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# Fiscal Policy Variables and Economic Growth in Nigeria

**Ele, Linus Egwu**
Department of Banking and Finance,
University of Uyo, Uyo, Akwa Ibom State
egwulines@gmail.com / linusele@uniuyo.edu.ng
ORCHI: 0000-0002-5993-2916

**Mgbada, Friday Nwome**
Department of Banking and Finance
Ebonyi State University, Abakaliki

**Nwafor, Ifeanyi Nwankwo**
Department of International Business
Ulster University London
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***Abstract***
*This study focused on the effect of fiscal policy variables on economic growth in Nigeria, secondary data was used to draw out information. The specific objectives were to: determine the impact of government expenditure on economic growth in Nigeria; and assess the impact of government tax revenue generation on economic growth in Nigeria. The ordinary least squares (OLS) method was employed to estimate the parameters in the analysis. The findings indicate that: government expenditure has a positive and significant impact on Nigeria's gross domestic product; government tax drive has a negative and significant impact on Nigeria's gross domestic product. Based on the findings, the study recommends as follows: government should reduce its spending when tax rate are high, this will balance effect and normalize growth; government should review the tax rates downward because it is hitting hard on the aggregate economic output.*

***Keywords:*** *Fiscal Policy, Economic Growth, Macroeconomics, Revenue Generation, Tax Rate*

## Introduction

### 1.1 Background to the Study

Fiscal policy is one of the macroeconomic principles which the government mediates in the economic activity of the nation. It is the purposeful; use of instruments of taxation and public spending as well as debt operations to achieve certain macroeconomic objectives facing government. There is no doubt that government is an institution saddled with a myriadfunctions. However, the way and manner in which these functions are carried out vary from one country to another. Prior to the economic depression of the 1930s, economist held the general view that the market system was the perfect solution. The primary center point of this belief was the famous law of the market which says that supply created its own demand. Hence, the market system was capable of allocating societal resources equitably to all manner of citizens. The recognition accorded to fiscal policy is a recent development because, the scale

had always swayed in favour of the market economy and also balanced budget had always been advocated for without recourse to the nation by Keynes that an attempt to balance the budget resulted to its balance (Uwazie, 2018).

In Nigeria, the years of corruption, civil war, military rule, and mismanagement have hindered both human and material. However,years of negligence and adverse policies have led to the under-utilization of these resources (Economic Watch, 2010), and this has contributed to the increasing unemployment rate in Nigeria. In 2000, the unemployment rate was 13.1%, and 21.10% in 2010. On the average, there has been an upward trend (CBN, 2005,2006,2009; Nigeria Bureau of Statistics, 2010). The use of government revenues and expenditures to influence macroeconomic variables developed as a result of the Great Depression when the previous laissez-faire approach to economic management became discrete. Fiscal policy is based on the theories of the British economist john Maynard Keynes, whose Keynesian economics indicated that government changes in the levels of economic activity. Fiscal and monetary policy are the key strategies used by a country's government and central bank to advance its economic objectives. The combination of these policies enables these authorities to target the inflation (which is considered "healthy" at the level in the rate of 2% - 3%) and to increase employment. Additionally, it is designed to try to keep GDP growth at 2% - 3% and the unemployment rate near the natural unemployment rate 4% - 5%. This implies that fiscal policy is used to stabilize the economy over the course of the business cycle.

In Nigeria, the general fundamental intention of economic management operations focuses on the achievement of rapid growth and development including improvements in social welfare of the people and creating an environment that is conducive enough to drive private sector investments. There are conflicting views of researchers and institutions on the use and application of fiscal policy instruments in Nigeria. An extensive use of fiscal policy is necessary for economic growth and development in Nigeria as it plays a dynamic role in economic development. CBN (2014) notes that fiscal operations of the federal government resulted in estimated overall national deficit of 142.0 billion naira or 1.7% of GDP, the power of fiscal policy as an instrument of economic stabilization occupies a lofty place in the management of the economy. For instance, the total public expenditure for the year 1988 was 27.75 billion naira (CBN 2013) and a decade later (1998) it shot up to 487.11 billion naira.

The revenue accruing to government has also exhibited an increasing nature but has never offset total expenditure such that in 1988, the total federally collected revenue was 27.60 billion naira and rose to 463.61 billion naira in 1998 (CBN, 2013). By 2013, the total government expenditure now counted in trillions (5.165 trillion) according to the 2013 statistical bulletin of the central bank of Nigeria. Despite the continuous growth in fiscal policy measures, the Nigerian economy is yet to come on the path of sound growth and development. Studies point out that the economy is still tied up by chronic unemployment, rising rate of inflation, dependence in foreign technology, one-source foreign exchange earnings, volatility of the naira, etc. Nigeria is gifted with enormous potential growth and development with her vast oil and gas resources, rich and expensive agricultural land, solid minerals and abundant human resources. Yet, given these factors, successive governments have not done enough to put the nation's resources to effective productive use in such a way as to speed up growth and development and these and more lead us to some of the problem questions we intend to investigate in this study.

