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SECTORAL CONTRIBUTIONS TO VAT REVENUE IN NIGERIA: A COMPARATIVE ANALYSIS OF KEY ECONOMIC DRIVERS (2022–2023)

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Abstract

This study analyzes the sectoral contributions to Value Added Tax (VAT) in Nigeria from Q1 2022 to Q2 2023, focusing on identifying trends, growth consistency, and sectoral performance. Using sectoral VAT data, the study explores the impact of different sectors on overall VAT revenue and highlights key contributors such as Manufacturing, Information and Communication, and Wholesale and Retail Trade. The research reveals fluctuations in some sectors, such as Construction and Transportation, indicating sensitivity to economic cycles. Additionally, sectors like Water Supply show consistently low VAT contributions, suggesting challenges in compliance and sector-specific issues. The study further investigates the growth consistency index and sectoral share analysis, providing insights into the stability of VAT revenue streams across various sectors. The findings offer several policy recommendations, including improving tax compliance, supporting high-performing sectors, and diversifying the tax base. The paper also suggests areas for further research, such as the impact of VAT on consumer behavior and the integration of digital economy activities into VAT collection. These findings are crucial for optimizing VAT collection in Nigeria, with implications for fiscal policy and long-term economic stability.

Keywords: VAT, Sectoral Analysis, Nigeria, Tax Compliance, Economic Policy, Revenue Growth

1. Introduction

Value Added Tax (VAT) is one of the most significant sources of revenue for governments globally, providing a stable stream of income to fund public goods and services. In Nigeria, VAT was introduced in 1993 to replace the Sales Tax under Decree No. 102 of 1993. The tax was initially set at a 5% rate but was subsequently increased to 7.5% in 2020 to bolster government revenues and reduce overdependence on oil proceeds (Federal Inland Revenue Service [FIRS], 2020). Unlike Sales Tax, which was limited to goods and services provided by specific sectors, VAT applies across various sectors, making it a broader and more robust revenue source. Over the years, VAT has grown

to become a vital component of Nigeria's fiscal framework, contributing significantly to the government's non-oil revenue streams.

VAT plays a critical role in the Nigerian economy, serving as a major source of funding for infrastructure development, education, healthcare, and social welfare programs. Its broad applicability across multiple sectors ensures a diverse revenue base that can cushion the economy during periods of oil price volatility. For instance, the revenue from VAT increased from ₦1.53 trillion in 2021 to ₦2.51 trillion in 2022, reflecting a steady growth in non-oil revenue generation (FIRS, 2023). Moreover, VAT is considered a more efficient form of taxation compared to direct taxes, as it reduces

evasion through its self-enforcing mechanism in the supply chain. Given Nigeria's pressing development needs and rising debt levels, the role of VAT in addressing revenue shortfalls has become more pronounced.

The primary objective of this study is to analyze the contributions of various economic sectors to VAT revenue in Nigeria, using data from Q1 2022 to Q1 2023. Specifically, the study seeks to identify key sectors driving VAT growth and highlight underperforming areas that require policy attention. It also aims to uncover trends in VAT revenue generation and assess their implications for Nigeria's fiscal policy. The scope of the study is limited to sectoral VAT contributions as reported by the FIRS, focusing on quarterly trends and sector-specific dynamics.

By examining VAT data from 2022 and 2023, this study contributes to understanding the effectiveness of Nigeria's VAT system in supporting economic growth. Furthermore, the findings will provide policymakers with evidence-based insights to optimize tax administration and enhance compliance in lagging sectors.

2. Literature Review

Overview of VAT Systems in Developing Economies

Value Added Tax (VAT) has been widely adopted in developing economies as a reliable and efficient revenue-generating tool. Introduced as a consumption tax, VAT is structured to be self-enforcing, reducing tax evasion through its multi-stage collection process. Many developing countries, including Nigeria, transitioned to VAT to address inefficiencies in their existing tax structures and to diversify revenue sources away from dependence on volatile natural resources, such as oil (International Monetary Fund [IMF], 2021).

