

PREDICTIVE ROLE OF ANNUAL REVENUE OF THREE TIERS OF GOVERNMENT ON ECONOMIC RECOVERY IN NIGERIA (2001 – 2023)

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ABSTRACT

Government Revenue comprises revenues from oil and non-oil sectors. The study aims at establishing the effect of the government revenue on the economic growth of Nigeria, more specifically on the federation allocation to the three tiers of government. The study will help in assisting the government to making efforts in the redistribution of the Nigeria economic resources. Time series data were extracted from Central Bank Statistical Bulletin and summary of federation account committee. The multiple linear regression model and correlation coefficient were used to analyze the data. The findings show that the adjusted R-square of 70.22% is significant to the overall hypothesis tested and government revenue have positive effect on the economic growth of Nigeria as expressed by GDP. The study also recommend that efforts should be made by the Government to diversify the Nigerian economy so as to bring about economic stability.

Key words: *Gross Domestic Product, Government Revenue, Economic Recovery, Oil and Non-Oil Revenue*

1. INTRODUCTION

Dang (2013). The Federation of Nigeria achieves her macroeconomic objectives by performing the functions of resource allocation, income distribution/redistribution, and economic stabilization within the central government, that is, federal government and its units (states and local governments). The annual revenue of the government plays a crucial role in predicting economic recovery. An increase in government revenue can fuel investment in infrastructure and social programs, stimulating economic growth. Moreover, higher government revenue often signifies increased economic activity and higher employment levels, both of which are essential for economic recovery. Conversely, a decrease in government revenue can indicate a slowdown in economic activity, potentially impeding the recovery process. Therefore, closely monitoring government revenue provides valuable insights into the economy's direction and its potential for recovery. Nigeria continuously experiences upturns in revenue generation from various sources like oil and gas, because of the unstable price of crude oil in the global market. it relies mainly on loans to finance its

budget over the years. The economy, however, was characterized by stunted gross domestic product (GDP) and high indebtedness (Central Bank of Nigeria, 2020).

The economy accounts for high unemployment, low per capita income, low investment, high inflation rate, and unfavorable balance of payment. For instance, the unemployment rate jumped from 4.2 percent in 1999 to 22.6 percent in 2018 and later moved up to 23.1 percent in the first quarter of 2019, and in 2020, it rose to 27 percent (National Bureau of Statistics, 2020). The inflation rate increased from 6.6 percent in 1999 to 16.5 percent in 2017 which later dropped to 12.1 percent in 2018 and 13 percent in 2020 (National Bureau of Statistics, 2020). The trend raises the question of whether government-generated revenues impact economic growth. Following this view, this study first investigated the impact of aggregate government revenue on economic growth in Nigeria, and secondly, it evaluated revenue patterns and trends in Nigeria

The annual revenue of the three tiers of government encompasses the total income generated by the federal, state, and local government entities within a specific fiscal year. This revenue comprises a diverse range of sources, including but not limited to taxes (such as income tax, sales tax, and property tax), grants from higher levels of government, revenue from public services, and other forms of income. Monitoring the annual revenue of the three tiers of government is crucial for gaining a comprehensive understanding of their financial standing and their ability to fund public services, infrastructure development, social programs, and other essential initiatives. Furthermore, analyzing this data provides valuable insights into the allocation and utilization of financial resources across different levels of government, offering a detailed overview of their economic performance and fiscal responsibility. (Chandana et al 2024) Agbazure (2020) disclosed that “successive governments abandon inherited public policies and initiate theirs that their successors equally abandon, thus leaving a trail of abandoned policies and their relevant projects”. He added that “there is a big disconnect between the policymakers and those for whom the policies are made, resulting in lack of ownership and acceptance of the policies by the people. The result is a near directionless growth”

