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Fiscal Policy Instruments and Economic Development in Nigeria

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Abstract

The aim of this paper was to examine the effect of fiscal policy on economic development in Nigeria from 2000 to 2023. The fiscal policy variables that were taken into consideration were government expenditure, public debt, and taxation, while economic development was measured using the composite index of the human capital index. The study employed the fully modified ordinary least squares (FMOLS) technique of estimation since the unit root test reported that the time series variables were stationary at higher order of integration. From the result, it was observed that government expenditure exerted positive and significant effect on economic development in Nigeria. On the contrary, public debt and taxation generated negative and significant effects on economic growth. Other key variables that were noted to be of significant influence on economic development were official development assistance and trade openness (with a positive effect) along with inflation with negative effects. The paper therefore recommended an option of increasing government spending on productive sectors, reducing public debt, and implementing tax reforms.

Keywords*:*

Taxation, government expenditure, public debt, human capital index, fiscal policy.

1. Introduction

Fiscal policy, as a tool of macroeconomic management, has been a subject of intense debate among economists and policymakers. It entails the deliberate attempt by the government to utilize its expenditure and taxing powers to influence macroeconomic outcomes (economic growth, price stability, full employment, favourable balance of payments) which can hitherto translate to economic development. In Nigeria, the government has consistently employed fiscal policy measures to stimulate economic growth and development. However, the effectiveness of these measures in achieving their intended objectives remains a topic of discussion.

The theoretical underpinnings of the relationship between fiscal policy and economic development can be found in the Keynesian and neoclassical growth models. The Keynesian model posits that fiscal policy can stimulate economic growth by increasing aggregate demand and crowding-in private investment (Keynes, 1936). In contrast, the neoclassical growth model suggests that fiscal policy can have a positive impact on economic growth by increasing the productivity of private capital and labor (Solow, 1956). The endogenous growth theory also emphasizes the role of fiscal policy in enhancing human capital, infrastructure, and technological progress, which are critical drivers of long-run economic growth (Romer, 1986; Barro, 1990).

Empirical evidence on the impact of fiscal policy on economic development in Nigeria is scarce and inconclusive. Some studies have found a positive relationship between fiscal policy and economic growth (Aigbokan, 1999; Olaniyan, 2011; Ogunsola, 2023; Ikwuo et al., 2024; Okwu and Nkoro, 2025), while others have reported a negative or insignificant relationship (Okonjo-Iweala & Osafo-Maafo, 2007; Akpomi & Orhero, 2014; Oladele, 2021; Odetola et al., 2025). Meanwhile, studies have also explored the effect of fiscal policy on inflation (Atan & Effiong, 2021), unemployment (Ekong et al., 2019), exchange rate (Effiong et al., 2022), and on industrial productivity (Effiong & Essien, 2020; Effiong et al., 2024). These mixed findings highlight the need for further research to clarify the relationship between fiscal policy and economic development in Nigeria. Nigeria's economic experience provides a unique context for examining the role of fiscal policy on economic development. The country has experienced significant fluctuations in oil revenue, which has implications for fiscal policy and economic growth and development pursuit. The government's fiscal policy measures have been criticized for being ineffective in stimulating economic growth and reducing poverty (World Bank, 2019). The country's infrastructure gap is estimated to be around $100 billion, highlighting the need for increased investment in physical capital (AfDB, 2020).

Despite the importance of fiscal policy in stimulating economic growth and development, Nigeria's economic performance has been disappointing. The country's GDP growth rate has been volatile, averaging 2.5% per annum between 2010 and 2019 (World Bank, 2020). The poverty rate remains high, with over 60% of Nigerians being estimated to live below the national poverty line in 2025 (World Bank, 2025). The country's infrastructure gap is significant, with inadequate power supply, poor transportation networks, and limited access to healthcare and education (AfDB, 2020). Overall, the human development index (HDI) hovers around 0.56 which indicates just a moderate level of economic development.