The management of the Nigerian economy in order to achieve macroeconomic stability has been unproductive and negative, hence one cannot say the Nigerian economy is performing. This is evident in the adverse inflationary trend, government fiscal policies, ripping foreign

exchange rates, the fall and rise of gross domestic product, unfavourable balance of payments as well as increasing unemployment rates which are all symptoms of growing macroeconomic instability. As such, the Nigerian economy is unable to function well in an environment where there is low capacity utilization attributed to shortage in foreign exchange as well as the volatile and unpredictable government policies in Nigeria. Hence, the study is poised to evaluate the effect of fiscal policy variables on the growth of Nigerian economy.

### 1.2 Objectives of the study

The broad objective of this study is to determine empirically the impact of fiscal policy variables on economic growth of Nigeria between 1981 and 2021. The specific objectives are

1. To determine the effect of government expenditure on economic growth in Nigeria.
2. To evaluate the effect of government tax revenue generation on economic growth in Nigeria.

### 1.3 Research Hypothesis

To guide the focus of this work, the following research hypothesis are formulated in null form:

Ho: Government expenditure does not affect significantly on economic growth in Nigeria.

Ho: Government tax revenue generation has no significant effect on economic growth in Nigeria.

### 1.4 Significance of the study

A study of the impact of fiscal policy measured on economic development in Nigeria has a long list of significance but specially, this work is significant in the following ways:

It will guide policy makers on the correct mix and use of economic tools relating to fiscal operations and the intended goals, it will guide the private sector in reaching investment decisions. This study will also benefit the following:

Government and her agencies (CBN): The various findings of this research would help the government and financial institutions to modify and adopt an enhanced fiscal policy on the economy that is policy makers of the central bank of Nigeria who issue guideline governing international trade practices.

Banks especially the commercial banks: importantly, this study would help banks to identify the strength and weakness of each foreign exchange system and hence adopt the policy that suits their activities. This will definitely enhance growth and development of the economy of commercial banks in Nigeria.

Students of finance and Banking: from this work has a clue to further research into the field of exchange rate fluctuations and international trade. Hence, the study will also serve as a guide to further researchers on this subject.

The public: who have right to contribute and informed activities of our banking institutions. It is hoped that the, findings and recommendations of this study will be of great importance to the above mentioned group.

### 1.5 Scope of the study

This study has both space and time scope. It is an analytical investigation of the impact of fiscal policy measures on economic development in Nigeria between the year 1981 and 2021. The variables are economic development proxy by national output (GDP), tax

revenue and government expenditure. This study focuses exclusively on fiscal policy and its relationship with gross domestic product (GDP) in Nigeria. This study appraises the impact of fiscal actions of the government for the period 1981 to 2021. This period of time is chosen due to the availability of data on the subject matter and the change in the economic structure of Nigeria over the last decade. The study would make use of key variables such as tax and government expenditure.

## Review of Related Literature

### 2.0 Conceptual Review

### 2.1 Concept of fiscal policy

The term fiscal policy has conventionally been associated with the use of taxation and public expenditure to influence the level of economic activities. Fiscal policy deals with government deliberate actions in spending money and levying taxes with a view to influencing macroeconomic variables in a desired direction. This includes sustainable economic growth, high employment rate and low inflation (Microsoft Corporation, 2004). Thus, fiscal policy aims at stabilizing the economy. Increases in government spending or a reduction in taxes tend to pull the economy out of a recession; while reduced spending or increased taxes slow down a boom (Dornbusch& Fischer, 1990).

Fiscal policy involves the use of government spending, taxation and borrowing to influence the pattern of economic activities and also the level and growth of aggregate demand, output and employment. Fiscal policy entails government's management of the economy through the manipulation of its income and spending power to achieve certain desired macroeconomics objectives (goals( amongst which is economic growth (Medee&Nembee, 2011). Peter and Simeon (2011) define fiscal policy as the process off government management of the economy through the manipulation of its income and expenditure and to achieve certain desired macroeconomic objectives. Central Bank of Nigeria (2011) defined fiscal policy as the use of government expenditure and revenue collection through tax and amount of government spending to influencing the economy.

In finance, fiscal policy is the use of government revenue collection (taxation) and expenditure (spending) to influence the economy. The two main instruments of fiscal policy are government taxation and expenditure. Geoff (2012) contended that fiscal policy involves the use of government spending, taxation and borrowing to affect the level and growth of aggregate demand, output and jobs creation. These policies affect tax rates, interest rates and government spending, in an effort to control economy. Fiscal policy is the means by which a government adjusts its level of spending in order to monitor and influence a nation's economy.

