

## **TAX POLICY CHANGE AND REVENUE PERFORMANCE IN NIGERIA**

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### **Abstract**

The persistent underperformance of government in spite of frantic efforts in policy raises critical questions about the effectiveness of specific reform enacted to enhance revenue mobilization. This study is therefore conducted to examine the effect of tax policy change on revenue performance in Nigeria. The study adopts a quantitative research design using secondary data obtained from Central Bank of Nigeria, National Bureau of Statistics, and Federal Inland Revenue Service, covering the period of 2000-2024. The study employs unit-root tests, Johansen integration, and a Vector Error-Correction Model (long-run and short-run) statistics to test the effect of tax policy change on revenue performance in Nigeria. Findings showed that stable long-run equilibrium relationships exist among the variables. The long-run results show that tax rate has a positive and significant effect on revenue performance, while tax incentives and tax collection cost are negative and statistically insignificant. In the short run, tax rate remains significant, whereas tax incentives and tax collection cost are positive but insignificant. The study concludes that tax rate adjustments are the most effective reform instrument for revenue performance, while administrative and incentive reforms require longer gestation periods. The study therefore recommends an optimal tax rate structuring, performance-based incentive review, sustained investment in tax administration infrastructure, and integrated reform packages synchronizing statutory changes with enforcement mechanisms. These measures are expected to enhance tax performance, promote transparency and accountability and restore public confidence in government.

**Keywords:** Revenue performance, tax collection cost, tax incentives, tax policy change, tax rate.

### **1.0 Introduction**

Taxation has become an increasing source of focus as a mobiliser of domestic resources, especially since the global economic shocks of the 2008 financial crisis and the COVID-19 pandemic. To

address these shifts, the governments of both advanced and developing economies have turned to tax policy measures to broaden tax bases, increase digital compliance, fill tax gaps, and tackle tax policy differences (Organisation for Economic Cooperation and Development (OECD), 2023; International Monetary Fund, (IMF), 2024). In 2022, integrated tax policy and administrative reforms have contributed to a success story in many jurisdictions and the global average tax-to-GDP ratio stood at 33.5% (OECD, 2023). Developed countries with successful tax policy and growth, equity, and sustainability linkages tend to have better revenue performance and lower fiscal vulnerabilities, including Chile, Estonia, and New Zealand.

In Africa, tax performance is still a significant issue, with the majority of African states having faced challenges in achieving high tax-to-GDP ratios, short tax bases, high informality, weak tax administration and heavy reliance on external aid or natural resources. The African Tax Administration Forum (ATAF, 2022) found that the overall tax-to-GDP ratio in sub-Saharan Africa has been 15.6% on average, with significant differences between countries. Other countries, such as Rwanda, recorded 16.1% tax-GDP ratio in 2023/2024, and South Africa recorded 24.7% have done very well by implementing institutional changes and digital tax systems (Ghafoori, 2024; IMF, 2023), but there are many countries still struggling with regressive tax systems and weak enforcement.

The problems are more pronounced in Nigeria which is the largest economy and the biggest producer of crude oil in Africa, as Nigeria's tax-to-GDP ratio in 2022 was among the lowest in the world (FIRS, 2023; World Bank, 2024). Nigeria's tax rate structure has been found wanting in terms of efficiency and equity aspects for a long time (Odumu, 2025). Despite hikes in Value Added Tax (VAT) from 5% to 7.5% in 2020, it is still lower than the regional level and does not meet the government's revenue requirements. Corporate Income Tax (CIT) at 30% remains fairly high, but there are problems of tax evasion, base erosion and low tax collection. Multiple taxation, at both subnational and national levels, and the burden of uncoordinated taxations on the other hand further reduce the impact of tax rates and the compliance thereof (Odusola, 2023; Ariyo & Uche, 2019).

Nigeria has attempted to tackle these structural weaknesses with a comprehensive tax policy reform, with increased efforts in the past decade. A number of major changes were introduced in the Finance Act 2019-2025 such as raising the VAT rate from 5% to 7.5%, new thresholds for SMEs, and modernised rules for non-resident suppliers of digital services (Federal Ministry of Finance, 2020). Likewise, the Petroleum Industry Act (PIA) 2021, which remodeled the tax regime in the oil and gas industry, was enacted and abolished the outdated Petroleum Profit Tax (PPT) with the introduction of a dual tax system tax regime of Hydrocarbon Tax and Companies Income Tax, recalibrated royalty regime in the oil and gas industry to encourage investments and maximise government revenue (Okon & Udoh, 2022). The Federal Inland Revenue Service (FIRS) has launched digital platforms like TaxPro Max, e-Invoicing and real-time monitoring systems at the administrative level to minimize leakages, expand the tax base and enhance compliance (FIRS, 2023).

There are many empirical studies that have attempted to assess the impact of these reforms on the revenue performance of Nigeria. Akintoye and Tashie (2020) explored the wider link between public revenue generation and sustainable development, and notes that Nigeria is faced with the

challenge of making structural changes in the tax system. Likewise, Adeniran and Obinna (2021), studied the specific impact of the implementation of the VAT increase in the Year 2019, and they found that the increase in the VAT had great revenue potential but its impact was limited by the informality, low rate of compliance and the regressive nature of indirect taxes. Ojong and Anya (2021) investigated the 2019 and 2020 Finance Acts in another line of work, suggesting that the reforms incorporated progressive elements, however, these were not successful in terms of revenue due to weak enforcement and tax resistance. Eze and Udeh (2021); Okon and Udoh (2022) found at the sectoral level that the fiscal impact of the Petroleum Industry Act could positively affect transparency and boost revenue flows, but its effectiveness hinged on political will and institutional capacity. In addition to the policy design, other studies conducted by Omodero (2020) and Adekoya and Raheem (2022) investigated the digitisation of the tax administration process, noting that the use of technology by the FIRS and state revenue agencies contributed to better tax compliance, with a corresponding rise in revenue, though implementation was not without its challenges.

These studies add to the body of knowledge, but there are some important gaps in the current literature. The majority of studies use a descriptive or correlational design and as a consequence, they do not determine causes and effects of specific tax policy changes on the observed revenue performance. For instance, when the amount of VAT collected increased, the Finance Act is often blamed, but other macroeconomic factors like inflation, currency devaluation, or compliance drives at the time of the increase are not controlled for (Adeniran & Obinna, 2021). Further, the empirical evidence is largely based on aggregated revenue data, hiding important differences between various tax instruments, and between federal and subnational governments (Akintoye & Tashie, 2020). This lack of disaggregation hinders efforts to identify the most effective reforms for improving the fiscal performance. Furthermore, there is little research on the interaction between tax policy reform and administrative innovations. VAT reforms and FIRS' digital compliance platforms were some of the initiatives introduced concurrently, leaving it difficult to separate the gains in revenue from the impetus of statutory changes and the enforcement of technology (Omodero, 2020; Adekoya & Raheem, 2022).

Furthermore, the existing literature is constrained by methodological and temporal shortcomings. Many studies use short post-reform windows, thereby failing to capture the medium-to long-term impacts of tax policy changes. This problem is compounded by the frequent use of nominal revenue figures, which can exaggerate revenue growth in periods of high inflation and exchange-rate depreciation, as observed in Nigeria's recent fiscal trajectory (Eze & Udeh, 2021). Finally, the literature has not adequately engaged with the dynamic and cumulative nature of Nigeria's tax policy changes. With successive Finance Acts 2019–2023, the enactment of the PIA in 2021, and ongoing reform proposals in 2024–2025, most studies have treated reforms in isolation rather than examining their combined impact on Nigeria's fiscal system (IMF, 2023). In response to the identified research gaps, this study examines the effect of tax policy change and revenue performance of Nigerian government. The study specifically focuses on changes in the tax policy change such as adjustments to tax rates, the introduction or removal of tax incentives, expansion of the tax base, and enhancement of compliance mechanisms.

