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Government Revenue and Economic Growth in South-South, Nigeria: An Evaluation

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Abstract: This study examined the impact of government in financing projects towards economic growth in selected states in South-South Nigeria. Related literature was reviewed. Four objectives, four research and hypotheses were stated and tested. The findings show that GDP and Internally Generated Revenue (IGR) have a very strong positive correlation (r = 0.967), suggesting that GDP rises significantly in tandem with IGR. This implies that internally mobilized resources play a significant role in the region's economic performance, highlighting the significance of effective local revenue generation. There is a significant positive correlation (r = 0.937) between GDP and Value Added Tax (VAT), indicating a close relationship between VAT collections and economic activity. This emphasizes how important consumption-based taxes are for boosting local GDP growth. The 13% Derivation Fund (DIV) and GDP have a moderately positive relationship (r = 0.464), indicating that oil-producing activities' revenues have a positive impact on economic output, albeit not as strongly as IGR and VAT. The study recommended among others that: Federal Inland Revenue Service (FIRS) and state governments should cooperate to modernize VAT administration, close loopholes, and raise tax compliance awareness. Optimizing VAT collection is essential because it plays a major role in growth. Create impartial oversight organizations to keep tabs on state-level expenditures of federal allotments and derivation funds.

Keywords: Economic Growth, Internally Generated Revenue, Statutory Allocation, Value Added Tax, 13% Derivative.

INTRODUCTION

Background to the Study

Nigeria, a country endowed with an abundance of natural resources, boasts a population of approximately 200 million people. Its vast wealth of resources includes significant reserves of oil, natural gas, coal, and an array of valuable minerals such as gold, tin, and others. With these immense resources, Nigeria is well-positioned to drive economic growth not only within Africa but also on the global stage, potentially becoming a major economic powerhouse.

The South-South zone of Nigeria, comprising Akwa-Ibom, Bayelsa, Delta, Edo, Cross rivers and Rivers states, possesses significant economic growth potentials. These potentials are driven by several key factors.

The South-South geopolitical zone of Nigeria is home to a diverse range of industrial clusters, including not limited to the Fishing industry at Eket. thriving fishing activities along the coastal locations and waterways in Akwa Ibom State. A major industrial project in Bayelsa State, poised to boost economic activity, Furniture and carpentry cluster, A prominent industry in Benin, Edo State, known for its woodworking expertise, Ughelli industrial hub, located in Delta State, this hub is a home of industries producing sheets glass, glass bottles, and other products, tourism cluster at the Obudu in Cross River State is a popular tourist destination, offering a beauty and recreational opportunities. and the Port Harcourt cluster; a significant industry in Rivers State, producing varieties of luxury items

that appeals to the sight and mind. These industrial and enterprise clusters dot the economic landscape of the South-South zone, presenting vast opportunities for:

Industrial growth: Driving economic expansion and development.

Wealth creation: Generating income and prosperity for individuals and communities.

Employment generation: Creating jobs and opportunities for the growing population.

Entrepreneurial development: Fostering innovation and entrepreneurship, and supporting the growth of small and medium-sized enterprises. They assume a critical part in the advancement of an economy (Babajide, 2021). Most of other zones used the instrumentality of natural resources and provision of social amenities to alleviate poverty as well as to develop their Gross Domestic Product (GDP) (Babajide 2011). The provision of basic amenities is to consider becoming the major driving tool and contributors of economic growth in the country's economy (Akinggunola, 2011).

Therefore, the effect of social amenities towards the growth and development of any economy cannot be over emphasized (Ibrahim and Mohd-Noor, 2014. Despite the important role played by social amenities in economic development and growth, it is however, discovered that the provision of infrastructure in South-South Nigeria are weak due to the problem of access to finance all over the world (Boateng and Boateng, 2014). Lack of finance is the major constraint yo government in order to provide basic needs and enhance economic growth. In the words of Krishnan, Mandy and Puri (2014) access to finance improves government ability to stimulate economic growth by providing basic amenities. This is in line with the work of (Fonseka, Yanga and Tian, 2013) were they opined that basic mechanism that leads to economic growth is financial capital. Similarly, Access to Finance (internal and external financing) significantly affects Economic Growth. Government Access to finance in South-South Nigeria ranges from statutory allocation, share from Value Added Tax, and internally generated revenue among others.

It is argued that, south-south geopolitical zone to improve the economic growth of the zone, she must improve its revenue. This is because the revenue base of the zone is very poor (Nwogbaga 2011). However, the south-south geopolitical government and the states are dependents on hand out from statutory allocation and share from VAT and 13% derivative for execution of it provision of social amenities for economic development programmes. The execution of contracts and other development projects in South-South Nigeria has defended on oil revenue. The decline in the receipt from oil in recent years has negatively affected the Nigerian government at all levels (Uzonwanne, 2015).

The relationship between government access to finance and economic growth has been a subject of extensive research and debate among economists and policymakers. Access to finance is crucial for governments to implement development projects, provide essential public services, and stimulate economic activity. In Nigeria, the South-South region has significant economic potential due to its rich natural resources, strategic location, and growing population. However, the region still faces challenges in achieving sustainable economic growth and development.

Agunsoye, Oloye and Sankey (2025) explored the potential of Nigeria's blue economy in promoting sustainable development and economic growth. They highlight the importance of sustainable development and wealth creation as key indices of economic growth, emphasizing the need for effective management of marine resources to achieve sustainable development in Nigeria.

Asimiyu and Kizito (2024) opined that economic development and sustainability of states in Nigeria depends on the ability of such states to generate revenue internally to supplement the revenue allocation from the federation allocation account. It means that the nature of the revenue accruing from other sources such revenue from Statutory Allocation and share from VAT determines the revenue conditions of various governments (Otu and Theophilus, 2013).

This will by extension determine the level of economic growth of south south states in Nigeria. A developed south-south will positively impact lives through the provision of physical

social amenities like roads, portal water, and electricity and social services such as health, education and security (Chukwu, 2011).

It has been argued that the dilapidated state of infrastructural facilities and the unavailability of social services hinder revenue generation in the South-South geopolitical zone. Ideally, revenue accruing to the South-South states should positively correlate with economic growth in the zone. Effective utilization of resources is expected to yield a reasonable degree of efficiency in economic growth. Against this backdrop, this study "Government Revenue and Economic growth in South-South, Nigeria: An Evaluation" becomes imperative to investigate this relationship and provide insights for policy and development.