From all these definitions, it was deduced that one of the regulatory policies used by government in achieving its objectives to bring about economic growth is fiscal policy. Fiscal policy is an outgrowth of Keynesian economics; its logical analysis suggests that it offers a sure-fire means of stabilizing the economy. The goal of modern fiscal policy is to achieve economic efficiency and stability, in a modern economy, no sphere of economic life is untouched by the government. Two major instruments or tools are limited to these two, it may include public debt, public work among others.

Fiscal policy is undoubtedly, one of the most important tolls used by government to achieve macroeconomic stability of the economy of most developing countries (Ihendinihu, Jones &Ibanichuka, 2014). Therefore, the attempt to empirically test the effectiveness of monetary and fiscal policy in an economy dates back to the pioneering studies of Friedman and Easterly and Rebelo, (1993) empirically investigated the responsiveness of general price level

on economic activity represented by aggregate consumption to change in money supply and autonomous government expenditure using ordinary simple linear regression model to estimate the US data from 1897 – 1957. In their conclusion, they found out that a stable and predictable casual relationship existed between demand and money supply while no such significant relationship was observed for government expenditure (Abdul-Rahamoh, taiwo and Adejare, 2013). Hence, there was a stable aggregate aggregate and money supply for the period.

Consequently, Keynes proposed the concept of government intervention in the economy through the use of macroeconomic policies such as fiscal and monetary policies. Fiscal policy deals with government deliberate actions in spending money and levying taxes with a view to influencing macroeconomic variables in a desired direction. This includes sustainable economic growth, high employment creation and low inflation (Microsoft corporation 2004). Thus, fiscal policy aims at stabilizing the economy. Increases in government spending or a reduction in taxes tend to pull the economy out of a recession; while reduced spending or increased taxes slowdown a boom (Dornbusch& Fischer, 1990).

Government intervention in economic activities are basically in the form of controls of selected areas/sectors of the economy. These controls defer and depend on the specific needs or purpose the government desires to achieve. Samuelson and Nordhaus (1998), distinguished between two forms of regulation, namely: economic regulation involving control of prices, entry and exit conditions, regulations of public utilities such as transportation and media organization, regulation of the financial sector operations; social regulation aimed at protecting the health and safety of workers at work place, the environment and protection of customer rights. Our focus is on economic regulation.

### 2.1.2 Fiscal Policy Variables and Economic growth in Nigeria

Among the factors that drive economic growth and development Wilson (2002) identified structural changes which according to him involves a radical transformation of existing institution. He went ahead to state that the structural changes can take various but complementary forms including first, expansion of the non-agricultural sector so that labour is transferred to from the primary to the secondary and tertiary sector employment.It implies reduction in the size of contribution to the national output by the agricultural sector and not a fall in the output of this sector, but rather increases in absolute terms in agricultural sector which can be achieved when radical changes occur in the form of land reforms by government.

Secondly, it can take the form of transferring population from primary and secondary to tertiary employment, when there is improvement in transport, retail and whole sale distribution, education, government and domestic services. On the premise above, relationship could be established between fiscal policy operation and economic development is supported by Akpakpan's view as expressed in Wilson (2002) that development is defined in terms of improvement in the general welfare of the society usually manifested in the desirable changes in the various aspect of life of the society. By recognizing improvement in education, government and domestic service as factor that drive economic development, it can be reasoned that fiscal policy operations (government activity) tends towards economic development.

The government services could be expressed in terms of budget operation as all government services flow from its budgetary process. The role of fiscal policy in industrial development cannot be over emphasized the fax law and processes of government bears some effect of industrial activities in a way that a low tax rate regime drives industrial activities upward.

Improvement in education as a measure of development is captured in government spending on social services by building new schools and improving the structural and internal outlook of these institutions. The provision of health services is almost an exclusive preserve of government of Nigeria who through his fiscal operation (budgeting) expends its large chunk of its relevance on health services. For instance, a combined total government spending on education on health services in 1988 was 1.90 billion naira and a decade, later it rose to 18.133 billion in 1998. (CBN, 2013). The increasing trend in government services spending on education and health has been running even till 2014 when the combine total government expenses on health and education services sprouted up to 506.08 billion.

The role of the state in development was a major component of the Washington consensus of 1980 (Todaro and Smith 2011). The consensus rereviewd the participation of the African government in development and concluded in the adoption of the free market approach. The element of the consensus as spelt out by Todaro and Smith include the following;

- Fiscal discipline
- Redirection of public expenditure priority toward health, education and infrastructure.
- Tax reform, including the broadening of the tax base and cutting marginal tax rates.
- Unified and corporative exchange rates.
- Secure property right.
- Deregulation
- Trade liberalization.
- Privatization.
- Elimination of barriers to direct foreign investment
- Financial Liberalization.

These roles of government are supposed by the consensus captures fiscal operations (Fiscal Discipline, Public expenditures and tax reforms.

