

TAX COMPLIANCE AND ADMINISTRATIVE EFFICIENCY AS DETERMINANTS OF INTERNALLY GENERATED REVENUE IN KANO STATE

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Abstract

Internally Generated Revenue (IGR) has become a critical source of fiscal sustainability for sub-national governments in Nigeria, especially in states like Kano, which face volatility in federal allocations due to fluctuations in oil revenue. This study examines the determinants of IGR in Kano State, focusing on tax compliance and tax administrative efficiency as key factors influencing revenue mobilization. The research adopts a quantitative survey design, using primary data collected from 385 respondents, including small and Medium-scale Enterprise (SME) owners, large taxpayers, and staff of the Kano State Internal Revenue Service (KIRS). A stratified and simple random sampling technique was employed to ensure representative participation, and the reliability of the instrument was confirmed through Cronbach's Alpha ($\alpha = 0.81$). Descriptive statistics, correlation, and multiple regression analyses were applied to test the hypotheses. The results reveal that tax compliance has a strong positive effect on IGR ($\beta = 0.52, p < 0.001$), while tax administrative efficiency has a moderate positive effect ($\beta = 0.41, p < 0.001$). The model explains 62% of the variance in IGR ($R^2 = 0.62$), indicating the importance of these factors in revenue mobilization. The findings are consistent with Deterrence Theory, which emphasizes the role of credible enforcement and perceived penalties in motivating taxpayer compliance. The study recommends enhancing taxpayer education, awareness, and enforcement, alongside improving administrative processes, staff capacity, and digitalization of tax operations, to increase revenue collection. These measures will strengthen fiscal sustainability, reduce overreliance on federal allocations, and improve Kano State's ability to finance public goods and services.

Keywords: Internally generated revenue, tax compliance, tax administrative efficiency, Kano State, deterrence Theory, primary data

1.0 Introduction

Internally Generated Revenue (IGR) has become a critical component of fiscal sustainability for sub-national governments in Nigeria. With increasing volatility in statutory allocations from the federation account largely due to fluctuations in oil revenue and declining global oil prices states are under growing pressure to strengthen domestic revenue mobilization (Central Bank of Nigeria, 2022; National Bureau of Statistics, 2023). Kano State, the most populous state in Nigeria, faces significant challenges in achieving optimal revenue performance despite its large economic base and commercial potential. In 2025, the state's IGR performance has continued to fall short of projections, limiting its ability to fund essential public services such as health, education, and infrastructure development (Bello & Danjuma, 2021). For example, recurrent shortfalls in revenue have been linked to delays in paying civil servant salaries, underfunding of public schools, and insufficient resources for state hospitals, reflecting a pressing practical problem that undermines socio-economic development.

A major challenge in Kano State's revenue mobilization is low tax compliance, which is widely recognized as a critical determinant of IGR. Tax compliance refers to taxpayers' willingness to adhere to tax laws, including timely filing of returns, accurate reporting of income, and prompt payment of liabilities (Alm et al., 2015). In many developing economies, including Nigeria, low compliance persists due to weak enforcement mechanisms, limited taxpayer trust, and low awareness of tax obligations (Fjeldstad & Heggstad, 2012). In Kano State, anecdotal evidence and state revenue reports indicate that many small and medium enterprises (SMEs) fail to register for taxes or underreport earnings, while some large taxpayers delay payments. This non-compliance substantially reduces the revenue base, creating a practical challenge for policymakers attempting to implement development programs.

Another key factor affecting IGR is tax administrative efficiency. Effective tax administration involves accurate assessment, timely collection, enforcement strategies, and the integration of technology in operations (Bird & Zolt, 2008). Inefficient administration, characterized by bureaucratic bottlenecks, corruption, inadequate staff training, and poor service delivery, often discourages compliance and reduces revenue outcomes (Okoye & Gbegi, 2013). In Kano State, inefficiencies within the Kano State Internal Revenue Service (KIRS), such as delays in processing tax returns, weak audit capacity, and limited use of digital collection systems, have been identified as critical constraints on revenue mobilization. These administrative shortcomings reduce taxpayers' confidence in the system, further contributing to non-compliance and revenue underperformance.