STATEMENT OF THE PROBLEM

Despite the South-South region's significant economic potential, driven by its rich natural resources and growing population, the region continues to face challenges in achieving sustainable economic growth and development. The dilapidated state of infrastructural facilities and the unavailability of social services hinder revenue generation, and the region's heavy dependence on statutory allocations and oil revenue has made it vulnerable to fluctuations in global oil prices. Moreover, the states in the zone fail to adequately tap into these economic opportunities due to limited access to finance, particularly from internally generated revenue, which is starkly disproportionate to the zone's potential. This is consistent with the Central Bank of Nigeria's report, which indicates that the level of other revenue generation, especially internally generated revenue, has been underwhelming, ranging between 1 percent and 14 percent at various periods. The inability of governments in the South-South region to effectively harness their revenue-generating potential has significant implications for economic growth and development, underscoring the need for this study to investigate the relationship between government access to finance and economic growth in the region.

Objectives of the Study

To examine the effect of access to finance from statutory allocation on GDP in South-South Nigeria.

To assess the impact of access to finance from internally generated revenue on GDP in South-South Nigeria.

To investigate the effect of access to finance from Value Added Tax (VAT) on GDP in South-South Nigeria.

To ascertain the effect of access to finance from 13% derivatives on GDP in South-South Nigeria.

Research Questions

To what extent has statutory allocation impacted on economic growth (GDP) in South-South Nigeria?

How does internally generated revenue influence economic growth (GDP) in South-South Nigeria?

To what extent does VAT revenue contribute to economic growth (GDP) in South-South Nigeria?

How does the 13% derivative revenue impact economic growth (GDP) in South-South Nigeria?

Research Hypothesis

The following null hypotheses have been formulated to achieve the research objectives:

HO1: Statutory allocation has no significant impact on economic growth (GDP) in South-South Nigeria.

HO2: Internally generated revenue has no significant influence on economic growth (GDP) in South-South Nigeria.

HO3: VAT revenue has no significant contribution to economic growth (GDP) in South-South Nigeria.

HO4: 13% derivative revenue has no significant impact on economic growth (GDP) in South-South Nigeria.

Scope of the Study

This study examined the relationship between government access to finance and economic growth in the South-South region of Nigeria, focusing on three oil-rich states: Bayelsa, Delta, and Rivers. The study's time frame spans from 2005 to 2023.

The study investigates four key sources of government finance:

Internally Generated Revenue (IGR)
Statutory Allocation
Value Added Tax (VAT)
13% Derivative

These revenue sources are selected due to their significance in contributing to the region's economic growth.

Economic growth is proxied by Gross Domestic Product (GDP), a widely accepted measure of economic performance, supported by previous literature. The scope of this study is designed to provide in-depth insights into the relationship between government access to finance and economic growth in the South-South region, with a focus on oil-rich states.

Implications of the Study

The implication of the study is that failure to implement the recommendations may result in persistent poor economic growth, as measured by GDP, in the South-South region due to a limited revenue base. This underscores the need for policymakers to prioritize effective revenue mobilization and allocation strategies to unlock the region's economic potential.

LITERATURE REVIEW

Conceptual Review

The following concepts: statutory allocation, Value Added Tax Internally Generated Revenue, Economic Growth Real GDP and 13 percent derivative were reviewed in this section.

Statutory Allocation

Statutory allocation in Nigeria refers to the revenue distribution from the Federation Account, backed by law, specifically the 1999 Constitution of the Federal Republic of Nigeria. This allocation is made to the three tiers of government: federal, state, and local governments (Chukwu, 2011).

According to Agana, 2020, statutory allocation is defined as "the share of revenue in the federal account that is distributed to the state governments" sharing federally collected revenue among federal, state and local governments in Nigeria. Revenue from Statutory allocation will help government in meeting its obligations especially as it relates with the provision of public projects and improve GDP. In a study on fiscal sustainability of states in Nigeria, Adedokun, Temitope, and Ruth (2024, stated that, statutory allocation is considered a crucial source of revenue for state governments, alongside tax revenue.

Internally Generated Revenue

Internal Revenue Generation (IRG) involves various activities and processes that enable governments to generate revenue from their own internal sources. Adediran, Alade & Oshode (2013) as cited in. These researchers view internal revenue generation as a critical aspect of tax administration, focusing on compliance with tax laws and efficient revenue collection mechanisms. They emphasize the role of tax audit in ensuring compliance and generating revenue for governments. The importance of using internal revenue generation to improve economic growth cannot be over emphasized. Abiola and Ehigiamisoe (2014) posits that internal revenue generation does not develop hyper- inflation , it is free and does not carry any burden of repayment and interest like domestic borrowing and loan; through tax, internal revenue generation serves as the nerve centre of the social contract, it makes government more responsible and more responsible to the needs of the people, it serves as a tool for economic growth, it is an important consideration in the planning of savings and

investment and a powerful fiscal weapon for planning and redirect the economy. It serves as a tool for social engineering, it keeps the economy moving, because as governments get more revenue and commission, more projects, more money is put in circulation that leads to employment opportunities and more business opportunities are created which impacts positively on the society in general. Above all public projects are completed in due time (Salami, 2011). However, studies suggest that internal revenue generation refers to the process of collecting revenue from internal sources, such as taxes, fees, and charges, to fund government activities and provide public goods and services.

Value Added Tax (VAT)

Value Added Tax is an indirect tax in which a sum of money is levied at a particular stage in the sale of a product or service. This means VAT is a consumption tax, levied at each stage of the consumption process and borne by the final consumer of the product or service (Onwuchekwa and Aruwa, (2014) cited in Bekeboh, (2020). In Nigeria 15 percent charge is expected to be remitted on all invoiced goods and services not exempted from paying taxes, under the Value Added Tax Act as amended (Bekeboh, 2020).

Current issues in Value Added Tax (VAT) in Nigeria

The Nigerian Senate recently passed a bill proposing a 55% VAT distribution to states, down from the current 15%, while reducing the federal government's share to 10%. This move aims to increase revenue allocation to states. The Federal Government has exempted 63 items from VAT, including essential goods and services like food items, medical services, pharmaceuticals, and educational fees. Additionally, items like Compressed Natural Gas (CNG) and Liquefied Petroleum Gas (LPG) equipment, electric vehicles, and biogas equipment have been added to the VAT-exempt list to promote clean energy solutions (Onwuchekwa & Aruwa).