### 2.1.3 Concept of Economic Growth

Economic has long been considered as important goal of economic policy with a substantial body of research dedicated to complaining how this goal can be achieved (Fadare 2010). Economic growth has received much attention amongst scholars. According to Kohrravi and Karimi 2010, classical studies estimate by economic growth is largely linked in labour and capital as factors of production. The emergence of the indigenous growth theory has encouraged specially to question the role of other factors in explaining the economic growth phenomenon (Bogdanov 2010). Economic growth represent the expansion of the economic potentials GDP or output. For instance if the social rate of return on investment exit the private return, then tax policies that encouraged can raised the growth rate and levels of utility. Growth model that incorporate public services, the optimal tax policy lingers on the characteristics of services (Olopade and Olopade 2010). Economic has provided inside into why state growth at different rate over time; and this influence in her choice of tax rate and expenditure levels that will influence the growth rate.

## 2.2 Theoretical Framework

### 2.2.1 The savers-Spenders Theory of Fiscal Policy

Savers-spenders theory of fiscal policy was developed by Mankiw 2000. This theory was developed because of inconsistency of Barro-ramsey (1974) theory of indefinitely lived families and Diamond Samuelson 1965 theory of overlapping generation respectively. Savers-

spenders theory is the new theory developed to explain the behavior of fiscal policy in the economy. The theory is based on some proposition (Mankiw 2000). The first proposition is on temporary tax changes having large effect on the demand for goods and services. The proposition state that the higher the higher take-home pay that spender received will be offset by higher tax payment or by lower tax refunds. The implication is that consumer should realize that their life time resources were unchanged and therefore, should save the extra take-home pay to meet the upward tax liability.

The second proposition is on government debt in relation to crowd out capital in the long run. This proposition state that extra consumption of spenders as a result of a tax cut finance by debt reduces investment which in turn raises marginal product per capital and thus the interest rate. The higher interest rate therefore induces savers to save more their savings continues until the marginal product of capital is driven back to their rate of time preference. Thus, temporary decrease in the level of economic growth. It is to be noted that this proposition holds when tax is lump sum. The third proposition states that government debt increases steady state inequality. This means that a higher level of debt mean a higher level of taxation to pay the interest on debt. The tax will fall on both the savers and the spenders but the interest payment will go entirely to the savers. The implication of this is that a higher level of debt raises the income and consumption of the savers and lowers the income and consumption of the spenders. Thus, the higher level of dent raises the steady state inequality in income and consumption.

### 2.2.2 Keynesian Theory of Economic Growth

The Keynesians are the 20$^{th}$ century economist who embraced and also broadened John Maynard Keynes principles in the existence of incessant unemployment equilibrium, dissimilar to the classical economist idea on Say's law of market arguing that market economy are self-adjusting therefore there is no need for the government involvement in the economy. They believe that fiscal policy and not monetary policy is the most powerful policy measure to make the economy stable and move it forward. They are sometimes referred to as Demand side economist. Keynes accepts that the forces of demand and supply could not attend full employment condition. Keynesians therefore insisted that only government interference (public sector) through the use of unrestricted policy measures would take the free enterprise economy out of depression and ensure steady growth. Variations in savings and investment are responsible for modification in business activities and employment in an economy.

This study is therefore anchored on the Keynesians theory of economic growth because of its peculiar policy measures an believed that the fiscal policy is the most powerful economic tool.

## 2.3 Empirical review

Having surveyed fiscal policy, variable and its operation in Nigeria, it is necessary to turn to the empirical evidence of fiscal policy on economic development in Nigeria.

Igwe, Edeh and Ukpere 2015 researched on the impact of fiscal policy variables on economic growth in Nigeria: managerial economic prospective, using a time series data for the period 1970 – 2012. The study test for the present of unit root test using the augmented Dickey-fuller for stationarity. It is discovered that all the variables are integrated at (1). The Johansen co-integration reveals the presence of a long run relationship between economic growth and all the dependent variables (CX, RX and TX). The VECM analysis indicates that capital

expenditure and recurrent expenditure are positively related and statistically significant in determining economic growth in the long run. As expected, direct income tax is inversely related and statistically significant in determining economic growth in the long run. A 1% increase in capital expenditure leads to an increase of 3.94% in income. A 1% increase in recurrent expenditure leads to an increase of 3.22% in income. On the other hand, a 1% increase in direct income tax leads to a fall of 6.83% in national output. These results meet apriori expectations with respect to their signs. GDP adjust to its long run equilibrium when there is a shock at a slow speed of 3.07%. the pairwise granger causality indicates that causality relationship does not exist between any of the fiscal policy variables and economic growth.

Amusa, Nwagwu Yusuf and Sokunbi (2019) examined the relationship between fiscal policy and economic growth in which past studies have not fully explored in Nigeria. Secondary data from 1990 to 2017 was used and the Autoregressive Distributed Lag (ARDL) model and Error correction Model (ECM) was employed to address its objectives. Consequently, the major findings that originated from the work could be submitted as follows. Meanwhile, the estimated result shows that economic growth and government revenue have a significant positive relationship in Nigeria in the short run but the relationship becomes negative in the long run. However, recurrent expenditure has a significant negative relationship with economic growth in the short run but the relationship becomes insignificant in the long run.