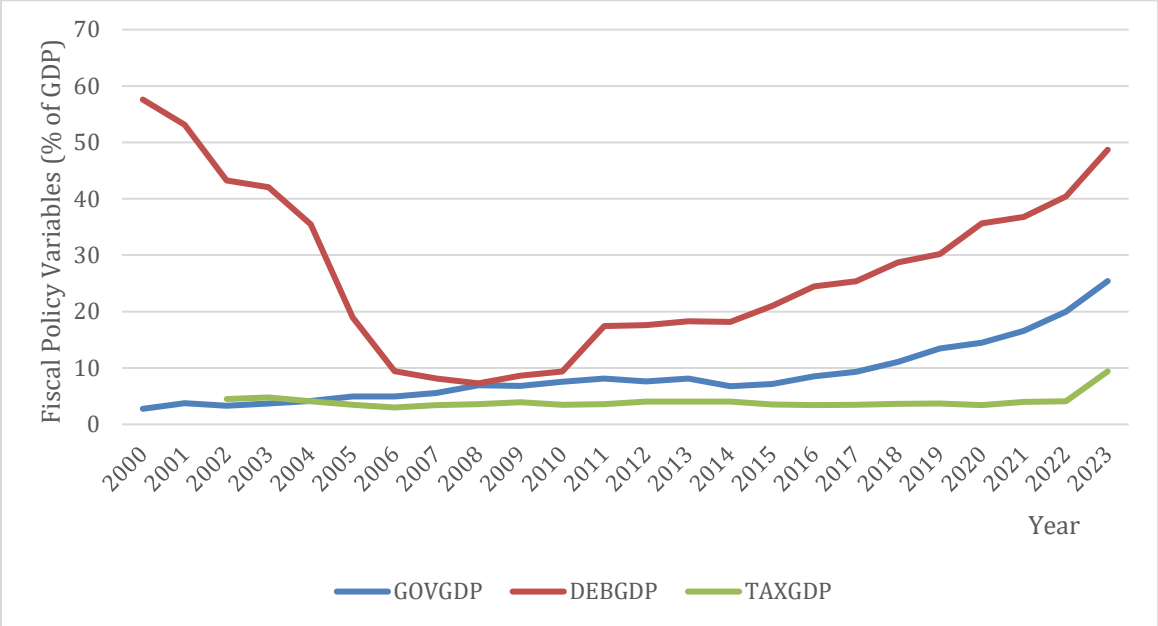

Figure 1: Trends in fiscal policy variables in Nigeria

The government's fiscal policy measures have been criticized for being ineffective in addressing these challenges. The country's fiscal deficit has been persistent, averaging 2.79% of GDP between 2010 and 2023 (CBN, 2023). The government's revenue mobilization efforts have been weak, with an average tax-to-GDP ratio of around 4.13% (IMF, 2026) between 2010 and 2023. While government expenditure-GDP ratio continues to rise up to 25.42% and averaging 11.72% between 2010 and 2023, the debt-GDP ratio also exhibits rising trend from 9.39% in 2010 to 48.67% in 2023 (see Figure 1). These challenges highlight the need for a comprehensive examination of the role of fiscal policy on economic development in Nigeria.

The study seeks to answer the following research questions:

1. What is the impact of government expenditure on economic development in Nigeria?

2. How does public debt affect economic development in Nigeria?

3. What is the effect of tax on economic development in Nigeria?

4. What is the joint effect of government expenditure, public debt, and tax on economic growth in Nigeria.

The main objective of this study is to examine the role of fiscal policy on economic development in Nigeria from 2000 to 2023. Specifically, the study aims to:

1. Investigate the impact of government expenditure on economic development in Nigeria.

2. Examine the effect of public debt on economic development in Nigeria.

3. Investigate the influence of taxation on economic development in Nigeria.

4. Examine the joint effect of public expenditure, public debt, and taxation on economic development in Nigeria.

This study is significant because it will provide empirical evidence on the role of fiscal policy on economic development in Nigeria, which can inform policy decisions on the allocation of public resources. The study also contributes to the existing literature on the relationship between fiscal policy and economic development and provides a basis for further research in this area.

2. Literature Review

2.1 Conceptual Clarification

Fiscal policy and economic development are two distinct yet interconnected concepts in economics. Fiscal policy refers to the use of government spending and taxation to influence the overall level of economic activity and achieve macroeconomic objectives, such as promoting economic growth, reducing unemployment, and maintaining price stability (Keynes, 1936). Fiscal policy involves the deliberate manipulation of government expenditure and revenue to achieve desired economic outcomes. Economic development is a multifaceted concept that encompasses the improvement in the standard of living, economic growth, and structural transformation of an economy (Todaro &

Smith, 2015). It is characterized by increases in per capita income, improvements in health and education, and reductions in poverty and inequality. Economic development is a broader concept than economic growth, as it encompasses not only increases in output but also improvements in the quality of life and the distribution of income.

Fiscal policy and economic development are interconnected concepts, as fiscal policy can be used as a tool to promote economic development. Fiscal policy involves the use of government spending and taxation to influence the overall level of economic activity, and it can impact economic development through several channels. Government expenditure on infrastructure, education, and healthcare can improve the quality of human capital, increase productivity, and stimulate economic growth (Barro, 1990). Tax policies can influence investment, consumption, and savings decisions, which can impact economic development (Auerbach, 2012). Additionally, fiscal policy can be used to redistribute income and reduce poverty, promoting more equitable economic development (Musgrave, 1959).

Effective fiscal policy can contribute to economic development by stimulating economic growth, improving human capital, and reducing poverty and inequality. By influencing aggregate demand, government spending and taxation can stimulate economic growth and promote economic development. Investment in education and healthcare can improve the quality of human capital and increase productivity, leading to sustainable economic development. Furthermore, fiscal policy can be used to address issues of poverty and inequality, promoting more equitable economic development and improving the overall standard of living.

