



ASSESSING THE DETERMINANTS OF VALUE-ADDED TAX COMPLIANCE: EVIDENCE FROM SMEs OPERATING IN NORTH-EAST, NIGERIA

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ABSTRACT

VAT compliance in Nigeria is facing serious problems as compared to other non-oil taxes for instance income tax and corporate tax as well. The SMEs in particular, need an urgent consideration as only less than 10% of SMEs are complying with VAT laws in Nigeria even before the VAT increment from 5% to 7.5%. The study examines the impact of determinants of value added tax increment compliance in SMEs within North-east, Nigeria. The population of the study comprises all the 293-core staff of the Federal Inland Revenue Service within the Bauchi coordinated office of North-Eastern Region of Nigeria. The census population was used to collect primary data using structured questionnaire. The PLS-SEM results reveal that information technology, tax service quality, and staff motivation were significantly and positively influence the value added tax increment compliance in SMEs. The study concluded that information technology, tax service quality, and tax education relate to value added tax increment compliance in SMEs. Therefore, the study recommended that FIRS should establish a strong control measure to monitor information technology, tax service quality, and tax education in order to enhance VAT increment compliance.

Key words: *Information Technology, Tax service Quality, Staff Motivation and VAT increment compliance*

1. INTRODUCTION

Every sovereign government attempts to generate adequate revenue to provide public amenities and accomplish its programs and stimulate private sector growth. In Nigeria, successive governments have used a variety of revenue streams to ensure that public programs and other needs are satisfied. However, Aminu (2019) observed that the country's revenue is biased towards the oil sector, which accounts for over 80% of its earnings, a scenario that was particularly evident during



the Niger Delta conflict. This necessitates the development of new revenue streams capable of affecting economic growth.

Governments apply taxes to create money in addition to earnings from the oil sector, and this has been a key source of revenue. Direct and indirect taxes are the most common types of taxes. Some Nigerians' attitude toward taxation has resulted in governments losing recoverable taxes, notably direct taxes. The unsavoury habit of tax avoidance and evasion continues to cost the country a significant amount of money. In January 1994, the Federal Government introduced the Value Added Tax (VAT) as a consumption tax to replace the Sales tax as a means of cushioning its resources to cope with the ever-increasing obligations (Gashi, Assllani, & Boqolli, 2018).

Value Added Tax (VAT) compliance means how well businesses/SMEs adhere to VAT rules this include registering, charging VAT, filing returns, remitting payments, and maintaining proper records. VAT increment compliance specifically relates to how taxpayers adjust their behavior when VAT rates increase or enforcement becomes stricter. For the purpose of this study four determinants of value added tax were used which include tax service quality, information technology, staff motivation and taxpayers' education. These four determinants were selected because they cover both the supply side (tax authority's capacity: service quality, IT, staff motivation) and the demand side (taxpayers' capability: education) of VAT compliance. Together, they represent the main operational and behavioral factors that prior research and tax administration theory identify as directly influencing VAT revenue performance and compliance levels.

Several critical issues necessitate the conduct of research on tax service quality, information technology and staff motivation in relation to Value Added Tax (VAT) compliance among Small and Medium Enterprises (SMEs) within the North eastern Zone. The persistent problem of low VAT compliance among SMEs remains a major concern. Empirical evidence indicates that tax compliance among SMEs in Nigeria is influenced by factors such as compliance cost, organizational characteristics, and taxpayer perceptions, with many SMEs still failing to fully comply with VAT obligations (Ojo & Shittu, 2023). This challenge raises concerns about the effectiveness of existing tax administration systems in capturing the full tax potential of SMEs.

Tax service quality plays a significant role in shaping taxpayer compliance behaviour. Inefficient service delivery, lack of transparency, and administrative bottlenecks can discourage voluntary compliance, particularly among small businesses that require guidance and support from tax authorities (Ndlovu & Schutte, 2024). Thus, improving service quality is essential for enhancing trust and compliance.

Furthermore, the adoption of information technology in tax administration has become increasingly important in improving compliance. The introduction of electronic tax systems has been shown to positively influence tax compliance and revenue generation among SMEs, although challenges such as system acceptance and accessibility still persist (Inegbedion & Okoye-Uzu, 2024; Olatunji, Adeyemi, & Bello, 2025).

