



The Impact of E–Payment System on Tax Revenue in Nigeria

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Abstract: Nigeria is experiencing a substantial digital transition, characterised by the growing use of electronic payment systems across all sectors of the economy. Comprehending the impact of these technological transformations on tax income is essential for policymakers and stakeholders. The purpose of this research is to examine how the rise of online payment systems has affected tax collection in Nigeria. Tax income in Nigeria was the intended target of this research, which aimed to assess the impact of three different payment mechanisms on that revenue: ATM, POS, and mobile application. An ex-post facto design was used in the investigation. For this study, we used a random selection of five companies—MTN Nigeria, eTranzact, Chams Plc, Courteville Business Solutions Plc, and Omatek Plc—to represent the population of all telecommunications companies listed on the Nigerian Stock Exchange as of 2023. It was decided how many samples to take using the judgemental sampling technique. As for the analytical method, it was the Auto Regressive Distributed Lag Model (ARDL). Tax income in Nigeria is significantly impacted by the three main payment systems—automated teller machine (ATM), point-of-sale (POS), and mobile application (MApp)—according to the study's results. The report advises the Nigerian government, in conjunction with financial institutions, to persist in promoting and incentivising the use of ATM payment systems and other digital payment platforms. The substantial influence of these systems on corporate income tax suggests that their broad implementation may improve tax compliance and revenue generation. The government must to consistently assess the influence of POS payment systems on tax income and modify policies accordingly. Ongoing assessment will guarantee that difficulties are immediately addressed, hence maintaining the favourable effect on tax income.

Keywords: E–payment system, tax, revenue, companies income tax, mobile application system, POS payment system, ATM payment system.



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Introduction

Throughout human history, barter has been overshadowed by the practice of trading goods and services for money or other abstract values (Oginni et al., 2023). A payment system has been present since the origin of money as an abstract representation of value. Over time, more and more abstract representations of value were developed. Electronic payment systems have progressed from value transfer methods that began with barter and moved via banknotes, payment orders, checks, and finally credit cards. The shift to electronic payment systems improves the

monetary framework's deposit base by incorporating the money supply outside the banking system, which represents a possible source of unproductive economic resources because it cannot be used to expand credit.

Tee and Hway-Boon (2016) assert that Nigeria's payment system has mostly depended on cash for several good and negative factors. In a positive light, it may be instantly converted to other kinds of value without the involvement of financial institutions; in a bad one, it is anonymous and impossible to track in illegal activities. In response to several allegations of corruption within the Federal Civil Service, electronic payment was instituted (Udeghe & Hanzace, 2018). Information and communication technology is important to this worldwide trend, functioning as an absorber and providing a cooling effect. Contemporary commercial companies, especially within the telecommunications industry, function in a multifaceted and competitive landscape characterised by fluctuating variables and a highly uncertain climate. Muiyawa et al. (2013) assert that the telecommunications industry cannot overlook information systems, as they are essential to maintaining a competitive advantage both domestically and internationally. They indicate that the cash flow of most successful organisations is correlated with their implementation of information systems.

When it comes to the telecommunications sector, the use of ICT is often known as electronic transactions. A major concern for all telecom companies is how to apply its principles, procedures, regulations, and implementation methods to telecom services. Because it has such an immediate effect on management decisions, strategic planning, and the products and services offered by these businesses, it is vital for competitiveness on a global and local scale (Zandi, 2016). The introduction of several E-Payment systems has improved service delivery innovation, reshaped the structure of telecom companies, and shook up global commercial alliances. According to Ravikumar (2019), E-Payment systems use telecommunications, software, computers, and auxiliary devices like debit cards and Automated Teller Machines (ATMs) to automate procedures, controls, and information generation. Electronic technology used to meet the information demands of the telecommunications industry is what this phrase refers to. The hardware and software that connect multiple pieces of computer hardware and allow data transmission between different locations are both part of electronic payment (E-Payment) systems, according to Mamudu and Udo (2019). If financial service providers want to be around in the 21st century, according to Afaha (2019), they need to shake up their old ways of doing things. The primary shortcoming in the telecommunications sector today is the widespread failure of senior management in telecoms companies to understand technology improvements and incorporate them into their strategic goals. Examining how the introduction of electronic payment systems has affected Nigeria's tax take is the primary goal of this research.