Economic Growth

It means the quantitative measures which consider the rise in the output produced on an economy of a particular period in its monetary value. The key parameters of economic growth in any economy are its gross domestic product (GDP) and gross national product which helps in measuring the actual size of an economy. For instance, the current GDP of the United States is approximately $30.51 trillion, ranking it as the world's largest economy whereas GDP of India is around $4.19 trillion, making it the fourth-largest economy globally. It shows how the production of goods and services has increased compared from last year in a quantitative manner. It has many parameters to measure and few of them are as follows;

Human resources
Natural resources
Capital formation Advancement in technology
Political and social economic factors (Bekeboh, 2024)

Real GDP

Real Gross Domestic Product (GDP) is a measure of output that accounts for the total value of goods and services produced within a country's borders within one year, adjusted for inflation. Real GDP is a critical indicator of economic performance that provides insight into the growth or decline of an economy. Unlike nominal GDP, which reflects current prices, real GDP uses a constant set of prices (usually from a base year) to account for inflation fluctuations (Bekeboh, 2020).

13 Percent Derivation Fund

The 13% derivation formula for oil-producing states in Nigeria is enshrined in the 1999 Constitution, specifically in Section 162, Sub-section 2. This provision mandates that not less than 13% of the revenue accruing to the Federation Account directly from natural resources should be allocated to the states where these resources are derived. The current 13% derivation formula has been in place since the return to democracy in 1999. The fund is meant to cushion the effects of oil exploration and production on the environment and

communities in oil-producing areas. The fund is allocated to oil-producing states based on the amount of oil produced in each state. Funds are expected to be used for developmental projects in oil-producing communities, but there have been concerns about mismanagement and lack of transparency in the use of these funds (Oloye and Adedeji, 2017).

Empirical Review

The relationship between revenue generation and economic growth has been a subject of interest for scholars, both in Nigeria and abroad. An empirical review of the works of these scholars are outlined below.

Akinola and Afolabi (2018) using survey research design examined internally generated Revenue and economic development in South-South Nigeria. The specific objective was to examine the impact of internally generated revenue on economic development in South South Nigeria. The findings of the study show that the internally generated revenue has a positive and significant impact on economic development in South-South Nigeria. The study recommended that states in the South-South geopolitical zone should increase their internally generated revenue to promote economic development.

Ogbonna and Osadume (2017) assessed the association between revenue generation from federal statutory allocation and economic growth of Niger Delta area of Nigeria using six states in the geopolitical zone. The work used the multiple method and Granger Casually technique. The results of the analysis showed that revenue generation from statutory allocation affects economic growth measured by Gross Domestic Product (GDP) positively but significantly. The study suggests that for efficient economic growth to be visible in the Niger delta region, the revenue generation from statutory allocation due to the region must be judiciously put into projects that are economic friendly.

Bah and Onuora (2018) assessed the effect of revenue generation from internal sources on the development of infrastructure of the south Eastern geopolitical zone. Delta collected from budget estimates of each of the five south Eastern states of Nigeria namely: Abia state, Anambra state, Ebonyi state, Enugu state and Imo state during the period 2013 - 2017.

The work made use of descriptive statistics, OLS analysis amongst others to analyze collected data. From the analysis, the results showed that revenue generation from internal sources positively and significantly influenced. In order to enhance infrastructural development by meeting cost of infrastructure, the study recommended the need to increase revenue flows from internal sources.

Adegbite and Gasina (2018) assessed the impact of internally generated revenue on economic growth in Nigeria. Data were collected from Central Bank of Nigeria (CBN) from 1981 through 2025. The work made use of the regression analysis, OLS analysis amongst others to analyze the collected data. From the analysis, the results showed a significant positive relationship between internally generated revenue and economic growth. In order to enhance infrastructural development, the study recommended that states should increase their internally generated revenue to reduce dependence on statutory allocation.

Adeyemi and Adedeji (2020) examined the effect of statutory allocation on economic growth in Nigeria, using time series data. The auto- regressive Distributed Lag (ARDL) Model was employed by the researcher in the analysis of data. The results of the analysis showed that there is a significant positive relationship between statutory allocation and economic growth in the long run. The study suggested that the federal government should ensure timely release of statutory allocation to states.

Nwankwo and Nwankwo (2019) used the survey research design to examine the derivation Revenue and economic development in Nigeria's Niger Delta region, using six states in the Niger delta area. The results of the descriptive statistics showed a strong positive relationship between derivation Revenue and economic development. The study recommended that the government should increase derivation revenue to the Niger delta region to promote economic development.

Okafor and Ezenwakwe (2020) did a study on Government Revenue and Economic Growth in Nigeria: A Disaggregated Analysis. The study sourced data from the CBN and NBS. The broad objective of the study was to examine the impact of different revenue sources on economic growth in Nigeria. Findings of the study showed that different revenue sources (statutory allocation, internally generated revenue and value Added Tax) have varying impacts on economic growth in Nigeria. However, the results of the ARDL Model showed significant positive relationship between statutory allocation, internally generated revenue and economic growth. The study recommended that the government should diversify its revenue sources to reduce dependence on single source.

Onyeiwu and Nwosu (2020) examined the effect of statutory allocation on infrastructure development in Nigeria using time series data from the Central Bank of Nigeria and Nigeria Bureau of Statistics for the period 1981 through 2018. Descriptive statistics and regression analysis via E- view 8.0 econometrics software's were employed by the researchers in the analysis of data. The results of the analysis showed that the ARDL Model has a significant positive.

Theoretical Framework

Endogenous Growth Theory

Revenue generated are expected to grow the economy as explained by Keynesian growth theories, however, the inability of the growth theory to explain saving rates and the rate of technological progress has led to the introduction of the endogenous growth theory (Otiki and Odey,2017 as cited in Agana, (2020). Endogenous growth theory as developed by Romero in 2994 explains economic growth through internal factors like technological advancements, human capital, and knowledge (Chukwu, 2011). It's an alternative to the neoclassical exogenous growth models, which attribute growth to external factors. Endogenous Growth Theory emphasizes the role of innovation, knowledge, and human capital in driving economic growth. It suggests that investments in research and development, education, and infrastructure can lead to sustained economic growth (Oghuma, 2017 cited in Agana, 2020).

Summary of Empirical and Gap in Literature

The empirical studies reviewed revealed that most research has focused on the impact of total revenue, statutory allocation, and internally generated revenue on economic growth, economic development, and infrastructural development in South Eastern Nigeria and Nigeria in general. However, this study differs significantly from previous research in several ways. Firstly, while existing studies have primarily examined access to finance from internal sources, this study considers a broader range of revenue sources, including statutory allocation, Value Added Tax (VAT), 13% derivation, and other sources. Additionally, whereas previous studies have mainly focused on infrastructural development, this study uses Gross Domestic Product (GDP) as a measure of economic growth.

