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Fiscal Policy, Private Consumption and Employment in Nigeria: An Empirical Investigation

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Abstract **Original Research Article**

The study examined the influence of fiscal policy on private consumption and employment in Nigeria for the period of 1975 to 2023 using annual time series data sourced from the statistical bulletins (various editions) of central Bank of Nigeria, National Bureau of Statistics and Federal Inland Revenue. The data were tested for stationarity using Augmented-Dickey Fuller (ADF) and Phillips-Perron (PP) unit root test. The test results showed that all the variables used in the study are stationary at their first difference [i.e. 1(1)]. The data were also subjected to cointegration test to ascertain whether using the variables together would ensure reliable results. The test results confirm the presence of a long-run association among the variables which satisfy the condition for our fitting a parsimonious Error Correction Model (ECM) to the data. The empirical results of the models indicated a positive and significant relationship between aggregate government expenditure and private consumption spending. We also found a positive and but insignificant relationship between government expenditure and employment in Nigeria. Furthermore, the study revealed that tax revenue exhibited a negative and an insignificant impact on private consumption spending, tax revenue also exerted positive but insignificant impact on the rate of employment in Nigeria. Further results of the study revealed that wage rate has negative and significant impact on aggregate employment in Nigeria. Lastly, broad money supply has a positive and an insignificant influence on aggregate employment in Nigeria. This suggests that fiscal policy tools of government expenditure and taxation do not have appreciable impact on the rate of employment and private consumption in Nigeria. The study recommends that government should increase and sustain its spending decision on basic infrastructure such as electricity, transport /communication facilities, education and health. Also tax revenue should be efficiently mobilized and channeled to capital projects capable of generating employment opportunities for the people, especially the youths. There is also the need for government to spend more tax revenue on social transfers, rural development, grants and other social services capable of raising the consumption level of households in Nigeria.

Keywords: Fiscal policy, Private consumption, Employment, Government, Expenditure, Tax revenue.

1.0 INTRODUCTION

Attainment of macroeconomic objectives like full employment, stable prices, enduring economic expansion, and positive external balances have always been of paramount interest to governments and policymakers in both developed and developing economies all over the world (Ismaila & Imoughele, 2015). The realization of this desirable macroeconomic objective as a policy priority has never been automatic but requires deliberate interventions by the state (Adefeso & Mobolaji, 2010). To steer the economy toward growth and development, governments have adopted a variety of macroeconomic policy initiatives over the years. Amongst the policy options readily employed are fiscal policy and/or monetary policy (Ismaila & Imoughele, 2015). Fiscal policy, as one of the macroeconomic tools that government employ in the administration of economies to attain desired objectives, dates to the Keynesians. John Maynard Keynes introduced the concept as a measure of steering the economy from depression to the path of expansion and growth during the economic meltdown of the 1930s. Fiscal policy is therefore the application of government expenditure and tax policy to

regulate the level and pattern of production and consumption to bring about sustainable economic growth and development.

Consumer expenditure is considered one of the main drivers of economic growth in developing countries like Nigeria. Mamuyovwi and Maku (2024) asserted that consumer expenditure, also known as private consumption expenditure, constitutes the largest component of the total consumption expenditure in Nigeria, and accounts for about 65% of the nation's Gross Domestic Product (GDP). According to John (2003), private consumption expenditure refers to spending on both durable and non-durable goods, maintenance and protection, and the payment for factor services, as well as goods and services. The consumption pattern reflects the qualities, quantities, actions, and tendencies that characterize a community or group's use of resources for survival, comfort, and enjoyment. Private consumption is an important component of aggregate demand, i.e. the total demand for all goods and services in an economy because according to Keynesian theory, aggregate demand determines the level of production and employment in any economy. Hence, the more the demand, the more the production, and the more the production, the more the jobs that will be created (Ibrahim, 2023). Therefore private consumption expenditure is a key factor for growth and sustainable economic development.

The size of government spending and taxation regime plays a major role in determining how well the economy performs. Government expenditure and taxation level impact on the level of private consumption and hence on the capacity of the economy to generate employment. For instance, by investing in new public works projects like constructing roads or railways, government can boost employment, lower unemployment, and increase disposable income and spending. Employment will, therefore, increase if such programs promote overall economic growth long after the projects are completed. According to Ubesie (2016), government spending creates beneficial public goods including security, infrastructure, roads, and education, and brings about improvements in citizens' purchasing power.