Moreover, staff motivation is a crucial determinant of effective tax administration. Poorly motivated tax officials may exhibit low productivity and weak enforcement capacity, which can



negatively impact tax collection efficiency and compliance outcomes. Effective motivation strategies are therefore necessary to enhance staff performance and service delivery within tax authorities.

Nigeria has been experiencing a revenue crisis due to declining crude oil earnings, prompting the government to explore ways of enhancing its revenue base through increased taxation (Ogbonna & Ebimobowei, 2017). Since its introduction in 1993, the Value Added Tax (VAT) rate in Nigeria remained at 5 per cent despite several attempts by successive governments to review it upward. Notably, in 2007, the Federal Government proposed an increase of the VAT rate to 10 per cent; however, this move faced strong opposition and was subsequently suspended. In a later development, on Wednesday, September 11, 2019, the Nigerian government approved a 50 per cent increase in the VAT rate from 5 per cent to 7.5 per cent on the supply of goods and services. This new rate eventually took effect on February 1, 2020 (first quarter of 2020), attracting widespread public attention and generating mixed reactions among Nigerians.

However, for Nigeria to generate more revenue and minimized budget deficits as well, tax rate has to be increase, especially the VAT. VAT revenue losses in developing countries such as Nigeria are largely driven by non-compliance and tend to be more pronounced than in developed countries, mainly due to the presence of a large informal economy that is not adequately captured within the VAT net (Buettner & Tassi, 2023). VAT compliance in Nigeria is facing serious problems as compared to other non-oil taxes for instance income tax and corporate tax as well. The SMEs in particular, need an urgent consideration as only less than 10% of SMEs are complying with VAT laws in Nigeria (fowler, 2016). Thus, focusing on this sector is vital in addressing the overall VAT noncompliance concern in Nigeria.

The ability of Nigerian government to use VAT revenue to finance developmental projects has been challenged by low VAT revenue, according to the country's Minister of Finance Ahmed, (2019) "Our VAT revenue to GDP ratio stands at less than 1% (0.8%), which compares unfavourably to the ECOWAS average of 3.4%, this makes the minister to announce government plan of the possibility to increase VAT rate in the country from 5% to 7.5%. This revelation caused public outcry from tax experts, general public and politicians, who says that the low VAT revenue was caused by weak tax administration, which tolerate VAT evasion that create a huge VAT gap in the country. Mati (2018) observed that there was a lot of leakage in the country tax system; compliance in Nigeria is very low, about 20% to 25%; if you were to double compliance to 50% to 60%, you would double VAT collection. Additionally, prior literatures point several VAT compliance challenges, especially in developing countries centred on VAT-specific designed features and policies. These include parametric issues on registration, base, rates, exemptions, zero-rating, return filing, thresholds, and refunding (Finck, 2021).

Therefore; in examining the determinants of VAT increment compliance among SMEs in Bauchi, North-eastern Nigeria., the four element was examined namely, information technology, tax service quality, and staff motivation against VAT increment compliance. Therefore, this study intends to solve the issue of VAT increment compliance among SMEs in Bauchi coordinating office, Nigeria.



2. LITERATURE REVIEW AND THEORY

This section reviewed relevance and extant literature on the study area, this includes: conceptualization which comprises concept of VAT compliance, measurements of VAT compliance which includes information technology, staff motivation and tax service quality. The section also discusses empirical review, conceptual framework and theoretical framework.

2.1 Concept VAT Compliance

McNabb (2018) defines VAT compliance as the willingness of individuals and other VAT entities to act by the spirit as well as the letter of VAT law administration without the application of enforcement activity. Many factors have been attributed to influencing VAT compliance. They include economic, social and psychological factors (Ababayehu, 2020). Noncompliance can be categorized as either VAT evasion or VAT avoidance. VAT evasion is out rightly non-payment of VAT, while VAT avoidance is the use of VAT laws to reduce VAT payment. Both VAT evasion and VAT avoidance lead to a reduction in government revenue (Ababayehu, 2020). Knowledge of VAT is essential in VAT compliance, especially under the self-assessment system. Alsughayer (2021) asserted that knowledge would lead to higher VAT compliance.