The positive impact of government capital spending could be credited to the fact that most capital expenditure components enter into productive projects like bridges, roads, schools, airports, and hospitals, among others, which have higher social benefits and longer paybacks - serving as a positive externality to economic activities in the economy. It is recommended to the government to expand its spending share of capital expenditure to further enhance the

growth of the economy, since it has been getting small share as compared to recurrent expenditure. To ensure higher productivity of capital in promoting economic growth, capital allocations should be prioritized based on projects and areas that have strong benefits to the citizens and sound linkages with various sectors of the economy. Recurrent expenditure is found to have a significant negative impact on the economic growth of Nigeria. This finding may be due to interest payment where the government uses significant portions of the recurrent expenditure as debt interest on previous borrowings. Thus, this calls for the need for government to improve the spending patterns of recurrent expenditure by focusing more on human development through appropriate expenditure switching policy. (Chandana et al 2024)

The major objective of this study is to determine the predictive role of annual revenue to the three tiers of Government on economic recovery in Nigeria (2001 – 2023). The study specifically seeks to:

1. evaluate the effect of revenue allocation to Federal government on the GDP of the economy
2. ascertain the effect of revenue allocation to State Government on the GDP of the economy
3. determine the effect of revenue allocation to the Local Government on the GDP of the economy

To pursue the above study objectives, the hypotheses below were formulated:

- H₀₁: There is no significant relationship between the allocation of revenue to the federal government on the Gross Domestic Product of the Economy in Nigeria
- H₀₂: There is no significant relationship between the allocation of revenue to the State government on the Gross Domestic Product of the Economy in Nigeria
- H₀₃: There is no significant relationship between the allocation of revenue to the Local government on the Gross Domestic Product of the Economy in Nigeria

2.1 LITERATURE REVIEW

2.1.1 Government Revenue

Odinakachi et al (2021) reflected that, Section 162 (10) of Nigeria's 1999 constitution, defines revenue as any income returns accruing from or derived by the government from any receipt arising from the operation or any law, property held by the government and any returns by way of interest or loans and individuals in respect of shares or interest held by the government in any company or statutory body Government revenue includes all amounts of money (i.e., taxes and fees) received from sources outside the government entity. Large governments

usually have an agency or department responsible for the collection of government revenue from companies and individuals. Government revenue may also include reserve bank currency, which is printed, and this is recorded as an advance to the retail bank together with a corresponding currency in circulation. The income is derived from the official cash rate for instruments such as 90 days bills. Prior to the oil boom of early 1970s, agriculture was the mainstay of the economy as the sectors contribution to GDP was about 70%. This contribution has fallen to about 30% with the advent of crude oil. Since the advent of crude oil, the trend has changed in favor of the latter, now it is the oil revenue that contributes the bulk of the federal government's revenue. The main sources of revenue to the Nigeria government are largely grouped as oil and non oil revenues.

Nwachukwu, Nwoha and Inyama (2022) aligned with the above assertion, noting that government can discover any of the numerous tax gear to elevate finances for its projects. No matter the demanding situations confronted by the Nigerian financial system the federal government through its liberation plan announced Nigeria as turning into a higher location for enterprise investment. The contribution of the oil sector to the economic growth of Nigeria need not be over emphasized occasioned by the monolithic nature of her economy. OPEC (2014) noted that the oil and gas sector in Nigeria accounts for about 35% of the gross domestic product and petroleum exports revenue accounts for about 70% of total exports revenue

2.1.2 Oil Revenue

Oil revenue is the income earned from the sale of crude oil. oil is the main source of government revenue, accounting for about 90% of total exports, and this approximates to 80% of total government revenues in Nigeria. Ilori and Akinwunmi (2020) noted that oil and gas is the major source of revenue in Nigeria as well as supporting the nation for the future. The authors argued that the budget of Nigeria most vital source of income is from oil revenue. It includes, though is not limited to, revenue from the export of crude oil, petroleum income tax receipts, and revenue from the domestic sale of crude oil (Ilori & Akinwunmi, 2020). The revenue generated from oil and gas in Nigeria contributes to the economic growth of the Country. Efanga et al, (2020) argue that the over-reliance on oil revenue has a tendency to mislead and depress sourcing of revenue from other sources by the government. For instance, as a result of enormous oil revenue flows; countries tend to de-emphasize taxes as a source of government revenue.