Similarly, Sikiru (2002) found out that government expenditure impacted positively on economic growth. He adopts the unit root, co-integration and the error mechanism technique over a period of 1977-2009. The recommendations focused on government improving expenditure especially on health and education as well as economic vival which are components of government productive expenditure that boost economic growth. The empirical evidence of the impact of various aspect of tax policy on growth has so far been mixed and a major difficulty in isolating the impact of tax on growth arises because key non-tax variables such as public expenditure that are often not independent of tax policy can also affect growth. From the above, the need to have a concise functional model to capture the impact of fiscal policy variables on growth in an economy is tasking.

## Methodology

### 3.1 Research Design

This work adopts the experimental research design which combines theory and empirical exercises in estimating the impact of the explanatory variable on the explained variable. The procedure to be adopted for data verification include the unit root test, co integration test, the error correction mechanism, the granger causality test and the standard error test.

#### 3.1.1 Source of Data

This research employed data sourced from central bank of Nigeria (CBN) statistical bull in (2022).

#### 3.1.2 Model Specification

The model employed by Ogbole, Amadi and Essi (2011), the model is specified as GDP = f (GE, PI, IFR, CIF, X)…….. 3.2.1

Where GDP= economic growth proxy by gross domestic product.

PI: Private investment

IFR: Inflation rate

CIF: Capital inflow

X = export

The model was employed in expressing the relationship between fiscal policy operations of government and economic growth of Nigeria. In order to take in the effect of some other key factors necessary for economic growth, the model by Ogbole, Amadi and Essi is adopted and modified for use in this work as follows.

GDP = f (GE, GTX, GD)……3.2.1

Where GDP = economic growth proxy by gross domestic product.

GE = government expenditure

GTX = government aggregate debts

The linearized econometric form of the model is

GDP Bo +B1 GE + B2GTX + B3GAD+ Ut…….3.2.2

Where Bo= constant term/parameter intercept

B2 and B3 = coefficient of the parameter estimate

Ut= error term

**3.1.3 Model Estimation**

At this stage of the research, the researcher used time series data on GDP, government expenditure (GE), government tax revenue (GTX) and government aggregate debt (GAD) to estimate the model has preference over others dues to its qualities such as best linear unbiased estimates, minimum variance, zero mean value of the random terms etc. (Koutsoyian's, 2003). In the preliminary test, the following teat conducted.

**Unit root test**

This test is used to check for the stationarity of the time series data, it involves testing for the order of integration of the individual to time series under consideration, performed at levels and then at first difference from. The Augment Dickey Fuller test is employed at 5% level of significance. If the ADF test statistic is greater than the critical values, then the data is concluded to be stationary at the test order. The ADF relies on rejecting a null hypothesis of unit roofs (the series are non-stationary ) in favour of the alternative hypothesis of stationary.

If the ADF test fails to reject the in levels but reject the test in first difference then, the series contain some unit root and it is integrated of order 1 (1). If the data are stationary at level i.e. at 1 (0), the OLS will follow but where the data are stationary at first or more difference i.e at 1 (d), the co-integration test will follow. The unit root test generally is used to confirm that the data in use is fit for the intended purpose.

**Co-Integration**

In co-integration test, if the several variables are all integrated of the order 1 (d), their linear combination may be stationary; this means that the variables exhibit long-run relationship.

**Decision Rule**

Accept $H_o$: ( there is no significant co-integration relationship) is t-statistics is greater than the critical value or if P-values is less than the level of significance (5%).

**Other wise accept $H_1$:** (there is significant relationship) if t- statistics is less than the critical values or if P-values is greater than the level of significant. The testing sequence ends if the null hypothesis cannot be rejected for the first time.

**The Error Correction Mechanism**

This mechanism is used to indicate the speed of adjustment from the short run equilibrium state. The speed of adjustment of the model from the short run equilibrium to the long-run equilibrium. The three (3) conditions to be satisfied by the ECM statistic is that it must be negative (-), fractional and significant. The closer the test statistic is to (1), the higher the speed of adjustment.

**The Granger Causality Test**

This is a statistical hypothesis test for determining whether one time series is useful in forecasting another. When time series X granger causes time series Y, the patterns in X are approximately repeated in Y after some time lag such that the past value of X an be used for the prediction of the future values of Y, in essence is helps us to find out whether one time series can be used in forecasting another. The test is conducted in this study to see whether the past effects of fiscal policies in Nigeria can be used to forecast economic growth (GDP).

**3.1.4 Evaluation Criteria**

Every econometrics research must proceed through all the important steps which includes evaluation of the model employed. The model developed in this research will be evaluated as follows:

**The F-Test**

This test is otherwise known as overall test of significant of the regression. It establishes whether or not there is a joint influence then explanatory variable on the explained variable. The hypothesis is:

$H_o$:The overall result in not statistically significant.