2.2 Information Technology

Information Technology can be defined as the technology involving the development, maintenance and use of computer systems, software, and networks for the processing and distribution of data. It is concerned with the use of electronic technology in managing and processing information, especially in large organization. Information Technology (IT) deals with the use of electronic computers and computer software to convert, store, protect, process, transmit and retrieve information. IT simplifies VAT processes reduces paperwork, time, and human contact with tax officials' taxpayers are more likely to comply, even when VAT increases. With IT (like e-invoicing and digital receipts), tax authorities can track transactions in real time, reducing opportunities for underreporting or evasion (Matiku, Mayala, Lamu & Amos, 2025). This strengthens compliance after VAT increments. Therefore, if IT systems are reliable and user-friendly, taxpayers feel the system is fair and transparent, making them more willing to comply. In contrast, if IT systems are unreliable (downtime, errors, poor support), taxpayers may resist compliance, especially when VAT rates increase (Matiku, *et al.*, 2025).

2.3 Tax Service Quality

Tax service quality refers to how effectively tax authorities (e.g., FIRS in Nigeria) provide services such as registration support, education, guidance, ICT platforms, dispute resolution, and responsiveness to taxpayers. It reflects efficiency, transparency, fairness, and professionalism in tax administration (Ogaluzor & Edori, 2023). Service quality is the quality of the service provide by the tax authorities to the taxpayer. Furthermore, administration can be characterized as a mysterious offer given by one gathering to another gathering in the trading of cash for pleasure. Quality is the totality of climaxes and attributes of an item or administrations that can fulfil client needs (Awaluddin & tamburaka, 2017). Service quality is defined as the differences between customer expectations and perceptions of services (Orlaila, *et al.* (2021).

2.4 Staff Motivation

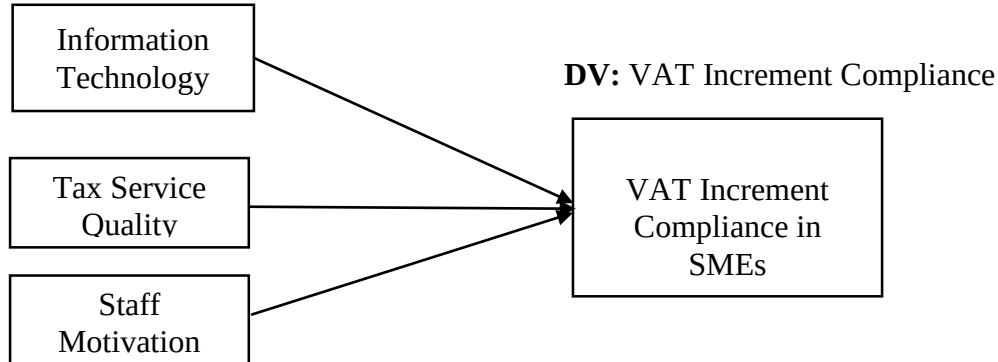
Staff motivation refers to the extent to which employees of the tax authority (For instance, FIRS officers) are committed, satisfied, and willing to perform their duties effectively. It may come from

training, incentives, recognition, fair pay, job security, and supportive work environment. Additionally, motivated staff are more likely to provide quality taxpayer services, accurate guidance, timely responses, and effective enforcement. This increases taxpayer willingness to comply, even when VAT rates rise (Kawaganise & Mayala, 2025).

In addition, motivated tax officers engage better in awareness campaigns and education. This reduces taxpayer confusion and resistance when VAT increments occur. Taxpayers are more likely to comply with VAT increments if they perceive that tax officers are professional, approachable, and not exploitative. Motivation influences this perception. Hence, demotivated staff may tolerate corruption, delays, or inefficiency leading to taxpayer frustration and possible evasion (Kawaganise & Mayala, 2025). Motivation is the desire or needs that motivates a person to work (Maslow, 1970), needs theory from Maslow. Needs can be defined as a gap or contradiction experienced between reality and the inner impulse. According to Abraham Maslow, human needs are: physiological needs are necessary to maintain one's survival, such as eating, drinking, air, and house. In organizations, these needs can be like money, entertainment, pension programme, comfortable working environment, safety and security needs are the security needs of the threat of feeling safe from the threat of accidents in doing the job. Additionally, according to Safian and Hamid (2017), motivation can increase the level of taxpayer's obedience, based on the benefits of motivation as emotional and psychological responses that can trigger taxpayer's awareness to fulfil their tax-related obligations.