2.1.3 Revenue Allocation to the three tiers of Government in Nigeria.

Chinwe et al (2023), The federal and state governments, or whatever names they may go by, are constitutionally designated as the minimum number of tiers of government in all federal systems. Nonetheless, Nigeria is a federal state with three levels of government: federal, state, and municipal. More often than not, the federating units' statutory responsibilities are not complemented by the distribution of revenue sources. This leads to an imbalance between the obligation to make expenditures and the resources available to do so, which causes the different governmental levels' fiscal capacities and their expenditure responsibilities to diverge. As a result, the debate over revenue sharing or allocation emerged as a means of striking a balance between the duties and powers of various governmental levels. Usually, to do this, resources are moved from one governmental level to another. Like in many federations, Nigeria's constitution or Revenue Commission may approve a formula or set of criteria for the transfer of resources from the federal to the subordinate levels of government. The Federation Account Allocation Committee (FAAC) (November 2023) disbursed the sum of ₦1.35 trillion to the three tiers of government in November 2023 from the total revenue generated in October 2023. The amount disbursed comprised: • ₦660.09 billion recorded from the Statutory Account, • ₦262.89 billion from Exchange Gain, • ₦60.00 billion from Non-Oil Revenue, • ₦16.20 billion from Electronic Money Transfer Levy (EMTL), and • ₦347.34 billion from Value Added Tax. The allocations to the three tiers of government for November 2023 were: • Federal Government with a total of ₦323.35 billion.

- a. States with a total of ₦307.72 billion.
- b. Local Governments with a total of ₦225.21 billion.

The sum of ₦50.67 billion was shared among the oil-producing states from the 13% derivation fund. The revenue-generating agencies comprising Nigeria Customs Service (NCS), Federal Inland Revenue Service (FIRS), and Nigerian Upstream Petroleum Regulatory Commission (NUPRC) received ₦16.38 billion, ₦24.59 billion, and ₦12.52 billion respectively, as cost of revenue collections.

2.1.4 Economic Growth

Odinakachi et al (2021) Economic growth can be defined as the steady process by which the productive capacity of the economy is increased over time to achieve rising degrees of public yield and pay (Todaro and Smith, 2005). In any case, it is appropriate to take note of the fact

that growth is concerned exclusively with quantitative and quantifiable qualities. An economy can grow yet may not develop. It is hard to envision monetary advancement without financial development. The two concepts contrast in idea; however they are now and again utilized conversely. Though they differ in concept, they are sometimes used interchangeably (Berembo & Igonikon, 2020). Environmental conditions that would decorate monetary growth should be created via funding of the authorities revenue on infrastructural and social provision so that it will result in improving the life of the citizens of the country, then it may be said the development has taken place. Omodero, et al (2018) opined that, Economic Development is the development of economic wealth of countries, regions or communities for the well-being of their inhabitants (Salmon, From the policy viewpoint, Economic Development can be referred to as efforts that seek to improve the economic well-being and quality of life for a community by creating and/or retaining jobs and supporting or growing incomes and the tax base. The scope of economic development includes the process and policies by which a nation improves the economic, political and social well-being of its people. The goals of economic development policies are to seek economic growth through higher productivity, establishing political systems that represent the preferences of its citizens as accurately as possible, extension of rights to all social groups, creating opportunities for institutions/organizations to function properly, such that they will be capable of handling complex technical and logistic tasks. These tasks involve raising revenues through taxes and utilizing it to provide public service

2.1.5 Gross Domestic Product

The gross domestic product (GDP) is one of the primary indicators used to gauge the health of a country's economy. According to the Central Bank of Nigeria (2010), GDP is the money value of goods and services produced in an economy during a period of time irrespective of the nationality of the people who produced the goods and services. It is usually calculated without making any allowance for capital consumption (or deductions for depreciation). It represents the total dollar value of all goods and services produced over a specific time period (Berembo & Igonikon, 2020). Usually, GDP is expressed as a comparison to the previous quarter or year. For example, if the year-to-year GDP is up 5%, this is thought to mean that the economy has grown by 5% over the last year.

2.2 Theoretical Review

Chinwe et al. (2023) posit that the impact of Statutory Allocation on Economic Development can be analyzed through the theoretical lenses of public goods and fiscal federalism. Within the realm of fiscal federalism, Agu (2010) emphasizes that discussions about the internally generated revenue of sub-national governments are contextualized.