2.2 Theoretical Postulations

The theories linking fiscal policy with economic development are discussed as follows:

Human Capital Theory: The Human Capital Theory, developed by Gary Becker in 1964, emphasizes the importance of investing in human capital, such as education, healthcare, and skills development, to drive economic development (Becker, 1964). According to this theory, human capital is a key driver of economic growth and development, as it increases the productivity and efficiency of workers. Governments should prioritize spending on education and healthcare to promote economic development. For example, countries like South Korea and Singapore have invested heavily in education and skills development, leading to rapid economic growth and development. By investing in human capital, countries can increase their economic competitiveness and improve living standards.

Institutional Theory: The Institutional Theory highlights the role of institutions, governance, and regulatory quality in shaping economic development. Developed by economists such as Acemoglu, Johnson, and Robinson in 2005, this theory posits that strong institutions and good governance are essential for promoting economic development (Acemoglu et al., 2025). Institutions shape the incentives and opportunities faced by individuals and firms, influencing economic outcomes. Weak institutions, on the other hand, can hinder economic development by creating uncertainty and corruption. Countries with strong institutions, such as Norway and Switzerland, tend to have higher levels of economic development and stability. Effective institutions can promote economic growth, reduce poverty, and improve living standards.

Sustainable Development Theory: The Sustainable Development Theory emphasizes the need to balance economic growth with environmental and social sustainability. This theory, popularized by the Brundtland Commission in 1987, recognizes that economic development must be achieved without compromising the environment and social equity. Sustainable development prioritizes the needs of future generations, ensuring that economic growth is achieved in a way that is environmentally and socially sustainable (Brundtland Commission, 1987). Governments should implement policies to promote sustainable development, such as investing in renewable energy and reducing carbon emissions. Countries like Costa Rica and Sweden have implemented policies to promote sustainable development, achieving economic growth while protecting the environment.

Fiscal Policy and Development Theory: The Fiscal Policy and Development Theory examine how fiscal policy can promote economic development through investments in human capital, infrastructure, and social services. Developed by economists such as Musgrave in 1959, this theory highlights the role of government spending and taxation in promoting economic development (Musgrave, 1959). Fiscal policy can be used to promote economic growth, reduce poverty, and improve living standards. Governments should prioritize spending on human capital, infrastructure, and social services to promote economic development. For example, countries like China and India have used fiscal policy to promote economic development, investing heavily in infrastructure and human capital.

Dependency Theory: The Dependency Theory argues that economic development in peripheral countries is hindered by their dependence on core countries. Developed by economists such as Frank in 1966, this theory posits that the global economic system perpetuates inequality and underdevelopment in peripheral countries (Frank, 1966). Peripheral countries are dependent on core countries for technology, capital, and markets, hindering their economic development. Governments should promote economic diversification and self-reliance to reduce dependence on core countries. Many countries in Africa and Latin America have struggled with dependence on primary commodities, hindering their economic development.

Modernization Theory: The Modernization Theory posits that economic development occurs through a linear process of modernization, driven by technological progress and institutional change. Developed by economists such as Rostow in 1960, this theory suggests that countries progress through stages of economic development, from traditional societies to high mass consumption (Rostow, 1960). Governments should promote modernization through investment in education, infrastructure, and technology. Countries like Japan and South Korea have undergone rapid modernization, driven by technological progress and institutional change, achieving rapid economic growth and development.

Keynesian Theory: The Keynesian theory, developed by John Maynard Keynes, posits that fiscal policy can stimulate economic growth by increasing aggregate demand and crowding-in private investment. According to Keynes (1936), government spending can fill the gap in aggregate demand and stimulate economic growth during periods of recession. The theory suggests that fiscal policy can be used to stabilize the economy and promote economic growth. Keynes' theory is based on the idea that the economy is subject to fluctuations in aggregate demand, which can lead to

unemployment and economic instability. Government spending can help to stabilize the economy by increasing aggregate demand and stimulating economic growth.

2.3 Empirical Literature

Empirical literature is massive when it comes to the effect of fiscal policy on economic growth. However, paucity of empirical studies exists when it comes to the nexus between fiscal policy and economic development. Babalola (2015) used cointegration and pairwise correlation to determine the link between the short- and long-term effects of fiscal policy on economic development in Nigeria between 1981 and 2013. The outcome demonstrated that, throughout the time under review, government investment and recurring spending have a major beneficial influence on economic development over the short and long terms. In the short term, capital expenditures seemed to be beneficial.

Yahaya (2020) used the Human Development Index (HDI), a more complete measure of economic and human advancement than the GDP, to examine the link between fiscal policy and economic development in Nigeria. In order to employ Nigerian time series data from 1990 to 2017 in an Ordinary Least Square (OLS) regression approach for analysis, the study uses an ex post facto research design. The results show that while government debt has a positive impact on GDP and a considerably negative impact on HDI, fiscal policy factors like government revenue and spending have a negative impact on GDP but a positive and considerable impact on Nigeria's human development index.

