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THE IMPACT OF E-COMMERCE ON TAX REVENUE IN NIGERIA

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ABSTRACT

As Nigeria seeks to diversify its economy and reduce its dependence on oil revenues, tax revenue from non-oil sectors, including e-commerce, has become increasingly important. This study is timely as it contributes to the broader discussion on revenue diversification by examining how the rapidly growing e-commerce sector can be effectively taxed to support national development goals. Therefore, this study investigated the relationship between e - commerce and tax revenue. The sample size of the study consist of two hundred and eighty (280) staff of FIRS and RIRS in Rivers State out of nine hundred and thirty eight (938) staff of the Revenue Services using Taro Yamane formula for sample size determination of 1967. Primary data on e - commerce and tax revenue were collected from respondents using the questionnaire instruments. Data were analysed using descriptive and Pearson Correlation Coefficient Statistical tools with the aid of Statistical Package for Social Sciences (SPSS) version 23.0. The findings at 0.05 level of significance reveals that business models has a positive and a moderate relationship with tax revenue (r = 0.567**), payment system has a positive and a moderate relationship with tax revenue (r = 0.595**) and technology has a positive and a moderate relationship with tax revenue (r = 0.535**). Based on the findings, it was concluded that e – commerce has significant relationship with tax revenue. Therefore, the study recommends that the government should invest in modern tax collection technologies, such as automated transaction tracking systems, to monitor digital sales more effectively since e-commerce business models operate largely in the digital space. Finally, the government should adopt advanced digital tax systems, such as electronic invoicing, automated tax filing, and payment systems that integrate directly with e-commerce platforms.

Keywords: E – commerce, Business models, Payment systems, Technology, Tax Revenue

INTRODUCTION

The rapid growth of e-commerce in Nigeria presents both opportunities and challenges for the nation's economy, particularly in the realm of tax revenue. As digital transactions become more prevalent, they reshape the traditional commerce landscape, creating new pathways for businesses to operate across borders with minimal physical presence. The Nigerian government, recognizing the vast potential of the digital economy, has sought to capture tax revenue from this expanding sector (Abdul-Azeez, Ihechere, & Idemudia, (2024). However, effectively taxing e-commerce remains a complex issue due to factors such as the informal nature of many online businesses, challenges in tracking digital transactions, and the evolving regulatory environment. In Nigeria, e-commerce has experienced significant growth driven by increased internet penetration, mobile technology, and a youthful population embracing online platforms for buying and selling goods and services (Oladele, & Olupidi (2022). Major platforms like Jumia, Konga, and smaller-scale operations thrive in the marketplace. This surge, while beneficial for the economy, creates a need for robust tax policies that can ensure the government collects its fair share of revenue without stifling innovation or the growth of digital businesses.

Taxation in the digital economy introduces several challenges, particularly in terms of policy implementation and enforcement. Traditionally, tax systems were designed for physical goods and services, where tax authorities could easily assess income, value-added tax (VAT), and other levies based on location and tangible transactions (Etim, et al., (2020). However, with e-commerce,

businesses can operate across multiple jurisdictions, making it difficult for tax authorities to track revenue sources and apply appropriate tax rates. Furthermore, many online transactions bypass traditional banking systems, which complicate enforcement and tracking (Sanyaolu, et al., 2024).

In recent years, the Nigerian government has made several efforts to integrate e-commerce into the tax net. Notable among these initiatives is the introduction of the Finance Act 2020, which expanded the scope of VAT to include digital services (Ede, 2020). This legislation was a significant step towards addressing the tax challenges posed by the digital economy. Yet, questions remain regarding how effective such measures are in curbing tax evasion, particularly among small and medium-sized enterprises (SMEs) operating online, and whether the current tax policies are sufficiently comprehensive to address the rapid changes in the e-commerce landscape. This study explores the nexus between e-commerce and tax revenue in Nigeria, examining the impact of online businesses on the country's tax base and evaluating the effectiveness of current tax policies aimed at the digital economy.

Statement of the Problem

The rapid growth of e-commerce in Nigeria has revolutionized the way businesses operate, providing consumers with increased access to goods and services through digital platforms. While this transformation has contributed significantly to economic activities, it has also exposed critical gaps in Nigeria's tax collection system. Traditional tax frameworks, designed for physical goods and services, are struggling to keep pace with the evolving digital marketplace, leading to concerns about the potential erosion of the national tax base (Ismail, 2020).