2.2.1 Kremer's O-Ring Theory of Economic Development

The O-Ring Theory of Development extends economic theory to model production and employment, emphasizing the critical role of skill-matching along the chain of production. Developed by Kremer, the theory posits that the complementarity of skills is vital for high-value output, leading to spillovers, strategic complementarity, and multiple equilibria in education. This theory finds empirical relevance in understanding international economic development, particularly in the context of the 'brain drain' phenomenon, where skilled individuals migrate from less developed to wealthier countries (Abbasov & Aliyev, 2018).

2.2.2 Buchan Fiscal Residuum Theory

Buchan (1982) proposes a meaningful approach to fiscal federalism by considering overall fiscal pressures on individuals. The Fiscal Residuum, as per Buchan, balances contributions made against the value of public services received. This theory emphasizes horizontal equity, where fiscal residuals should be equal for individuals or states. While acknowledging constitutional barriers, Buchan suggests "Unconditional Equalization Grants" as a second-best solution. This theory's relevance to Nigeria lies in addressing the fiscal disparities between states, especially those rich in revenue generation versus those with limited resources.

2.2.3 Endogenous Growth Theory

Endogenous growth theory propounded by Romer (1994) holds that economic growth depends on investment in human capital, innovation and knowledge management. The theory also supports government policies that could boost economic growth in a nation. These policies include all measures governments take to encourage exploitation of IGR opportunities within the domain of every state and local government in a nation. There is no homogeneity in IGR sources and opportunities existing in states and local governments, but the government at the center gives states the privilege to harness all available resources within the ambit of the law and constitution of the country. Classical economists particularly Adam

Smith advocated minimum government intervention in providing public goods, law and order and those investments that cannot be adequately provided by private sector due to their high risk or unprofitable nature (Jibir & Aluthge, 2019b). This doctrine dominated the world economy until the unprecedented Great Depression of 1930s that exposed the failure of the classical system. On the contrary, the Keynesian economists supported the use of public expenditure in promoting growth and development by stimulating aggregate demand especially during economic depression. This provides the obvious reason for government participation in economic activities in the modern time. This is because government is needed to correct short term distortions in an economy (Jibir & Aluthge, 2019b). Government also exists so as to provide basic services such as health, education, communication, transportation, among others, through expenditures which have an impact on the wellbeing of citizens and business environment for the private sector (Aladejare, 2019; Jibir & Aluthge, 2019b; Ukwueze, 2015).

(Chandana et al 2024) stated that Wagner (1883) proposed a theory of government expenditure in economic literature. The law states that as the per capita income of a country rises, the share of public spending to gross domestic product also rises - which connote direct positive relationship between them. Put differently, industrialization-driven growth in per capita income incentivizes government to increase its expenditures with direct bearing on social welfare (education, health, etc.), which in turn encourages industries to produce more goods and services as aggregate demand goes up. Increased industrial production finally raises aggregate output. Since the emergence of Wagner's law, there has been debate over the role of government spending on the performance of an economy both at theoretical and empirical level.

2.3 Empirical Review

Osamor et al (2023) examined the effects of tax revenue on economic growth in Nigeria. Tax revenue was a proxy with PPT, CIT, VAT and CTD, while economic growth was proxy with GDP. Ex post facto research design was employed, while time series quarterly data were collected from the statistical bulletins of CBN and FIRS for 10 years (2011-2020). Data collated were analyzed using descriptive analysis, unit root test, bounds cointegration test and ARDL. The findings revealed that PPT, CIT, VAT and CTD had positive insignificant effects on economic growth. The study concluded that tax revenue had insignificant effects on the economic growth of Nigeria and therefore, recommended that proper tax audit should constantly be carried out to reduce tax evasion and avoidance.