$H_1$: the overall result is statistically significant

**Decision Rule**

Reject $H_o$ if F –cal> F-tab and accept $H_1$

Accept $H_o$if F-cal< F-tab and reject $H_1$

**The student T-test**

This is used to test for the statistical significance of the individual parameter estimate. Here, we use the degree of freedom at 5% level of significance . the calculated t-value will be compared with the tabulated t-value and then judgment is made.

**Decision Rule**

If t-cal> t-tab, we reject the null hypothesis and conclude that the individual parameter estimate is statistically significant.

**The coefficient of determination $R^2$**

This is used to indicate whether our model satisfies the requirement of goodness of fit. It will also tell us how much of the variations in the dependent variable is accounted for by variations in the independent variables. The value ranges between 0 and 1, and the closer the value is to 1, the higher the goodness of fit of the model.

**The standard error test:**

Sample errors are generally accepted to be inherent in all estimates. Test of significance helps to measure the size of the error term and determine the degree of confidence reposed in the estimate. In this test, no reference is made to the degree of freedom. The parameter estimated are compared with their standard errors and judgment on the significance of the estimates are not statistically significant.

**Decision Rules**

**Accept** $H_o$ if S (B1) > ½ B1 and rejected $H_1$

Rejected $H_o$ if S ($B_1$) > ½ $B_1$ **and accept** $H_1$

This mechanism is used to indicate the speed of adjustment from the short run equilibrium state. The speed of adjustment of the model from the short run equilibrium to the long –run equilibrium

**Results and Discussions**

**4.1 Descriptive Statistics of the dependent and independent variables**

This subsection contains results obtained for selected statistical measures (correlation, graphical trend relationship) of the independent and dependent variables.

**4.1.1 Selected Descriptive Summary Results**

**Table 1: Descriptive statistics**

| | GDP | GE | GTX | GAD |
|---|---|---|---|---|
| Mean | 34690.67 | 1039.706 | 1698.217 | |
| STD. Dev. | 20237.78 | 2544.412 | 1351.775 | 2195.768 |
| SKEWNESS | 0.673787 | 1.252951 | 1.174475 | 1.763094 |
| KURTOSIS | 1.880848 | 3.716125 | 3.124704 | 5.585451 |
| Observations | 39 | 39 | 39 | 39 |

**Source : Author's computation (E-views 10)**

The table 1 shows the selected descriptive statistical summary of the data employed in this study . The dependent variable (gross domestic product –GDP) has the highest mean value and its movement being determined by the mean, deviations and skewness of the independent variables (government expenditure – GE, government total tax revenue GTX and government aggregate debt stock GAD). Notably, those variables with the highest mean deviations are taken to imply that they are more effective in explaining variations in government revenue generation drive since the farther the standard deviation is from the central point, the less then effect.

**4.1.2 Model Suitability And Diagnostic Tests**

These include all the pre-estimation test conducted on the data employed in this study. The dependent variable (gross domestic product –GDP) has the highest mean value and its movement being determined by the mean, deviations and Skewness of the independent variables (government expenditure –GE, government total tax revenue –GTX and government aggregate debt stock –GAD). Notably , those variables with the highest mean deviations are taken to imply that they are more effective in explaining variations in government revenue generation drive since the farther the standard deviation is from the central point, the less the effect.

**4.1.2 Model Suitability and Diagnostic Tests**

These include all the pre-estimation tests conducted on the data and model to ensure that they are fit and suitable for use especially regarding the stationary of the model variables (Unit root test), long run relationship (Bounds test of long-run relationship), and the strength of relationship (correlation matrix).

**4.1.3 Unit root test for Stationarity**

**Table 2: Unit root Test Results.**

| Variable | @ level | Critical value order | Remark | Stationary |
|---|---|---|---|---|
| GDP | | | | |
| GE | -4.294608 | 3.690814 | 1 (10) | Stationary |
| GTX | -3.201008 | -5.188648 | 1 (0) | Stationary |
| GAD | -2.770801 | -4.784098 | 1 (0) | Stationary |

**Source: Author'SComputation (E-views 10)**

The test for stationary conducted using the Augmented Dickey Fuller Test (ADF) shows that all data were stationary at level, for this reason differencing cannot be justified following econometrics procedures. Differencing is done when the data set fails to be stationary ate level Stationary is concluded if the ADF statistic is greater than the 5% critical value or if the probability value (P-value) is less than (0.05). Hence , stationarity and integration was achieved at order 1 (0) and 1 (1).