The introductory overview is presented in the first section. The second section presents a thorough literature review of conceptual frameworks, theoretical foundations and empirical research. The

third section describes the research method used. The fourth section looks at data presentation, analysis and hypothesis testing. Last, the final section provides a summary, conclusions, and policy recommendations of the study.

## **2.0 Literature Review**

This section synthesizes the conceptual, theoretical, and empirical foundations underpinning tax policy changes, and revenue performance in Nigeria. It also identifies research gaps that inform the study.

### **Conceptual Review**

This section discussed the conceptual literature, offering diverse scholarly perspectives on key ideas relevant to the investigation.

### **Revenue Performance**

Revenue performance refers to the outcome of revenue agencies efforts in collecting revenue for the government. Revenue performance is the economy, efficiency and effectiveness of revenue collection activities. It can be seen as the ability of revenue agencies to attain its goals by using resources in an efficient and effective manner. The main factors contributing to an improved revenue performance are changes in tax legislation, tax administration and minimal tax evasion (Morrisset & Izquierdo, 2023). Oti et al (2016) noted that the simple most important index to measure the performance and outcome of the recent tax policy change is the improvement in revenue collection, particularly non-oil tax revenue. Revenue collection serves as baseline for assessing the impact of the recent tax policy change and restructuring of the Federal Inland Revenue Service (FIRS).

Revenue performance in any country is dependent on fiscal adjustment. Dom et al. (2021) noted that the efficacy of any fiscal adjustment to accomplish fiscal obligations depends on the tax base or capacity relative to the expenditure requirements of the public sector. This fiscal position defining the ratio of capacity to requirements approximates the marginal benefits of public expenditures vis-a-vis marginal sacrifice of the citizenry.

### **Tax Policy Change**

Tax policy change according to Muhammad et al. (2024) is an ongoing process which tax policymakers and tax administrators in consonance with the economic and socio-political realities continued to adopt so as to restructure the tax system for efficiency revenue generation in the country. Challoumis (2024) and Okolo (2024) revealed that tax policy changes improve the revenue generating machinery of government to undertake socially desirable expenditure that will translate to economic growth in real output and per capita basis.

Nnamani et al. (2023) noted that tax policy change are embarked upon to correct the weaknesses in the existing tax system and enhance its efficiency. The reasons for tax policy changes may range from the need for additional revenue to economic growth. Tax policy changes can lead to a new tax, a new rate, a new legal clause, a new assessment system such as the self-assessment system. Tax policy changes can be either progressive or retrogressive and dysfunctional. A progressive tax system is one that is growth-oriented; aggressively seeks to minimize the distortions of market signals by the tax system, and promotes convergent expectations, serving in this way to attenuate

uncertainties and obstacles to investment, innovation, entrepreneurship and other drivers of economic growth (Iyidiobi & Ezugwu, 2022).

### **Tax Rate**

Tax rates are an important fiscal tool that governments use to raise revenue that could be used in funding government expenditure and stimulating economic growth. According to Akpokhio and Ekperiware (2022), they posit that tax rates mean the percentage charged on taxable bases like income, consumption, profits, or assets and the revenue performance is the efficiency and effectiveness of gathering of the taxes in comparison with the economic potential. According to IMF (2021), there is no linear connection between the tax rates and the performance of revenue, implying that either high or too low tax rates can inhibit its optimum production. In the developing economies like Nigeria, the structural, institutional, and compliance-related factors are rather strong determinants of the effectiveness of tax rates.

Nigeria has a mixed tax system, which includes direct taxes; Personal Income Tax (PIT), and indirect taxes, which particularly includes the Value Added Tax (VAT) and development levy. Regardless of the various tax policy changes, the tax performance in Nigeria is poor due to a low tax-to-GDP ratio that continues to be low compared to the same in other Sub-Saharan African peer economies (World Bank, 2023). According to the scholars, the current tax rates, despite being moderate in comparison to other countries, have failed to reflect into improved revenues because of the small tax bases, high levels of informality, and poor tax collection (Adeosun & Oyinlola, 2022).

### **Tax Incentive**

Tax incentive is a group of financial measures given by government to drive certain taxpayer behaviours in desired directions by lowering the tax cost of undertaking certain activities (Mauda and Saidu, 2019). The incentives aim to support economic development, investment, and behaviour that supports the government's policy objectives. Tax incentives is one of the common types of tax credits, and it involves a direct reduction in the amount of tax paid for particular activities or expenditure (Babatayo & Adegbie 2021).

Philip (2018) suggests that tax incentives come in many different shapes and forms and may include investment incentives, innovation incentives and regional development incentives. Investment incentives are designed to promote investment in capital assets by permitting the deduction of the expenses at a faster rate than would be otherwise allowed in accordance with a specific set of regular depreciation rates. Innovation incentives are designed to encourage innovation and technological change by offering a tax break for eligible activities, such as research and development tax credits. Regional development incentives are measures aimed at fostering development in a particular region, including tax relief for businesses that locate in a depressed region.

Furthermore, Nmehielle (2022) suggested that tax incentives play a role in ensuring that corporate tax management strategies are aligned with the objectives of the entire organisation. Businesses may combine tax planning with their business strategies, and make use of tax incentives that go hand-in-hand with their business, growth plans, sustainability programs and so on. For example, tax deductions for green measures could be significant for any business that has a corporate social responsibility program. This alignment is important as it ensures that corporate tax management

practices not only help to reduce corporate tax liability, but also align with the company's broader strategic goals, thereby helping to maximize overall firm value (Kazeem, 2018).

### **Tax Collection Cost**

Tax collection cost can be defined as the organized and institutionalized costs incurred whereby the government authorities determine taxpayers, tax liabilities, receive the due taxes, and enforce compliance per the law and regulations which are set up by the government in taxation. It involves all the administrative processes of tax authorities mobilizing the revenue of the population and corporations. James and Nobes (2020) note that tax collection is not just the actual process of payment of taxes but involves registration, documentation, assessment, monitoring, and mechanisms of enforcement that make the process efficient and accountable in raising the revenue. In a developing economy such as in Nigeria, the success of this process is the key to the fiscal capacity and sustainability of the government. The cost of tax collection is the total expenses which are incurred by government to collect the tax revenue. It encompasses the resources used to locate taxpayers, to determine their taxes, to collect the taxes, to ensure their timely payment, and to administer the tax system to ensure compliance.

At the administrative level, the process of tax collection is initiated by identification and registration of taxpayers, which entails the process of trapping future taxpayers into an established tax net by using systems like Tax Identification Numbers (TIN) and electronic databases. This phase plays a very crucial role in broadening the tax base and aligning on informality. According to Bird and Zolt (2021), an effective registration system improves voluntary compliance by making tax systems easy to access and improve transparency. Recent reforms in Nigeria focus on digital registration and data consolidation to enhance coverage, curtail duplication and resulting revenue leakages of manual processes.

The process also entails tax evaluation and filing with tax obligations to be calculated at an income, profit, or consumption level with taxpayers being obligated to submit returns and pay taxes within a specified time. OECD (2022) states that fairness and equity are enhanced through proper assessment and filing systems because everybody taxpayer should pay an equivalent of their economic capacity. The use of electronic-filing and payment systems in the modern tax systems, which the Nigerian tax system is no exception, has become central in enhancing efficiency, saving on costs of compliance and enhancing performance of the revenue in the non-oil tax sources such as the VAT and corporate income tax.