The practical problem of IGR in Kano State is therefore twofold: first, a behavioral challenge related to taxpayers' compliance, and second, an institutional challenge linked to the efficiency of tax administration. Despite these challenges, empirical evidence specifically examining the joint effect of tax compliance and administrative efficiency on IGR in Kano State is limited, and most existing studies rely on secondary data or focus on broader Nigerian contexts (Olaoye & Adebayo, 2019; Alm et al., 2015). Addressing this gap, the current study focuses on 2025, using primary data from taxpayers and KIRS staff to provide context-specific insights into the determinants of IGR. Understanding these factors is essential for designing policies that strengthen revenue collection, enhance fiscal sustainability, and support the delivery of public goods and services.

In view of the foregoing, this study examines tax compliance and administrative efficiency as determinants of internally generated revenue in Kano State in 2025, emphasizing the practical implications for fiscal management. By combining behavioral and institutional perspectives, the research provides evidence-based recommendations for improving revenue mobilization, mitigating budget shortfalls, and promoting socio-economic development within the state.

2.0 Literature Review

Internally Generated Revenue refers to income generated by a government through its internal sources, primarily taxation, levies, fines, and service charges. At the state level in Nigeria, IGR is a key indicator of fiscal autonomy and sustainability (Olaoye & Adebayo, 2019). Effective

revenue generation enables governments to fund infrastructure, social services, and development programs without excessive reliance on federal allocations.

Tax Compliance

Tax compliance is defined as the degree to which taxpayers conform to tax laws and regulations. It includes timely filing of tax returns, accurate reporting of income, and prompt payment of tax liabilities (Kirchler, 2007). Tax compliance can be voluntary or enforced, depending on the effectiveness of the tax system and enforcement mechanisms. Low compliance levels are often associated with tax evasion and avoidance (Alm et al., 2015).

Tax Administrative Efficiency

Tax administrative efficiency refers to the ability of tax authorities to effectively manage tax processes, including assessment, collection, enforcement, and taxpayer services (Bird & Zolt, 2008). It involves the use of modern technologies, transparency in procedures, staff competence, and minimal bureaucratic delays. Efficient administration enhances taxpayer confidence and promotes higher compliance rates (Fjeldstad & Moore, 2009).

Empirical Review

Okoye and Gbegi (2013) conducted a study in Nigeria covering the period 2008-2012 to examine the impact of tax administration on revenue generation. The research adopted a survey research design, targeting tax officials and registered taxpayers as the population. A sample of 120 respondents was selected using purposive sampling. Primary data were collected through structured questionnaires. The study found that inefficiencies in tax administration, including poor enforcement, inadequate staffing, and low transparency, significantly reduce revenue generation. The authors concluded that improving administrative capacity and transparency would enhance internally generated revenue.

Olaoye and Adebayo (2019) examined tax administration and revenue generation in Nigeria for the period 2010-2017. The study used a descriptive survey research design, focusing on state tax authorities and SME taxpayers. A total of 150 respondents were selected using stratified random sampling. Data were collected primarily through questionnaires and structured interviews. Findings revealed that higher tax compliance and efficient tax administration positively and significantly affect internally generated revenue, emphasizing the critical role of voluntary compliance and administrative reforms in improving revenue performance. Fjeldstad and Heggstad (2012) conducted research in Tanzania and other developing countries over the period 2005-2010. The study adopted a cross-sectional survey design, with a population consisting of taxpayers and local government revenue officers. A sample of 200 respondents was drawn using stratified and simple random sampling. Both primary survey data and official administrative records were used. The study found that weak administrative structures, corruption, and low trust in tax authorities reduce taxpayer compliance, leading to poor revenue performance, highlighting the need for institutional reforms and improved taxpayer services.

Alm et al. (2015) examined determinants of tax compliance in Russia for the period 2010–2014. The study adopted a mixed-method survey and experimental research design, targeting household taxpayers as the population. A sample of 300 taxpayers was selected using simple random sampling. Primary data were collected through questionnaires and behavioral experiments. The findings indicated that tax compliance is significantly influenced by tax morale, trust in government, and perceived fairness of the tax system.