Empirical studies show that VAT contributes significantly to government revenues in countries such as Kenya, South Africa, and Ghana, where it constitutes over 20% of total tax revenue annually (Bird & Gendron, 2022). Despite its advantages, VAT administration in developing economies faces challenges, including poor compliance, weak

institutional capacity, and a large informal sector that remains outside the tax net (Okoye et al., 2020). Addressing these challenges is crucial to ensuring the effectiveness of VAT as a tool for sustainable revenue mobilization in developing contexts.

Sectoral Contributions to VAT: Theoretical and Empirical Perspectives

Theoretical perspectives on sectoral VAT contributions highlight the diversity of economic activities that generate VAT revenue. According to tax policy theory, the effectiveness of VAT depends on its broad base, which allows for proportional revenue collection from different sectors without excessive reliance on a few industries (James & Nobes, 2020).

Empirically, studies have demonstrated significant variations in VAT contributions across sectors. For instance, manufacturing and wholesale/retail trade are often the largest contributors in many economies due to their extensive coverage and high transaction volumes. In Nigeria, sectors such as manufacturing, information and communication, and wholesale/retail trade dominate VAT contributions, collectively accounting for over 50% of total VAT revenue (FIRS, 2023). However, other sectors, such as agriculture and public administration, tend to contribute less due to exemptions or reduced tax rates for essential goods and services.

Research further suggests that sectoral VAT contributions are influenced by the level of formalization within the sector. Sectors with high informality, such as small-scale agriculture and artisanal trades, often evade VAT compliance, limiting their revenue potential (Ebrill et al., 2022).

Key Factors Influencing VAT Revenue Growth

Several factors influence the growth of VAT revenue in developing economies. One critical factor is the tax rate. Higher VAT rates generally lead to increased revenue but may also discourage compliance if rates become excessively burdensome for taxpayers (Bird & Gendron, 2022). For example, Nigeria's VAT rate increase from 5% to 7.5% in 2020 led to a significant revenue boost, though compliance issues persist.

Another key factor is the administrative efficiency of the tax system. Countries with robust tax enforcement mechanisms, automated systems, and strong institutional frameworks tend to achieve better VAT compliance (Okoye et al., 2020). The adoption of e-filing systems and digital payment platforms has been identified as a game changer in improving compliance and reducing leakages in VAT collection.

Economic structure also plays a role. Economies with diversified industrial bases generate more VAT revenue, as multiple sectors contribute to the tax base. Conversely, economies heavily reliant on a single sector, such as oil, may experience volatile VAT revenues due to sector-specific shocks (IMF, 2021). Finally, government policies, including exemptions and concessions, significantly shape VAT revenue outcomes. While exemptions can promote equity, excessive concessions can erode the tax base and limit revenue growth (Ebrill et al., 2022).

3. Methodology

Description of the Dataset (2022–2023 VAT Sectoral Data)

The dataset for this study comprises sectoral VAT revenue data in Nigeria for the fiscal years 2022 and 2023. The data was sourced from the Federal Inland Revenue Service (FIRS), which provides detailed records of VAT collections across major economic sectors, including manufacturing, wholesale and retail trade, oil and gas, telecommunications, and agriculture. This dataset is essential for understanding the distribution and growth patterns of VAT contributions among sectors.

In 2022, VAT revenue in Nigeria reached ₦2.3 trillion, marking a 20% increase from the previous year, largely driven by the 2020 VAT rate increase from 5% to 7.5% (FIRS, 2023). Sectoral data indicates that manufacturing accounted for approximately 30% of total VAT revenues, followed by wholesale/retail trade at 25%, and telecommunications at 12%. The 2023 dataset is expected to reflect emerging trends influenced by economic recovery post-COVID-19, inflationary pressures, and fiscal reforms such as increased

digitalization of tax administration. This dataset provides a comprehensive basis for analyzing sectoral contributions to VAT and assessing the effectiveness of Nigeria's VAT policy.