Furthermore, the time frame of this study, spanning 19 years, differs from previous research. The existing literature also shows contradictory findings regarding the variables under investigation. Notably, there is a dearth of empirical studies examining the impact of government access to finance from statutory allocations, internally generated revenue, VAT, and 13% derivation on economic growth in South-South Nigeria.

This study aimed to bridge the empirical gap by investigating the relationship between government spending (financing of projects) and economic growth in South-South Nigeria. By exploring this under-researched area, this study seeks to contribute to a deeper understanding of the topic and provide valuable insights for policymakers.

METHODOLOGY

Research Design

This study adopts an ex-post facto research design. According to Nnanseh and Akpan (2013), ex-post facto research refers to a research approach that is conducted after the event or phenomenon has occurred, and the data already exist. The justification for

choosing this design is that it allows the researcher to examine the relationships between variables without manipulating or controlling them, as the events already exist. This design is suitable for this study because it enables the investigation of the relationship between government access to finance and economic growth in South-South Nigeria using existing data.

Area of Study

This study focuses on selected states in the South-South region of Nigeria, one of the country's six geopolitical zones. The South-South zone is a significant contributor to Nigeria's GDP, primarily due to its rich oil reserves. The zone comprises six states: Akwa Ibom, Bayelsa, Cross River, Delta, Edo, and Rivers. However, this study specifically targets Bayelsa, Delta, and Rivers states, which were purposely sampled due to their status as major oil-producing states. These states are home to numerous multinational companies and businesses operating across various sectors of the economy. The similarity in their economic activities and oil-producing status makes them an ideal focus for this study.

Sources of Data

The data used in this study were sourced from secondary sources, specifically published financial statements obtained from the Office of the Accountant-General of the selected states in South-South Nigeria and the National Bureau of Statistics (NBS). The data span a period of 19 years, from 2005 to 2023 this period was chosen due to the availability of relevant data for the study's variables.

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

Data Presentation

This study looked at how South-South Nigeria's GDP was affected by access to statutory allocation (SA) financing. Examine how South-South Nigeria's GDP is affected by the availability of financing from internally generated revenue (IGR). Examine the impact of Value Added Tax (VAT) financing availability on South-South Nigeria's GDP determine the impact on South-South Nigeria's GDP of having access to financing from 13 derivatives.

Table 1: Data Presentation on GDP, SA, IGR, VAT and DIV

YEARS	GDP	SA	IGR	VAT	DIV
2005	22884.9	606,767,406,080.34	2236726255	0.00	0.00
2006	30063.96	0.00	0	0.00	0.00
2007	34318.67	6,151,119,338.34	0	1,005,638,056.36	24,458,746,666.75
2008	39542.43	3,451,506,969.95	54114449967	0.00	0.00
2009	43012.51	0.00	0.00	0.00	0.00
2010	54612.26	5,347,241,632.74	79835665506	1,444,380,471.62	17,157,040,714.92
2011	62980.4	6,563,655,590.72	91117781425	1,187,082,444.10	22,746,785,080.13
2012	71713.94	6,563,655,590.72	1.16801E+11	1,187,082,444.10	22,746,785,080.13
2013	80092.56	0.00	1.48624E+11	0.00	0.00
2014	89043.62	10,252,102,611.49	1.4289E+11	1,478,205,940.16	32,834,241,740.46
2015	94144.9	8,782,565,620.08	1.3162E+1	1,662,331,278.0	28,551,592,128.

	6		1	3	76
2016	101489.5	7,777,264,804.86	1.3725E+11	812,717,414.89	9,419,219,057.42
2017	113711.6	7,890,715,791.42	1.53897E+11	3,834,592,910.94	23,591,735,083.97
2018	127736.8	9,935,062,917.90	1.84857E+11	3,678,508,252.48	34,253,028,317.52
2019	144210.5	10,687,003,841.19	2.2142E+11	4,022,820,739.64	27,307,362,647.33
2020	152324.1	10,147,108,681.44	1.89103E+11	4,510,195,342.96	28,955,127,264.88
2021	173527.7	8,169,343,015.38	2.16825E+11	6,255,911,649.63	18,838,691,539.76
2022	199336	70,008,655,980.12	2.74628E+11	9,682,642,714.71	76,700,000,169.79
2023	229912.9	69,312,539,856.75	3.29327E+11	11,589,041,928.19	622,689,670.23

Source: CBN Statistical Bulletin, National Bureau of Statistics Reports

Descriptive Analysis

This study looked at how the GDP of South-South Nigeria was affected by several public funding sources, including Statutory Allocation (SA), Internally Generated Revenue (IGR), Value Added Tax (VAT), and 13% Derivation (DIV). The distribution, central tendency, and variability of each variable over the course of 19 observations are revealed by the descriptive statistics that follow.

Table 2: Descriptive Statistics

	GDP	SA	IGR	VAT	DIV
Mean	98139.97	4.46E+10	1.30E+11	2.76E+09	1.94E+10
Median	89043.62	7.89E+09	1.37E+11	1.44E+09	2.27E+10
Maximum	229912.9	6.07E+11	3.29E+11	1.16E+10	7.67E+10
Minimum	22884.90	0.000000	0.000000	0.000000	0.000000
Std. Dev.	59894.95	1.38E+11	9.46E+10	3.33E+09	1.87E+10
Skewness	0.668896	3.870939	0.225071	1.462410	1.321129
Kurtosis	2.503982	16.33324	2.433073	4.253947	5.571284
Jarque-Bera	1.611613	188.1887	0.414860	8.017175	10.76114
Probability	0.446727	0.000000	0.812670	0.018159	0.004605
Sum	1864659.	8.48E+11	2.47E+12	5.24E+10	3.68E+11
Sum Sq. Dev.	6.46E+10	3.41E+23	1.61E+23	1.99E+20	6.33E+21
Observations	19	19	19	19	19

Source: E-views 10

With a median of ₦89,043.62 million and a mean GDP of ₦98,139.97 million over the period, South-South Nigeria's distribution is slightly skewed to the right (skewness = 0.6689). The GDP can be as low as ₦22,884.90 million or as high as ₦229,912.90 million. Moderate variability is indicated by the ₦59,894.95 million standard deviation. Given that the kurtosis (2.50) is near the normal value of 3 and that there appears to be no discernible deviation from normalcy, the distribution is roughly normal.