Statement of the Problem

The implementation of electronic payment (E-Payment) systems aims to improve customer satisfaction, reduce wait times for cash transactions, allow customers to withdraw cash at their convenience, simplify international payments and remittances, monitor individual cash transactions, access online statements, and enable deposit transfers to other accounts (Iluno et al., 2018). The telecommunications sector strives to provide consumer benefits from electronic payment systems; nonetheless, it faces persistent complaints regarding malfunctioning ATMs, network outages, online fraud and theft, inadequate financial services, unexpected costs linked to electronic payment systems, such as Short Message Service (SMS) for alerts, the need for an ATM card, and the fact that cards issued in Nigeria cannot be used for foreign transactions, among other problems (Saidi, 2018). The telecom industry has been heavily investing in customer payment cards and ATM installation since the early 2000s. Utilisation has been limited due to inadequate connectivity, namely the lack of a switching mechanism to connect the ATMs for cardholders. This research aims to examine the effects of e-payment systems on tax collection in Nigeria, including the problems related to e-payment.

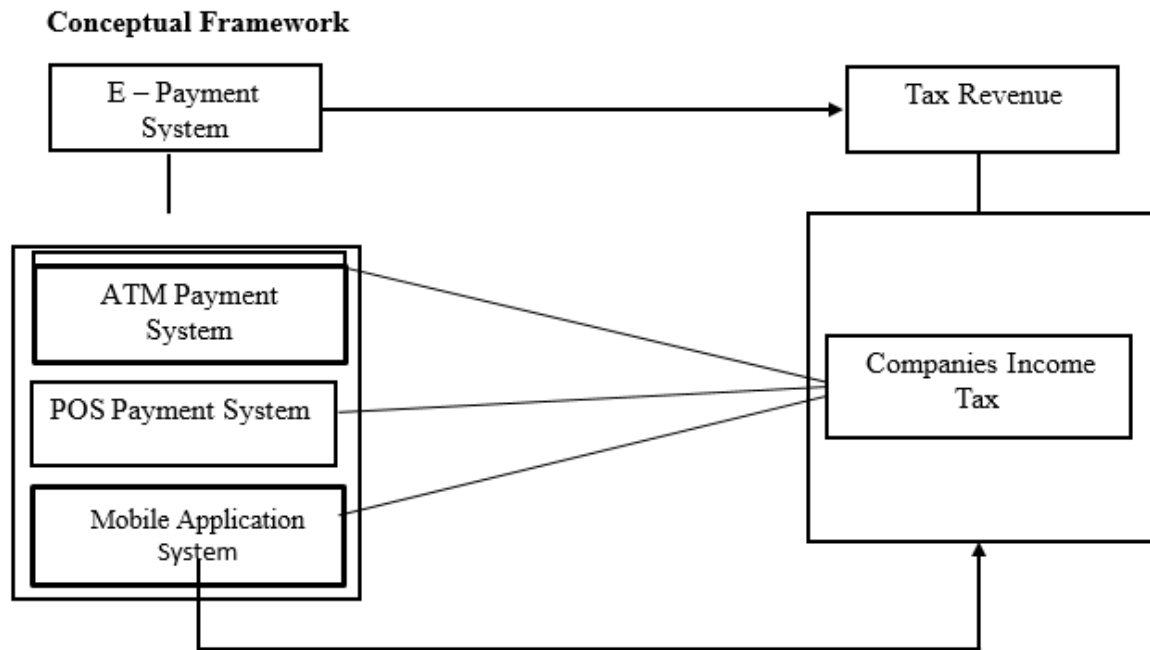


Figure 1.1: Operational framework of the impact of e – payment system on tax revenue in Nigeria

Aim and Objectives of the Study

The aim of this study is to investigate empirically the impact of e – payment system on tax revenue in Nigeria; however, the specific objectives are to:

- i. Investigate the impact of ATM payment system on tax revenue in Nigeria.
- ii. Determine the impact of POS payment system on tax revenue in Nigeria
- iii. Ascertain the impact of M – banking application on tax revenue in Nigeria

Research Questions

The study is set out to address the following research questions.

- i. What is the impact of ATM payment system on tax revenue in Nigeria?
- ii. What is the impact of POS payment system on tax revenue in Nigeria?
- iii. What is the impact of M – banking application on tax revenue in Nigeria?

1.6 Research Hypotheses

The following null hypotheses were stated for the study:

- H₀₁** ATM payment system does not have significant impact on tax revenue in Nigeria.
- H₀₂** POS payment system does not have significant impact on tax revenue in Nigeria.
- H₀₃** M – banking application does not have significant impact on tax revenue in Nigeria.