In Nigeria, another important macroeconomics objectives of the federal government is generation of an adequate level of employment for her teeming population. This, the government may achieved by initiating policy thrusts with the fundamental intent of creating an enabling and conducive environment or conditions for the attraction of investments in the critical sector of the economy with the multiplier effects of jobs creation (George-Anokwuru, 2025). Successive administrations in Nigeria over the years have initiated various policies focused on jobs creation. Some of which include the Economic Recovery and Growth Plan (ERGP), the Social Investment Programme (N-Power), the development of Small and Medium Enterprise Credit Guarantee Scheme, Small and Medium Enterprises Investment Scheme (SMEEIS), National Directorate of Employment (NDE), Subsidy Reinvestment and Empowerment Programme (SURE-P), Graduate Entrepreneurship Scheme (GES), etc. These and many other initiatives have yielded very negligible or intangible results in terms of generating employment and curbing unemployment. For instant, Udeora, Obayori and Krokeyi (2017) posited that employment rate, over the years has been very low in Nigeria, while unemployment has been on the increase. According to the National Bureau of Statistics (2025), the unemployment rate in Nigeria averaged 4.47% from 1991 until 2024, reaching an all-time high of 33.3% in the fourth quarter of 2020 (which could have been due to the Co-vid 19 pandemic that year) and a record low of 3.70% in the fourth quarter 2013. It was projected by the Nigerian Economic Summit Group (2024) that the unemployment rate in Nigeria will increase to 4.845% and that an estimated 3.9 million people are expected to jobless in fourth quarter of 2025. These and many other recent records in public domain have shown that Nigerian economy have failed to generate adequate level of employment opportunities for her growing population, especially the youths. It is on this premise that the investigation on the impact of fiscal policy on private consumption and employment generation in Nigeria was conceived.

This paper is organized thus: part II deals with theoretical and empirical review of literature, part III contains methodology, part IV dwells on empirical results, and part V contains the conclusions and recommendations.

2.0 REVIEW OF THEORETICAL AND EMPIRICAL LITERATURE

Keynes (1936) developed a theory that favored the employment of active government action as a tool for regulating the economy in his General Theory of Employment, Interest, and Money. According to the Keynesian theoretical premise, government spending can promote economic expansion and therefore, has a multiplier effects on aggregate demand. If aggregate demand is sufficient, full employment results and production will be at its full potential. Insufficient or excessive aggregate demand in the economy will reduce employment levels and inflation respectively. Therefore, increasing government expenditure is likely to increase investment and employment. Based on expenditure multipliers, government spending raises total demand, which in turn raises total output (Chanda, Adamu & Musa, 2020).

Following the Keynesian perspective, increasing government expenditure and reducing taxation boosts greater output and encourages domestic economic activity and private consumption. Government investment in infrastructure injects income into the economy by creating business opportunities, employment, and increased aggregate demand reversing the effects of macroeconomic imbalance (Ercolani, 2021). When government expenditure increases at the expense of decreased taxation level, households will have more money to spend from their additional income resulting from jobs made possible by government expenditures on infrastructure.

Empirical findings on the impact of fiscal policy on household consumption and employment generation in Nigeria have been uneven. Olusola, Chimezie & George (2022) used data from 1990 to 2020 and the Vector Error Correction Model (VECM) estimate technique to assess the effects of fiscal policy shocks on private consumption in Nigeria. The estimation outcomes demonstrate that tax revenue shocks and government consumption both have a favorable impact on private

consumption in Nigeria. This result confirms the existence of Keynesian crowding-in effects on private consumption in Nigeria.

Using the Autoregressive Distributed Lag (ADL), Ebi and Etim (2022) empirically examined the effect of tiers of government spending on private consumption in Nigeria. The result shows that both federal government and aggregate state government expenditures impacted positively and significantly on private consumption, with federal government expenditure exerting greater impact than aggregate state government expenditures. The finding also showed that aggregate recurrent expenditure crowd-in aggregate private consumption while aggregate capital expenditure crowd-out aggregate private consumption.