Oladipupo (2023) ascertained the effect of government revenue and expenditure on economic growth in Nigeria utilizing time series data spanning from year 2000-2021. The study specific goal is to evaluate the impact of capital expenditure, recurrent expenditure, and non-oil revenue on Nigeria's economic growth. *Ex-post facto* research is used for this study and the data collected are analyzed and tested for unit root using Augmented Dickey Fuller unit root test. The results show that the series had a mixed order of integration, with RGDP becoming stationary at level while CAPEX, NOILR, and RECEXP were stationary at first difference. Thus, cointegration test was conducted using the Auto regressive distributed Lag (ARDL) bounds test to determine whether a long run relationship exist between the variables. Both the ARDL short and long run estimate were conducted to show the dynamic influence of the independent variables on the dependent variable. Findings of the research showed that non-oil revenue and capital expenditure were positively influencing economic growth in both short and long run period but was not significant at the 5 percent level. Recurrent expenditure on the other hand had an insignificant negative effect on economic growth of Nigeria in both short and long run period. Also posit that Appah (2022) determined the relationship between oil revenue and economic growth in Nigeria. It spanned through the period 1990 through 2019. The specific objectives are to investigate the relationship between crude oil/gas export, petroleum profit tax/royalty, domestic crude oil sales, oil licensing fees on real gross domestic product and real gross national product in Nigeria. Data were sourced from the Central Bank of Nigeria (CBN) statistical bulletin, Federal Inland Revenue Service Fact Book and the World Bank Development Website. Descriptive Statistics, Pearson Moment Correlation Coefficient and Ordinary Least Square Multiple Regression Statistical tools were used in the study. The results revealed that Crude oil/gas export has a significant and negative relationship with the real gross domestic product in Nigeria; Petroleum *profit* tax/royalty has a significant and positive relationship with real gross domestic in Nigeria; Domestic crude oil sales have an insignificant and negative relationship with real gross domestic product in Nigeria; Oil licensing fees have an insignificant and negative relationship with real gross domestic product in Nigeria.

Berembo and Igonikon (2020) examined the relationship between government revenue and economic growth in within the period of 2000-2017. Its specific objective was to ascertain the relationship between independent revenue of federal government of Nigeria (INR) and Gross domestic product (GDP) of Nigeria. Explanatory, historical and correlational design was adopted for the study while secondary data was utilized for the study. Data was extracted from

Statistical bulletin of Central Bank of Nigeria and National Bureau of Statistics annual reports (various years). The data collected was from the period 2000–2017. Regression was used for data analysis and testing of the hypothesis. The result of the study shows that federal government independent revenue has a significant and positive relationship with economic growth when measured on the GDP.

Ihenyem and Ogbise, (2022) examined the effect of tax revenue generation on economic growth in Nigeria. Secondary data was obtained from reliable sources, using multiple linear regression, the study found that PPT, CIT and VAT have a positive impact on Nigeria's economic growth while customs and excise duties have a negative impact on Nigeria's economic growth.

The dynamic relationship between tax revenue, infrastructural development and economic growth in Nigeria was examined by Ayeni and Afolabi (2020) using time series data covering the period from 1981 to 2018. Vector autoregression (VAR) and other robust estimation tools were employed and the study found that while tax revenue influences economic growth and infrastructure, infrastructure on the other hand does not influence economic growth, though it significantly impacts tax revenue collected.

The current study covered a period from 2001 - 2023 and restricted literature reviews to a period from 2020 to 2024, which prevented a wider review and insight on this article. And limited time factor in conducting this research work. Based empirical review on the oil and non oil revenue on the Nigerian economy exhibited significant variations across countries. Even among the studies carried out in Nigeria there are still some significant variations. Some of these Studies failed to adopt robust methodologies in carrying out the analysis of research data. Also most of the studies were conducted in developing and few other developed economies that differ significantly from the Nigerian context. From the review of related literature, it shows that most of the study was faced with methodological problem of using single and double independent variables as measures of oil and non oil revenue in relation to the Nigerian economy.

3. METHODOLOGY

This study utilized Ex-Post Facto research design. The choice of the design is based on the idea that the method provides discovery on trends and pattern of change. The study used time series data covering a period 2001 to 2019. Data were extracted from Central Bank Statistical Bulletin and Federation Account Allocation committee for various years. Data extracted

includes gross domestic product as the dependent variable, while federation allocation to the three tiers of government sourced from the office of the accountant general of the federation represent the independent variables.