Review of Related Literature

Conceptual Review

E – Payment System

Electronic payment systems are those that use information and communication technology networks to facilitate the automatic transfer of funds between parties involved in a business transaction (Amin, Onyeukwu & Osuagwu, 2018). With electronic payment, parties in Nigeria may do business with one another using computer systems, eliminating the need for any kind of physical interaction beyond the entry of payment information. The ability to pay vendors, consumers, and workers digitally with the touch of a mouse (Udeghi & Hanzace, 2018). Recently, the electronic payment system has arisen as a convenient method for the movement of monetary assets, especially in developing countries like Nigeria, where cash transactions are predominant. Due to the fact that an efficient e-payment system is known to substantially impact monetary policy, economic activity, and financial stability, it is crucial to Nigeria's contemporary market economy (Aduda & Kingoo, 2018).

A system for electronic payments was established by the Central Bank of Nigeria (CBN) in 2002. The Nigeria Automated Clearing System (NACS) was set up at this time as a reliable platform to improve electronic payments and shorten the time it takes for checks to pass. After implementing Real Time Gross Settlement in 2006 and Automated Teller Machines (ATMs) in 2003, Interswitch finally settled on a new unified accounting system (NUBAN) in 2010. The Nigerian Inter-bank Settlement System introduced its first wave of automated teller machines (AZEES, 2011) and announced its fast payment services in early 2011. A cashless economy was initially proposed in December 2011 and put into action in January 2012 in Lagos. Abuja, Port Harcourt, Abia, Kano, and Ogun States have successfully implemented a cashless policy before the year's conclusion.

The following e-payment systems are among the many examined in this research: The Internet and the World Wide Web facilitate online transactions by use of electronic payment mechanisms. The consumer's bank account may be used directly in this method for making online purchases. The opportunity to use banking services without leaving the comfort of their own homes or offices is another perk (Jun & Cai, 2011). One cutting-edge method of handling financial transactions is mobile banking. Here, you may use a universal short messaging service (USSD) or your bank's mobile app to initiate a payment. Because users' account details are already linked to the banking app, mobile banking eliminates the hassle and time wasted when dealing with cash or credit (Hodagho, 2016). Customers may complete transactions independently, without the help of a service person or teller, using an Automated Teller Machine (ATM), an electronic banking device. If a person's credit or debit cards are all linked to the same network, they are able to use an ATM. When a customer uses an ATM, they have access to their account details via the ATM network.

Payments made using Visa, MasterCard, and Verve, which are issued by banks both at home and abroad, may be processed straight into other accounts via point-of-sale (POS) terminals, facilitating transactions (Isibar, 2018). According to Edet (2019), the following tools and infrastructure are necessary for the operation of electronic banking: computers, phones, mobile phones, the internet, ATMs, and other devices utilised at the point of sale or contact. Specifically, we will focus on ATMs and POS terminals while explaining the aforementioned tools and channels.

Automated Teller Machine (ATM)

Customers of a bank may conduct financial transactions in a public place using this digital telecommunications equipment, which eliminates the need for a human teller or clerk (Edet, 2019). With the help of an automated teller machine (ATM), customers may check their account balances and make withdrawals. Financial transactions processed by Automated Teller Machines

must first be authorised over the communications network by the card issuer or another authorising agency. Using an ATM often costs you more money. In Nigeria, using an ATM to make an ON-US transaction does not cost anything, however using an ATM to make a NOT-ON-US transaction at a different bank would cost you between 100 and 150 naira. ATM services, such as withdrawing funds, checking balances, requesting mini-statements, transferring funds, and making purchases. The use of automated teller machines (ATMs) has many advantages for financial institutions, such as reducing instances of theft, improving client acquisition and retention, increasing profits from customer fees, providing more convenient services, decreasing the number of bad checks, saving a lot of money on hidden operational costs, and relieving tellers of low-value transactions (Akinuli, 2018).

Point of Sale (POS)

The term "point of sale" may describe any place where a customer pays for an item or service in a store. Electronic point-of-sale (POS) terminals allow customers and businesses to deal with one another in a more streamlined manner. Their numerous useful banking and financial services simplify many of the hassles associated with dealing with cash, such as making payments, checking balances, and printing out tiny statements. The benefits of POS for all stakeholders encompass improved operational efficiency, assured transaction security and integrity, the removal of the need to carry significant cash outside banking hours, augmented revenue from transaction fees and float, and the establishment of a simple, more effective, and convenient payment system.