### **Theoretical Review**

This study will review two theories; Ability to Pay Theory and Benefits Received Theory of Taxation. This study will focus on Benefits Received Theory of Taxation. This theory would examine the broader economic consequences of tax compliance, digitalization and tax policy change measures.

#### **Ability to Pay Theory**

A renowned proponent of the Ability to pay theory of taxation is Adams Smith in 1776. In his book titled 'the wealth of a nation' and further popularized and amplified by Author Cicil Pigou 1877 and the theory is adjudged one of the most renown and generally accepted theory of taxation is that which allows citizens to pay tax to the government in accordance to the ability of individual tax payers (Otu & Theophilus, 2012). According to Jones and Rhoades (2011), the theory is said

to have originated by the Swiss philosopher Jean Jacques Rousseau between 1712 and 1778 in the 16th century and was scientifically extended by a number of scholars.

Since the introduction of the theory, it has dominated several literatures with a view to explaining basis upon which good tax system should operate (Lawrence, 2015). This theory holds that tax should be levied progressively to the income of taxpayers where those who earn more are made to pay more tax than those on lower income. Ability to pay theory of taxation is adjudged most reasonable and fair theory of taxation owing to the fact that it takes into account the disparities income among various tax payers (Jones & Rhoades, 2021). Ability to pay theory has also been challenged by scholars on ground that it has no concrete approach for measuring the equity of sacrifice in absolute, proportional and marginal terms (Komal, 2013).

### **Benefits Received Theory of Taxation**

Wicksell (1896) and Lindahl (1919) contributed to the development of the benefits received theory of taxation. This theory assumes that there is an exchange relationship between taxpayers and the state because the state provides certain goods and services to the members of the society. Thus, members of the society should contribute to the cost of these supplies in proportion to their share of the total benefits. This implies that the more benefits a person derive from the activities of the state, the more tax one should pay to the government. According to Anyanfo (1996), taxes should be allocated based on benefits received from government expenditure. Traditionally, the application of this theory has been observed in the aspects of progressive tax, corporation taxes, and taxes on property or wealth. Under the regime of progressives, the government should levy tax on individuals based on the benefits accruable to the individuals following their access to public goods provided by the government. In other words, the theory is built on the assumption of an exchange relationship between the taxpayers and the government. The benefit theory violates the basic principle of tax. A tax is paid for the general purposes of the state and not in return for a specific service. Moreover, it is commonly believed that the poor benefit more from the State activities than the rich. If that is so, then the poor have to contribute more than the rich, this would be absurd.

The study anchors on benefit received theory because the theory helps explain why reforms aimed at improving visible public benefits can enhance revenue performance. The theory posits that taxpayers are more willing to pay taxes when they perceive tangible benefits such as infrastructure, security, healthcare, and education from the taxes they pay. In Nigeria, repeated tax policy changes (e.g., VAT reforms, Finance Acts, and digital tax administration reforms) have been driven by the need to strengthen the link between taxation and public service delivery.

### **Empirical Review**

Abomaye, et al. (2018) conducted empirical research to investigate the relationship between the tax revenue and economic growth in 1980-2015 applying Ordinary Least Square (OLS), Co-integration, and Granger Causality tests using the data in the CBN statistical bulletin on GDP, Petroleum Profit Tax (PPT), Company Income Tax (CIT), and Custom and Excise Duty (CED). Using the time series statistics of 1986 and 2016, which were created by the Federal Inland Revenue Service, National Bureau of Statistics and Central Bank of Nigeria statistical bulletin, the results indicated that there was no demonstrable relationship between PPT, CIT or CED and Nigerian economy growth, which is rather contradictory to the research by Ironkwe and Agu

(2019), who investigated the relationship between the impact of tax revenue on the growth of the Nigerian economy and time series statistics in 1986 to 2016.

Although Abomaye, et al. (2018) reported no significant correlation, Ironkwe and Agu (2019) have determined that total tax income and employment have a significant positive correlation in Nigeria, which indicates that the two opposing results might be caused by differences in methodological techniques of conducting the study, namely, the multiple regression used by Ironkwe and Agu and the causality tests used by Abomaye, et al., (2018) as well as by a difference in the time span as Ironkwe and Agu (2019) have used data much more recent and, therefore, possibly representing better. Both scholars, however, have a common drawback of relying upon secondary data using similar institutional sources that are not necessarily the best sources to understand informal sector dynamics and neither of them address the potential endogeneity difficulties inherent in tax revenue-economic growth relations.

Tamunonimim, et al. (2019) analyzed the impact of tax policy changes on the quality of life of the Nigerians based on the CBN statistical bulletin data and estimation techniques such as ordinary least square multiple regression, the Johansen co-integration test, the Granger causality test, and the error correction model. The results on the errors model indicated that CIT, PIT and VAT are the only values that significantly influence Nigeria living standard in the long term, even though all tax receipts fluctuated between 1981 and 2016, which means that the main aim of tax revenue in improving the standard of living in Nigeria was achieved.

This observation is consistent to some extent with Ewa et al. (2020), who investigated the taxation proceeds and their effects on economic development between 1994 and 2018 using Ordinary Least Square and discovered that taxation proceeds had a positive effect on the growth of the economy, and 99.2% of economic development can be explained by the effects of the taxation proceeds of companies, which are the taxes on profits of companies, and Value Added Tax. Nevertheless, Ewa et al. (2020) found no or very minor effect of Petroleum Profit Tax on GDP growth, owing to the limitation of OPEC production ceilings and shocks in the global crude oil prices, whereas the latter remained silent on the effects of petroleum taxes and indicates that the universal finding of the study regarding the success of tax policy change might fail to consider industry-specific weaknesses. Both articles support the importance of non-oil taxes but the sectoral disaggregation of the study by Ewa et al. (2020), gives a more specific policy recommendation than the aggregate welfare orientation of Tamunonim, et al. (2019).

Mourfou and Ouedraogo (2021) investigated the impact of various forms of tax revenues on the income inequality in the WAEMU countries between 1996 and 2015 with the application of the double least squares (2SLS) methodology: where the increase in direct tax revenue decreases income inequality by progressive income taxation, whereas indirect domestic and commercial tax revenue has a neutral effect on the income distribution. This cross-regional finding compliments Koatsaa, et al. (2021), who examined how the tax burden and economic growth in Lesotho in 1988-2017 relates with Scully tax optimization model in an ARDL bounds testing framework, Granger causality test, and error correction model.

Koatsaa, et al. (2021) found that the rate of economic growth was significantly related to tax burden with a unidirectional causality effect of economic growth to tax burden in a long-run study but surprisingly did not find any causal effect of tax burden to economic growth as hypothesized by

theory-based studies of tax structure instead of tax burden level on welfare outcomes. A finding that indirectly validates the argument of Mourfou and Ouedraogo (2021) that tax structure rather than the volume of tax burden determines welfare outcomes. The recommendation of Koatsaa, et al. (2021) to mobilize domestic tax revenue, however, does not seem to be linked to the empirical result of no growth causality, which is actually a normative leap that Mourfou and Ouedraogo (2021) circumvent by focusing more on structure; what is more, the use of formal tax measures by both studies might fail to capture the redistributive potential of informal tax collection methods that are so common in African economies.