One of the fundamental problems facing Nigerian tax authorities is the difficulty in identifying, tracking, and taxing e-commerce transactions. The digital economy allows businesses, especially small and medium-sized enterprises (SMEs), to operate without a physical presence or traditional forms of accounting, making it challenging for tax authorities to monitor revenue and enforce tax obligations (Nembe & Idemudia, (2024). This has resulted in widespread tax evasion, particularly among online businesses, which undermines the government's ability to generate the necessary revenue to fund public services and infrastructure. Moreover, the informal nature of many e-commerce businesses further complicates the issue. Many online vendors operate without registering with relevant tax authorities, thereby avoiding taxes such as corporate income tax, value-added tax (VAT), and other levies (Juswanto & Abiyunus, (2022). This not only limits the tax revenue potential but also creates an uneven playing field where compliant businesses bear a heavier tax burden, while unregistered businesses evade their fiscal responsibilities.

Additionally, the cross-border nature of e-commerce presents another challenge. Consumers in Nigeria can easily purchase goods and services from foreign e-commerce platforms, often bypassing domestic tax requirements. This cross-border flow of goods and services creates a significant leakage in the tax system, as Nigerian authorities struggle to collect VAT or customs duties on such transactions (Dashe & Asada (2023). The issue of taxing digital services provided by non-resident companies remains a persistent concern, as many global e-commerce giants do not have physical offices in Nigeria, complicating tax enforcement. Despite recent government efforts, such as the introduction of the Finance Act 2020, which expanded VAT to include digital services, there are still significant gaps in the legal and regulatory frameworks governing e-commerce taxation. Enforcement remains weak, and the existing tax policies may not fully capture the complexities of the digital economy (Weymouth, 2023). This inadequacy leaves the country vulnerable to losing substantial revenue from a sector that continues to grow exponentially.

The core of the problem, therefore, lies in the disconnection between the current tax regime and the rapidly evolving digital marketplace, without a comprehensive and adaptable taxation strategy, Nigeria risks missing out on a significant portion of its potential tax revenue, which could otherwise be invested in national development. The challenge for policymakers is to develop a tax system that can effectively capture revenue from e-commerce activities without stifling the growth of the digital economy or driving businesses into informality (Gwaindepi, (2024). This study seeks to address these issues by examining the existing gaps in Nigeria's e-commerce tax policies and exploring possible solutions for improving tax compliance and revenue generation in the digital

space.

Conceptual Framework

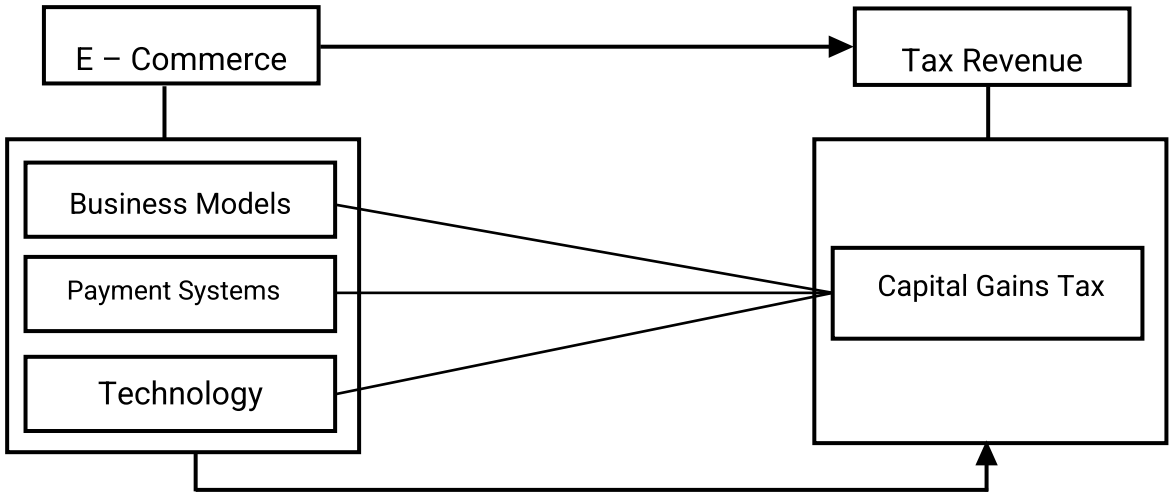

Figure 1.1: Operational framework of the impact of e – commerce on tax revenue in Nigeria