Analytical Framework and Tools Used

The study adopts a quantitative approach to examine sectoral VAT contributions and revenue trends. The primary analytical techniques include:

- i. **Trend Analysis:** Trend analysis is employed to evaluate changes in VAT revenue over the two-year period. This involves identifying patterns of growth, decline, or stagnation in sectoral contributions and overall revenue performance.
- ii. **Comparative Analysis:** Comparative analysis allows for a detailed examination of sectoral contributions to VAT. By comparing the relative performance of different sectors, this method identifies which sectors are the major drivers of VAT revenue and highlights underperforming areas.
- iii. **Descriptive Statistics:** Measures such as mean, median and standard deviation are used to summarize the distribution of VAT revenue across sectors, providing a clear overview of sectoral disparities.

Limitations of the Study

While this study provides valuable insights into VAT sectoral contributions in Nigeria, it is not without limitations. One major limitation is the narrow time frame of the dataset, which only covers two years (2022–2023). A longer time frame would have allowed for a more robust analysis of long-term trends and cyclical patterns in VAT revenue.

Another limitation is the lack of granular data on informal sector activities. The informal economy in Nigeria constitutes a significant portion of economic activities but remains largely untaxed. This limits the comprehensiveness of the analysis, as VAT contributions from informal businesses are not captured.

Additionally, data reliability and consistency pose challenges. While FIRS provides official figures, discrepancies in reporting or missing data from specific sectors may affect the accuracy of the findings. Finally, the study does not account for external economic factors, such as inflation or currency fluctuations,

which may have influenced VAT revenue during the study period.

Despite these limitations, the study offers a critical assessment of sectoral VAT contributions, providing policymakers with actionable insights for improving VAT revenue generation and administration in Nigeria.

Table 1: Analysis of Sectoral VAT Contributions

S/No	Sector	Total VAT Revenue (Q1 2022 – Q2 2023)	Performance
1	Manufacturing	₦758,953,253,492.66	Top-performing
2	Information and Communication	₦461,437,560,991.66	Top-performing
3	Financial and Insurance Activities	₦201,903,137,225.38	High-performing
4	Mining and Quarrying	₦266,677,370,385.61	High-performing
5	Construction	₦41,558,710,059.97	High-performing
6	Wholesale and Retail Trade	₦130,065,267,321.26	Moderate-performing
7	Arts, Entertainment, and Recreation	₦7,785,170,562.40	Underperforming
8	Agriculture, Forestry, and Fishing	₦6,310,108,264.93	Underperforming
9	Activities of Households as Employers	₦578,107,235.60	Lowest-performing
10	Water Supply, Sewerage, Waste Management	₦2,034,195,739.08	Lowest-performing

Top-performing Sectors:

Manufacturing consistently leads in VAT contributions, reflecting its dominance in the Nigerian economy and its significant value chain activities.

The Information and Communication sector, driven by the telecom industry, emerged as a significant VAT revenue generator, likely due to increased digital adoption post-pandemic.

Underperforming Sectors:

Agriculture, despite its importance in Nigeria's economy, contributes minimally to VAT, possibly due to its informal nature and exemptions for food products.