Mobile Banking Applications

Mobile banking applications, also termed M-banking or SMS banking, provide balance queries, account transactions, and payments using mobile devices such as smartphones (Clive, 2017). Mobile banking solutions provide essential financial services to consumers via their mobile devices. It is a platform facilitated by SMS that provides access to financial services using mobile phones. Mini statements, activity alerts, term deposit monitoring, bill payment, portfolio management, status of credit requests (including mortgage and insurance), requests for cheque books and cards, an ATM locator, and general information (weather, news, location-based services, etc.) are all part of the mobile banking product.

Tax Revenue

Governments acquire revenue via taxes, according to Brautigam (2022). The principal means by which a state acquires funds is via taxation. Income may come from a variety of places, such as private citizens, government agencies, businesses, natural resource royalties, and foreign assistance. Nations that suffer from extreme poverty, have a large agricultural economy, and depend heavily on foreign assistance are more likely to have inefficient tax collecting systems. Income and profit taxes, payroll taxes, taxes on goods and services, taxes on social security, taxes on property ownership and transfers, and a host of other types of taxes all contribute to total tax revenue. Revenue collected by the State via taxation. The state's principal income source, which funds public expenditures and other projects, distinctly embodies the community's collaborative efforts (Mutarindwa & Rutikanga, 2014). Slemond (2020) contends that taxes serve as efficient instruments for financing public goods, a specific class of resources whose use by one person does not reduce their availability for others, and for which restricting access is costly or unfeasible (e.g., street lighting). The typical pricing for these products would provide a zero-level price, so providing no incentives for production. Likewise, it is customary to fund via taxation the expenses of products and services that generate significant positive externalities when they are insufficiently provided by the private sector.

Companies Income Tax

Companies with a Nigerian registered office are subject to the country's enterprises income tax, short CIT. Taxes on earnings made by foreign companies doing business in Nigeria are also a part of this (Fowler, 2016). Public limited liability businesses and other limited liability entities are

required to pay this tax. Therefore, "corporate tax" is a common name for it. The Companies Income Tax Act (CITA) of 1979, which developed from the Income Tax Management Act of 1961, introduced the Companies Income Tax (CIT). The Federal Inland Revenue Service (FIRS) is responsible for collecting and administering this tax. The tax greatly enhances the Service's revenue foundation. The expected overall tax collection for 2016 is N4.957 trillion, with N1.877 trillion earmarked for companies' income tax. This amounts to about 40% of that total. An audited financial statement is required by law for the filing of Companies Income Tax (Fowler, 2016). To prepare and/or certify the accounts for submission, it is necessary to hire external auditors. Qualifying assets of the business must have their tax and capital allowance computations backed up by the returns. The filing obligation is applicable to all taxpayers, regardless of size. The Corporate Income Tax (CIT) is too complex, making it difficult for taxpayers to comprehend and adhere to its requirements.

Theoretical Review

New Growth Theory

Paul Romer proposed the new growth theory in 1989, and it states that the limitless desires and aspirations of humans drive economic progress. According to the theory, real GDP per capita would rise in the long run as more and more people seek financial gain (Hodagho, 2016). The new growth hypothesis contends that economic development is not only derived from external sources, highlighting the significance of entrepreneurship, innovation, information, and technology as primary catalysts for economic advancement. The new growth hypothesis posits that knowledge is a growth asset not subject to decreasing returns, with innovation and new technologies emerging from the pursuit of enhanced knowledge or human capital to attain greater profitability. The economic growth derived from e-payment systems originates from internal consumption facilitated by e-payment platforms, making it an endogenous source of economic development (Saidi, 2018). Human capital, including technical expertise and education, is essential for the use of several new technologies.

Empirical Review

Using monthly data from 2012–2017, Afaha (2019) examined the correlation between e-payment systems and GDP growth in Nigeria. The approach used in the study was ADLR, or Autoregressive Distributed Lagged Regression. Electronic payment systems were shown to have a strong positive correlation with economic advancement, as measured by real GDP growth.

From 2005 to 2012, Oyewole, El-Maude, Abba, and Onuh (2013) looked at how e-payment systems affected Nigeria's economic development. Two-Stage Least Squares (2SLS) and Ordinary Least Squares (OLS) were used for the regression analysis. Economic growth, as measured by real GDP per capita, was positively and significantly correlated with the e-payment system.