Figure 2.1: Conceptual Model

IV: Determinants of Value Added Tax



Source: Authors's Conceptualization (2025)

2.6 Empirical Literature Review

This section reviews empirical literature relating to Value Added Tax (VAT)

2.6.1 Information Technology and VAT compliance

Olooh and Kilonzi (2024) examined the impact of taxpayer education and information technology on VAT compliance among Hotels in Kisumu County. The study used a sample of 153 hotels and the findings indicated a positive and significant relationship between information technology and VAT compliance in hotels in Kisumu Country. Wadesango and Chirebvu (2020) investigated the impact of information technology on VAT compliance in health sector of Malaysia. The study used a sample of 271 respondents within the health sector of Malaysia. The result revealed that



information technology has significant influence on VAT compliance among private health practitioners. The study recommended emphases should be giving on the understanding the requirement of the system and the information required for the taxpayers to either engage the third parties for assistance. Judith (2019) examined the effect of taxpayers' behavior on the issues of technology acceptance in Nigeria. The study used survey research design with the population of 100 business in Nigeria. The study used primary data and data obtained was analysed using regression analysis with the help of SPSS version 23. The findings reveal that a significant relationship between information technology and tax compliance. The study recommended that the process should be done in practice for the taxpayer to appreciate and embraces it rather than imposing it on them resulting to errors and unrealistic objectives.

2.6.2 Tax Service Quality and VAT compliance

Hadiwijaya (2021) assessed the impact of service quality on compliance behaviour of taxpayers in Malaysia. The study used survey research design method with a sample of 271 respondents within the health sector of Malaysia. The result revealed that service quality did not influence taxpayer's attitude on tax compliance among private health practitioners. Awaluddin and Tamburaka (2017) investigated the effect of tax service quality and compliance to pay motor vehicle tax. The used a sample of 98 respondents. The result indicated that service quality has significant effect on the compliance obedience of motorized vehicle tax. The study was conducted in Indonesia.

2.6.3 Staff Motivation and VAT Compliance

Suprihati (2024) investigated the effect of taxpayer's motivation, commitment and tax sanctions on the level of individual taxpayer's obedience at Small and Medium-sized Enterprises (SMEs) in Jakarta. The study used samples of 150 respondents from SMEs. The data collected by the survey method through a questionnaire. The study used multiple linear regression model. The results showed that motivation, commitment and tax sanction have a positive effect on taxpayer's obedience in tax. Yunianti, Putri, Sudibyo and Rafinda (2019) investigated the empirical evidence on the influence of motivation, moral obligation, access tax, quality of service, and tax penalties on taxpayer compliance in paying motor vehicle tax in Banyumas district. The population included all taxpayers' two-wheelers and three-wheelers motor vehicle registered in the office of UPPD Banyumas district until 2017 that as many as 501.400 vehicles. The study used samples used of 100 respondents. The results showed that motivation, moral obligation, quality of service, and tax penalties have a positive effect on taxpayer compliance in paying motor vehicle tax. Furthermore, the variable of access taxes is positive effect but statistically not significant on taxpayer compliance in paying motor vehicle tax.

2.7 Economic Compliance Theory

The theory was first unearthed from Becker's work in the late 1960s. Becker was analysing the tax evasion behaviour by utilising an economic framework. Becker proposed that deterrents like penalties, sanctions and the likelihood of detection were within the control of the society in limiting tax evasion via enforcement. However, the proposition faced a limitation that at a certain point, tax enforcement became uneconomic and caused a social loss (Onwuchekwa & Aruwa, 2019).

In the 1970s, Onwuchekwa and Aruwa (2019) incorporated thresholds to this theory and produced a formula that identified the reputation of taxpayers as a variable simplistically. From their derivations, they depicted that escalating the level of penalty could not essentially accomplish a



greater deterrence impact if the tax offender knows that the probability of being detected is certainly high (Onwuchekwa & Aruwa, 2019). Also, Srinivasan (1973) argues that when the incomes of taxpayers increased, the extent of evasion could also increase if the prospect of detection was independent of the income.