With a maximum of ₦607 billion and a high mean value of ₦44.6 billion, SA exhibits substantial variability (standard deviation = ₦138 billion). Since zero is the minimum value, there are some times when no allocation is noted. A few extremely high values are implied

by the distribution's leptokurtic (kurtosis = 16.33) and highly positively skewed (skewness = 3.87). Non-normality is confirmed by the highly significant Jarque-Bera test (p = 0.000).

With a median marginally higher at ₦137 billion and a high average of ₦130 billion, IGR indicates a reasonably symmetric distribution (skewness = 0.2251). With a standard deviation of ₦94.6 billion, the variability is likewise significant. The distribution is near normal (kurtosis = 2.43) and supported by a non-significant Jarque-Bera statistic (p = 0.8127), despite its wide spread.

VAT revenue ranges from 0 to 11.6 billion, with a mean of ₦2.76 billion and a median of ₦1.44 billion. Its distribution is leptokurtic (kurtosis = 4.25) and right skew (1.46). In comparison to the mean, the ₦3.33 billion standard deviation indicates significant variability. A statistically significant departure from normalcy is indicated by the Jarque-Bera test (p = 0.0182). With a range of 0 to ₦76.7 billion, DIV records a mean of ₦19.4 billion and a median of ₦22.7 billion. The data is more peaked than a normal distribution (kurtosis = 5.57) and has a moderately rightward skew (skewness = 1.32). Significant non-normality is confirmed by the Jarque-Bera test (p = 0.0046), indicating outliers or extreme values.

Correlation Analysis

The nature and strength of the relationships between South-South Nigeria's GDP and different government revenue sources are revealed by the correlation analysis.

Table 3: Correlation Analysis

Covariance Analysis: Ordinary

Sample: 2005 2023

Included observations: 19

Covariance

Correlation	GDP	SA	IGR	VAT	DIV
GDP	3.40E+09				
	1.000000				
SA	-1.51E+15	1.79E+22			
	-0.193462	1.000000			
IGR	5.19E+15	-2.75E+21	8.48E+21		
	0.967454	-0.222843	1.000000		
VAT	1.77E+14	-3.07E+19	2.60E+20	1.05E+19	
	0.936581	-0.070694	0.870252	1.000000	
DIV	4.94E+14	-4.50E+20	7.75E+20	2.72E+19	3.33E+20
	0.464180	-0.184073	0.461219	0.460669	1.000000

Source: E-views 10

The findings show that GDP and Internally Generated Revenue (IGR) have a very strong positive correlation (r = 0.967), suggesting that GDP rises significantly in tandem with IGR. This implies that internally mobilized resources play a significant role in the region's economic performance, highlighting the significance of effective local revenue generation.

Likewise, there is a significant positive correlation (r = 0.937) between GDP and Value Added Tax (VAT), indicating a close relationship between VAT collections and economic activity. This emphasizes how important consumption-based taxes are for boosting local GDP growth.

The 13% Derivation Fund (DIV) and GDP have a moderately positive relationship (r = 0.464), indicating that oil-producing activities' revenues have a positive impact on economic output, albeit not as strongly as IGR and VAT. Furthermore, the weakly negative correlation (r = -0.193) between GDP and Statutory Allocation (SA) suggests that higher GDP is not always the result of higher federal allocations. This could be the result of inefficient

budgeting, an excessive dependence on federal transfers, or state-level funding misallocation.

Unit Root Test

The stationarity characteristics of the variables used in this study are revealed by the outcomes of the Augmented Dickey-Fuller (ADF) unit root test. Because non-constant statistical properties over time can lead to misleading statistical inferences and ensure valid regression outcomes, stationarity is an essential requirement in time series analysis.

Table 4: ADF Unit Root Test

Variables	ADF STAT	5%	Prob.	Level of integration
GDP	3.439458	-3.690814	1.0000	I(0)
D(GDP)	-5.541670	-3.733200	0.0023	I(1)
SA	-32.09545	-3.690814	0.0001	I(0)
IGR	2.479681	-1.962813	0.9943	I(0)
D(IGR)	-3.926362	-1.962813	0.0006	I(1)
VAT	2.244000	-3.052169	0.9998	I(0)
D(VAT)	-3.675516	-3.052169	0.0152	I(1)
DIV	-4.442248	-3.040391	0.0031	I(0)

Source: E-views 10

The Gross Domestic Product (GDP) was found to be non-stationary at level but became stationary after first differencing, indicating that it is integrated of order one, I(1). The test was performed at both the level and first difference forms. This implies that in order to attain stationarity, the time-dependent structure of GDP needs to be differenced. With a p-value well below 0.05 and a significantly negative ADF statistic, Statutory Allocation (SA) is stationary at level. Since SA is integrated of order zero, or I(0), its values are stable over time and do not show a time trend.

Internally Generated Revenue (IGR) is implied to be I(1) since it is non-stationary at level but becomes stationary at first difference. This demonstrates that although there are enduring patterns in IGR fluctuations, differencing can eliminate these patterns. It is suggested that Value Added Tax (VAT) is also integrated of order one, I(1), since it likewise shows non-stationarity at level but becomes stationary after first differencing. 13% Derivation Fund (DIV) is an I(0) variable since it is stationary at level. This suggests that the derivation fund series will remain stable over time without requiring differencing. Both I (0) and I(1) variables are present in the data set; SA and DIV are I(0), while GDP, IGR, and VAT are I(1). Since the Autoregressive Distributed Lag (ARDL) modeling approach is suitable for series that are integrated at different orders (as long as none is I(2)), this combination of integration levels supports the use of ARDL for additional econometric analysis.

Bounds Test

To ascertain whether there is a long-term relationship (cointegration) between GDP and the explanatory variables-Status Allocation (SA), Internally Generated Revenue (IGR), Value Added Tax (VAT), and 13% Derivation Fund (DIV)—the ARDL Bounds Test was used. The absence of a long-term (levels) relationship between the variables is the null hypothesis of the bounds test. Comparing the calculated F-statistic with the critical bounds values (I(0) and I(1)) at various significance levels determines whether or not to reject this hypothesis.

Table 5: Bounds Test

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0) Asymptotic: n=1000	I(1)
F-statistic	39.01410	10%	2.45	3.52
K	4	5%	2.86	4.01
		2.5%	3.25	4.49

	1%	3.74	5.06

Source: E-views 10

We reject the null hypothesis of no level relationship because the calculated F-statistic (39.01410) is substantially greater than the upper bound critical value (I(1)) at all standard significance levels (1%, 2.5%, 5%, and 10%). In South-South Nigeria, there is substantial statistical support for a long-term cointegration relationship between GDP and the independent variables (SA, IGR, VAT, and DIV). The use of the ARDL model to estimate both the short-run and long-run dynamics is justified by the fact that changes in these public finance sources have a long-term equilibrium effect on the region's GDP.