Using quarterly time-series data from 2011 (Q1-Q4) to 2017 (Q1-Q4), Mamudu and Udo (2019) examined the influence of the cashless policy on the Nigerian economy. Payment Value at Automated Teller Machines (ATMV), Value at Web/Internet Transfers (WTV), Value at Mobile Point of Sale (POSV), Value at Cheques Cleared (CHEV) are the variables used. An error correction model, a Johansen co-integration test, and the Ordinary Least Squares (OLS) regression approach were all used by the researchers. The findings showed that Nigeria's GDP is favourably and significantly impacted by the use of cashless policy tools. Although a long-term link was shown by the Johansen cointegration test, short-run regression findings indicated that these non-cash instruments had a substantial and beneficial impact on Nigeria's GDP.

Researchers Amin, Onyeukwu, and Osuagwu (2018) looked at how satisfied customers were with certain Nigerian banks' online banking, service quality, and overall experience. Information was collected via interviews and structured questionnaires. The data collected from the respondents was analysed using descriptive statistics. It seems that E-banking has a positive influence on service quality in Nigeria's banking industry, but has no effect on consumer contentment,

according to the data, which show a strong correlation between service quality and customer happiness.

The impact of electronic payment systems on the efficiency of developing-world banks was studied by Saidi (2018). A random panel regression model was used for analysis in this research, which employed an ex post facto design. Investors should put the bank's present resources ahead of its past accomplishments, as research shows that bank performance deviates from autoregressive and random walk models.

To find out how happy customers are with their online banking experience, Iluno et al. (2018) looked into it. Two analytical tools, multiple regression analysis and a frequency distribution table, were used. Customer satisfaction (CS) in Nigeria's Kaduna State is significantly boosted by EBS and EBP, according to the data. So, to improve E-banking operations, the Central Bank of Nigeria (CBN) should establish customer-centric regulations that put clients' satisfaction first. To further improve customer satisfaction, IT companies and banks should work together to create service delivery technologies that are easier to use, more secure, more streamlined, and more efficient.

In 2019, Nedozi and Omoregie empirically evaluated many Nigerian electronic payment options. Statistical analysis was performed on the collected data. Out of all the electronic payment methods used in Nigeria between 2011 and the first quarter of 2019, statistics showed that ATM transactions were the most popular. In 2012 and 2013, NEFT was the most valuable approach, but from 2014 until the beginning of 2019, NIP was the most popular.

Gap in Literature

Afaha (2019) used monthly data from 2012–2017 to study the correlation between e-payment systems and GDP growth. The approach used in the study was ADLR, or Autoregressive Distributed Lagged Regression. Electronic payment systems were shown to have a strong positive correlation with economic advancement, as measured by real GDP growth.

The research conducted by Afaha (2019) focused on electronic payment systems and economic development, while the present study examines the E-payment system and tax income. The analysis conducted by Afaha (2019) included the years 2012 to 2017, but the present study spans from 2014 to 2023. The Afaha research was conducted in 2019, whilst the current study is being conducted in 2024. In order to address these deficiencies, this research will objectively analyse how the e-payment system affects tax income in Nigeria.

Methodology

Using secondary data collected from individual Nigerian telecommunications providers and the Statistical Bulletins of the Central Bank of Nigeria for the applicable years, the study used an ex-post facto technique. Every single telecoms company that has an NSE registration in 2023 was considered part of the research population. Companies in this group include MTN Nigeria, eTranzact, Computer Warehouse Group (CWG) Plc, Chams Plc, NCR Plc, Courteville Business Solutions Plc, Omatek Plc, and Tripple Gee & Company Plc (Fact Book, 2023). Because these businesses' financial records had all the necessary information for the time period under review, five telecommunications companies were chosen at random using a judgemental sampling technique. Companies including MTN, eTranzact, Chams Plc, Courteville Business Solutions Plc, and Omatek Plc are being considered. The ARDL, or Auto Regressive Distributed Lag Model, was used to analyse data collected throughout the last ten years (2014–2023). The purpose of this was to determine how the independent variables affected the dependent one. Unit root tests and descriptive statistics, on the other hand, were used as first analyses. To examine the variables' unique traits, we utilised descriptive statistics; to ensure that they were stationary, we ran a unit root test.

