeria in both short-run and long-run while decrease in mobile payment will lead to decrease in total export value in Nigeria in both short-run and long-run. It can therefore be inferred that mobile payment as a proxy of fintech payment systems has a significant positive effect on export performance in Nigeria. This finding is in line with the finding of Abdullai and Micheni (2018) which stated that mobile banking platforms show a significant positive impact on the financial performance of COE-Minna microfinance bank.

Finally, NIBSS instant payment has a positive and significant effect on total export value in Nigeria. This implies that increase in NIBSS instant payment will lead to increase in total export value in Nigeria in both short-run and long-run while decrease in NIBSS instant payment will lead to decrease in total export value in Nigeria in both short-run and long-run. It can therefore be inferred that NIBSS instant payment as a proxy of fintech payment systems has a significant positive effect on export performance in Nigeria. This finding is in line with the finding of Enoruwa, Ezuem and Nwani (2019) which stated that NIBSS has a positive and significant impact on the performance of bank performance in Nigeria.

CONCLUSION AND RECOMMENDATIONS

The study empirically examined fintech payment systems and export performance in Nigeria using the quarterly data from 2012Q1 to 2024Q4. The empirical evidence demonstrated that, fintech payment systems as proxied by web-based payments, Point of Sale (POS) systems, mobile payments, and NIBSS Instant Payments (NIP) have positive impacts on export performance in Nigeria. Hence, through enhancement of transactional efficiency, reducing settlement times, and broadening investor participation, these fintech innovations have improved increased trading volumes, and strengthened investor confidence in the Nigerian export sector. These findings underscore the transformative role of fintech in export development, suggesting that continued investment in digital financial infrastructure and supportive regulatory frameworks could further amplify export growth, ultimately contributing to Nigeria's broader economic resilience and development. Overall, the study concluded that fintech payment systems play a significant positive role in improving export performance in Nigeria.

Based on the conclusion, study made the following recommendations:

i. Since web-based payment has a positive but non-significant effect on export performance, policymakers should invest in upgrading digital payment platforms, reducing transaction delays, and enhancing cyber-security. Improving trust, speed, and stability in web-based payment systems will encourage exporters to adopt them more widely, thereby increasing their contribution to export growth.

ii. Given the positive and significant effect of Point of Sale (POS) usage on total exports, government agencies such as Central Bank of Nigeria (CBN) and NEXIM Bank should encourage exporters to integrate Point of Sale (POS) payment channels into their operations. This can include subsidizing Point of Sale (POS) devices, lowering transaction charges, and ensuring stable connectivity for exporters in both urban and rural production zones.

iii. The significant impact of mobile payments shows their importance in improving trade transactions. Policymakers should expand mobile-payment-friendly export programs, support fintech–exporter partnerships, and provide financial literacy training to export SMEs. Enhancing mobile payment adoption will reduce cash dependence and speed up payment cycles for exporters.

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iv. Since NIBSS instant payment significantly boosts export value, the government should promote its use in export financing, customs payments, and cross-border settlements (where applicable). Strengthening system reliability, reducing downtime, and integrating NIBSS instant payment with export portals such as the Nigeria Single Window will further improve transaction transparency and facilitate faster export processing.

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