Oladele (2021) investigated the statistical relationship between tax compliance and economic development, revealing a positive and significant association between the two variables. Regression analysis results showed that improved tax compliance is linked to enhanced economic development. In a similar vein, Uche and Ugonabo (2021) examined the impact of Value Added Tax (VAT) on economic development in Nigeria between 1994 and 2018. Using Pearson correlation and regression analysis, they found that VAT has a positive and significant influence on economic development. Timah and Chukwu (2021) focused on the impact of company income tax on employees' wages, dividend payments, and corporate social responsibility in Nigeria. Their study revealed a substantial relationship between company income tax and these variables. Furthermore, Egiyi (2021) explored the statistical relationship between company income tax and economic development in Nigeria, finding a long-run and short-run relationship between the two variables. These studies collectively suggest that taxation plays a significant role in shaping Nigeria's economic development.

Osuka et al. (2022) used time series yearly data from 1986 to 2017 to investigate the connection between fiscal policy and economic development in Nigeria. Government capital expenditures, recurring expenditures, direct tax income, and indirect tax revenue were used as proxies for fiscal policy tools. The Autoregressive Distributed Lag (ARDL) technique was used to analyse the data. The analysis found a strong and favourable correlation between Nigeria's fiscal policies and economic development. Additionally, the study discovered that although capital expenditures, direct tax income, and indirect tax revenue have a positive but negligible link with Nigeria's economic development, recurrent expenditures have a negative relationship. According to the

study, the government should invest more in productive spending, such as in manufacturing, mining, education, health care, and agriculture.

Ogunsola (2023) looked into how taxes affected Nigeria's economic development. The time series research approach was used in the study. The data utilized came from secondary sources and covers the years 2015 through 2022. Regression analysis was used to determine that whereas education tax (EDTX) has a negligible impact on real gross domestic product, corporation income tax (CITX) and value added tax (VATX) have a positive and negligible impact. Additionally, the results showed that CITX had very little effect on the poverty index, but VATX and EDTX have insignificantly positive and negative effects, respectively. Additionally, results showed that CITX had a negative and negligible impact on life expectancy. EDTX has a favourable but negligible impact on life expectancy, but VATX has a positive and large impact.

Nzechukwu and Onodi (2024) investigated how Nigerian economic development was impacted by government spending. Data from 1990 to 2021 were evaluated using an error correction regression model. The results showed that government spending (both capital and recurrent) significantly affects Nigeria's GDP but has no discernible impact on per capita income. According to the study's conclusions, public spending is a crucial fiscal tool that the government can use to manage the economy by making sure that funds allocated to capital and recurrent expenses are effectively used to raise Nigeria's GDP.

Ikwuo et al. (2024) investigated how public debt affected Nigeria's economic development between 2000 and 2023.The data study used the econometric methods of multiple regression analysis, the Johansen Co-integration Test, and the Error Correction Model (ECM). The long-term equilibrium link between the variables was demonstrated using the co-integration test. The results of the data analysis demonstrated that domestic debt has a little but detrimental impact on Nigeria's economic development; Nigeria's economic development was positively and negligibly impacted by bilateral debt; and Nigeria's economic development was negatively and insignificantly impacted by multilateral debt, while it is positively and insignificantly impacted by debt servicing.

The relationship between public debt and the growth of the Nigerian economy from 1990 to 2021 was examined by Edward and Amadi (2024). The public debt classes that were taken into consideration were outstanding Treasury bills, outstanding Treasury bonds, multilateral debt, and bilateral debt. The human development index (HDI) was utilized as a proxy to gauge the Nigerian economy's development. Descriptive analysis, unit root/stationarity testing, ARDL and ECM estimates, and co-integration analysis were applied to the data. Among other things, the findings showed that only multilateral debt has a negative impact on HD in Nigeria, but Treasury bills, Treasury bonds, and bilateral loans had favourable effects on HDI in the short and long term. Nevertheless, over the time under consideration, there was no significant effect between any of these public debt components and Nigeria's human development index. Based on these assumptions, it was concluded that public debt and economic development in Nigeria had a positive but negligible relationship over time.

Fasoye (2025) used a Non-linear ARDL (NARDL) approach to examine the unequal impacts of fundamental fiscal policy tools on economic development in Nigeria from 1981 to 2022. According to the study, although negative shocks might result in economic collapse, government spending

shocks in Nigeria can have a beneficial effect on unemployment, boost economic activity, and lessen poverty. However, because to inefficiency, corruption, and economic expansion, long-term impacts could lessen. Additionally, the analysis reveals a negative association between the Human Development Index and government expenditure shocks, suggesting inefficient public spending.

Odetola et al. (2025) used time series data spanning 34 years (1990-2023) to assess government spending and economic development in Nigeria using a disaggregated method. The Autoregressive Distributed Lagged (ARDL) method was used to produce and analyze the time series data. According to the study, government expenditure on education significantly raises GDP per capita. On the other hand, government spending on health had a negligible beneficial effect. Although it was not statistically significant, government investment on agriculture was shown to have a detrimental impact. The findings indicated that in order to support long-term economic development in Nigeria, more investments in education, together with changes to health and agriculture policy, are crucial.