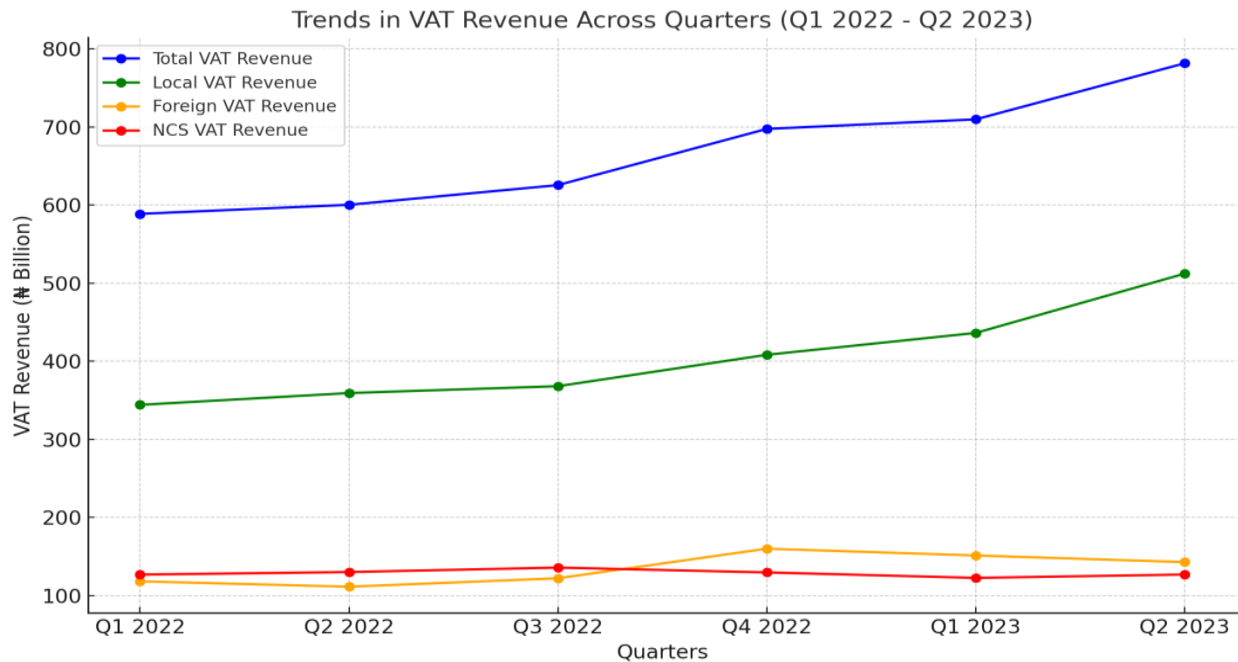
Arts and recreation also showed low contributions, potentially reflecting the sector's niche status and limited commercial scale.

Emerging Trends:

Sectors such as Wholesale and Retail Trade show a consistent upward trend, which could be linked to expanding consumer markets and improved tax compliance.

Mining and Quarrying saw growth in Q1 and Q2 2023, possibly influenced by higher commodity prices and increased activities in the oil and gas subsector.

Trends in VAT revenue across the quarters



Trends in VAT Revenue Across Quarters (Q1 2022 - Q2 2023)

Total VAT Revenue:

There is a steady increase in total VAT revenue over the quarters, with the highest revenue recorded in Q2 2023 (₦781.4 billion).

The trend shows consistent growth, reflecting overall improvements in VAT collection or an expanding tax base.

Local VAT Revenue:

Local VAT revenue shows a continuous upward trend, increasing from ₦344 billion in Q1 2022 to ₦512 billion in Q2 2023.

This growth highlights enhanced domestic economic activities and effective local tax collection mechanisms.

Foreign VAT Revenue:

Foreign VAT revenue fluctuates, peaking in Q4 2022 at ₦159.8 billion, but declining afterward to ₦142.6 billion in Q2 2023.