Aim and Objectives of the Study

The aim of this study is to investigate empirically the relationship between e – commerce and tax revenue in Nigeria; however, the specific objectives are to:

i. Investigate the relationship between business models and tax revenue in Nigeria.
ii. Determine the relationship between payment systems and tax revenue in Nigeria
iii. Ascertain the relationship between technology and tax revenue in Nigeria

Research Questions

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

i. What is the relationship between business models and tax revenue in Nigeria?
ii. What is the relationship between payment systems and tax revenue in Nigeria?
iii. What is the relationship between technology and tax revenue in Nigeria?

Research Hypotheses

The following null hypotheses were stated for the study:

Ho_1 There is no significance relationship between business models and tax revenue in Nigeria.
Ho_2 Payment system does not have significance relationship with tax revenue in Nigeria.
Ho_3 There is no significance relationship between technology and tax revenue in Nigeria.

Conceptual Review

The Concept of E-Commerce

E-commerce, or electronic commerce, refers to the buying and selling of goods and services through digital platforms, primarily the internet. It encompasses a broad range of online activities, including retail shopping, digital payment systems, online auctions, internet banking, and ticketing services. Essentially, e-commerce enables businesses, consumers, and governments to conduct commercial transactions without requiring physical presence or interaction. According to Laudon and Traver (2023), e-commerce is the use of the internet and related technologies to facilitate commercial transactions and enable the exchange of goods and services. The Organization for Economic Cooperation and Development (OECD, 2021) defines e-commerce transactions as "the sale or purchase of goods or services, conducted over computer networks by methods specifically designed for receiving or placing orders." Additionally, Laudon and Traver emphasize that e-

commerce integrates the transfer of funds, data exchange, and the delivery of digital services, making it a pivotal component of modern business operations (Laudon & Traver, 2023).
The OECD (2001) asserts that payment and delivery do not have to be conducted online for a transaction to qualify as e-commerce. The major parties involved in e-commerce include consumers, businesses, and governments, operating in combinations such as business-to-business (B2B), business-to-consumer (B2C), and business-to-government (B2G) (United Nations Conference on Trade and Development [UNCTAD], 2001). E-commerce transactions can take place in four main forms: Business to Business (B2B), Business to Consumer (B2C), Consumer to Consumer (C2C), and Consumer to Business (C2B). Bristol (2001) reports that Forrester Research estimated global B2B e-commerce in the year 2000 at approximately US$604 billion (UNCTAD, 2001). According to Toppr (2020), by 2020, global retail e-commerce sales were projected to reach $27 trillion. E-commerce is currently one of the fastest-growing sectors in the global economy, with an estimated annual growth rate of nearly 23%, projected to involve $27 trillion by the end of this decade (Toppr, 2020). Duke et al. (2013) identify the main instruments of e-commerce in Nigeria as online (web-based) purchasing, point-of-sale (POS) systems, automated teller machines (ATM), and mobile phone (GSM) payments.

Tax Revenue

Tax revenue refers to the income that a government collects from individuals, businesses, and other entities through various forms of taxation. These taxes are a major source of funding for governments, enabling them to finance public services, infrastructure, social programs, defence, and other functions essential for running the country. According to Agbo and Nwadialor (2020), tax has been defined in several ways by different individuals. For instance, the Institute of Chartered Accountants of Nigeria [ICAN] (2009) defines tax as an obligatory contribution imposed on the citizens by the government in order to provide social services and to ensure the citizens‟ social and economic welfare. Tax is considered as a financial charge or levy imposed upon an individual or legal entity by a government such that failure to pay, or evasion of or resistance to collection, is punishable by law. Taxes are also imposed by many administrative divisions (Opara, 2014).