Inferential statistics will be utilized using:

- i. Coefficient of correlation: which is a good measure of relationship between two variables that tell us about the strength of relationship and the direction of the relationship as well.
- ii. Linear regression analysis: Regression analysis predicts the value the dependent variable based on the value of the independent variable and explains the impact or effect of changes in the values of the variables.

Decision Rule: Accept the alternative hypothesis, if the correlation coefficient R is (0)Zero or +1(plus one) otherwise, it will be rejected.

4. RESULT AND DISCUSSIONS

This study aims to investigate the impact of revenue allocation to the federal, state and local government to the GDP of Nigeria economy, focusing on three specific objectives: first, to ascertain the effect of revenue allocation to from the federation account to the Federal government. second, to ascertain the effect of revenue allocation to from the federation account to the state government; and third, to ascertain the effect of revenue allocation to from the federation account to the Local government of Nigeria. Table 4.3, 4.4 and 4.5 below shows the descriptive analysis of the data.

The data extracts below will be used to examine the relationship between our dependent and independent variables. While the Pearson's product moment correlation will serve as our measurement tool

4.2 Test of Hypothesis

The hypotheses were tested using the Linear regressing analysis to the value of the dependent variable based on the value of the independent variables, while correlation coefficient was deployed to measure the relationship between the two variables.

4.2.1 Hypothesis 1

H₀₁: There is no significant relationship between the allocation of revenue to the federal government on the Gross Domestic Product of the Economy in Nigeria

Table 1 below will be we used to analyze the data extracted to measure the relationship between federation allocation to federal government and the effect on the GDP on the Nigerian Economy.

Table 1: relationship between federation allocation to federal government and the effect on the GDP

No.	YEAR	X	Y	XY	X ²	Y ²
1	2001	723.92	26658.62	19298708.2	524060.166	710682020.3
2	2002	842.51	30745.19	25903130	709823.1	945266708.1
3	2003	948.41	3304.8	3134305.37	899481.528	10921703.04
4	2004	1180.81	36057.74	42577340	1394312.26	1300160614
5	2005	1456.96	38378.8	55916376.4	2122732.44	1472932289
6	2006	1739.93	40703.68	70821553.9	3027356.4	1656789566
7	2007	1869.19	43385.88	81096453	3493871.26	1882334583
8	2008	2655.45	46320.01	123000471	7051414.7	2145543326
9	2009	2151.1	50042.36	107646121	4627231.21	2504237794
10	2010	2416.51	54612.26	131971072	5839520.58	2982498942
11	2011	3237.04	57511.04	186165537	10478428	3307519722
12	2012	3451.76	59929.89	206863597	11914647.1	3591591715
13	2013	3711.75	63218.72	234652084	13777088.1	3996606558
14	2014	3404.45	67152.79	228618316	11590279.8	4509497205
15	2015	2600.98	69023.93	179529861	6765096.96	4764302913
16	2016	2081.41	67931.24	141392762	4332267.59	4614653368
17	2017	2564.04	68490.96	175613561	6574301.12	4691011602
18	2018	3483.89	69799.94	243175313	12137489.5	4872031624
19	2019	3344.56	71387.83	238760881	11186081.6	5096222272
		43864.7	964655.68	2496137443	118445483	55054804526

Correlation coefficient $r = \frac{n\sum xy - \sum x \sum y}{\dots}$

$$\sqrt{(n\sum x^2 - (\sum x)^2)(n\sum y^2 - (\sum y)^2)}$$

Where:

X represents federation allocation to federal government for the respective period from 2001 to 2019

Y represents Nigerian GDP – from 2001 to 2019

N = number of years under consideration

$$r = \frac{19(2496137443) - (43854.67)(964655.68)}{\sqrt{(19(118445483.4) - (43864.67)^2)(19(55054804526) - (964655.68)^2)}}$$

$$r = 0.832$$

$$r^2 = 0.832^2 = 0.693 * 100 = 69.34\%$$

The result of the regression analysis on the annual revenue of the federal government, specifically as it relates to federation allocations and the economic growth of Nigeria expressed by GDP had a coefficient of adjusted R-square value of 0.693 which means that 69.3% of the variation in the GDP were explained by the changes revenue/federal allocation within the period. The adjusted R-square of 69.3% shows that the model has a good fit with the data.