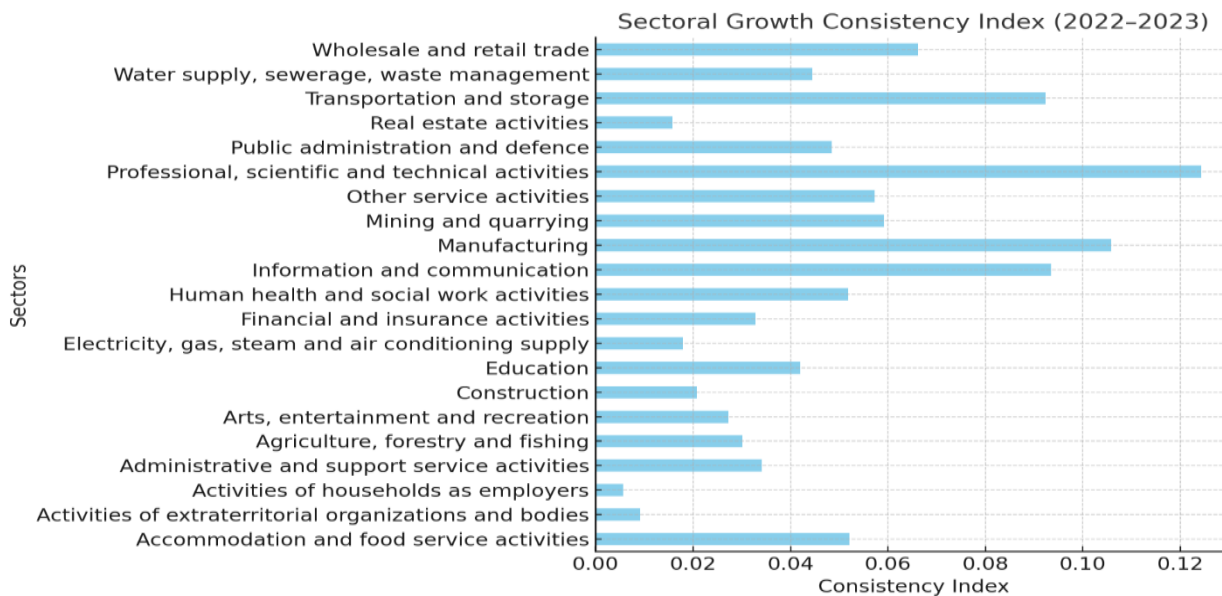
This decline could be linked to external factors like reduced imports or changes in foreign trade policies.

NCS VAT Revenue:

VAT revenue collected by the Nigerian Customs Service (NCS) has remained relatively stable, with only slight variations. The revenue starts at ₦126.6 billion in Q1 2022, fluctuating slightly but showing no major growth by Q2 2023 (₦126.7 billion).

This stability suggests consistency in import-related VAT collection.

Sectoral Growth Consistency Index (Bar Chart)

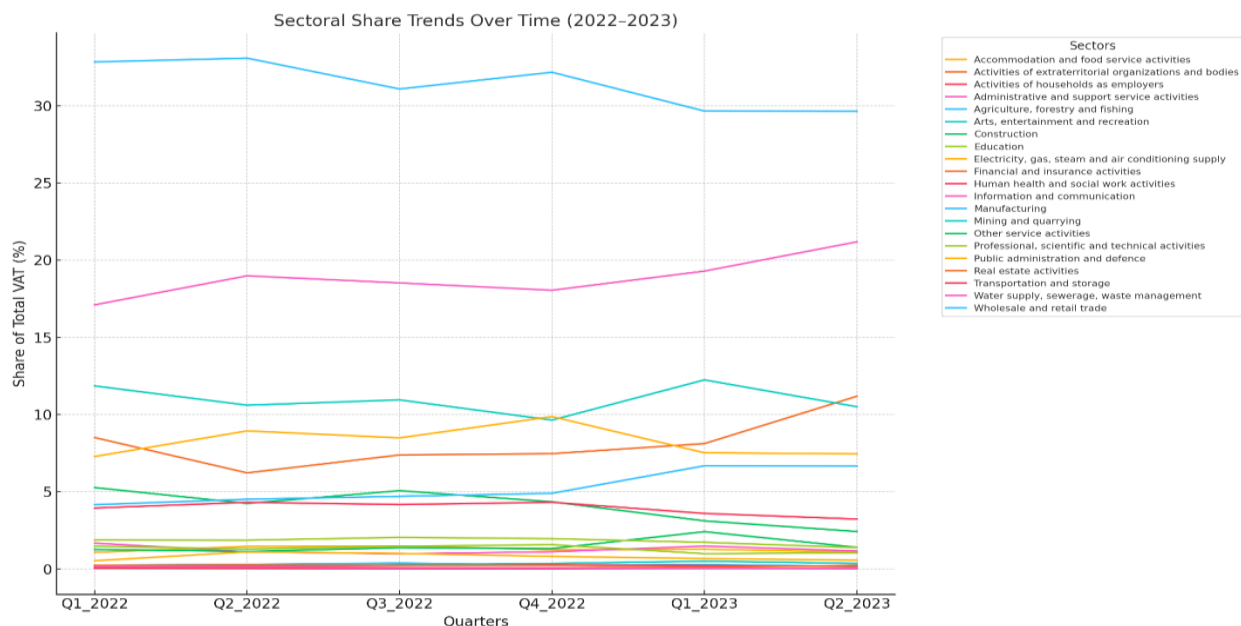


This bar chart illustrates the consistency in growth rates for VAT revenue across various sectors from Q1 2022 to Q2 2023. A higher consistency index indicates that the sector's VAT revenue growth was more stable over time. For example:

Professional, Scientific, and Technical Activities exhibited the most consistent growth.