The National Tax Policy for Nigeria refers to tax as a monetary charge on a person’s or entity’s income, property or transaction which is usually collected by a defined authority at Federal, State or local level. For some others, it is an obligatory levy which government or any recognized authority of the state imposes on the property, goods, services and people living in an area for revenue generation in order to offset the expenses incurred by the government or the authority on behalf of the citizens; a fiscal policy tool employed to redistribute wealth or to achieve other macroeconomic objectives. As many as the definitions above and other similar definitions may be, there exist some common basic elements in them. For instance, they all consider tax as a compulsory levy imposed by the government on its citizens and business entities to raise fund utilized to finance government operations. Tax revenues are basically the revenues collected from income taxes, social security contributions; value added tax, payroll taxes, and other items. Social security payments, fines, and penalties are usually excluded from its calculations. They are a major source of government revenue which serves not only as a means for financing expenditure needs (Agbo & Nwadialor, 2020). Tax revenues are generated from direct and indirect taxes.

Capital Gains Tax

Capital gains tax (CGT) is a tax imposed on the profit realized from the sale or disposal of a capital asset, where the sale price exceeds the original purchase cost (basis) of the asset (IRS, 2023). Common capital gains arise from transactions involving stocks, bonds, real estate, and precious metals. According to Poterba (2021), capital gains are only taxed when they are realized — that is, when the asset is sold or exchanged, not while it is held. The gain is calculated by subtracting the asset’s adjusted basis (original purchase price plus allowable adjustments) from the sales proceeds. If the adjusted basis exceeds the sales price, the result is a capital loss. Tax regulations and rates vary by jurisdiction and asset type (OECD, 2022).

In Nigeria, Capital Gains Tax is governed by the Capital Gains Tax Act and is levied at a flat rate of 10% on net capital gains from the disposal of qualifying assets (Federal Inland Revenue Service [FIRS], 2024). The tax applies to individuals and corporations, and the taxable gains typically include profits from sales of land, buildings, shares, and other specified assets (Nairametrics, 2023). Capital Gains Tax is distinct from income tax and is triggered only when the capital asset is disposed of, not while it is held. This tax encourages long-term investment by taxing gains only upon realization (Investopedia, 2023).

Theoretical Review

Optimal Taxation Theory

This study is grounded in the Optimal Taxation Theory, initially formulated by James Mirrlees in 1971. The theory remains highly relevant today, addressing the design of tax systems that balance government revenue needs while minimizing negative effects on economic behaviors such as labor supply and investment (Saez & Zucman, 2019). Optimal Taxation Theory proposes that taxes should be structured to maximize social welfare by minimizing economic inefficiencies. Two prominent models within this theory are the Ramsey Rule and the Laffer Curve Model. The Ramsey Rule suggests setting tax rates inversely proportional to the price elasticity of demand for goods and services, minimizing excess burden or efficiency loss (Kopczuk, 2019). This framework enables governments to achieve required revenue with minimal market distortion. In contrast, the Laffer Curve Model highlights the government's motivation to maximize tax revenue, sometimes at the expense of economic efficiency. This model illustrates an optimal tax rate beyond which increasing taxes reduces total revenue due to decreased economic activity (Slemrod, 2018). Recent studies confirm that moderate tax rates may optimize tax income in digital commerce (OECD, 2020; Emenyi, 2013). The theory supports a progressive, targeted, and technologically adaptive tax policy, capturing revenue without discouraging digital participation or innovation. It also emphasizes strengthening tax administration capacity to reduce the formal-informal sector gap and improve compliance, especially for SMEs and cross-border digital transactions.

In the Nigerian context, Optimal Taxation Theory is particularly relevant as the country seeks to expand its tax net to the digital economy. By applying the principles of optimal taxation, Nigeria can design a tax system that balances revenue generation with economic growth and development. Optimal Taxation Theory underpins Nigeria's efforts to expand its tax net to the digital space, providing a cautionary framework: poorly designed tax policies could harm compliance and innovation, ultimately defeating their purpose.

Empirical Review

Numerous empirical studies have examined the relationship between electronic tax systems, e-commerce, and tax revenue generation, with growing emphasis on digitalization and fiscal modernization.

Adeola et al. (2025) examined e-commerce tax compliance among SMEs in Abuja and Lagos using survey data from 210 digital businesses. The study found low compliance levels driven by limited awareness and enforcement. However, it highlighted that improved digital literacy and clearer regulatory frameworks significantly encouraged voluntary compliance.

Olowookere and Adebayo (2024) analyzed the impact of digital tax reforms on VAT revenue performance in Southwest Nigeria using VAT revenue data from 2017–2023. Their regression analysis revealed that automation and e-filing systems significantly improved VAT collection in states like Lagos and Ogun due to reduced processing times and increased taxpayer compliance.