Data analysis from Table 1 indicates that federation allocation to the federal government has a positive significant effect on gross domestic product in Nigeria. This can be observed from the correlation coefficient 0.832 and a coefficient of determination of 69.3%. Thus, null hypothesis is Rejected and alternative hypothesis Accepted.

4.2.2 Hypothesis 2

H₀₂: There is no significant relationship between the allocation of revenue to the state government on the Gross Domestic Product of the Economy in Nigeria

Table 2 below will be we used to analyze the data extracted to measure the relationship between federation allocation to State government and the effect on the GDP on the Nigerian Economy.

Table 2: relationship between federation allocation to State government and the effect on the GDP

No.	YEAR	X	Y	XY	X ²	Y ²
1	2001	404.61	26658.62	10786344.2	163709.252	710682020.3
2	2002	424.06	30745.19	13037805.3	179826.884	945266708.1
3	2003	489.16	3304.8	1616575.97	239277.506	10921703.04
4	2004	666.04	36057.74	24015897.1	443609.282	1300160614
5	2005	815.19	38378.8	31286014	664534.736	1472932289
6	2006	976.26	40703.68	39737374.6	953083.588	1656789566
7	2007	1070.86	43385.88	46460203.5	1146741.14	1882334583
8	2008	1511.51	46320.01	70013158.3	2284662.48	2145543326
9	2009	1387.78	50042.36	69447786.4	1925933.33	2504237794
10	2010	1538.65	54612.26	84029153.8	2367443.82	2982498942
11	2011	1921.61	57511.04	110513790	3692584.99	3307519722
12	2012	2084.69	59929.89	124935242	4345932.4	3591591715
13	2013	2251.34	63218.72	142326833	5068531.8	3996606558
14	2014	2062.63	67152.79	138511359	4254442.52	4509497205
15	2015	1597.64	69023.93	110275392	2552453.57	4764302913
16	2016	1347.23	67931.24	91519004.5	1815028.67	4614653368
17	2017	1681.47	68490.96	115165495	2827341.36	4691011602
18	2018	2210.73	69799.94	154308821	4887327.13	4872031624
19	2019	2174.94	71387.83	155264247	4730364	5096222272
		26616.4	964655.68	1533250496	44542828.5	55054804526

Correlation coefficient $r = \frac{n\sum xy - \sum x \sum y}{\sqrt{(n\sum x^2 - (\sum x)^2)(n\sum y^2 - (\sum y)^2)}}$

Where:

X represents federation allocation to State government for the respective period from 2001 to 2019

Y represents Nigerian GDP – from 2001 to 2019

N = number of years under consideration

$$r = \frac{19(1533250496) - (26616.4)(964655.68)}{\sqrt{(19(44542828.46) - (26616.4)^2)(19(55054804526) - (964655.68)^2)}}$$

$$r = 0.866$$

$$r^2 = 0.866^2 = 0.750 * 100 = 75.01\%$$

The result of the regression analysis on the annual revenue of the state government, specifically as it relates to federation allocations and the economic growth of Nigeria expressed by GDP had a coefficient of adjusted R-square value of 0.750 which means that 75.01% of the variation in the GDP were explained by the changes revenue/federal allocation within the period. The adjusted R-square of 69.3% shows that the model has a good fit with the data.

Data analysis from Table 2 indicates that federation allocation to the state government has a positive significant effect on gross domestic product in Nigeria. This can be observed from the correlation coefficient 0.866 and a coefficient of determination of 75.01%. Thus, null hypothesis is Rejected and alternative hypothesis Accepted.

4.2.3 Hypothesis 3

H₀₃: There is no significant relationship between the allocation of revenue to the Local government on the Gross Domestic Product of the Economy in Nigeria

Table 3 below will be we used to analyze the data extracted to measure the relationship between federation allocation to Local government and the effect on the GDP on the Nigerian Economy.