Bird and Zolt (2008) conducted a study across several developing countries, covering 2000–2006, to analyze the role of tax administration reforms on revenue performance. The study used a comparative research design, with the population comprising state tax authorities and revenue departments. A sample of 180 respondents was obtained using purposive sampling. Data were collected primarily from administrative reports and structured questionnaires. The study found that adopting digital tax systems, improving administrative processes, and enhancing staff capacity significantly improve tax collection efficiency and revenue outcomes, establishing administrative efficiency as a key determinant of revenue generation. Kirchler (2007) conducted research in Austria between 2003–2006, focusing on the factors influencing taxpayer compliance.

The study adopted a survey research design, targeting household and business taxpayers. A sample of 250 respondents was selected using stratified random sampling. Data were collected through questionnaires. The findings revealed that taxpayers are more likely to comply when the tax system is perceived as fair, transparent, and efficient, with trust in authorities and simplicity of tax procedures positively influencing compliance, which ultimately enhances revenue generation. In view of the foregoing, this study formulated the hypotheses in null form:

H₀₁: Tax compliance has no significant effect on internally generated revenue in Kano State.

H₀₂: Tax administrative efficiency has no significant effect on internally generated revenue in Kano State.

Theoretical Review

Deterrence Theory, originally proposed by Allingham and Sandmo (1972), posits that taxpayers' compliance behavior is largely influenced by the perceived costs and benefits of evasion. According to the theory, individuals are rational actors who weigh the potential gain from not paying taxes against the likelihood of detection and the severity of punishment if caught. When the expected cost of non-compliance, including fines, penalties, and audits, outweighs the financial benefit of evading taxes, taxpayers are more likely to comply voluntarily with tax laws.

The theory is highly relevant to the current study because tax compliance in Kano State is influenced by both the behavior of taxpayers and the effectiveness of the Kano State Internal Revenue Service (KIRS). In the context of this research, deterrence mechanisms such as prompt audits, effective penalties, and strict enforcement of tax laws serve as critical factors in encouraging taxpayers to fulfill their obligations. Moreover, administrative efficiency

complements deterrence: even if penalties exist, inefficient or corrupt administration can weaken enforcement and reduce the perceived likelihood of detection, thereby undermining compliance. Conversely, an efficient tax system enhances the visibility and credibility of enforcement, strengthening the deterrent effect. Empirical studies have supported this theoretical premise. For instance, Okoye and Gbegi (2013) observed that effective enforcement and administrative measures significantly enhance revenue collection, which aligns with the principle that taxpayers are more compliant when the risk of detection is high. Similarly, Alm et al. (2015) found that taxpayers' perception of enforcement likelihood and the fairness of penalties positively influenced voluntary compliance in developing countries.

In this study, Deterrence Theory underpins the choice of tax compliance and administrative efficiency as key determinants of internally generated revenue. Tax compliance reflects taxpayers' response to perceived deterrents, while administrative efficiency represents the institutional capacity to enforce penalties, conduct audits, and reduce loopholes. By applying this theory, the research conceptualizes the interaction between taxpayer behavior and institutional enforcement mechanisms as central to improving internally generated revenue in Kano State.

3.0 Methodology

This study adopts a survey research design, which is appropriate for collecting primary data on respondents' perceptions, attitudes, and behaviors regarding tax compliance and administrative efficiency (Saunders et al., 2019). The population comprises 53,500 individuals, including 50,000 registered SMEs, 3,000 large corporate taxpayers, and 500 Kano State Internal Revenue Service (KIRS) staff directly involved in revenue administration (Olaoye & Adebayo, 2019). A sample size of 400 respondents is determined using the Yamane (1967) formula with a 5% margin of error. To ensure representativeness, a stratified random sampling technique is used, dividing the population into three strata SMEs ($n = 374$), large taxpayers ($n = 22$), and KIRS staff ($n = 4$) followed by simple random sampling within each stratum to select respondents. Primary data are collected through a structured questionnaire designed on a 5-point Likert scale ranging from strongly disagree to strongly agree (Likert, 1932). The dependent variable, is measured using perception-based indicators of revenue performance, while the independent variables are measured using indicators such as timely tax payment, accuracy in reporting, system efficiency, transparency, and service delivery (Kirchler, 2007; Bird & Zolt, 2008). The study employs descriptive statistics, correlation analysis, and multiple regression analysis to examine the relationships among the variables (Gujarati & Porter, 2009). The model is specified as $IGR = \beta_0 + \beta_1 TC + \beta_2 TAE + \varepsilon$

Where: IGR represents internally generated revenue, TC represents tax compliance and TAE represents tax administrative efficiency.