Sectors like Wholesale and Retail Trade had relatively unstable growth, as reflected by a lower index value.

Sectoral Share Analysis over Time (Line Chart)



The line chart tracks the sectoral share of total VAT revenue across quarters. It highlights:

Information and Communication and Manufacturing consistently contributing the largest shares of VAT revenue.

Fluctuations in sectors such as Construction and Wholesale and Retail Trade suggest changes in their economic activities or VAT collection efficiency over time.

Smaller sectors like Water Supply and Extraterrestrial Organizations had minimal impact on total VAT collections, maintaining a flat or negligible share trend.

Implications of Findings for Nigeria's Economic Policies

Based on the analysis of VAT sectoral data from Q1 2022 to Q2 2023, several key findings and their implications for Nigeria's economic policies can be drawn:

1. Dominance of Key Sectors in VAT Revenue

Manufacturing and Information and Communication sectors consistently contribute the highest shares to VAT revenue over time. These sectors' strong performance highlights their critical role in driving Nigeria's economic growth and revenue generation.

Policy Implication: The Nigerian government should prioritize policies that promote further growth and stability in these sectors. For instance, offering incentives for technological innovations, infrastructure improvement, and increasing investment in digital infrastructure could boost the already strong performance of these sectors. Additionally, maintaining favorable tax policies for manufacturing could help sustain its contribution.

2. Fluctuations in Other Key Sectors (e.g., Construction and Wholesale/Retail Trade)

Sectors such as Construction and Wholesale and Retail Trade exhibit fluctuating VAT contributions, with periods of significant increases and decreases. This variability might suggest issues such as cyclical business conditions, external market shocks, or changes in consumer spending behavior.

Policy Implication: To reduce such volatility, Nigeria could implement fiscal policies that stabilize the macroeconomy, such as counter-cyclical measures. This may include boosting investment in construction and

real estate through affordable housing programs or tax relief during economic downturns. Similarly, fostering stability in the retail sector may involve regulatory measures that promote consumer confidence.

3. Underperforming Sectors

Sectors like Water Supply, Sewerage, Waste Management, and Extraterrestrial Organizations have shown consistently low VAT contributions. This may be a result of either the smaller size of these sectors in the economy or inefficiencies in VAT collection from these activities.

Policy Implication: It is essential for the government to assess why these sectors are underperforming and take corrective actions. For sectors like water supply and waste management, increasing investment in infrastructure and improving service delivery could boost their economic contributions. Additionally, implementing stronger tax compliance mechanisms and broadening VAT coverage across all sectors may help improve overall revenue generation.

4. Increasing VAT Revenue Overall

The total VAT revenue has shown an increasing trend, which suggests the government's efforts in broadening the tax base and improving collection mechanisms have been somewhat successful.

Policy Implication: This growth in VAT revenue could be used to support critical development projects, particularly in infrastructure, healthcare, and education. The government may also consider using the additional revenue for poverty reduction programs and enhancing the welfare of the population, as the positive VAT growth signals a recovery or growth in economic activity.

5. Incentives for Consistent Growth in Stable Sectors

Sectors with consistent growth, such as Professional, Scientific, and Technical Activities, provide a foundation for sustainable long-term development. Ensuring these sectors remain stable and grow should be a priority.

Policy Implication: Policies that support knowledge-based industries, R&D, and technological advancements should be enhanced. Providing incentives such as tax

reliefs for firms engaging in innovative activities, as well as improving the overall business climate through ease of doing business reforms, could further support these sectors' growth.