Chukwu and Danladi (2023) evaluated the potential of blockchain technology in promoting transparency and trust in Nigerian tax administration. Using mixed methods on 150 tax officers and IT professionals, the study concluded that blockchain could minimize fraud, increase accountability, and ultimately enhance tax compliance and revenue generation if properly implemented.

The World Bank (2023) in its report *"Digital Taxation and Revenue Mobilization in Sub-Saharan Africa"* highlighted Nigeria's efforts in implementing digital service taxes (DSTs). The report found modest improvements in tax-to-GDP ratios in countries with functional e-tax systems and advocated for regional harmonization of digital tax policies to reduce complexity and prevent double taxation.

Ndalu and Igwe (2022) investigated the relationship between electronic tax payment systems and tax revenue of the Federal Inland Revenue Service (FIRS) and the Rivers State Internal Revenue Service (RIRS). From a sample of 280 staff selected using the Taro Yamane formula, data were collected via structured questionnaires and analyzed using Pearson Correlation with SPSS 23.0. Their results revealed a moderate but significant positive relationship between e-payment systems and company income tax (r = 0.586**) and capital gains tax (r = 0.545**), concluding that electronic tax payment systems significantly influence tax revenue collection.

Arinze et al. (2018) focused on the taxation of the e-commerce business segment, using secondary data from archival documents, textbooks, and online publications. The study found that while e-commerce presents substantial opportunities, it also challenges traditional taxation frameworks. The researchers concluded that while tax-free e-commerce could erode government revenue, over-taxation may hinder technological innovation, hence recommending a balanced approach to policy formulation.

Simken et al. (2017) explored the domestic and international implications of internet taxation. Reviewing the Internet Tax Freedom Act and the global digital tax debate, the study outlined arguments both for and against taxing e-commerce, noting the need for tax systems that do not stifle innovation while ensuring equitable tax contributions.

Duke et al. (2013) estimated the contribution of e-commerce transactions to Nigeria's national tax revenue between 2008 and 2011. Using proxies like ATM usage, Point-of-Sale (POS) terminals, online purchases, and mobile payments, the study found that while ATM and POS activities contributed relatively well, online purchases and GSM-based payments had minimal impact on revenue, suggesting the need for broader inclusion of digital platforms in tax policy.

Gap in Literature

There is a growing body of research on the rise of e-commerce in Nigeria, most existing studies tend to focus on its impact on consumer behaviour, economic growth, and the challenges faced by the e-commerce industry. However, limited empirical research has been conducted specifically on the relationship between e-commerce and tax revenue. Key gaps include:

Olusola and Oladipupo (2020) in their study on "E-commerce and Taxation in Nigeria," the authors discuss the emerging challenges of taxing digital transactions but do not provide an in-depth analysis of how tax policies are adapting to these challenges. This highlights a gap in understanding how Nigeria's tax framework is evolving in response to e-commerce growth Taiwo (2019) in his study, "Digital Economy and Taxation: The Nigerian Experience," explores general challenges of the digital economy but does not offer detailed insights into the mechanisms of tax compliance for e-commerce, suggesting that more research is needed on tax policy adaptation. Ogunsanya and Ojo (2021) in their research on "The Role of Fintech in Nigeria's Economy," they focus on digital payment systems but do not thoroughly investigate the connection between these payment methods and tax revenue collection, especially from e-commerce transactions. This gap indicates the need for studies that specifically address how digital payment platforms could enhance tax compliance. While, Ogbuji and Ifeanacho (2018) in their work on "E-commerce Adoption in Nigeria and the Role of Digital Payment Platforms" discusses the growth of e-commerce but fails to connect it to the tax implications or how payment platforms can be leveraged for tax collection, highlighting an underexplored area.

METHODOLOGY

This study adopted the survey research design. This method was considered appropriate as it is useful for the study of non-observable events such as opinions, attitudes, preferences or dispositions. The population of the study consists of the twenty six (26) branches of both Federal

Inland Revenue Service (FIRS) and Rivers State Internal Revenue Service (RIRS) (FIRS 11 & RIRS 15) operating in Rivers State with nine hundred and thirty eight (938) staff as respondents. The sample size of two hundred and eighty (280) was determined using Taro Yamane's formula of 1967 for sample size determination as adopted by Baridam (2001). Primary data collection method was adopted in this study. Primary data involves the administration of questionnaire instruments to the respondents. The method of collecting data in this study could be done through administering questionnaires through mail, personally, online, researchers representative etc. In this case the researcher opted to administer questionnaires personally with the aid of two (2) research assistants. Thus the primary source in this study was the administration of questionnaire to the staff of FIRS and RIRS under study. Pearson Product Moment Correlation Coefficient analytical technique was used and facilitated by Statistical Package for Social Sciences (SPSS) version 23.0.