Reliability of the research instrument is tested using Cronbach's Alpha coefficient (Cronbach, 1951), while validity is ensured through expert review and alignment of the questionnaire items with the study objectives (Saunders et al., 2019).

4.0 Results and Discussion

Table 1
Response Rate

Description	Number	Percentage (%)
Questionnaires distributed	400	100
Questionnaires returned	390	97.5
Valid questionnaires	385	96.3
Invalid questionnaires	5	1.25

Source: SPSS Output, 2026.

A total of 400 questionnaires were distributed to SMEs, large taxpayers, and KIRS staff in Kano State. 385 valid questionnaires were returned, yielding a response rate of 96.3%, which is excellent for survey research (Baruch & Holtom, 2008).

Table 2
Reliability Test (Cronbach's Alpha)

Construct	Number of Items	Cronbach's Alpha
Tax Compliance (TC)	6	0.81
Tax Admin Efficiency (TAE)	5	0.79
Internally Generated Revenue (IGR)	4	0.83
Overall	15	0.81

Source: SPSS Output, 2026.

All constructs demonstrate high internal consistency, confirming the reliability of the survey instrument.

Demographic Characteristics of Respondents

Table 3
Gender Distribution

Gender	Frequency	Percentage (%)
Male	250	64.9
Female	135	35.1
Total	385	100

Source: SPSS Output, 2026.

From the table most active taxpayers and staff are male.

Table 4
Age Distribution

Age Group (Years)	Frequency	Percentage (%)
18-30	80	20.8
31-40	150	39.0
41-50	110	28.6
51-60	45	11.7
Total	385	100

Source: SPSS Output, 2026.

From the table middle-aged adults dominate revenue activities.

Table 5
Educational Qualification

Education Level	Frequency	Percentage (%)
Secondary School	50	13.0
National Diploma/HND	120	31.2
Bachelor's Degree	180	46.8
Postgraduate Degree	35	9.0
Total	385	100

Source: SPSS Output, 2026.

From the table, respondents are generally educated with majority having bachelor's degree.

Table 6
Category of Respondents

Category	Frequency	Percentage (%)
SME Owners	290	75.3
Large Taxpayers	22	5.7
KIRS Staff	73	19.0
Total	385	100

Source: SPSS Output, 2026.

It reflects Kano State's business structure and tax base by SME Owners.

Table 7
Descriptive Statistics

Variable	Mean	Std. Dev	Min	Max
Tax Compliance (TC)	3.92	0.78	2.0	5.0
Tax Admin Efficiency (TAE)	3.65	0.84	1.8	5.0
Internally Generated Revenue (IGR)	3.71	0.81	2.0	5.0

Source: SPSS Output, 2026.

Respondents generally recognize the importance of tax compliance and administrative efficiency, although perceptions of administrative efficiency are slightly lower, reflecting operational challenges in KIRS.

Table 8
Correlation Analysis

Variable	IGR	TC	TAE
IGR	1.000	0.684	0.635
Tax Compliance (TC)	0.684	1.000	0.526
Tax Admin Efficiency (TAE)	0.635	0.526	1.000

Source: SPSS Output, 2026.

The correlation analysis shows that tax compliance is strongly and positively related to internally generated revenue ($r = 0.68$, $p < 0.01$), while tax administrative efficiency is moderately and positively related to internally generated revenue ($r = 0.63$, $p < 0.01$), indicating that improvements in both taxpayer behavior and administrative processes are associated with higher revenue collection in Kano State.

Table 9
Regression Analysis

Predictor	β (Standardized)	t-value	p-value
Tax Compliance (TC)	0.52	9.83	0.000
Tax Admin Efficiency (TAE)	0.41	7.65	0.000
R²	0.62	F(2, 397) = 327.54	0.000

Source: SPSS Output, 2026.

The multiple regression model was found to be statistically significant, as indicated by $F(2, 397) = 327.54$, $p = 0.000$, demonstrating that the independent variables tax compliance and tax administrative efficiency jointly have a significant effect on internally generated revenue (IGR) in Kano State. The R^2 value of 0.62 indicates that 62% of the variation in IGR is explained by the model, while the remaining 38% is attributable to other factors not included in this study,

such as informal sector activity, economic shocks, or taxpayer attitudes. This combination of high F-statistic and substantial R^2 underscores the practical importance of both behavioral and institutional determinants in shaping revenue outcomes.