Model Specification

The model of the study was adapted from model of Brooks (2014) as follows: $TR = f(ATM, POS, MAP)$ (1)

Where: TR = Tax Revenue

ATM = Automated Teller Machine

POS = Point of Sale

MAP = Mobile Applications

In a linear regression form, it will become: $TR = \beta_0 + \beta_1 ATM + \beta_2 POS + \beta_3 MAP + \mu$ -(2)

Where β_0 = Constant Term

β_1 = Coefficient of Automated Teller Machine

β_2 = Coefficient of Point of Sale

β_3 = Coefficient of Mobile Applications

μ = Error Term

Data Analysis and Results

YEAR	ATM (N'M)	POS (N'M)	MAP (N'M)	CIT (N'M)
2014	1,183,382,493,119	28,301,118,493	9,453,826,182,342	11411.07
2015	1,984,990,636,830	48,461,883,431	13,753,178,360,585	14,610.88
2016	2,830,533,105,570	161,212,840,665	14,367,950,496,617	18,564.59
2017	3,681,980,955,458	312,071,736,903	14,563,804,544,654	20,657.32
2018	3,971,651,486,420	448,512,548,727	13,087,085,484,769	24,296.33
2019	4,988,133,401,544	758,996,505,702	14,584,802,657,086	24,794.34
2020	6,437,592,402,748	1,409,813,091,608	14,946,463,879,672	54,612.26
2021	6,480,085,899,670	2,383,108,901,148	11,030,961,545,925	62,980.4
2022	6,512,612,259,811	3,204,749,863,644	5,080,961,536,595	71,713.94
2023	12,004,067,823,108	2,806,304,086,834	19,377,841,240,553	80,092.56

Source: CBN Statistical Bulletins, 2024

Table 2: Logs of ATM, POS, MAP and CIT

YEAR	LATM	LPOS	LMAP	LCIT
2014	16.86749	15.92545	12.49086	11.86461
2015	17.17133	16.32327	13.51232	13.77192
2016	17.07615	16.35091	12.50557	13.56639
2017	16.10849	16.64850 1	14.18601	12.69806
2018	16.89121	16.57954	15.79803	11.04203
2019	16.89542	16.67701	15.45412	11.41467
2020	17.55943	16.64205	14.93565	12.00075
2021	17.28589	16.50929	15.61929	12.09576
2022	17.40063	16.33763 1	15.18927	12.09253
2023	17.48327	16.41057	15.25106	12.17357

Source: E-views Output, 2024

Table 3: Test of Hypotheses

Dependent Variable: CIT

Method: ARDL

Date: 08/16/24 Time: 15:58

Sample (adjusted): 2014 2023

Included observations: 9 after adjustments

Maximum dependent lags: 1 (Automatic selection)

Model selection method: Akaike info criterion (AIC)

Dynamic regressors (1 lag, automatic): ATM MAP POS

Fixed regressors: C

Number of models evaluated: 8

Selected Model: ARDL(1, 1, 1, 1)

Variable	Coefficien t	Std. Error	t-Statistic	Prob.*
GDP(-1)	-2.229456	0.411744	-5.414669	0.1163
ATM	3.61E-08	8.40E-09	4.299150	0.0455
ATM(-1)	2.44E-08	6.66E-09	3.663889	0.1696
MAP	1.28E-08	2.53E-09	5.052350	0.0244
MAP(-1)	2.24E-09	6.70E-10	3.342461	0.1851
POS	3.60E-08	4.00E-09	8.994663	0.0105
POS(-1)	8.52E-08	1.87E-08	4.553031	0.1376
C	-118816.0	24097.28	-4.930679	0.1274
R-squared	0.999502	Mean dependent var		41369.18
Adjusted R-squared	0.996017	S.D. dependent var		25724.44
S.E. of regression	1623.474	Akaike info criterion		17.20308
Sum squared resid	2635667.	Schwarz criterion		17.37839
		Hannan-Quinn		
Log likelihood	- 69.41385 criter.			16.82476
F-statistic	286.7985	Durbin-Watson stat		3.101817
Prob(F-statistic)	0.045436			

*Note: p-values and any subsequent tests do not account for model selection.

Source: Author's Computation from E-views 9.0, 2024

Summary of Findings

H₀₁ The ATM payment method does not substantially affect tax income in Nigeria.

Based on the criteria for rejecting the null hypothesis, which stipulates that the t-statistic must exceed 2.0 and the p-value must be less than 0.05, Table 3 demonstrates that the ATM payment system has a significant impact on companies' income tax in Nigeria, as its t-statistic of 4.299150 exceeds 2.0 and its p-value of 0.0105 is below 0.05. A probability of 0.0455 was lower than the significance level of 0.05. Consequently, the alternative hypothesis was confirmed and the null hypothesis was rejected.

H₀₂ The POS payment method does not substantially affect tax income in Nigeria.