Model Specification

The model of the study was adapted from model of Brooks (2014) as follows:
TR = f (BUS, PMS, TECH) …….. (1)

Where:
TR = Tax Revenue
BUS = Business Models
PMS = Payment System
TECH = Technology
In a linear regression form, it will become: $TR = \beta o + \beta 1\ BUS + \beta 2\ PMS + \beta 3\ TECH + \mu$ -(2)
Where βo = Constant Term
β1 = Coefficient of Business Models
β2 = Coefficient of Payment System
β3 = Coefficient of Technology
μ = Error Term

Results and Findings

Table 1: Questionnaire Distribution & Retrieval

Numbers	Questionnaire	Percentage (%)
No. Sent out	280	100%
No. Returned	228	81%
No. Not Returned	52	19%

Table 1 show the distribution and collection of questionnaire sent to the respondents. It was shown that 280 copies of questionnaires were distributed to the respondents representing 100%. 228 copies of questionnaires representing 81% were correctly filled and successfully collected from the respondents; however 52 copies of questionnaires representing 19% were not collected.

Table 4.2: Range of Relationship and Descriptive Level of Association of Relationship

Range of r values	Descriptive level of association of r
±0.80 – 1.00	Very strong
±0.60 – 0.79	Strong
±0.40 – 0.59	Moderate
±0.20 – 0.39	Weak
±0.00 – 0.19	Very weak

Test of Hypothesis One

Ho_1 There is no significance relationship between business models and tax revenue in Nigeria.

Table 3: Correlation Analysis on the Extent and Direction of the Relationship between Business Models and Tax Revenue

Correlations

		Business Models	Tax Revenue
Business Modes	Pearson Correlation	1	.567**
	Sig. (2-tailed)		.000
	N	228	228
Tax Revenue	Pearson Correlation	.567**	1
	Sig. (2-tailed)	.000	
	N	228	228

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3 shows the correlation analysis on the extent and direction of the relationship between business models and tax revenue. The table showed a correlation coefficient of r = 0.567** with a correspondent significant/probability value of 0.000, from the classification of r value in table 2, the value is moderate. Also the correlation coefficient is positive which indicate that an increase in tax revenue is associated with an improvement in business models. Thus the analysis from table 4.3 shows that there is a moderate significant relationship between business models and tax revenue.

Test of Hypothesis Two

Ho_2 Payment system does not have significance relationship with tax revenue in Nigeria.

Table 4: Correlation Analysis on the Extent and Direction of the Relationship between Payment System and Tax Revenue

Correlations

		Payment System	Tax Revenue
Payment System	Pearson Correlation	1	.595**
	Sig. (2-tailed)		.000
	N	228	228
Tax Revenue	Pearson Correlation	.595**	1
	Sig. (2-tailed)	.000	
	N	228	228

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4 shows the correlation analysis on the extent and direction of the relationship between payment system and tax revenue. The table showed a correlation coefficient of r = 0.595** with a correspondent significant/probability value of 0.000, from the classification of r value in table 2, the value is moderate. Also the correlation coefficient is positive which indicate that an increase in tax revenue is associated with an improvement in payment system. Thus the analysis from table 2 shows that there is a significant relationship between payment system and tax revenue.

Test of Hypothesis Three

Ho_3 There is no significance relationship between technology and tax revenue in Nigeria.

Table 5: Correlation Analysis on the Extent and Direction of the Relationship between Technology and Tax Revenue

Correlations

		Technology	Tax Revenue
Technology	Pearson Correlation	1	.535**
	Sig. (2-tailed)		.000
	N	228	228
Tax Revenue	Pearson Correlation	.535**	1
	Sig. (2-tailed)	.000	
	N	228	228

**. Correlation is significant at the 0.01 level (2-tailed).

Table 5 shows the correlation analysis on the extent and direction of the relationship between technology and tax revenue. The table showed a correlation coefficient of r = 0.535** with a correspondent significant/probability value of 0.000. From the classification of r value in table 2, the value is moderate. Also the correlation coefficient is positive which indicate that an increase in tax revenue is associated with an improvement in technology. Thus the analysis from table 5 shows that there is a moderate relationship between technology and tax revenue.