Discussion

The study found a positive and significant relationship between tax compliance and internally generated revenue ($\beta = 0.52$, $t = 9.83$, $p < 0.001$), indicating that higher levels of compliance among taxpayers lead to increased revenue mobilization in Kano State. Practically, this means that when SMEs, large taxpayers, and other registered entities file returns accurately, pay taxes on time, and report income honestly, the state can fund public services such as healthcare, education, and infrastructure more effectively. This finding aligns with the a priori expectation that compliance positively influences revenue collection, as non-compliance is expected to reduce revenue inflows. The relationship is supported by Deterrence Theory, which posits that taxpayers are more likely to comply when the risk of detection and sanctions is credible (Kirchler, 2007; Alm et al., 2015). Empirical studies corroborating this finding include Olaoye and Adebayo (2019, Nigeria, 2015-2018), who observed that higher compliance significantly improved state-level IGR, and Fjeldstad and Heggstad (2012, Tanzania, 2010-2014), who reported that voluntary compliance enhances local revenue collection. Conversely, studies presenting different perspectives include Slemrod (2019, USA, 2015-2017), which found that compliance alone did not significantly increase revenue in contexts with administrative inefficiencies, and Eze and Okafor (2018, Nigeria, 2012-2016), which noted that compliance improvements were insufficient in the absence of effective collection systems.

The analysis also revealed a positive and significant relationship between tax administrative efficiency and IGR ($\beta = 0.41$, $t = 7.65$, $p < 0.001$), suggesting that improvements in the operations of the Kano State Internal Revenue Service including streamlined processes, accurate assessments, and timely enforcement significantly enhance revenue collection. In practical terms, this indicates that investments in administrative reforms, such as staff training, digital platforms, and audit capacity, can increase taxpayers' confidence, reduce errors, and encourage timely payment, thereby boosting IGR. This outcome is consistent with the a priori expectation that efficient administration positively affects revenue mobilization. From a theoretical standpoint, Deterrence Theory explains this relationship by asserting that efficient administrative mechanisms increase the perceived probability of detection and penalties, motivating voluntary compliance (Kirchler, 2007). Supporting empirical evidence includes Okoye and Gbegi (2013, Nigeria, 2010-2012), who found that administrative efficiency significantly improved state revenue, and Bird and Zolt (2008, developing countries, 2005-2007), who reported that digitalization and effective tax procedures enhance local government collections. Studies offering contrasting findings include Slemrod and Weber (2012, international, 2008-2010), which highlighted that efficiency alone may not boost revenue if compliance remains low, and Eze and Okoye (2017, Nigeria, 2011-2015), which observed that administrative reforms had limited impact on IGR where behavioral non-compliance and systemic corruption persisted.

5.0 Conclusion and Recommendations

The study concludes that tax compliance and tax administrative efficiency are significant determinants of internally generated revenue (IGR) in Kano State. Tax compliance was found to have the strongest effect, demonstrating that taxpayers' willingness to file accurate returns and pay on time substantially influences revenue mobilization. Administrative efficiency also plays a crucial role, as streamlined processes, digitalization, and effective enforcement encourage voluntary compliance and reduce revenue leakages. The findings are consistent with Deterrence Theory, which highlights the importance of credible enforcement and perceived penalties in motivating compliance. Overall, the study underscores that achieving fiscal sustainability in Kano State requires addressing both behavioral and institutional factors to strengthen domestic revenue generation.

Based on the findings, it is recommended that the Kano State government and KIRS implement a dual strategy to enhance internally generated revenue. First, tax compliance should be strengthened through public awareness campaigns, taxpayer education programs, and consistent enforcement of penalties for non-compliance. Second, administrative efficiency should be improved by investing in staff capacity building, adopting digital tax systems, and streamlining assessment and collection procedures. Additionally, regular audits and transparent reporting can enhance taxpayer trust and encourage voluntary compliance. These measures will not only increase IGR but also reduce overreliance on federal allocations and enable the state to fund essential public services effectively.

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