In the study of Adusei and Owusu (2022), the impact of managerial ownership on tax avoidance in 68 non-financial Ghana Stock Exchange listed firms between 2011 and 2020, sampled the firms, analyzed them using multiple regression analysis and discovered that the managerial ownership had a significant and positive impact on tax avoidance, indicating that entrenched managers are taking advantage of the weaknesses of the internal controls to engage in aggressive tax planning. Such a result is in contrast to the explanatory sequential mixed-methods study of 68 non-financial companies listed between 2004 and 2018 in Nigeria by Ogundeji (2022), who concluded that board financial expertise significantly decreased tax avoidance and enhanced compliance due to the inclusion of both quantitative panel data and qualitative interviews using GLS regression that showed that the qualitative data supported the results of the quantitative research.

The difference between the ownership-based perspective of Adusei and Owusu (2022) and the governance-based perspective of Ogundeji (2022) indicates the context sensitivity of the determinants of tax avoidance: in Ghanaian companies, managerial entrenchment is the root cause of tax avoidance whereas, in Nigerian companies, board expertise intervention is, which may be due to the fact that in the two markets, the regulatory enforcement is different or maturity in corporate governance. Nonetheless, the fact that Ogundeji (2022) does not consider variables of ownership structure and that Adusei and Owusu (2022) omit the variables of board financial expertise results in the complementing blind spots of these studies that Bello and Hassan (2022) fulfill by studying family ownership and tax avoidance in 28 family-owned manufacturing firms in Nigeria between 2011 and 2020 through the correlational research design and multiple regression analysis.

Bello and Hassan (2022) identified no statistically significant family ownership and tax avoidance, indicating that regulatory enforcement and firm size rather than ownership type are significant in tax behaviour, which contradicts Adusei and Owusu (2022) managerial ownership results but corroborates the conclusions of Ogundeji (2022) on structural governance variables instead of ownership types. However, the local sample limits the comparative usefulness of the article by Bello and Hassan (2022) and the lack of measures of board governance, and this gap in the literature requires to be filled in the future by comprehensive approaches that incorporate variables of ownership, governance, and regulation.

The time-series data of tax policy changes analyzed by Mainoma, et al. (2024) revealed a statistically significant positive effect of tax policy changes on revenue in Nigeria, which can be achieved by increasing the tax base and restructuring tax administration but not by raising tax rates because of compliance losses. This result is in direct opposition to Nwaorgu et al (2025) who conducted another longitudinal analysis between 1971 and 2012, where gross domestic product

was used as the dependent variable, with CIT, PIT, VAT, PPT and CED used as independent variables based on Ordinary least square regression and diagnostic test, and concluded that tax policy changes had a significant positive effect on national income and economic growth, mostly by the growth rates of VAT and PIT.

This discrepancy between the skepticism of rate-based reforms expressed by Mainoma, et al. (2024) and the general embrace of reform effectiveness expressed by Nwaorgu et al. (2025) might be a matter of time, with Mainoma, et al. (2024) having more current data that captures the behavioral changes of taxpayers in response to reforms, or a matter of methodology, where Nwaorgu et al. (2025) may be subsuming changes in the work of the administration with changes in the rate. Nonetheless, the unexpected negative significant effect on national income at the expense of VAT growth, as found by Nwaorgu et al. (2025) against the expected success on base expansion by Mainoma, et al. (2024) indicates inconsistency in the measurement of data which is clarified by Naburgi and Chamba (2025) in their ex-post facto review of FIRS reforms, which indicated that the administration effectiveness and organizational redesigning led to the same impact on revenue performance over time and therefore depends on macroeconomic stability and the institutional nuance described by Naburgi and Chamba (2025) mediates between Mainoma, et al. (2024) and Nwaorgu et al. (2025) and hence implies that the effectiveness of reforms depends on the specific context and is not universal, but this particular focus of FIRS limits its applicability to other areas of national tax policy.

Akinboboye, et al. (2025) employed structural equation modelling to analyse the implications of digital tax policy on the tax gap in informal sector of Nigeria, and determined that digital tax reporting and integrated management systems significantly lowered the tax gap and increased revenue collection by the government on hitherto hard-to-tax economic sectors due to poor digital literacy and adoption levels. This technological emphasis is complementary to Ebieri et al (2025) who estimated the effects of tax policy changes on economic growth in 1985-2023 using Ordinary least squares based multiple regression with GDP variable as the dependent variable and PPT, CIT, VAT, PIT, education tax, and tax policy change dummy as explanatory variables, which found that 99% of variations in GDP were due to these tax variables with PPT and CIT having positive significant effects but no statistical significance of customs duties, VAT, PIT, and education tax. The success of digitalization that Akinboboye, et al. (2025) concluded with the success of digital systems is juxtapositioned with the finding of VAT insignificance by Ebieri et al. (2025) a paradox of the digital reforms is maintaining the collection of the informal sector where VAT is not applicable to a large part but not the growth of the formal sector with VAT, indicating that digital reforms can help in fixing the administrative efficiency instead of the structural defects in tax design.

Ebi et al (2025) add to this image by considering the tax policy change and tax yield between 1981 and 2022 through the use of the error correction mechanism technique with dummies assigned to the tax variables, namely PIT, PPT, and total tax revenue, and excise duty and finds that the coefficient of the dummy terms was positively signed and significant at 5% level in all tax periods, which indicate that tax policy changes do improve tax revenues with all the tax variables being positively signed at both pre-reform and post-reform periods. Although Ebieri et al. (2025) aggregate specification may fail to capture the effect of timing of a reform as explicitly as Ebi et al. (2025) approach, which uses the dummy variable, the results of universal positive reform effects

do not agree with the rate-skepticism found by Mainoma, et al. (2024), or with the mixed significance findings by Ebieri et al. (2025), and could overstate the effectiveness of such reforms by failing to differentiate between administrative and policy reforms.

Lastly, Oyedokun, et al. (2026) tested the relationship between tax policy changes and revenue outcomes with survey data among tax officials, and found that tax policy changes had a statistically significant but weak association making reforms explain only 10 percent of the variation in revenues, indicating that economic situations, tax morale, effectiveness of enforcing taxation, and population trust which are often not included as intervening variables are dominant drivers of reform effects. The behavioral insight of Oyedokun, et al. (2026) gives a critical corrective to the technocratic optimism of Akinboboye, et al. (2025) and Ebi et al (2025) in that even digital and administrative reforms cannot counteract basic trust deficits between taxpayers and state actors, which all the previous quantitative studies have failed to consider in favor of their use of secondary macroeconomic data and not primary behavioral evidence.

### **Gap in literature**

Although the relationship between tax policy changes and revenue performance is being evaluated by increasing amount of research in Nigeria, there still exist critical gaps, which restrict a comprehensive picture of the effects of tax policy changes stimulating revenue performances in different economic and administrative settings, Okoro et al. (2025) and Oyedokun et al. (2026). Similarly, not many studies formally incorporate the contribution of administrative and compliance factors like tax rates, tax incentives, digital taxation and tax collection cost to their findings on revenue performance subsequent to tax policy changes. The research conducted by Naburgi and Chamba (2025) recognizes the positive changes after the reform on the Federal Inland Revenue Service (FIRS) level, but fails to sufficiently demonstrate how the behavior in terms of tax incentives, tax rates, and tax collection cost mediate the changes in revenue performance.