Summary of Findings

There is a moderate relationship between business models and tax revenue on the test of $H0_1$ as shown in table 3 with the correlation coefficient value of r = 0.567** significant at pv = 0.00 < 0.05.

There is a positive moderate relationship between payment system and tax revenue on the test of $H0_2$ as shown in table 4 with the correlation coefficient value of r = 0.595** significant at pv = 0.00< 0.05.

There is a moderate relationship between technology and tax revenue on the test of $H0_3$ as shown in table 5 with the correlation coefficient value of r = 0.535** significant at pv = 0.00 < 0.05.

Discussion of Findings

Business Models and Tax Revenue

The test of hypothesis one ($H0_1$), found that there is a moderate relationship between business models and tax revenue on the test of $H0_1$ as shown in table 3 with the correlation coefficient value of r = 0.567** significant at pv = 0.00 < 0.05. Hence, the study concludes that there is a significant relationship between business models and tax revenue. This is in line with the assertion of Wedick (1986) as cited by Mongwaketse (2015) who assert that e –filing system is a fundamental technological departure from the traditional paper-based process to a system founded on computer-to-computer exchange of data between the taxpaying community and the IRS.

Payment System and Tax Revenue

The test of hypothesis two ($H0_2$), found that there is a positive moderate relationship between payment system and tax revenue as shown in table 4 with the correlation coefficient value of r = 0.595** significant at pv = 0.00< 0.05. Hence, the study concludes that there is a significant relationship between payment system and tax revenue. This finding is in consonant with the study of Owino, Otieno & Odoyo (2017) who studied, “Influence of Information and Communication

Technology on Revenue Collection in County Governments in Kenya. The findings showed that a strong and almost a perfect association existed between ICT systems adopted in County Governments and the revenue collection.

Technology and Tax Revenue

The test of hypotheses three ($H0_3$), found that there is a moderate relationship between technology and tax revenue as shown in table 5 with the correlation coefficient value of r = 0.535** significant at pv = 0.00 < 0.05. Hence, the study concludes that there is a significant relationship between technology and tax revenue. This is in support of the study of Eneojo & Gabriel (2014) who studied "Taxation and Revenue Generation: an Empirical Investigation of Selected States in Nigeria. Findings from the study revealed that taxation has a significant contribution on revenue generation.

CONCLUSION AND RECOMMENDATIONS

E-commerce has emerged as a powerful driver of economic activity in Nigeria, significantly transforming the way businesses operate and consumers shop. The rapid expansion of digital platforms, coupled with increasing internet penetration, presents both opportunities and challenges for tax authorities. This study has highlighted the immense potential of e-commerce to contribute to tax revenue generation, but it has also revealed several gaps in Nigeria's current tax policies and enforcement mechanisms. One of the central challenges lies in the inadequacy of the existing tax framework to effectively capture and regulate the activities of online businesses, especially those operating informally. Many small and medium-sized enterprises (SMEs) evade taxes due to difficulties in tracking digital transactions and the cross-border nature of e-commerce, which further complicates tax collection. Moreover, international e-commerce giants often operate in Nigeria without a physical presence, leading to significant tax revenue leakage. Despite efforts by the Nigerian government, including the introduction of the Finance Act 2020, which expanded VAT to include digital services, the enforcement of these laws remains weak. The study underscores the need for more comprehensive, technology-driven tax policies that can adapt to the fast-paced evolution of the digital economy. The study therefore, makes the following

Recommendations:

i. The government should invest in modern tax collection technologies, such as automated transaction tracking systems, to monitor digital sales more effectively since e-commerce business models operate largely in the digital space.
ii. The government should work closely with payment service providers to integrate tax deduction features into their platforms. This would allow for real-time tax deductions on transactions and ensure that businesses, particularly e-commerce vendors, are taxed at the point of sale, significantly improving compliance and reducing tax evasion.
iii. The government should adopt advanced digital tax systems, such as electronic invoicing, automated tax filing, and payment systems that integrate directly with e-commerce platforms.

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