ARDL Regression Analysis

Table 6:ARDL Regression Output
Dependent Variable: GDP
Method: ARDL
Sample (adjusted): 2006 2023

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
GDP(-1)	0.842884	0.068085	12.37990	0.0000
SA	-6.58E-08	8.27E-08	-0.795724	0.4430
SA(-1)	4.92E-09	1.85E-09	2.662250	0.0221
IGR	7.70E-08	2.50E-08	3.074827	0.0106
VAT	2.97E-06	8.23E-07	3.609913	0.0041
DIV	-2.02E-08	2.82E-08	-0.715659	0.4891
C	7639.218	1751.201	4.362273	0.0011
R-squared	0.999145	Mean dependent var		102320.8
Adjusted R-squared	0.998678	S.D. dependent var		58709.32
S.E. of regression	2134.269	Akaike info criterion		18.45494
Sum squared resid	50106141	Schwarz criterion		18.80119
Log likelihood	-159.0944	Hannan-Quinn criter.		18.50268
F-statistic	2142.111	Durbin-Watson stat		2.818790
Prob(F-statistic)	0.000000			

*Note: p-values and any subsequent tests do not account for model selection.

In South-South Nigeria, the ARDL regression results show a very strong model that explains the relationship between GDP and the main sources of government revenue, including Statutory Allocation (SA), Internally Generated Revenue (IGR), Value Added Tax (VAT), and the 13% Derivation Fund (DIV), from 2006 to 2023.

An F-statistic of 2142.111 and a corresponding p-value of 0.000000 demonstrate the statistical significance of the model, suggesting that the explanatory variables taken together have a significant and powerful impact on GDP. With an adjusted R-squared value of 0.9987, the model also shows excellent goodness-of-fit, meaning that the variables included in it account for about 99.87% of the variation in GDP. This shows that the model is suitably specified and exhibits a very high explanatory power. The model's dependability and statistical soundness for inference are further supported by the Durbin-Watson statistic of 2.82, which indicates that there is no indication of autocorrelation in the residuals.

Table 4.7: Short Run Estimate (Error Correction Model (ECM))
ECM Regression
Case 3: Unrestricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7639.218	508.7618	15.01531	0.0000
D(SA)	-6.58E-08	5.56E-09	-11.84645	0.0000
CointEq(-1)*	-0.157116	0.009633	-16.30967	0.0000

Source: E-views Version 10

The findings of the Error Correction Model (ECM), which incorporates the long-run adjustment mechanism through the error correction term and captures the short-run dynamics of the relationship between GDP and its explanatory variable Statutory Allocation

(SA), are shown in Table 4.7. With a coefficient of -0.1571, the Error Correction Term is highly significant, indicating that it contributes significantly to the explanation of how the system eventually regains equilibrium. The negative symbol attests to the existence of a long-term correlation between GDP and statutory allocation. Simply put, this result indicates that approximately 15.7% of the imbalance is corrected annually when the economy deviates from its long-term trajectory, possibly as a result of abrupt changes in revenue or expenditure. This indicates that following brief shocks, the economy gradually returns to its long-term, natural state. This suggests that although short-term adjustments to statutory allocation appear to lower GDP, the model verifies that there is a consistent, long-term relationship between the variables. Even though there are short-term inefficiencies, the economy eventually returns to equilibrium, albeit slowly.

Table 4.8: Long-run ARDL regression result

Levels Equation

Case 3: Unrestricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SA	-3.88E-07	5.09E-07	-0.761853	0.4622
IGR	4.90E-07	9.08E-08	5.398604	0.0002
VAT	1.89E-05	6.15E-06	3.074297	0.0106
DIV	-1.29E-07	1.90E-07	-0.676556	0.5127
EC = GDP - (-0.0000*SA + 0.0000*IGR + 0.0000*VAT -0.0000*DIV)				

The ARDL model's long-run coefficients, which estimate the relationship between different government revenue sources and economic growth (as indicated by GDP) in South-South Nigeria, are shown in Table 4.8. Statutory Allocation (SA), Internally Generated Revenue (IGR), Value Added Tax (VAT), and the 13% Derivation Fund (DIV) are the variables that are included.

HO1: Statutory allocation has no significant impact on economic growth (GDP) in South-South Nigeria.

The results indicate that GDP is negatively impacted by statutory allocation, although this effect is not statistically significant. Simply put, it doesn't seem that the amount of federal funding the area receives has a significant impact on long-term economic growth. This might indicate that these funds are not being used efficiently or that they are not being adequately invested in industries that are focused on growth.

HO2: Internally generated revenue has no significant influence on economic growth (GDP) in South-South Nigeria.

Revenue generated internally provides a different perspective. The findings show a significant and favorable long-term effect on GDP that is statistically significant. This indicates that funds collected within the states, such as through business permits, taxes, and levies, are essential to promoting long-term, steady economic growth in the area. It emphasizes how crucial it is to improve local revenue structures and lessen an excessive reliance on federal funding.

HO3: VAT revenue has no significant contribution to economic growth (GDP) in South-South Nigeria.

Long-term economic growth is also positively and significantly impacted by VAT. This implies that VAT and other consumption-based taxes are a significant and efficient source of funding for South-South Nigeria's long-term development objectives. Growth could be further enhanced by promoting tax compliance and enhancing VAT administration.

HO4: 13% derivative revenue has no significant impact on economic growth (GDP) in South-South Nigeria.

Unexpectedly, the 13% derivation fund, which is meant to compensate states that produce oil, has a negative and statistically insignificant long-term impact on GDP. This suggests that the fund might not be successfully promoting long-term economic growth in spite of its strategic goal. It calls into question accountability, transparency, and the distribution and use of these monies.