Table 3 shows that the POS payment system significantly affects corporate income tax in Nigeria. This is supported by a t-statistic of 8.994663, which is greater than 2.0, and a p-value of 0.0105, which is lower than 0.05, according to the criteria for rejecting the null hypothesis (H₀), which states that the t-statistic must be greater than 2.0 and the p-value must be less than 0.05. Less than 0.05 was the probability value of 0.0105. This led to the endorsement of the alternative hypothesis and the rejection of the null hypothesis.

H₀₃ The M-banking application does not substantially affect tax income in Nigeria.

Based on the criteria for rejecting the null hypothesis (H₀), which stipulates that the t-statistic must exceed 2.0 and the p-value must be less than 0.05, Table 3 indicates that mobile application payment systems significantly influence corporate income tax in Nigeria, as the t-statistic of 5.052350 exceeds 2.0 and the p-value of 0.0244 is below 0.05. Consequently, the alternative hypothesis was supported and the null hypothesis was rejected.

Discussion of Findings

ATM Payment System and Tax Revenue

Table 3 demonstrates that the ATM payment system significantly affects enterprises' income tax in Nigeria, as shown by a t-statistic of 4.299150, which exceeds 2.0, and a probability value of 0.0105, which is below 0.05. The probability value of 0.0455 was inferior than 0.05. This observation is in line with the findings of Afaha's (2019) research on the correlation between e-payments and GDP growth, which used monthly data from 2012–2017. Real GDP growth demonstrates a strong positive correlation between e-payment systems and economic expansion. Making use of macroeconomic data from 70 nations between 2011 and 2015, the results confirmed what Zandi (2016) had suspected about the effect of electronic payment on GDP growth. The data indicated that electronic payments positively influence economic development by enhancing per capita spending via card use for transactions.

Point of Sales (POS) Payment System and Tax Revenue

Table 3 demonstrates that the POS payment system significantly affects enterprises' income tax in Nigeria, as shown by a t-statistic of 8.994663, which exceeds 2.0, and a probability value of 0.0105, which is below 0.05. Less than 0.05 was the probability value of 0.0105. This result is in agreement with what Oyewole, El-Maude, Abba, and Onuh (2013) found. The authors looked at Nigeria's e-payment systems and economic growth from 2005 to 2012 and found a strong correlation between the two. This correlation was measured by real GDP per capita. Yusuf (2016) found results that contradicted the finding. After looking at data from 2008–2015 on the relationship between cashless policies and GDP growth in Nigeria, the author came to the conclusion that POS, internet, and mobile payments don't have much of an effect on GDP growth in Nigeria.

M – banking System and Tax Revenue

Table 3 shows that in Nigeria, company income tax is strongly impacted by mobile application payment systems. This is supported by a t-statistic of 5.052350, which is more than 2.0, and a probability value of 0.0244, which is less than 0.05. This finding was corroborated by Ravikumar's (2019) research on the effect of digital payments on India's GDP growth from 2011 to 2019. The data indicate that digital payments significantly affect short-term economic growth, although have no effect on long-term economic development. Saidi (2018) performed studies that refuted this conclusion. Investors should put current bank resources ahead of past performance, according to the author's investigation into the impact of E-payment technologies on developing country banking performance. The author discovered that bank performance does not conform to autoregressive and random walk models.

Conclusion and Recommendations

The telecommunications business is heavily focused on information and communication technology (ICT) and has greatly profited from technical advancements, thanks to the increased use of ICT, which has allowed for the merger of diverse economic units. An empirical investigation was conducted to ascertain the roles of ICT in improving the operational methods of selected banks in Nigeria. The payment systems in place at Nigerian ATMs, POS terminals, and mobile app stores have a substantial influence on the country's tax income. Consequently, the research proposes the following recommendations:

- i. The Nigerian government, in partnership with financial institutions, should persist in promoting and incentivising the use of ATM payment systems and other digital payment platforms. The substantial influence of these systems on corporate income tax suggests that their broad implementation may improve tax compliance and revenue generation.
- ii. The government must consistently evaluate the effects of POS payment systems on tax income and modify policies accordingly. Ongoing assessment will guarantee that difficulties are immediately addressed, hence maintaining the favourable effect on tax income.
- iii. The corporation must guarantee that mobile payment systems are safe, dependable, and user-friendly to promote wider acceptance and use, hence enhancing the collection of taxable revenue.