**Correlation matrix of the variables**

**Table 3: correlation Matrix table**

| | GDP | GE | GTX | GAD |
|---|---|---|---|---|
| GDP | 1.000000 | 0.958036 | 0.964501 | 0.566773 |
| GE | 0.958036 | 1.000000 | 0.985911 | 0.678818 |
| GTX | 0.964501 | 0.985911 | 1.000000 | 0.645320 |
| GAD | 0.566773 | 0.678818 | 0.645320 | 1.000000 |

**Source Author's Computation (E-views 10)**

The table above shows the correlations of the dependent variable in relation to the independent variables. The relationship is positive and the strength was highest between the gross domestic product (GDP) and a combination of government's fiscal policy actions (government expenditure- GE, government tax revenue drive –GTX, and government aggregate debt stock-GAD).

**Impact Estimation Result**

This section displays estimation results of the impact of the independent variables on the independent variable using the (OLS) method, following immediately is the result obtained:

**Regression Result**

**Table 5: OLS estimates**

| Variable | Coefficient | T-statistic | P-value |
|---|---|---|---|
| GE | 14.91 | 3.2 | 0.0094 |
| GTX | -21.36 | 2.5 | 0.0184 |
| CAD | 3.96 | 2.6 | 0.0109 |

**R-Squared 0.672879**

**Source: Author's computation (E-views 10)**

Table 5 above shows the estimated coefficient of the independent variables utilizing the ordinary least squares model. As indicated, the t-statistic and the corresponding probability (p-value) shows that government expenditure (GE), and the government aggregate debt (GAD) are positively signed.

**Post Estimation Diagnostic Test**

To ensure that the model is correctly specified and to avoid spurious results, it is therefore necessary to examine for model misspecification which may occur due to unstable parameters and afterward lead to bias estimates. Hence the autocorrelation test (LM test of serial correlation).

**Test of serial correlation**

**Table 6: LM tests.**

**Breusch –Godfrey Serial Correlation LM Test:**

| | | | |
|---|---|---|---|
| F-Statistic | 0.298775 | Prob. F (1,14) | 0.0233 |

| | | | |
|---|---|---|---|
| Obs* R-squared | 0.397008 | Prob. Chi-Square | 0.0086 |

**Source : Author's Computation (E-views 10)**

Serial correlation is concluded when observed data appear to have a natural sequential order. Table 6 shows that the LM –statistics with P-value of 0.0233 indicate the obsence of serial correlation in the model since the P-value is less than the 5% critical value. Thus, we can conclude that there is no presence of serial correlation in the model and it supports the fitness of the model.

**4.1.4 Test Research Hypotheses**

In the earlier sections of the study, some statements were made as tentative answers to the research question. In this section relevant statistics are used to determine the level of probability in the trueness or falsehood of the hypotheses statements. In the operation, conclusions were made using the parameter estimate and their probability values at 5% level of significance. The decision rule is to accept the null hypothesis where the t-stat is less than 2 or the probability value of the parameter estimate is greater than 0.05**.**

**Test of Hypothesis one**

Research hypothesis one determined the impact of government expenditure on the gross domestic product in Nigeria, stated in null form as:

$H_o$: Government expenditure has no significant impact on the gross domestic product of Nigeria.

**In the alternative form, it is restated as:**

$H_1$: Government expenditure has significant impact on the gross domestic product of Nigeria.

**Decision Rule : Accept** $H_o$ if T-sta< 2 or P-value >0.05, otherwise reject it and accept the alternative.

The estimated coefficient of the government expenditure variable (GE) IS 19.91, and P-value of the t-stat is 0.0094, the study hereby rejects the null hypothesis and accept the alternative, the conclusion is that government expenditure has significant impact on the gross domestic product of Nigeria. This means that when the spending of government rises by a unit measure, the aggregate economic output (GDP) is up by 14.91 billion naira. By implication, larger government spending will raise the level of economic growth assuming that we hold everything else constant.

**Test Of Hypothesis Two**

**Research hypothesis two is stated in null form as:**

$H_0$: government tax revenue drive has no significant impact on the gross domestic product of Nigeria.

In the alternative form, it is restate has:

$H_1$: government tax revenue drive has significant impact on the gross domestic product of Nigeria.

**Decision Rule:** accept $H_o$ if T- stat < 2, or P-value > 0.05, otherwise reject it and accept the alternative.

The estimated coefficient of the tax revenue variable (GTX) is -21.36, and P-value of 0.0184, the study hereby rejects the null hypothesis and accepts the alternative. In conclusion, the government tax revenue drive has significant impact on the gross domestic product of Nigeria. Precisely the tax revenue drive reduces the aggregate economic output by 21.36 billion naira assuming a mix economic system where the economy tends more towards the market system.

**Discussion of the Findings**

From the estimation results, it could be seen that the government expenditure variable has positive sign and also in a significant value. (coefficient 14.91, P- value 0.0094).