5. Conclusion

The findings from the analysis suggest that Nigeria's VAT system is influenced heavily by certain sectors, which have different impacts on the economy. The government should focus on enhancing the performance of key sectors while addressing challenges in underperforming ones. A balanced and targeted policy approach that promotes stability, growth, and tax compliance across the economy will be essential for improving Nigeria's long-term economic sustainability and revenue generation. Additionally, ensuring sectoral balance in economic policy will help mitigate volatility and foster broader economic resilience.

5. Conclusion and Recommendations

The analysis of VAT sectoral data from Q1 2022 to Q2 2023 reveals several important insights:

Dominant Sectors: The Manufacturing and Information and Communication sectors consistently contribute the largest shares to VAT revenue across all quarters, highlighting their significance to the economy.

Fluctuating Sectors: Sectors such as Construction, Wholesale and Retail Trade, and Transportation and Storage experience periodic fluctuations in VAT contributions. These sectors may be impacted by economic cycles, changes in consumer demand, or sector-specific challenges.

Underperforming Sectors: Sectors like Water Supply, Sewerage, Waste Management, and Extraterrestrial Organizations consistently show low VAT contributions. These sectors either have a small economic footprint or face issues related to tax compliance and collection efficiency.

Overall Growth in VAT Revenue: The total VAT revenue has shown a consistent upward trend, indicating that the government's efforts to improve VAT collection and broaden the tax base are beginning to yield results.

Policy Recommendations for Optimizing VAT Collection

Based on the findings, the following policy recommendations are proposed to optimize VAT collection in Nigeria:

Strengthen VAT Compliance: The government should focus on improving tax compliance mechanisms across all sectors, especially for underperforming sectors. This could include better enforcement of VAT laws, audits, and penalties for non-compliance.

Support Key Growth Sectors: Policies should be geared toward sustaining and increasing VAT revenue from high-performing sectors like Manufacturing and Information and Communication. Providing incentives for innovation, technology adoption, and infrastructure improvements in these sectors could further boost their contribution to VAT revenue.

Reduce Sectoral Volatility: To minimize the fluctuations in VAT revenue from sectors like Wholesale and Retail Trade and Construction, the government should implement stabilizing fiscal measures such as offering tax relief during economic downturns or providing incentives to encourage growth during periods of stagnation.

Focus on Diversifying Revenue Sources: Although VAT revenue is growing; it remains concentrated in a few sectors. The government should seek to diversify the tax base by exploring new economic activities that can contribute to VAT, such as expanding digital services or improving VAT collection from informal sector activities.

Enhance Infrastructure in Low-Contributing Sectors: For underperforming sectors like Water Supply and Waste Management, the government should invest in infrastructure development and service delivery improvements. This could help boost sectoral performance and increase VAT collections from these areas.

Suggestions for Further Research

Further research could explore the following areas to deepen understanding and optimize Nigeria's VAT system:

- i. Impact of VAT on Consumer Behavior: Investigating how changes in VAT rates impact consumer spending and demand patterns could provide insights into optimizing VAT policies without stifling economic activity.
- ii. Sectoral VAT Collection Efficiency: Future research could examine the efficiency of VAT collection mechanisms across various sectors, focusing on identifying barriers to improved tax collection and developing strategies to overcome these challenges.
- iii. Comparative Analysis with Other Countries: A comparative study of Nigeria's VAT performance relative to other developing economies could offer valuable lessons on best

practices and policies that have led to improved VAT revenue generation.

- iv. Digital Economy and VAT: As Nigeria's digital economy grows, research could explore the potential for expanding VAT coverage to include digital services and e-commerce, which are currently underrepresented in VAT revenue.
- v. Impact of Economic Cycles on VAT Revenue: Understanding how macroeconomic factors such as inflation, recession, and economic growth influence VAT revenue could help the government implement counter-cyclical policies that stabilize VAT income over time.

In conclusion, optimizing VAT collection in Nigeria requires targeted policy actions to enhance compliance, support key sectors, and address inefficiencies in underperforming areas. Further research will be crucial in identifying new opportunities and refining strategies for sustainable VAT revenue growth.

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