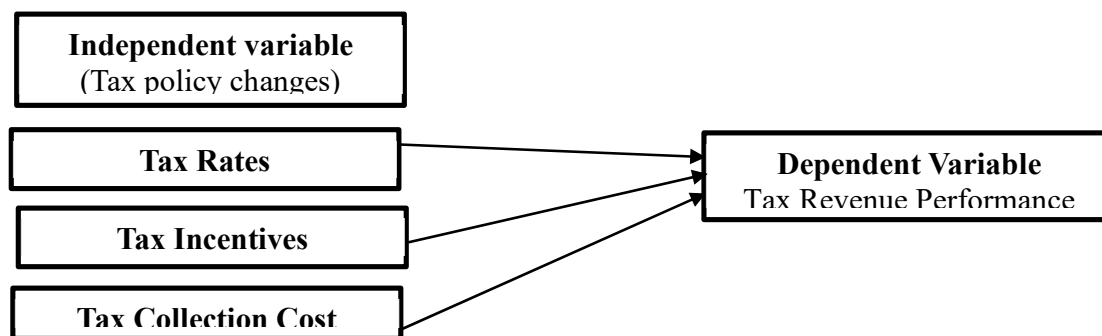
Many studies focus on broad tax policy changes or aggregated tax policy change measures and their link to revenue outcomes, but they often do not isolate the distinct effects of various tax rate adjustments (VAT, corporate tax, petroleum profit tax) on revenue performance. For instance, adjustments in statutory tax rates can influence both taxpayer behaviour and revenue mobilization, yet most research fails to unpack how specific rate changes contribute to improvements or declines in revenue performance over time. Additionally, the role of tax incentives such as holidays, allowances, credits, and exemptions designed to stimulate investment and compliance is seldom examined in relation to revenue performance at the macro level in Nigeria.

While studies in related sectors like oil and gas firms measure the impact of incentives on firm performance, they do not translate these insights into national tax revenue implications or how incentives interact with other reform components to influence taxpayers' compliance decisions. Lastly, despite recurrent policy narratives about administrative reforms, empirical assessments of the tax collection cost (including efficiency, digitization, enforcement, and institutional capacity) are limited. Many analyses emphasize revenue outcomes without examining how procedural aspects of tax collections such as enforcement intensity, automation of filing systems, taxpayer education, and collection costs mediate the effectiveness of tax policy changes. The existing literature largely overlooks this administrative dimension, even though it is crucial for transforming statutory tax policy into actual revenue.

### Conceptual Framework

Based on the review of empirical literature and the conceptual perspective, the study developed a conceptual framework to show the interaction between tax policy changes and revenue performance of the Nigeria government. The conceptual framework is presented in Figure 1, where tax policy changes standing as independent variable, is proxy with tax rates, tax incentives, and tax collection cost, while revenue performance used as the dependent variable.

**Figure 1:** Conceptual Framework to show the relationship between tax policy changes and revenue performance



Source: Authors' Compilation, 2026.

### 3.0 Methodology

A longitudinal research design was adopted, spanning from 2000 to 2024, to enable the identification of long-term patterns and causal relationships. The study utilizes secondary data sources derived from annual financial reports, Nigeria Bureau Statistics (NBS), Central Bank of Nigeria (CBN), and the Nigerian Exchange Group (NGX) Factbook of Federal Inland Revenue Services. The study applies a robust analytical framework comprising descriptive statistics, a correlation matrix, and time series data to test hypothesized relationships.

### Model Specification

This study adapted the model specified in the study undertaken by Udezo and Onuorawho examined tax reforms and revenue performance in Nigeria for 1991–2018. The scholars measured tax reform through reforms in PPT, CIT, VAT and PIT, while revenue performance was total federally collected revenue. Their actual model was:  $TFCR = f(R, P, P, TRCIT, RVAT, RPIT)$

Econometrically:  $TFCR_t = \alpha_0 + \alpha_1 RPPT_t + \alpha_2 RCIT_t + \alpha_3 RVAT_t + \alpha_4 RPIT_t + \mu_t$

Also, estimated the logged version:  $LTFCR_t = \alpha_0 + \alpha_1 LRPPT_t + \alpha_2 LRCIT_t + \alpha_3 LRVAT_t + \alpha_4 LRPIT_t + \mu_t$

Where: TFCR = Total Federally Collected Revenue, RPPT = Reform in Petroleum Profit Tax (PPT), RCIT = Reform in Company Income Tax (CIT), RVAT = Reform in Value Added Tax (VAT), RPIT = Reform in Personal Income Tax (PIT),  $f$  means Functional Notation,  $\alpha_0$  = Constant,  $\alpha_1$ - $\alpha_4$  = the coefficient of the regression equation,  $\mu$  = Error Term.

This study adapted the model by modifying some components of the models and introducing new variables that are peculiar to the focus of this study by replacing variables that are outside the scope of this study. In other to achieve the objective of this study, the data econometric technique to test the significance of the various components tax policy change index variable will be employed. To

achieve the broad objective of this study of investigating the effect of tax policy changes and revenue performance in Nigeria, the function model is stated as;

$$RP = f(TPC) \quad 3.2$$

Where; RP = Revenue Performance, TPC = Tax Policy Change

To show the individual specific objective represented by the explanatory variables of tax policy change which are; tax rates, tax incentives and tax collection cost, the expanded functional model is stated thus;

$$RP = f(TR, TI, TCC) \quad 3.3$$

Where; RP = Revenue Performance, TR = Tax Rate, TI = Tax Incentives, TCC = Tax Collection Cost.

Econometrically, the functional model to show the effects of tax policy change on revenue performance in, Nigeria is shown as;

$$RP = \beta_0 + \beta_1 TR_t + \beta_2 TI_t + \beta_3 TCC_t + \mu_t \quad 3.4$$

Where; RP = Revenue Performance, TR = Tax Rate, TI = Tax Incentives, TCC = Tax Collection Cost.

The a-priori expectation based on literatures reviewed and theories is that tax policy change would have positive effect on revenue performance. It is shown statistically as  $\beta_1 > 0$ ,  $\beta_2 > 0$ .  $\beta_3 > 0$ .

### Measurement of Variables

The dependent variable of this study is revenue performance which will be proxy by tax-GDP ratio while independent variable is tax policy changes which will be proxy by tax rates, tax incentives and tax collection cost. The details of the variable, notation, description, measurement, and the sources of the measurement are spelt out in Table 3.1 for objectives one, two and three.

**Table 3.1:**  
**Measurement of Variables**

| Variables                   | Descriptions                                                                                         | Measurement                                                                 | Source                                   |
|-----------------------------|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|------------------------------------------|
| <b>Dependent Variable</b>   |                                                                                                      |                                                                             |                                          |
| Tax Revenue Performance     | The total income a government collects from all the various taxes                                    | $\frac{\text{total tax revenue}}{\text{Gross Domestic Product}} \times 100$ | Awotomilusi, et.al.(2021), Oadele (2016) |
| <b>Independent Variable</b> |                                                                                                      |                                                                             |                                          |
| <b>Tax policy changes</b>   |                                                                                                      |                                                                             |                                          |
| Tax rates                   | the tax rate is the ratio (usually expressed as a percentage) at which a business or person is taxed | $\frac{\text{company Income Tax Revenue}}{\text{GDP}}$                      | Berlina, etal.(2023)                     |
| Tax incentives              | Refers to provisions made to eligible tax payers to reduce tax burden                                | $\frac{\text{Tax Expenditure}}{\text{Total Tax Revenue}}$                   | Ricy, et al.(2020)                       |

|                     |                                                                                                               |                                                               |                            |
|---------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|----------------------------|
| Tax Collection cost | The cost of tax collection is the total expenses which are incurred by government to collect the tax revenue. | $\frac{\text{Administrative Cost}}{\text{Total Tax Revenue}}$ | Akpoyibo and okolo, (2023) |
|---------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|----------------------------|