If the Nigerian government cut government spending, it would have a significant impact on both aggregate demand (AD) and the supply side of the economy –depending on which areas of public spending were cut. Firstly, government spending is a component of aggregate demand of this government spending, we can split up spending into component-current spending and capital spending. Holding everything else constant, a cut in government spending would be expected to have a negative impact on aggregate demand. We would expect a fall in aggregate demand. This would lead to lower economic growth and lower inflation. However, if other components, such as consumer spending were risi then a cut in government spending may just reduce the growth of aggregate demand. The demand side impact of a cut in government spending will depend larlgey on the state of the economy. If the government cut spending when the economy is already in difficulties, then we will get a significant fall in real GDP. If the government cut spending when the economy is booming then the spending cuts help to reduce inflation, but only cause a small fall in real GDP.

The problem is that there is often political pressure to cut government spending when the budget deficit rises in a recession. In order to balance the budget, government cut spending, but this is at a time when the economy is weak. It also depends on monetary policy. If the government cut spending, but at the same time, we can have a loosening of monetary policy-cutting interest rates- then in this case aggregate demand could continue to rise.

If monetary policy cannot be loosened (e.g interest rates already zero, then cutting spending will have a bigger negative impact. One impact of cutting government spending is that is will help reduce annual government borrowing and help reduce the total public sector debt. In fact, some have argued, there are times when it is essential to cut spending because government borrowing can become dangerously high and the bond markets may start to downgrade government debt if they feel there is a chance of default. However, if a cut in government spending does cause a further economic downturn, the improvement in finances will be limited. This is because if spending cuts cause lower growth, it will lead to lower tax revenue and higher spending on benefits.

The negative significant coefficient value of the government tax revenue variable (GTX, 21.26, P-value 0.0184) agrees with the postulation that misdirected tax policy will have very bad effects on the economy. As we know, if any element of the national income formula increases, the GDP and total demand increases. If the government spending at all levels increases, then GDP and total demand increases. If the government spending at all levels increases, then GDP increases. Similarly, if government spending decreases, then GDP decreases. When it comes to financial management, four characteristics of the government set it apart from household, and business Government has the power to tax, which gives it greater control over is revenue. Federal, state, and local government can mandate higher taxes and increases their revenue. Households and business have the more difficult task of selling their labor, goods, and services in order to raise revenue.

By increasing or decreasing taxes, the government affect households' level of disposable income (after –tax income). A tax increase will decrease disposable income, because it takes money out of households. A tax decrease will decrease disposable income, because it takes money household. A tax increase will increase disposable income, because it leaves households with more money. Disposable income in the main factor driving consumer demand, which accounts for two-thirds of total demand. The federal government can finance budget deficits by borrowing in the financial markets. Investors consider government bonds to be risk free, because they are backed by the taxing power of the government. States also issue

bonds to finance deficits. These bonds, however, are considered because the tax base of the state could go down.

It is only the federal government that can print more money. Like raising taxes, this has potential economic consequences (in the form of higher inflation) as well as political consequences. Nevertheless, the federal government does have that option, which is certainly not open to households and business. These unique characteristics set the government apart from the other players in the economy. They also position the federal government to formulated and implement economic policy.

Fiscal policy is the general name for the federal government's taxation and expenditure decisions and activities, particularly as they affect the economy.

Taxes lower households' disposable income. The amount collected in taxes doesn't find its way into consumption. But if the government spends very dollar that it collects in taxes, then that occurs, the GDP remains unaffected by taxes. The size of the economy is the same whether people choose to produce and consume private goods (angora sweater) or public goods (army uniforms). The mix of goods doesn't affect the level of GDP, as long as the total amount spent on them doesn't change. When the government collects more in taxes than it spends, the equilibrium level of GDP decrease. In general, when the government brings in more in taxes than it spend, if reduce disposable income and slows the growth of the economy.

**Summary, Conclusion and Recommendation**

**5.1 Summary of Findings**

This study focused on the effect of fiscal policy variables on economic growth in Nigeria, using data from 1981-2021. The unit root test showed that all variables were stationary at level, the correlation test supports the presence of long-run relationship among the variables. The ordinary least squares technique became necessary at the instance that variables were integrated of the same order 1 (0). The summary of the major findings of the study are:

1. Government expenditure (GE) has a positive and significant effect on Nigeria's gross domestic product. (coefficient =14 p-value =0.0094).
2. Government tax drive (GTX) has a negative and significant effect on Nigeria's gross domestic product. (coefficient = 21.36, p-value = 0.0184)

5.2 **Conclusion**

The broad objective of this was to empirically examine the effect of fiscal policy variables on Nigeria's economic growth. The specific objectives of the study were: to determine the impact of government expenditure no economic growth in Nigeria; and to evaluate the impact of government tax revenue generation economic growth in Nigeria. Following the outcome of the various estimation and hypothesis tests, the study concludes that fiscal policy variables have mixed impact on economic growth in Nigeria for the period reviewed.

5.3 **Policy Recommendation**

Based on the outcome of the various tests carried out in this study and the result obtained, the study make the following recommendation.

1. Government should reduce is spending when tax rates are high, this will balance effect and normalize growth.
2. Government should review the tax rates downward because it is telling hard on the aggregate economic output.

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