Jon and Eke (2025) looked at how government spending affected Nigeria's economic development from 1981 and 2023. Descriptive statistics and inferential statistics (Multiple Regression and Moderated Multiple Regression) were used in the study's analysis. The findings showed that public administration spending has no discernible effect, whereas transportation services spending greatly increases GDP and HDI. Additionally, the impact of government spending on Nigeria's economic development is significantly mitigated by corruption. The study came to the conclusion that increasing public spending efficiency requires greater anti-corruption measures and efficient administration of government spending.

Finally, Okwu and Nkoro (2025) examined how public debt affected Nigeria's economic development (HDI) from 1986 to 2023. Descriptive statistics, trend analysis, the unit root test, and the autoregressive distributive lag approach were used in the analysis. There is a long-term equilibrium connection between the variables, according to the cointegration test. According to the empirical data, domestic debt had a positive but negligible effect on economic development, but external debt had a negative and considerable influence. The study concludes that while foreign debt presents hazards if improperly handled, domestic debt has a higher positive correlation with development results.

3. Research Methodology

3.1 Model Specification

Based on the Keynesian postulation, fiscal policy has the potency of improving the macroeconomy thereby fostering economic development, our model is specified as follows:

$$HDI_t = f(FISP_t, X_t) \quad (1)$$

Where HDI is the human development index (a proxy for economic development), FISP is a vector of fiscal policy variables (including expenditure, debt, and tax), and X is a vector of control variables (including inflation, trade openness, and official development assistance). Disaggregating the model and presenting it in an econometric form to address each of the specific objectives, the models are given as follows:

$$HDI_t = \alpha_0 + \alpha_1 GOVGDP_t + \alpha_2 INFR_t + \alpha_3 ODA_t + \alpha_4 TOPN_t + \mu_{1t} \quad (2)$$

$$HDI_t = \beta_0 + \beta_1 DEBGDP_t + \beta_2 INFR_t + \beta_3 ODA_t + \beta_4 TOPN_t + \mu_{2t} \quad (3)$$

$$HDI_t = \gamma_0 + \gamma_1 TAXGDP_t + \gamma_2 INFR_t + \gamma_3 ODA_t + \gamma_4 TOPN_t + \mu_{3t} \quad (4)$$

$$HDI_t = \delta_0 + \delta_1 GOVGDP_t + \delta_2 DEBGDP_t + \delta_3 TAXGDP_t + \delta_4 INFR_t + \delta_5 ODA_t + \delta_6 TOPN_t + \mu_{4t} \quad (5)$$

Equation (2), (3) and (4) present the effect of government expenditure, public debt, tax on economic development while Equation (5) presents the joint effect of these fiscal policy variables of economic development. From these equations, GOVGDP is government expenditure (% of GDP), DEBGDP is public debt (% of GDP), TAX is tax revenue (% of GDP), INFR is inflation rate, ODA is official development assistance (% of GDP), TOPN is trade openness (total trade, % of GDP), and μ is the error term. It is expected that $\alpha_1 > 0$, $\beta_1 < 0$, $\gamma_1 < 0$ signaling that government expenditure is expected to yield a positive effect on HDI while debt and tax are expected to yield negative effects. Likewise, it is expected that $\delta_1 > 0$, $\delta_2 < 0$, and $\delta_3 < 0$.

3.2 The Data

Our study employed secondary datasets from 2000 to 2023 which were obtained from secondary sources. Data on tax revenue (% of GDP) and debt (% of GDP) were obtained from the International Monetary Fund (2026), while data on government expenditure and trade openness were computed from the Central Bank of Nigeria (2023) statistical bulletin. Also, data on human development index was obtained from the United Nations Development Program (UNDP) website whereas data on official development assistance and inflation rate were obtained from the World Bank database on World Development Indicators.

3.3 Technique of Estimation

The study utilized the augmented Dickey-Fuller (ADF) unit root test to check for the stationarity of the time series variables. With higher order of integration established from the test, we proceed to apply the fully modified ordinary least squares (FMOLS) estimation technique in the data analysis. The FMOLS technique, which is a cointegrating regression approach, generates consistent and efficient estimates of the model when the variables in the model exhibit higher order of integration at the first difference and second difference. We therefore utilize the technique in estimating the four models specified in this paper in order to obtain their respective numerical estimates.

4. Empirical Results

4.1 Descriptive Statistics

The variables in the study and their respective descriptive properties are given in Table 1. It is observed that human capital index recorded a mean value of 0.5126 with a standard deviation of 0.0329. Its minimum value was 0.45 while its maximum value was 0.56. The variable is negatively

skewed (given the skewness coefficient of -0.3809) and platykurtic (coefficient of kurtosis being 2.1645 < 3).