**Source:** Authors' Compilation, 2026.4.0 **Data Analyses and Discussion of Findings**

## **Descriptive Statistics**

**Table 4.1:**

### ***Descriptive Statistics of Study Variables***

| Study Variables                 | Tax Revenue | Tax Rate | Tax Incentives | Tax Collection |
|---------------------------------|-------------|----------|----------------|----------------|
| <b>Mean</b>                     | 5.0597      | 16.9834  | 0.3432         | 0.4474         |
| <b>Standard Deviation</b>       | 4.0532      | 15.8382  | 0.216          | 0.129          |
| <b>Coefficient of Variation</b> | 0.8011      | 0.9326   | 0.6294         | 0.2884         |
| <b>Minimum</b>                  | 1.2495      | 2.0302   | 0.0123         | 0.1936         |
| <b>Maximum</b>                  | 17.7186     | 65.6016  | 0.8296         | 0.7709         |
| <b>Kurtosis</b>                 | 5.4198      | 5.1089   | 2.4032         | 3.15           |
| <b>Skewness</b>                 | 1.701       | 1.6211   | 0.6168         | 0.2121         |

**Source:** Authors' Compilation, 2026.

On Table 4.1, the mean value for tax revenue is 5.0597, which indicates a moderate average tax revenue across the years of observation with the standard deviation (SD) of 4.0532 which implies that it's widely dispersed and this is evident from the coefficient of variation showing 80.11 percent. The minimum and maximum value for tax revenue are 1.2495 and 17.7186 respectively which indicates a huge variability in tax revenue. Describing the normality of the data distribution, the kurtosis value showing 5.4198 and skewedness of 1.701 imply that the data for the variable is abnormally distributed. Likewise on the Table, it is revealed that the mean value for tax rate is 16.9834, which indicates a moderate level of taxation. Also, the standard deviation (SD) is 15.8382 which implies that the tax rate overtime is widely dispersed and this is evident from the 93 percent coefficient of variation. The minimum and maximum value for tax rate are 2.0302 and 65.6016 respectively, which indicates a wide disparity in tax rate across the period observed. The kurtosis value showing 5.1089 and skewedness of 1.6211 imply that the data for the variable is abnormally distributed.

It is also shown on Table 1 that the mean value for tax incentives is 0.3432, which indicates a moderate use of incentives across the period of observation. The standard deviation is 0.216 which implies that it's moderately dispersed and this is evident from the coefficient of variation showing 62 percent. The normality distribution for the data showed the value of 2.4032 and 0.6168 for kurtosis and skewness respectively and this indicates that the variables are normally distributed. Lastly on Table 4.1, it is observed that tax collection cost has a mean value of 0.4474 with standard deviation of 0.1290 which implies that it's moderately dispersed and this is evidenced by coefficient of variation of 28 percent. The minimum value is 0.1936 and maximum value of 0.7709. The value for kurtosis and skewedness indicates that the variables are abnormally distributed showing 3.1500 and 0.2121 respectively.

## Test of Variables

### Pairwise Correlation Matrix

The correlation results showing the relationship between tax policy change and tax revenue performance is presented in Table 4.2

**Table 4.2:**

*Correlation between Tax policy change and Tax Revenue performance*

| Stats          | Tax Revenue     | Tax Rate           | Tax Incentives    | Tax Collection |
|----------------|-----------------|--------------------|-------------------|----------------|
| Tax Revenue    | 1.000<br>-----  |                    |                   |                |
| Tax Rate       | 0.9023* 0.0000  | 1.000<br>-----     |                   |                |
| Tax Incentives | -0.7670* 0.0000 | -0.7836*<br>0.0000 | 1.000<br>-----    |                |
| Tax Collection | -0.7455* 0.0000 | -0.7014* 0.0000    | 0.6696*<br>0.0000 | 1.000<br>----- |

**Source:** Authors' Compilation, 2026.

The correlation matrix presents the degree of linear association among the variables used in the study, namely Tax Revenue Performance (TRP), Tax Rate (TR), Tax Incentive (TI), and Tax collection cost (TCP). The result shows that tax rate has positive and significant correlation with tax revenue performance showing the co-efficient value of 0.9023 and p-value of 0.0000 indicating that increases in tax rates are strongly associated with improvements in tax revenue performance within the period examined. In contrast, tax incentive exhibits a negative and significant relationship with tax revenue performance showing co-efficient value of -0.7670 and p-value of 0.0000 implying that higher tax incentives will reduce the level of tax revenue performance by 76.7 percent since incentives often involve tax reliefs, exemptions, or reductions granted to taxpayers. Similarly, Table4.2 reveals tax collection cost has an inverse and significant correlation with tax revenue performance showing co-efficient value of -0.7455 and p-value of 0.0000 suggesting that inefficiencies or weaknesses in the tax collection system may adversely affect the performance of tax revenue generation.

Further examination of the relationships among the explanatory variables shows that tax rate has negative and significant relationship with tax incentive and tax collection cost while Tax incentive and tax collection have positive correlation. Overall, the correlation results indicate the presence of relatively strong associations among the explanatory variables, which may raise concerns of multicollinearity. This requires further testing using diagnostic measures such as the Variance Inflation Factor (VIF).

## Variance Inflation Factor

**Table 4. 3**

### *Variance Inflation Factor*

| Variable            | VIF         | 1/VIF    |
|---------------------|-------------|----------|
| Tax rate            | 3.04        | 0.329408 |
| Tax incentive       | 2.8         | 0.357656 |
| Tax Collection Cost | 2.12        | 0.470725 |
| <b>Mean VIF</b>     | <b>2.65</b> |          |

**Source:** Authors' Compilation, 2026.

Based on the evidence presented in table 4.3, it can be concluded that there is no multi-collinearity problem for the measures of tax policy change which are tax rates, tax incentive and tax collection cost does not exhibit multicollinearity as none of the VIF is beyond the threshold of 10 and the tolerance values for the variables are greater than 0.10 (rule of thumb). Therefore, the study can rely on regression co-efficient to predict the level of impact of independent variables on dependent variables

## Stationary Test

**Table 4.4:**

### *Augmented Dickey-Fuller Test Results*

| Variables      | Augmented Dickey-Fuller test for unit root |                     |         |                       |                     |         | Phillips-Perron test for unit root |                     |         |                        |                     |         |
|----------------|--------------------------------------------|---------------------|---------|-----------------------|---------------------|---------|------------------------------------|---------------------|---------|------------------------|---------------------|---------|
|                | Level I(0)                                 |                     |         | First Difference I(1) |                     |         | Level I(0)                         |                     |         | First Difference I (1) |                     |         |
|                | t-stat                                     | Critical Value (5%) | p-value | t-stat                | Critical Value (5%) | p-value | t-stat                             | Critical Value (5%) | p-value | t-stat                 | Critical Value (5%) | p-value |
| Tax Revenue    | 0.410                                      | -3.000              | 0.9819  | -3.784                | -3.000              | 0.0106  | 0.157                              | -3.000              | 0.9435  | -3.921                 | -3.000              | 0.0019  |
| Tax Rate       | -0.403                                     | -3.000              | 0.9096  | -5.148                | -3.000              | 0.0000  | 0.365                              | -3.000              | 0.9159  | -6.287                 | -3.000              | 0.0000  |
| Tax Incentives | -0.875                                     | -3.000              | 0.7960  | -4.976                | -3.000              | 0.0000  | 2.181                              | -3.000              | 0.2131  | 10.834                 | -3.000              | 0.0000  |
| Tax Collection | -1.329                                     | -3.000              | 0.6157  | -4.243                | -3.000              | 0.0006  | 1.979                              | -3.000              | 0.2960  | -6.564                 | -3.000              | 0.0000  |

**Source:** Authors' Compilation, 2026.

The result presented in Table 4.4 infer that all variables are stationary at first difference I(1) for ADF unit root test and Phillips-Perron Test. Hence, the Johansen co-integration test will be considered to know if there is co-integration relationship among the variables and for the one with co-integration, the vector error correction model (VECM) will be done and vector auto-regression (VAR) for model if there is no co-integration.