The theory of economic compliance largely focuses on tax deterrence (Omodero & Dandago, 2019). Deterrence is generally achieved through persuasive and punitive approaches. The deterrence could take the form of the imposition of robust penalties, increased the tax rate and escalated the possibility of detection (Mukherjee & Badola, 2022). The theory proposes that individual taxpayers, who are risk-neutral and perfectly moral, will opt to evade tax at any time when the expected economic gain outweighs the cost of non-compliance.

Further studies have since then attempted to address the deficiencies of the pure economic compliance theory and have thus made several modifications. For instance, the study by Prihandono and Dewi (2020) revealed that the taxpayers' perceptions of the actual penalty level are greater than the authentic penalties. Thus, skewing research findings and thereby indicating that the true rates could not matter in contrast to the perceived penalisation rates (Chithambo et al., 2022). The economic theory of compliance is therefore relevant in determining the extent of tax compliance in country like Nigeria, especially by refining the economic theory to incorporate the perception and the attitude of the taxpayers. Through the above modification, this study could achieve a firm conclusion that can be utilised in further understanding the economic compliance theory and its correlation with tax compliance. Additionally, economic compliance theory explores how economic incentives and disincentives influence individuals' and businesses' adherence to laws and regulations. It often focuses on how economic factors, such as fines, penalties, and the perceived benefits of compliance versus non-compliance, affect behaviour.

Furthermore, value added tax (VAT) compliance is a specific area within this theory, dealing with how businesses and individuals adhere to VAT regulations. The relationship between economic compliance theory and VAT compliance involves understanding how economic incentives (like lower penalties for timely payment or higher enforcement measures) and the perceived benefits of compliance (such as avoiding audits or penalties) impact VAT adherence. In essence, economic compliance theory helps to explain the factors influencing VAT compliance by considering how economic pressures and incentives drive the behaviour of taxpayers and businesses.

3. METHODOLOGY

The study employed quantitative research design through cross sectional research method from the respondents who are staff of Federal Inland Revenue Service in North-east zone (Bauchi, Gombe, Yobe, Borno, Adamawa and Taraba state). This is because data were collected at a point time.

The population of the study is staff of the core tax service units of all the Federal Inland Revenue Service in the North-east zone, Nigeria. As at February, 2024, there were 6 branches of FIRS in north-eastern Nigeria with a total staff of 293 in their core tax service units and the study used census (the entire population was study). A structured questionnaire, on a 5-point Likert scale ranging from Strongly Disagreed (1 point) to Strongly Agreed (5 points), was used in collecting data for the study. The questionnaire contained test items that addresses all the variables and passed



the reliability and validity test. This was administered to staff of core tax service units of FIRS and data collected were analysed base on descriptive and inferential statistics.

Besides, this study was set out to assess the determinants for improving value added tax increment compliance in SMEs within north-east zone of Nigeria and has the following constructs: Dependent variable (VAT Increment Compliance) and independent variables (Determinants for Improving Value Added Tax measured by information technology; tax service quality and staff motivation). This study model equation relating to the study variables as stated as follows:

$$\text{VATIC} = f \{ \text{IT}, \text{TSQ}, \text{SM} \} \dots\dots\dots 1$$

$$\text{Therefore, VATIC} = \alpha + \beta_1 \text{IT} + \beta_2 \text{TSQ} + \beta_3 \text{SM} + \epsilon \dots\dots\dots 2$$

Where: VATIC = VAT Increment Compliance, α = Constant coefficient, IT= information technology, β_1 = Coefficient of IT, TSQ= Tax Service quality, B_2 = Coefficient of TSQ, SM= Staff Motivation, B_3 = Coefficient of SM, ϵ = error terms.

4. RESULTS AND DISCUSSIONS

This part presents and analyses the data collected to test hypotheses and draw conclusions.

4.1 Response Rate and Demographic Information

Two hundred and fifty (250) questionnaires were retrieved and usable out of the two hundred and ninety-three (293) distributed representing 85.3 per cent retrieval rate. As depicted by table 2, the demographic information of the respondents revealed the analysis of the responses received from the 250 respondents selected for the study. The information received from the respondents showed that 2% of the respondents have spent between 1-4 years in service, 24.8% of the respondents have spent 5-8 years, while 24.8 per cent and 48.4 per cent of the respondents have spent between 9-11 years and 11 years and above respectively in the Federal Inland Revenue Service. The result also revealed that the respondents with highest level of education are those under the category of degree/HND. The levels of educational qualifications of the respondents are adequately okay, with about 42.4% of the respondents having either HND or degree qualifications, 38.4% of the respondents have Master's degree and 3.2 per cent possessed doctorate degrees as their highest qualification, while 16% of the respondents have senior school leaving certificate and National Diploma.