References

1. Aduda, J. & Kingoo, F. (2012). A contingency model of leadership effectiveness, *Advances in experimental social psychology*, 1 (12), 149-190.
2. Afaha, J. S. (2019). Electronic payment systems (epayments) and Nigeria economic growth, *European Business & Management*, 5 (6), 77-87.
3. Akinuli, A. (2018). Effect of accounting information system on financial performance: A study of selected real estate companies in Jordan, *India Technical Research Organization*, 5(1), 41-50.
4. Amin, E., Onyeukwu, S., & Osuagwu, J. (2018). Effects of financing on performance of small and medium enterprises (SMEs), *International Journal of Management*, 2(10), 1-9.
5. Anyanwaokoro, P. (2017). *Resource-Based Theory: Creating and Sustaining Competitive Advantage*. Oxford: Oxford University Press.
6. Azeez, V. (2011). IS integration & business performance: The mediation effect of organizational absorptive capacity in SMEs, *Journal of Information Technology*, 23 (9), 297-312.

7. Brooks, C. (2014). Introductory econometrics for finance. 3rd Edition, Cambridge University Press, Cambridge Clive, O. (2017). Investigating the impact of accounting information system on the profitability of Jordanian banks, *Research Journal of Finance and Accounting*, 9(18), 110- 118.
8. Edet, A. (2019). Information technology and accounting information system in the Nigerian banking industry, *Asian Economic and Financial Review*, 4(5), 655-670.
9. Hassan, I. Tania, A. & Heiko, C.(2012) Do internet activities add value? The Italian bank experience, working paper, Berkley Research Centre, New York University.
10. Hodagho, J. (2016). The three fundamental roles of information systems in business. Hearst Newspapers, LLC: Retrieved April 9, 2019, from <https://smallbusiness.chron.com/threefundamental-roles-information-systems-business23681.html>.
11. Iluno, B., Frank, S. & Saheed, W. (2018). Impact of accounting information system on the financial performance of selected FMCG companies, *Asian Journal of Applied Science and Technology*, 2(3), 8- 17.
12. Isibar, T. (2018). The role of accounting information systems in accounting firm, *International Journal of Advanced Computer Research*, 1 (9), 21-31.
13. Jun, N. & Cai, N. (2011). Financial performance of firms: Evidence from Pakistan cement industry. *Journal of Teaching and Education*, 5(1), 81–94.
14. Mamudu, Z. & Udo, G. G. (2019). Cashless policy and its impact on the Nigerian economy, *International Journal of Education and Research*, 7 (3), 111-132.
15. Muiyiwa, O., Sunday, T. & John-Dewole A.T. (2013). Impact of cashless economy in Nigeria, Greener. *Journal of Internet, Information and Communication Systems*, 12 (8), 34 – 44.
16. Nedozi, F. O. & Omoregie, C. I. (2019). An empirical evaluation of different electronic payment channels in Nigeria, *Journal of Finance and Accounting*, 7 (5), 146 – 152.
17. Oginni, S. O., El-Maude, J. G., Mohammed, A. & Michael, E. O. (2023). Electronic payment system and economic growth: A review of transition to cashless economy in Nigeria, *International Journal of Scientific Engineering and Technology*, 2 (9), 13 – 18
18. Oyelami, L. O., Adebisi, S. O. & Adekunle, B. S. (2020). Electronic payment adoption and consumers' spending growth: empirical evidence from Nigeria, *Future Business Journal*, 6 (14), 12 – 16
19. Oyewole, A., El-Maude, E. A., Abba, I. & Onuh, J. (2013). The Impact of Internet Banking on Performance and Risk Profile: Evidence from Australian Credit Unions, *The journal of international banking regulation*, 6(20), 23 – 45
20. Ravikumar T, S. B. (2019). Impact of Digital Payments on Economic Growth: Evidence from India. *International Journal of Innovative Technology and Exploring Engineering*, 8 (12), 70 – 75.
21. Saidi, W. (2018). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3 (9), 305-360.
22. Tee, H. & Hway-Boon, O. (2016). Cashless payment and economic growth.
23. Udeghi, M. & Hanzace, K. (2018). Accounting information and managerial work, *Accounting, Organizations and Society*, 35(3), 301-315.
24. Woherem, A. I. (2019). Effect of accounting information system on financial performance of firms: A Review of Literature, *Journal of Business and Management*, 21 (5), 39-49.



25. Yusuf, I. (2016). Cash-less policy and economic growth: evidence from Nigeria. *International Journal Electronic Finance*, 9 (1), 63 – 71.
26. Zandi, M. (2016). The Impact of Electronic Payments on Economic Growth. *The journal of international banking regulation*, 6(20), 23 – 45.