Table 1: Descriptive statistics of the variables

	HDI	GOVGDP	DEBGDP	TAXGDP	INFR	ODA	TOPN
Mean	0.5126	9.2929	24.7861	4.0282	13.0743	16.2346	38.0891
Median	0.5145	7.5764	22.7465	3.6743	12.7266	13.0577	35.1984
Maximum	0.5600	25.4163	48.6730	9.4000	23.3159	76.6847	88.3935
Minimum	0.4510	3.2777	7.2760	2.9936	5.4204	2.2443	10.4843
Std. Dev.	0.0329	5.5747	12.7938	1.2659	4.0987	15.8771	18.2542
Skewness	-0.3809	1.4641	0.2395	3.6712	0.4233	2.8404	1.0484
Kurtosis	2.1645	4.5766	1.8674	16.2203	3.2143	11.0501	4.0612
Observations	22	22	22	22	22	22	22

Source: Researcher Computation (2026)

The total government expenditure (% of GDP) recorded a mean value of 9.29% with a standard deviation of 5.5747. The maximum and minimum values were 25.42% and 3.28% respectively, with the variable exhibiting positive skewness and leptokurtic distribution. The debt (% of GDP) averaged 24.79% with a standard deviation of 12.7938 while its maximum and minimum value were 48.673% and 7.276% respectively. The shape of its distribution was positively skewed and platykurtic. For tax (% of GDP), it recorded a mean value of 4.0282% with a standard deviation of 1.2659 and possessing a maximum and minimum value of 9.40% and 2.99% respectively. The variable exhibits a positively skewed and platykurtic distribution. Inflation, official development assistance, and trade openness recorded mean value of 13.07%, 16.23%, 38.09% respectively. It terms of their distribution; all the variables were positively skewed and platykurtic in nature.

4.2 Correlation Analysis

The Pearson correlation analysis presents how the variables correlate with each other. Table 2 presents the result where it is observed that HDI correlates positively with government expenditure, debt, and tax. Meanwhile, HDI exhibits strong positive correlation with government expenditure (r = +0.8261) where its correlation with debt and tax are weak (r = +0.2387 and r = +0.2246). Meanwhile, strong correlation was reported between HDI and trade openness (r = +0.8126) while weak positive correlation was observed between HDI and tax (r = +0.2246) and with inflation (r = +0.2511). However, a weak negative correlation was reported between HDI and official development assistance (r = +0.0624).

Table 2: Pearson correlation coefficients

	HDI	GOVGDP	DEBGDP	TAXGDP	INFR	ODA	TOPN
HDI	1						
GOVGDP	0.8261	1					
DEBGDP	0.2387	0.5192	1				
TAXGDP	0.2246	0.5925	0.5683	1			

INFR	0.2511	0.6065	0.6357	0.5865	1		
ODA	-0.0624	-0.0179	-0.2605	-0.1878	-0.0670	1	
TOPN	0.8126	0.1588	0.3567	0.5484	0.4912	0.0141	1

Source: Researcher Computation (2026)

The correlation coefficients between the explanatory variables shows that none of the coefficients are above 0.80. For instance, the correlation between government expenditure and debt (r = +0.5192) was fairly strong positive while with inflation (r = +0.6065) was fairly strong positive. Further, ODA and TOPN exhibits very weak positive correlation (r = +0.0141) while that of tax and ODA (r = -0.1878) was weakly negative. These correlation coefficients which are not extremely high indicate that the model is free from multicollinearity.

4.3 Unit Root Test

Checking for the unit root test to ascertain the order of integration (stationarity) of the time series variables was conducted using the augmented Dickey-Fuller (ADF) unit root test. The result is presented in Table 3.

Table 3: Unit root test result

Variables	ADF Statistic	5% Critical Value	p-value	Order of Integration
HDI	-3.8025	-3.6220	0.0351	I(1)
GOVGDP	-6.5901	-3.6450	0.0001	I(2)
DEBGDP	-5.8733	-3.6450	0.0006	I(2)
TAXGDP	-5.3689	-3.6736	0.0056	I(1)
INFR	-7.8311	-3.7105	0.0000	I(1)
ODA	-12.8988	-3.7105	0.0000	I(1)
TOPN	-6.4829	-3.6450	0.0002	I(2)

Source: Researcher Computation (2026)

The result in Table 3 shows that HDI, TAXGDP, INFR, and ODA were stationary at first difference whereas GOVGDP, DEBGDP, and TOPN were stationary at second difference. The significance of the ADF statistics is predicated upon the fact that the test statistics are more negative than the 5% critical value. Since the variables are stationary in mixed order of first difference and second difference, we therefore adopt the cointegrating regression analysis based on the fully modified ordinary least squares (FMOLS) approach.