Table 1: Rate of the Responses by the Respondents

	Total Number	Percentage%
Questionnaire Sent Online	293	100
Questionnaire Filled Online	250	85.3
Questionnaire Not Filled	43	14.7

Source: Field Survey, 2024



Table 2: Demographic Profile of Respondents

Variable		Frequency	Percentage
Gender	Male	158	63.2
	Female	92	36.8
	Total	250	100.0
Age Group	18-25	10	4.0
	26-34 years	71	28.4
	35-44 years	100	40.0
	Above 45 years	69	27.0
	Total	250	100.0
Working Experience	1-4 years	5	2.0
	6-8 years	62	24.8
	9-11 years	62	24.8
	Above 11 years	121	48.4
	Total	250	100.0
Qualification	Diploma/ NCE	40	16.0
	B.SC/HND	106	42.4
	MSc	96	38.4
	PhD	8	3.2
	Total	250	100.0

Source: Authors' Computation (2024) using SPSS Version 26

4.2 Descriptive Statistics

Twenty-two (22) test items were used to solicit responses on both the dependent and the independent variable measures. The responses from the administered questionnaires are summarized in Table 1.

Table 3: Descriptive Statistics of the Constructs (Mean & Standard Deviation)

Constructs	Sample	Min	Max	Mean	Std. Dev
VATIC	250	1	5	3.5935	0.9501
IT	250	1	5	4.2489	0.8059
TSQ	250	1	5	4.4377	0.7045
SM	250	1	5	4.5538	0.5505

Source: Authors' Computation (2024) using SPSS Version 26

As it was earlier mention, all the study's constructs were measured on a 5-point Likert scale. Thus, the mean and standard deviation were equally computed on the basis of the same 5-point Likert-type scale. Precisely, as it was presented in Table 3 above the mean and the standard deviation of value added tax increment compliance is 3.5935 and 1.190, information technology is 4.2489 and 0.8059, tax service quality is 4.4377 and 0.7045, staff motivation is 4.5538 and 0.5505, and taxpayer education is 4.5108 and 0.5554 respectively. Therefore, the descriptive statistics implies that, the data points are close to the mean, because the standard deviations of all the independent variables are not up to 1. This implies that while there is strong and consistent agreement that IT, service quality, staff motivation, and taxpayer education are high, but VAT compliance is still moderate and more dispersed, meaning taxpayers' actual compliance behaviours are not as uniform as their perceptions of the support factors.

4.3 Assessment of PLS-SEM Path Model Results

The results from the SMARTPLS analysis provide insight into the reliability and validity of the constructs used in the model. Factor loadings indicate the strength of the relationship between individual items and their respective constructs, with a threshold of 0.70 being the commonly accepted benchmark for strong indicator reliability. The Value Added Tax construct shows satisfactory factor loadings, ranging from 0.705 to 0.854, confirming that the indicators are appropriate measures of the latent variable shown in Figure 1.