## Diagnostic Test

**Table 4.5:**  
***Diagnostic Tests (Tax Revenue Performance)***

| Test of Variables                                                                          | Output                                                |
|--------------------------------------------------------------------------------------------|-------------------------------------------------------|
| <b>Eigen Stability Condition:</b>                                                          | The VECM specification imposes 3 unit moduli (stable) |
| <b>Lagrange-multiplier test</b><br>(Null hypothesis: No serial correlation at up to 2 lag) | chi2 - 19.9762<br>Prob > chi2 - 0.22129               |
| <b>Normality Test (Jarque-Bera test)</b>                                                   | chi2 - 40.662<br>Prob > chi2 - 0.00000                |

**Source:** Authors' Compilation, 2026.

The results are summarized in Table 4.5. The Eigenvalue Stability Condition shows that the VECM is stable, since the three-unit moduli imposed by the model satisfy the stability condition. This indicates that the relationships obtained between these variables are dynamically stable and deviations from the long-run equilibrium due to short run shocks can be corrected. The chi-square value was 19.9762 and the probability value was 0.22129 with Lagrange Multiplier (LM) test, which is higher than 0.05. As a result, the null hypothesis of no serial correlation up to lag 2 is not rejected, and hence the residuals are not serially correlated, and the model features the time-series dynamics relevant to the model.

The Jarque-Bera normality test, however, gave a chi-square of 40.662 and probability value of 0.00000 which is less than 0.05. Therefore, the null hypothesis of normal distribution of residuals is rejected, meaning that the residuals are not normally distributed. Overall, the diagnostic results indicate that the VECM is stable and is not serially correlated, but the residuals are not normally distributed. The CUSUM's test shows that our model is stable.

## Johansen's Co-integration Test

**Table 4.6:**  
***Johansen Tests for Co-Integration***

| Maximum Rank | LL          | Eigenvalue | Trace statistics | 5% Critical value | Max statistics | 5% Critical value |
|--------------|-------------|------------|------------------|-------------------|----------------|-------------------|
|              | -43.9545    | .          | 65.0238          | 47.21             | 33.5150        | 27.07             |
| 0            | -27.1971    | 0.76711    | 31.5089          | 29.68             | 24.5117        | 20.97             |
| 1            | -14.9412    | 0.65552    | 6.9971*          | 15.41             | 6.6669         | 14.07             |
| 2            | -11.6077    | 0.25164    | 0.3302           | 3.76              | 0.3302         | 3.76              |
| 3            | -11.4426    | 0.01426    |                  |                   |                |                   |
| 4            |             |            |                  |                   |                |                   |
| Sample:      | 2000 - 2024 | Lags:      | 2                | OBS:              | 23             |                   |

Trace test and max test indicates 2 cointegrating eqn(s) at the 0.05 level

**Source:** Authors' Compilation, 2026.

The results on Table 4.6 showing the outcome of the Johansen's co-integration test indicates we are to reject the null hypothesis at 5% significance level. The trace statistics shows that at rank 0, we have 65.023 which is greater than the critical value of 47.21 and for the max statistics which

shows 33.5150 it is greater than 5% critical value that indicates 27.07. Likewise, the trace statistics shows that at rank 1, we have 31.5089 which is greater than the critical value of 29.68 and for the max statistics which shows 24.511 it is greater than 5% critical value that indicates 20.97. However, at rank 2, we will accept the null hypothesis as there is at least 2 co-integration equation in the model as indicated by trace statistics of 6.9971\* which is lower than the 5% critical value of 15.41 and this is supported by the max statistics showing 6.6669 which is lesser than 14.07 at 5% critical level. This means there are stable and long-term equilibrium relationships among the variables and this imply that they exhibit co-integration. To determine this co-integrating coefficient and analyses the effect of tax policy change on tax revenue performance in Nigeria, both the short-run dynamics and the long run relationship was done by computing the vector error correction model.

### **Tax policy change and Revenue Performance (Long Term Effect) Vector Error-Correction Model**

**Table 4.7:**  
***Johansen Normalization Results (Long –Run Effect)***

| Beta           | Coef.  | Std. Err.  | Z        | P> z      |
|----------------|--------|------------|----------|-----------|
| _cel           |        |            |          |           |
| Tax Revenue    | 1      | .          | .        | .         |
| Tax Rate       | -0.226 | 0.020      | -11.200  | 0.000     |
| Tax Incentives | 0.497  | 0.741      | 0.670    | 0.502     |
| Tax Collection | 0.382  | 0.796      | 0.480    | 0.631     |
| _cons          | -1.257 | .          | .        | .         |
| Parms = 3      | Chi2   | = 680.2232 | . P>chi2 | . = 0.000 |

**Source:** Authors' Compilation, 2026.

Upon evaluating the test outcomes from the pre-estimation phases, which encompassed the data stationary assessment, lag length identification, co-integration analysis, and VECM stability evaluation, alongside the observation that this study possesses 2 co-integration rank at the 0.05 (5%) significance level, the VECM estimation model emerged as a viable option. The vector error correction model (VECM) accounts for the co-integration of the variables in a long-term relationship while also accounting for short term fluctuations in the relationship between the variables. The long run coefficient of the variables by VECM is presented in Table 4.7. The VECM model suggested in this study has been proven to be an excellent fit, as evidenced by the high values of its coefficient of determination (R<sup>2</sup>) or the corrected coefficient R<sup>2</sup>, F-statistic, and Durbin-Watson statistics. Furthermore, diagnostic tests have confirmed that our developed VECM model is free from serial correlation, normal error, or conditional heteroskedasticity. Based on these results, we can confidently conclude that the VECM model is robust and reliable for the given data.

Co-integration between variables indicates a long-term correlation between the variables being examined. As a result, the VECM model can be implemented. Based on one co-integrating vector, Table 4.7 and Equations (4.1) demonstrate the enduring relationship between tax policy changes and tax revenue performance in Nigeria from 2000 to 2024. The results imply that in the long run,

tax rate has a positive effect on tax revenue performance and the coefficient is significant at 5 percent showing coefficient of -0.226; z-statistics of -11.200 and p-value of 0.0000. The implication is that tax rate has asymmetric effect on tax revenue performance on the average, ceteris paribus. This means that for every 1 percent increase in tax rate, there is a corresponding increase in tax revenue performance by 0.226 percent. Likewise, it is shown on the table that in the long run, tax incentive has a negative effect on tax revenue performance and the coefficient is significant at 5 percent showing coefficient of 0.497; z-statistics of 0.670 and p-value of 0.502 but the effect is not significant. Lastly, it is revealed that in the long run, Tax collection cost has a negative and insignificant effect on tax revenue performance and the coefficient is significant at 5 percent showing coefficient of 0.3820; z-statistics of 0.48 and p-value of 0.631. In summary, tax policy change through tax rate is statistically relevant to predict movement and changes in tax revenue performance.

The VECM model provides correction terms that consider influences of deviations in the connection between the variables from long-run equilibrium and short-run parameters. The predicted coefficient of speed adjustment ( $\alpha$ ) is  $-0.1103$ , statistically insignificant at 5% level. The coefficient  $-0.1103$  indicates that if the model encounters a disturbance in period  $t$ , it will gradually approach the long-term equilibrium, reaching 11.03 percent of the equilibrium level in period  $(t+1)$ . Meanwhile, Table 4.8 shows the interpretation of the short-term relationship and the decision rule in decision making is  $H_0$  rejected if the p-value is significant at 5 percent.