Table 3: the relationship between federation allocation to Local government and the effect on the GDP

No.	YEAR	X	Y	XY	X ²	Y ²
1	2001	324.23	26658.62	8643524.36	105125.093	710682020.3
2	2002	360.23	30745.19	11075339.8	129765.653	945266708.1
3	2003	396.8	3304.8	1311344.64	157450.24	10921703.04
4	2004	507.87	36057.74	18312644.4	257931.937	1300160614
5	2005	622.1	38378.8	23875451.5	387008.41	1472932289
6	2006	744.81	40703.68	30316507.9	554741.936	1656789566
7	2007	815.32	43385.88	35373375.7	664746.702	1882334583
8	2008	1151.53	46320.01	53338881.1	1326021.34	2145543326

9	2009	992.28	50042.36	49656033	984619.598	2504237794
10	2010	1252.42	54612.26	68397486.7	1568555.86	2982498942
11	2011	1459.35	57511.04	83928736.2	2129702.42	3307519722
12	2012	1583.01	59929.89	94869615.2	2505920.66	3591591715
13	2013	1708.58	63218.72	108014241	2919245.62	3996606558
14	2014	1563.13	67152.79	104968541	2443375.4	4509497205
15	2015	1205.19	69023.93	83186950.20	1452482.94	4764302913
16	2016	1011.04	67931.24	68681200.9	1022201.88	4614653368
17	2017	1263.39	68490.96	86530794	1596154.29	4691011602
18	2018	1667.25	69799.94	116373950	2779722.56	4872031624
19	2019	1636.76	71387.83	116844745	2678983.3	5096222272
		20265.29	964655.68	1163699361	25663755.8	55054804526

$$\text{Correlation coefficient } r = \frac{n\sum xy - \sum x \sum y}{\sqrt{(n\sum x^2 - (\sum x)^2)(n\sum y^2 - (\sum y)^2)}}$$

Where:

X represents federation allocation to Local government for the respective period from 2001 to 2019

Y represents Nigerian GDP – from 2001 to 2019

N = number of years under consideration

$$r = \frac{19(1163699361) - (20265.29)(964655.68)}{\sqrt{(19(25663755.83) - (20265.29)^2)(19(55054804526) - (964655.68)^2)}}$$

$$r = 0.859$$

$$r^2 = 0.859^2 = 0.738 * 100 = 73.84\%$$

The result of the regression analysis on the annual revenue of the Local government, specifically as it relates to federation allocations and the economic growth of Nigeria expressed by GDP had a coefficient of adjusted R-square value of 0.738 which means that 73.8% of the variation in the GDP were explained by the changes revenue/federal allocation within the period. The adjusted R-square of 73.8% shows that the model has a good fit with the data.

Data analysis from Table 3 indicates that federation allocation to the Local government has a positive significant effect on gross domestic product in Nigeria. This can be observed from

the correlation coefficient 0.738 and a coefficient of determination of 73.8%. Thus, null hypothesis is Rejected and alternative hypothesis Accepted.

CONCLUSION AND RECOMMENDATIONS

The study determined the effect of government revenue on economic growth in Nigeria within the period of 2001-2019. This study utilized *Ex-Post Facto* research design. Data were extracted from Central Bank Statistical Bulletin and summary of federation account committee. The hypotheses were tested using multiple regressions analysis and found that Government revenue as it relates to federal allocation to the three tiers of government has a positive significant effect on gross domestic product in Nigeria. Conclusively, government revenue on economic growth affects the growth of Nigerian economy.

Based on the findings, the following recommendations were stated:

- a. This study recommends for the diversification of the Nigeria economy by developing the non –oil sector side by side with oil sector. This sector has long been neglected over the years as a result of too much reliance on oil sector which now is seriously affecting the economy. This will increase the revenue of the state as well as the spending power of the government as it relates to capital expenditure. Which will bring out improved GDP
- b. The allocation to federal, state and local government has to be adequate and timely to meet their needs and the purpose for which it is meant has to followed through for it to have a significant effect on the GDP of the economy.
- c. More of capital projects should be encouraged over recurrent expenditures as these projects will bring about more jobs and improve the standard of living of the country which will in turn improve the GDP of the country.

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