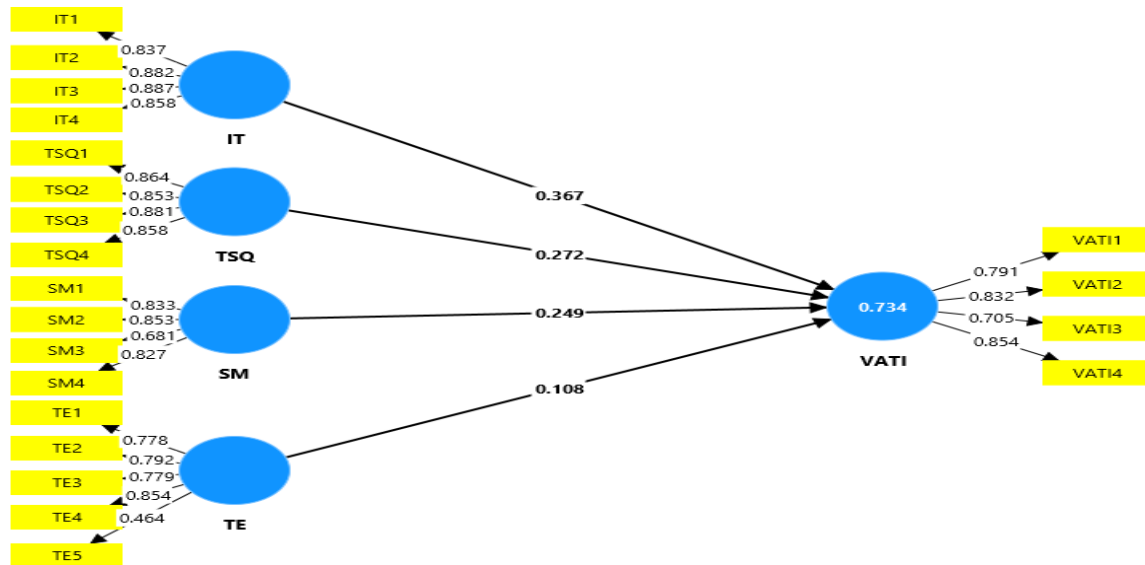


Figure 1 Measurement Model of the Latent Constructs

As depicted in Figure 1 The Information Technology construct has loadings ranging from 0.837 to 0.888, which are all above the recommended threshold, suggesting that each indicator effectively represents the construct. Similarly, Tax Service Quality exhibits strong indicator reliability, with loadings ranging from 0.853 to 0.881, reinforcing that the selected items are reliable measures of the construct. Staff Motivation has three indicators (SM1, SM2, and SM4) with strong loadings above 0.70, while SM3 has a slightly lower loading of 0.681, indicating a weaker but still acceptable representation of the construct. Taxpayer Education demonstrates moderate indicator reliability, with TE1 to TE4 having acceptable loadings between 0.778 and 0.854, whereas TE5 has a significantly low loading of 0.464, suggesting that it does not strongly contribute to the construct and may need to be removed to enhance reliability.

4.4 Discriminant Validity

The Heterotrait-Monotrait Ratio (HTMT) is a critical measure used in Partial Least Squares Structural Equation Modeling (PLS-SEM) to assess discriminant validity that is, the degree to which constructs in a model are distinct from one another. Discriminant validity ensures that each construct captures a unique concept rather than overlapping excessively with other constructs. The HTMT values are obtained by comparing the correlations between indicators measuring different constructs (heterotrait-heteromethod correlations) to the correlations within the same construct (monotrait-heteromethod correlations).



A commonly accepted threshold for HTMT is 0.85 (strict criterion) or 0.90 (more relaxed criterion). Values above 0.85 or 0.90 indicate potential issues with discriminant validity, suggesting that two constructs may not be sufficiently distinct. In the provided HTMT matrix, we analyse the relationships among five constructs: Information Technology (IT), Staff Motivation (SM), Taxpayer Education (TE), Tax Service Quality (TSQ), and Value Added Tax Increment Compliance (VATIC).

Table 4: Latent Variable Correlations

Variables	IT	SM	TE	TSQ	VATI
IT	1				
SM	0.656	1			
TSQ	0.646	0.859	0.899	1	
VATI	0.848	0.652	0.888	0.877	1

Source: Author Computation (2024) Using SPSS Version 26

The HTMT values for Information Technology (IT) with other constructs indicate that IT is relatively distinct. The HTMT ratio between IT and SM (0.656) suggests a moderate correlation, which is within the acceptable range, confirming that these constructs are distinguishable. Similarly, the relationship between IT and TE (0.636) further reinforces the discriminant validity of IT, as it remains below the 0.85 threshold. IT's relationship with TSQ (0.646) also falls within an acceptable range, indicating that IT and Tax Service Quality measure separate constructs. However, the HTMT ratio between IT and VATI (0.848) is relatively high and reaches the stricter threshold of 0.85, indicating a potential concern regarding the distinctiveness between Information Technology and Value Added Tax Implementation. While this does not necessarily imply redundancy, it suggests that these two constructs may share substantial conceptual overlap and should be carefully examined in further analysis.