4.4 Fully Modified Ordinary Least Squares (FMOLS) Estimation

In examining the role of fiscal policy on economic development in Nigeria, the FMOLS estimates of the models are presented in Table 4. In Model I, we explore the effect of government expenditure on economic development in Nigeria. From the result, it was observed that government expenditure exerts significant positive effect on economic development in Nigeria. It therefore follows that an increase in government expenditure has the potency of improving the level of economic development in Nigeria. From the estimates, a 1% increase in government expenditure will culminates to about 0.1039% increase in economic development in Nigeria. The control variables

show that inflation exerts significant negative effects on economic development whereas official development assistance and trade openness exerted significant positive. It follows that a 1% increase inflation leads to about 0.1733% decrease in economic development in Nigeria. Also, a 1% increase in ODA and TOPN yields about 0.1753% and 0.0863% increase in economic development respectively. The constant term shows that HDI will be 0.49 if all the explanatory variables are held constant. The R-squared indicates that the explanatory variables in the model account for about 79.01% of the overall variations in economic development during the study period. This represents a good fit of the regression line, and the explanatory power remains high at 74.34% after being adjusted for the degree of freedom.

Table 4: Fully Modified Ordinary Least Squares estimates

Dependent Variable: HDI				
Variables	Model 1	Model II	Model III	Model IV
GOVGDP	0.1039 (0.0000)**			0.0794 (0.0031)**
DEBGDP		-0.4003 (0.0000)**		-0.0243 (0.0000)**
TAXGDP			-0.0106 (0.0710)*	-0.1166 (0.0057)**
INFR	-0.1733 (0.0033)**	-0.0614 (0.0000)**	-0.0607 (0.0046)**	-0.0125 (0.0000)**
ODA	0.1753 (0.0000)**	0.0221 (0.0041)**	0.0404 (0.0017)**	0.4003 (0.0037)**
TOPN	0.0863 (0.0059)**	0.0017 (0.0000)**	0.0021 (0.0000)**	-0.0008 (0.3825)
C	0.4861 (0.0000)**	0.4736 (0.0000)**	0.4928 (0.0000)**	0.1293 (0.0000)**
R-squared	0.7901	0.7327	0.6883	0.8494
Adjusted R-squared	0.7434	0.6733	0.6104	0.7849
S.E. of regression	0.0181	0.0204	0.0191	0.0142
Long-run variance	0.0006	0.0007	0.0005	0.0003
Mean dependent var	0.5093	0.5093	0.5155	0.5155
S.D. dependent var	0.0357	0.0357	0.0307	0.0307
Sum squared resid	0.0059	0.0075	0.0059	0.0028

*Note: * and ** denotes significance at 10% and 5% respectively.*
Source: Researcher Computation (2026)

In Model II, we explore the effect of public debt on economic development in Nigeria. The findings indicates that public debt exerted a significant negative effect on economic development in Nigeria. Consequently, increased public debt beyond certain level dampens development prospect of an economy. The findings support earlier studies like Yahaya (2020). From the estimates, a 1% increase in public debt will yield about 0.4003% decrease in economic development in Nigeria. The control variables depict similar results as in Model I, whereby inflation rate exerts a negative and significant effect on economic development whereas ODA and TOPN exerted significant positive effect on economic development. From the estimate, a 1% increase in inflation leads to

about 0.0614% decrease in economic development; whereas a 1% increase in ODA and TOPN leads to about 0.0221% and 0.0017% increase in economic development. The constant term implies that holding the independent variables constant, the HDI will be 0.4736. In Model II, the explanatory variables account for about 73.27% of the total variations in HDI in Nigeria during the study period.

In Model III, we examined the effect of tax on economic development in Nigeria and the result shows that tax exerts significant negative effect on economic development. Thus, increased tax on the populace is detrimental to the development prospect of the country. The estimate shows that a 1% increase in tax will lead to about 0.0106% decrease in economic development in Nigeria. The control variables exhibit that inflation exerted a negative and significant effect on economic development while ODA and TOPN yielded significant positive effects. Thus, a 1% increase in inflation reduces economic development by about 0.0607% while a 1% increase in ODA and TOPN increases economic development by 0.0404% and 0.0021% respectively. The constant term implies that holding the explanatory variables constant, the HDI will be 0.4928. The R-squared shows that the explanatory variables account for approximately 68.83% of the total variations in HDI in Nigeria during the study period.

Lastly, Model IV presents the joint effect of the three measures of fiscal policy on economic development in Nigeria. The result is consistent with the disaggregated model, particularly with reference to the respective fiscal policy variables. From the result, government expenditure exerted a significant positive effect on economic development while debt and tax exerted significant negative effects. The result therefore indicates that a 1% increase in government expenditure will lead to about 0.0794% increase in economic development, whereas a 1% increase in debt and tax will yield 0.0243% and 0.1166% decrease in economic development. For the control variables, inflation exerted a significant negative effect on economic development while ODA yielded a significant positive effect. However, trade openness exerted an insignificant negative effect. It follows that a 1% increase in inflation will reduce the level of economic development by about 0.0125% while a 1% increase in official development assistance will lead to about 0.4003% increase in economic development in Nigeria. The constant in the result is an indication that HDI will be 0.1293 if all the explanatory variables are held constant. The explanatory variables in the model jointly account for about 84.94% of the total variations in the HDI with the explanatory power being still high at 78.49% after being adjusted for the degree of freedom.