Diagnostics Test

FIGURE 4.1: CUSUM TEST

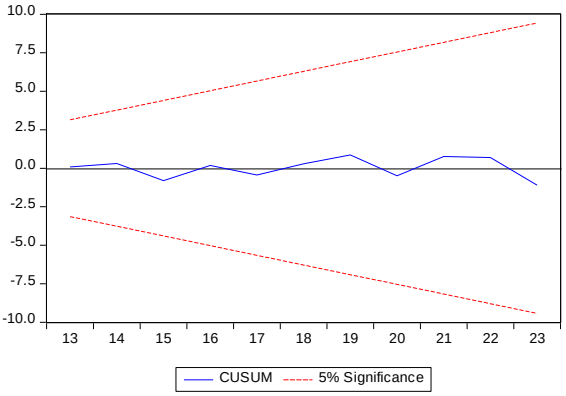
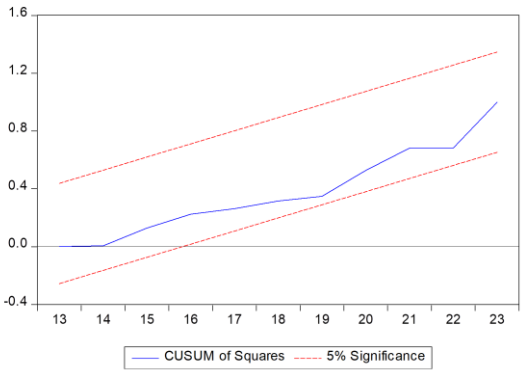
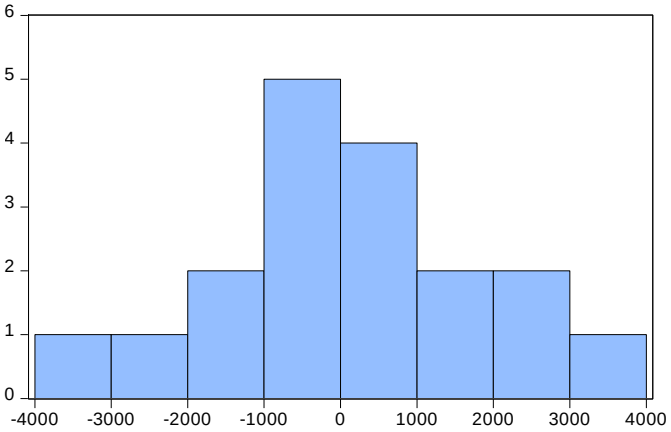


FIGURE 4.2: CUSMSQU TEST



The cumulative sum lines in Figures 4.1 and 4.2 above, as determined by the CUSUM and Cusum of Square test, fall within the 5% critical lines, indicating that the model's parameters are stable.

Figure 4.3: Histogram test of Normality



Series: Residuals	
Sample 2006 2023	
Observations 18	
Mean	1.92e-12
Median	-3.029353
Maximum	3089.820
Minimum	-3623.436
Std. Dev.	1716.805
Skewness	-0.210894
Kurtosis	2.626724
Jarque-Bera	0.237931
Probability	0.887839

Source: E-views 10.

The results of the above histogram normality test demonstrate that the residuals in our model have a normal distribution. The Jarque-Bera statistics of 0.237931 and the corresponding p-value of 0.887839, which are statistically above the 5% level of significance, support this.

DISCUSSION OF FINDINGS

The long-term impacts of different government revenue sources were examined in this study. Using an ARDL framework, the effects of Statutory Allocation (SA), Internally Generated Revenue (IGR), Value Added Tax (VAT), and the 13% Derivation Fund (DIV) on GDP in South-South Nigeria are examined.

According to the analysis, statutory allocation has a long-term negative but statistically negligible effect on GDP. This implies that federal transfers to South-South Nigerian states are ineffective at fostering long-term economic expansion. This result is consistent with that of Okafor & Uchenna (2022), who discovered that subnational mismanagement and a lack of fiscal restraint frequently prevent federal allocations from translating into development. In a similar vein, Eze and Ogiji (2019) contend that statutory revenues are typically allocated to ongoing expenses, leaving little space for the capital investments required to spur economic growth. Furthermore, statutory allocations promote fiscal dependency rather than creativity in revenue generation and spending efficiency, according to Aigbokhan (2020). This bolsters the claim that such allocations might not have

significant long-term effects on regional development in the absence of transparency and strategic planning.

On the other hand, the results demonstrate that internally generated revenue has a statistically significant, robust, and positive impact on long-term economic growth. This suggests that states are better equipped to finance infrastructure, health care, and education—all of which boost economic growth and productivity—when they create effective tax structures and local revenue sources. This outcome is in line with research by Adeniran & Adejare (2021), who discovered that higher IGR improves state-level economic performance and public service delivery. Additionally, Olaoye and Ogundipe (2018) showed that states with robust IGR frameworks have more steady and long-term growth than those that mainly rely on federal funding. IGR's beneficial contribution backs up the repeated demands by academics and decision-makers for Nigerian governments to diversify their sources of income and concentrate on becoming self-sufficient through improved resource mobilization and tax administration (World Bank, 2023).

Additionally, it was discovered that VAT significantly and favorably affected GDP over the long term, demonstrating its value as a steady source of income. Since VAT is a consumption tax, it is typically more stable and widely applied, which makes it a useful instrument for funding development. According to empirical data from Nwosu & Okoh (2020), VAT improves government fiscal capacity and has a positive correlation with economic growth, particularly when it is implemented correctly. Additionally, Ogundele and Salisu (2022) contend that public VAT collections can be used to finance investments that lead to long-term productivity gains. These results highlight how crucial it is to increase VAT compliance, streamline the tax code, and stop revenue leaks in order to fully realize South-South Nigeria's growth potential.

Unexpectedly, it was discovered that the 13% derivation fund, which is meant to promote development in oil-producing regions, had a detrimental and statistically insignificant long-term effect on GDP.

This finding casts doubt on the fund's ability to produce the desired developmental results. The derivation fund's developmental impact has been limited, according to Ibaba (2018), by weak institutions, corruption, and a lack of community involvement in planning and execution. Oviasuyi & Uwadiae (2021) also pointed out that the Niger Delta still has low socioeconomic indicators and underdevelopment despite significant income from the derivation principle. This finding lends credence to the claim that simple resource transfers are insufficient; in order for such funds to have a positive impact on regional growth, they require efficient governance, community involvement, and open monitoring systems.

CONCLUSION AND RECOMMENDATIONS

This study looked at the long-term impacts of various revenue sources on South-South Nigeria's economic growth, including Statutory Allocation (SA), Internally Generated Revenue (IGR), Value Added Tax (VAT), and the 13% Derivation Fund (DIV). According to the findings, only value-added tax and internally generated revenue have a substantial and favourable long-term impact on GDP, suggesting that these two revenue streams are essential for promoting sustainable development in the area.