**Table 4.8:**  
**Vector Error-Correction Model Results**

| Beta                | Coef.       | Std. Err. | Z         | P> z  |
|---------------------|-------------|-----------|-----------|-------|
| Ect                 | -0.11037    | 0.444207  | -0.25     | 0.804 |
| Tax Rate            | 0.161514    | 0.080171  | 2.01      | 0.044 |
| Tax Incentives      | 0.667522    | 2.465501  | 0.27      | 0.787 |
| Tax Collection Cost | 1.400664    | 2.499899  | 0.56      | 0.575 |
| _cons               | 0.259878    | 0.256974  | 1.01      | 0.312 |
| Number of obs       | 24          | RMSE      | = 0.84473 |       |
| AIC                 | = 4.7127    | R-sq      | = 0.8350  |       |
| HQIC                | = 5.04803   | chi2      | = 86.027  |       |
| SBIC                | = 6.0457    | P>chi2    | = 0.0000  |       |
| Sample:             | 2000 - 2024 |           |           |       |

**Source:** Authors' Compilation, 2026.

It can be seen that in the short term the value of C (constant) is 0.2598 which means that if all the variables had not changed in the previous year, the revenue performance would have increased by 0.2598 points. In addition, the R-squared coefficient value of 0.8447 means that 84.47 percent of revenue can be explained by tax rate, tax incentives and tax collection cost in the preceding year while 15.53 percent is explained by other variables outside the model. More so, the adjustment term ( $-0.1103$ ) is statistically insignificant at 5 percent suggesting that previous year error is not

being corrected for within the current year at a convergence speed of 5 percent. Hence, the null hypothesis that previous year error is adjusted for in the current year is rejected. Furthermore, it is revealed from the table that tax rate has significant short run impact on revenue performance as the coefficient is significant showing z-statistics of 2.01 and p-value of 0.044 and this imply that in the short term, changes in tax rate in preceding year does have a significant effect on revenue performance. Furthermore, on Table 4.8, tax incentive has positive but insignificant impact on tax revenue performance in the short run as evidenced by coefficient of 0.27 and p-value of 0.787 and lastly on the table, it is shown that tax collection cost is of positive effect on revenue performance but the effect is insignificant in the short run.

### **Discussion of Findings**

The insignificance of the error correction term implies that long-term equilibrium deviations are not addressed in the present. This suggests that shocks or inefficiencies from the prior year might not be immediately corrected since the tax revenue system lacks a short-run adjustment mechanism. The implication is that policymakers cannot rely on automatic adjustments and must instead adopt deliberate interventions to correct imbalances observed in tax revenue performance. Furthermore, the significance of tax rates is a pointer that it has an immediate and observable consequences on revenue generation, indicating that it is a useful tool for altering short-term revenue results by economist and policy makers. However, care must be taken because excessive tax rate hikes may eventually have a negative impact on compliance and economic activity.

The insignificant effect of tax incentives and the tax collection cost could suggest that the reforms are capable of drawing in investment or boosting the economy, but it may take a longer time to manifest, as they are not immediately reflected in revenue performance. It might take some time for improvements in tax collection procedures to result in quantifiable benefits. The delay's insignificance outcome could be a factor of institutional bottlenecks, lack of implementation support and capacity limitations. In summary, these reforms should take a gradual process and persistence, and also, stakeholders must remain committed to monitoring progress and making adjustments as necessary to ensure long-term success.

To enhance the efficiency of tax incentives and collection procedures over time, policymakers should focus on strengthening institutional frameworks. This includes improving administrative effectiveness, leveraging technology for tax administration, and ensuring accountability and transparency within the tax system. Such measures will not only foster greater compliance among taxpayers but also build public trust in the tax system. Ultimately, a robust framework will facilitate sustainable economic growth and enable governments to better serve their citizens.

The findings support the findings of Ebi et al (2025) examined tax policy change and tax yield in Nigeria using time series data from 1981 to 2022. The results showed that tax policy changes improve tax revenues. Also, the result for the study aligns with the result of Akinboboye, et al. (2025) which analysed the effect of digital tax policy on the tax gap in the informal sector in Nigeria. In their results, they found that the digital tax reporting systems and integrated tax management systems had a substantial impact in reducing the tax gap. Likewise, it supports the result of Mainoma, et al. (2024) which empirically analyzed the long-run impact of tax policy changes on revenue generation. In their findings, they found out that the tax policy changes have played a significant role in increasing the revenue. However, it contradicts the findings of

Naburgiand Chamba (2025) which evaluated the effects of tax policy changes on the revenue of the Federal Inland Revenue Service (FIRS) and the result supports the fact that tax policy changes in Nigeria are operating in a complex institutional and economic context. Also, it does not support the position of Oyedokun, et al. (2026) which explored the link between tax policy changes and revenue outcomes and the result suggests that tax policy changes are not critical determinants of revenue performance in Nigeria.

### **Policy Implication of the Findings**

- i. The study revealed that tax rate has a positive impact on the revenue performance, both in the short run and long run, and the impact is significant. The policy suggestion is to implement the optimal tax rate structure, which will maximize revenue without reducing taxpayers' willingness to pay the tax or without introducing tax-induced market inefficiencies.
- ii. The study finds that tax incentives have little impact on revenue performance, but could take longer to be evident. Policy implication is that Nigeria critically examine the current tax incentive regime so that incentives are performance-based and linked to measurable results; time-bound to prevent perpetual erosion of revenue; and transparent monitoring to prevent abuse and base erosion of the tax regime.
- iii. Further, the cost of tax collection was positive but insignificant in the short run, indicating institutional bottlenecks and capacity constraints, which raises questions about the revenues performance in this period. The policy implication is that there is a need to continue investing in tax administration infrastructure, particularly in improving the digitization of tax administration; building up an effective and efficient workforce of tax professionals; and automation of tax assessment, filing and payment processes.
- iv. Moreover, the study highlights the difficulty of disentangling policy reforms from administrative innovations. The policy implication is that future tax policy changes should be packaged together so that statutory changes are coordinated with enforcement measures and digital tracking and real-time data analysis should be used to track compliance and revenue leakages.

### **5.0 Conclusion and Recommendations**

Since many African nations suffer with low tax-to-GDP ratios, restricted tax bases and over-reliance on natural resources or foreign aid, the effectiveness of tax systems remains a key concern. Thus, the impact of the change in tax policies on Nigeria's revenue performance was explored. The findings indicate that policy reforms, such as the shift towards a higher tax rate, have a major effect on the performance of revenue. The revenue performance does improve, but the changes in tax incentives and in ways taxes are collected, have relatively little short-term impact. This suggests that an elaborate scheme would have to be developed in order to make the entire tax system more efficient. Other ways to generate revenue in a sustainable way could emerge in the future, and effective enforcement procedures should be established to ensure sustainable impact. The study hereby concludes that while identifying tax policy change that could improve revenue performance, tax rate is the most effect both in the short run and long-run.

The government should have an optimal tax rate system with a balanced tax revenues to taxpayers compliance rate, but should be careful not to impose too heavy a tax rate, as that would make it harder for taxpayers to comply with the tax, thereby reducing the rate of economic activities.

Furthermore, the taxation systems should be also carefully examined in terms of incentive structures to ensure that the incentive policies not only boost the growth of the economy, but also do not destroy the tax base and institutional structures to improve administrative efficiency, use of technology to tax, and institutional accountability and transparency. Since collection process reforms take a long time to take effect, stakeholders are under obligation to engage in sustained monitoring, incremental implementation, as well as sustained capacity building to achieve long-term success in revenue performance.

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