Staff Motivation (SM) also demonstrates mixed results regarding discriminant validity. The HTMT value between SM and TE (0.646) is well within acceptable limits, affirming that these constructs are distinct. However, the HTMT ratio between SM and TSQ (0.859) exceeds the stricter 0.85 threshold and approaches the relaxed 0.90 cut off, signalling potential issues in distinguishing these two constructs. This suggests that Staff Motivation and Tax Service Quality might share common conceptual elements, potentially requiring theoretical justification for their differentiation. The relationship between SM and VATI (0.652) is within an acceptable range, confirming that Staff Motivation and VATIC are sufficiently distinct.

Tax Service Quality (TSQ) also presents potential discriminant validity concerns in relation to VATIC. The HTMT ratio between TSQ and VATIC (0.877) exceeds the strict 0.85 threshold, indicating possible overlap between the two constructs. This suggests that Tax Service Quality and Value Added Tax Increment compliance may not be conceptually distinct enough, potentially due to shared attributes such as the quality of tax-related services influencing tax compliance and implementation outcomes. Given the high correlation, researchers should consider further theoretical justification, potential model specifications, or employing the HTMT inference criterion (bootstrapped confidence intervals) to verify whether these constructs are truly distinct.

**Table 5: Structural Model Evaluation – Direct Effect**

R/Ship	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
IT -> VATI	0.367	0.363	0.048	7.656	0.000
SM -> VATI	0.249	0.253	0.091	2.742	0.006
TSQ -> VATI	0.272	0.271	0.064	4.268	0.000

Source: Author Computation (2024) Using SPSS Version 26

The results of the hypothesis testing on Table 5 reveal critical insights into the determinants of Value Added Tax Increment Compliance (VATIC). The relationship between Information Technology (IT) and VATIC is both positive and statistically significant, with a path coefficient of 0.367, a high T-statistic of 7.656, and a p-value of 0.000. This implies that IT plays a fundamental role in ensuring the smooth and efficient Increment Compliance among SMEs. The strong impact suggests that digital tax systems, electronic invoicing, and automated tax filing mechanisms enhance VAT compliance by simplifying tax processes, reducing human errors, and minimizing tax evasion. Given this significance, tax authorities must prioritize IT infrastructure investments, enhance cyber security, and provide adequate training for both taxpayers and tax officials to maximize the benefits of digital tax administration.

Staff Motivation (SM) also exhibits a positive and significant relationship with VATIC, with a path coefficient of 0.249, a T-statistic of 2.742, and a p-value of 0.006. This indicates that motivated tax officers contribute significantly to effective VAT enforcement and compliance. Employees who are well-compensated, adequately trained, and supported with the necessary resources are more likely to perform their duties effectively, ensuring that VAT policies are properly implemented. The implication is that governments and tax agencies must introduce performance-based incentives, professional development programs, and supportive work environments to enhance tax officers' commitment and efficiency. Investing in human capital within tax institutions can significantly improve tax compliance, reduce corruption, and promote a culture of professionalism in tax administration.

Tax Service Quality (TSQ) demonstrates a significant positive relationship with VATIC, with a path coefficient of 0.272, a T-statistic of 4.268, and a p-value of 0.000. This underscores the crucial role of efficient and transparent tax services in enhancing VAT implementation. When taxpayers receive high-quality, responsive, and fair services, they are more likely to comply with VAT regulations. Poor service delivery, bureaucratic inefficiencies, and corruption in tax administration can discourage compliance and foster tax evasion. The implication is that tax authorities must modernize and streamline service delivery by leveraging technology, reducing administrative delays, and ensuring that tax officers provide professional and taxpayer-friendly services. Establishing customer service units, strengthening grievance redress mechanisms, and incorporating automation in service delivery can significantly improve tax service quality and, in turn, VAT implementation.

5. CONCLUSION AND RECOMMENDATIONS

The study assessed the determinants for improving value added tax increment compliance among SMEs within North-East Zone of Nigeria. The determinants for improving value added tax were



measured in terms of information technology, tax service quality and staff motivation against VAT increment compliance. The study concludes that information technology, tax service quality and staff motivation have positive and significance impact on value added tax increment compliance in SMEs. In line with the findings, the study recommended that the management FIRS should establish a strong control measure to monitor information technology, tax service quality, staff motivation, and tax education in order to enhance VAT increment compliance.

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