The 13% Derivation Fund and Statutory Allocation, on the other hand, have negligible, effects on economic growth, indicating that these federal revenue sources may not be effectively used or sufficiently invested in productive industries. These results highlight the value of increased accountability in public spending, better revenue management, and fiscal autonomy as instruments to boost regional economic performance. Together, the study's results imply that local productivity-based revenue sources (VAT and IGR) are superior to federal transfers (SA and DIV) in fostering sustained economic growth. This is consistent with the fiscal federalism theory, which highlights that when local governments are able to generate their own revenue, they are typically more responsive and efficient in allocating resources. To optimize Internally Generated Revenue (IGR), the report advises South-South states to increase their tax bases, enforce compliance, and invest in

digital tax collection systems. A more stable fiscal environment for long-term growth will result from a stronger IGR, which will lessen dependency on federal funding. The Federal Inland Revenue Service (FIRS) and state governments should cooperate to modernize VAT administration, close loopholes, and raise tax compliance awareness. Optimizing VAT collection is essential because it plays a major role in growth. Create impartial oversight organizations to keep tabs on state-level expenditures of federal allotments and derivation funds. To foster trust and guarantee that funds are allocated to sectors that promote growth, such as infrastructure, health, and education, states should implement participatory budgeting and release frequent reports on fund utilization. Restructuring the 13% derivation fund to concentrate on long-term investments like industrial parks, technology hubs, and agricultural development initiatives is necessary. States that produce oil need to change their focus from consumption to capital formation and economic diversification.

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APPENDIX

VAR Lag Order Selection Criteria
Endogenous variables: GDP
Exogenous variables: C
Date: 08/05/25 Time: 03:51
Sample: 2005 2023
Included observations: 14

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-171.6118	NA	3.00e+09	24.65883	24.70448	24.65461
		59.78599	23762387	19.81952	19.91082	19.81107
1	-136.7367	*	*	*	*	*
2	-136.4971	0.376433	26616167	19.92816	20.06510	19.91548
3	-136.4951	0.002921	30990951	20.07072	20.25331	20.05382
4	-136.0824	0.530615	34266416	20.15462	20.38286	20.13350
5	-134.9008	1.350348	34276108	20.12869	20.40257	20.10334

Null Hypothesis: GDP has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on AIC, maxlag=1)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		3.439458	1.0000
Test critical values:	1% level	-4.571559	
	5% level	-3.690814	
	10% level	-3.286909	

Null Hypothesis: D(GDP) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on AIC, maxlag=1)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.541670	0.0023
Test critical values:	1% level	-4.667883	
	5% level	-3.733200	
	10% level	-3.310349	

VAR Lag Order Selection Criteria
Endogenous variables: SA
Exogenous variables: C
Date: 08/05/25 Time: 03:53
Sample: 2005 2023
Included observations: 14

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-353.1675	NA	5.51e+20	50.59536	50.64101	50.59114
		7.327601	3.46e+20	50.12759	50.21888	50.11913
1	-348.8931	*	*	*	*	*
2	-348.4235	0.737993	3.75e+20	50.20335	50.34029	50.19068
3	-347.6138	1.156624	3.89e+20	50.23055	50.41314	50.21365
4	-346.8272	1.011410	4.07e+20	50.26103	50.48926	50.23990
5	-346.6120	0.245924	4.68e+20	50.37314	50.64702	50.34779

Null Hypothesis: SA has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on AIC, maxlag=3)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-32.09545	0.0001
Test critical values:	1% level	-4.571559	
	5% level	-3.690814	
	10% level	-3.286909	

VAR Lag Order Selection Criteria
Endogenous variables: IGR
Exogenous variables: C
Date: 08/05/25 Time: 03:55
Sample: 2005 2023
Included observations: 14

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-368.8547	NA	5.18e+21	52.83638	52.88203	52.83216
		20.90088	1.05e+21	51.23750	51.32879	51.22905
1	-356.6625	*	*	*	*	*
2	-356.3935	0.422750	1.17e+21	51.34192	51.47887	51.32925
3	-356.3603	0.047355	1.36e+21	51.48005	51.66263	51.46314
4	-355.7841	0.740843	1.46e+21	51.54059	51.76882	51.51946
5	-354.8193	1.102626	1.51e+21	51.54562	51.81950	51.52026

Null Hypothesis: IGR has a unit root
Exogenous: None
Lag Length: 1 (Automatic - based on AIC, maxlag=1)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		2.479681	0.9943
Test critical values:	1% level	-2.708094	
	5% level	-1.962813	
	10% level	-1.606129	

Null Hypothesis: D(IGR) has a unit root
Exogenous: None
Lag Length: 0 (Automatic - based on AIC, maxlag=1)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.926362	0.0006
Test critical values:	1% level	-2.708094	
	5% level	-1.962813	
	10% level	-1.606129	

VAR Lag Order Selection Criteria
Endogenous variables: VAT
Exogenous variables: C
Date: 08/05/25 Time: 03:56
Sample: 2005 2023
Included observations: 14

Lag	LogL	LR	FPE	AIC	SC	HQ

0	-326.7833	NA	1.27e+19	46.82619	46.87184	46.82196
1	-313.0920	23.47081 *	2.08e+18	45.01315	45.10444	45.00469
2	-312.0746	1.598785	2.08e+18	45.01066	45.14760	44.99798
3	-310.3850	2.413667	1.90e+18	44.91215	45.09474	44.89525
4	-309.7435	0.824881	2.04e+18	44.96335	45.19159	44.94223
5	-307.7454	2.283515	1.81e+18 *	44.82077 *	45.09465 *	44.79542 *

Null Hypothesis: VAT has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on AIC, maxlag=1)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		2.244000	0.9998
Test critical values:	1% level	-3.886751	
	5% level	-3.052169	
	10% level	-2.666593	

Null Hypothesis: D(VAT) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on AIC, maxlag=1)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.675516	0.0152
Test critical values:	1% level	-3.886751	
	5% level	-3.052169	
	10% level	-2.666593	

VAR Lag Order Selection Criteria
Endogenous variables: DIV
Exogenous variables: C
Date: 08/05/25 Time: 03:59
Sample: 2005 2023
Included observations: 14

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-350.2815	NA	3.65e+20	50.18307	50.22872	50.17885
1	-349.4146	1.486157	3.72e+20	50.20208	50.29338	50.19363
2	-349.2625	0.238946	4.22e+20	50.32322	50.46016	50.31054
3	-348.9200	0.489353	4.68e+20	50.41714	50.59973	50.40024
4	-344.6981	5.428119	3.00e+20	49.95687	50.18511	49.93574
5	-340.5064	4.790527 *	1.96e+20 *	49.50091 *	49.77479 *	49.47556 *

Null Hypothesis: DIV has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on AIC, maxlag=1)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.442248	0.0031
Test critical values:	1% level	-3.857386	
	5% level	-3.040391	
	10% level	-2.660551	