4.5 Discussion of Findings

The study's findings provide insights into the impact of fiscal policy on economic development in Nigeria. The results are discussed below:

1. Government Spending and Economic Development

The study found that government spending exerts a positive and significant effect on economic development in Nigeria. This finding is consistent with the Keynesian theory, which posits that government spending can stimulate economic growth by increasing aggregate demand and crowding-in private investment (Keynes, 1936). The finding is also supported by the endogenous growth theory, which emphasizes the role of government spending in enhancing human capital,

infrastructure, and technological progress (Romer, 1986; Barro, 1990). Empirical studies have also found a positive relationship between government spending and economic growth in Nigeria (Aigbokan, 1999; Olaniyan, 2011). The study's finding suggests that government spending can be an effective tool for stimulating economic development in Nigeria, particularly if targeted towards productive sectors such as infrastructure and human capital development.

2. Public Debt and Economic Development

The study found that public debt exerts a negative and significant effect on economic development in Nigeria. This finding is consistent with the debt-overhang theory, which posits that high levels of public debt can lead to a decrease in investment and economic growth (Krugman, 1988). The finding is also supported by empirical studies that have found a negative relationship between public debt and economic growth in Nigeria (Okonjo-Iweala & Osafo-Maafo, 2007; Akpomi & Orhero, 2014). The study's finding suggests that high levels of public debt can be detrimental to economic development in Nigeria, highlighting the need for fiscal discipline and debt sustainability. The government should prioritize debt reduction and ensure that borrowing is targeted towards productive sectors that can stimulate economic growth.

3. Taxation and Economic Development

The study found that taxation exerts a negative and significant effect on economic development in Nigeria. This finding is consistent with the supply-side theory, which posits that high taxes can lead to a decrease in private investment and economic growth (Laffer, 1981). The finding is also supported by empirical studies that have found a negative relationship between taxation and economic growth in Nigeria (Aigbokan, 1999; Olaniyan, 2011). The study's finding suggests that high taxes can be detrimental to economic development in Nigeria, highlighting the need for tax reforms that promote economic growth. The government should prioritize tax reductions and ensure that tax revenues are used efficiently to stimulate economic growth.

5. Conclusion and Recommendations

The role of fiscal policy in fostering economic development of Nigeria hinges on the effective implementation of fiscal policy through the various policy tools (expenditure, borrowing, and taxation). Consequently, this paper examined the effect of these fiscal policy variables on economic development of Nigeria from 2000 to 2023. We deployed the fully modified ordinary least squares to estimate the four models that were specified for the study. The results indicate the significant role that fiscal policy has in shaping the economic development dynamics in Nigeria. While government expenditure exerted a significant positive effect on economic development, both taxation and public debt exerted significant negative effects. The paper therefore conclude that Nigeria’s fiscal policy has been substantial in shaping the economic development dynamics in Nigeria.

Based on the study's findings, the following policy recommendations are made:

1. Increase Government Spending on Productive Sectors

(i) The government should increase its spending on productive sectors such as infrastructure, education, and healthcare to stimulate economic growth and development.

(ii) The government should prioritize spending on projects that have a high impact on poverty reduction and economic growth, such as rural roads, schools, and healthcare facilities.

(iii)The government should ensure that spending is done efficiently and effectively, with a focus on transparency and accountability.

2. Reduce Public Debt

(i) The government should prioritize debt reduction and ensure that borrowing is targeted towards productive sectors that can stimulate economic growth.

(ii) The government should implement fiscal discipline and ensure that debt servicing is done in a timely manner to avoid debt accumulation.

(iii) The government should consider debt restructuring and renegotiation with creditors to reduce the debt burden.

3. Implement Tax Reforms

(i) The government should implement tax reforms that promote economic growth, such as reducing tax rates and broadening the tax base.

(ii) The government should simplify the tax system and reduce tax evasion to increase revenue mobilization.

(iii) The government should ensure that tax revenues are used efficiently to stimulate economic growth and development.

4. Improve Human Capital Development

(i) The government should prioritize human capital development by increasing spending on education and healthcare.

(ii) The government should implement policies that promote access to education and healthcare, particularly for the poor and vulnerable.

(iii) The government should ensure that education and healthcare services are of high quality and meet international standards.

5. Promote Fiscal Discipline

(i) The government should promote fiscal discipline by implementing a medium-term fiscal framework that prioritizes spending and ensures fiscal sustainability.

(ii) The government should ensure that fiscal policy is coordinated with monetary policy to achieve macroeconomic stability.

(iii) The government should implement transparency and accountability measures to ensure that public finances are managed efficiently and effectively.

By implementing these policy recommendations, the government can promote economic growth and development, reduce poverty, and improve the standard of living of Nigerians.

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