Dada (2013) evaluated the composition effect of government spending on private consumption and output growth in Nigeria using time series data from 1961 to 2010. Within the context of a single equation error-correction mechanism, the study used the ordinary least squares (OLS) estimation technique. The outcome demonstrated that government spending has a long-term impact on both private consumption and output. The outcome also showed that public expenditure on social security, health care, and education crowds out private consumption, whereas public spending on administration, building development, agriculture, transportation, and communications crowd in private consumption. The short-run estimates based on the ECM revealed that only two of the six components (health and transfers) significantly influenced private consumption in the short run.

Oseni (2015) examined the effect of fiscal policy shock on private consumption in Nigeria using the Structural VAR approach by Blanchard and Perotti (2002). The investigation showed that positive government spending shocks in Nigeria have an instantaneous negative effect on private consumption. Thus, changes in government expenditure can be used to support private consumption in the long run, while that of taxes can only be used to support private consumption for a short period.

Also, Ezeabasili and Egbunike (2014) evaluated the impact of Nigeria's fiscal deficit on private consumption from 1970 to 2006. The study used the error correction model-based estimating technique known as ordinary least squares (OLS). The empirical findings indicated that fiscal deficits and government consumption both have a negative impact on private consumption in Nigeria. Specifically, a 1% rise in government spending and the fiscal deficit resulted in reductions in private consumption of about 0.3% and 0.7%, respectively.

Based on vector autoregressive regression (VAR) technique Umut (2015) investigated the impact of fiscal policy on unemployment in the Netherlands. According to the study, fiscal shocks have a significant impact on GDP, unemployment, consumption, and investment. According to the findings, unemployment rises in response to fiscal contraction and falls in response to fiscal expansion.

Tafuro (2015) used annual time series data from 1989 to 2009 to examine the impact of fiscal policy on employment for a panel of 17 OECD economies. The structural vector autoregressive (SVAR) regression methodology was used to investigate the impact of fiscal policy on employment. The estimation revealed that the shock caused by fiscal policy implementation reduces employment after two years. This means that the multiplier effect of fiscal policy shock on employment trend after two years was -0.55 percent, while fiscal policy's multiplier effect on overall employment was -0.10 percent.

Faramarzi, Avazalipour, Khaleghi, and Hakimipour (2014) studied the long-run effects of fiscal policy instruments (government spending and taxation) on the level of liquidity and employment in the Iranian economy from 1976 to 2009. The vector error correction mechanism (VECM) was used to estimate the equations in this study. The result of the study showed that there was occurrence of long run relationship among the variables. The results of the long run estimation revealed that government expenditure exerted a positive and significant effect on employment level in Iran. This in numerical term means that when government expenditure increased by one percent, employment level also increased by 0.16 percent. The result on the other hand showed that income tax exhibited a significant negative effect on employment level in Iran during the period evaluated. This implies that a one percent increase in tax decreases employment level by 0.17 percent.

Studies exist on the impact of fiscal policy on employment generation in Nigeria. Olukayode and Olorunfem (2018) investigated the impact of fiscal policy instruments on employment generation in Nigeria from 1980 to 2015. The study used the Augmented Dickey-Fuller test, Engel Granger cointegration test for long-run association and Ordinary Least Squares estimates. The findings showed amongst others that government expenditure has the potential of creating more jobs if they were expended on appropriate capital projects that can facilitate employment creation and linking rural-urban centres smoothly and not encouraging migration. The manufacturing sector also has the prospect of alleviating jobless growth, likewise the agriculture sector if policies are targeted at raising their outputs.

In the similar vein, Nwosa (2014) investigated the effects of government spending on unemployment and poverty rates in Nigeria from 1981 to 2011. The study determined that government spending had a positive and substantial impact on the unemployment rate but a negative and minor impact on the poverty rate using the Ordinary Least Square (OLS) estimation technique. The report suggested that the high poverty rate and rising unemployment rates require immediate intervention.

Using the framework of Keynesian economics, Abubakar (2016) investigated the effect of fiscal policy shocks on output and unemployment in Nigeria. The relationship was examined using yearly data from 1981 to 2015 and the Structural Vector Autoregression (SVAR) estimation method. The results of the cointegration analysis revealed the presence of one cointegrating equation, indicating the presence of a long-run association between the variables. According to the results of the Structural Vector Autoregression (SVAR) estimation, the

public expenditure shock had a negligible positive effect on unemployment in Nigeria. This result, according to the author, means that public expenditure in Nigeria tends to be skewed on unproductive spending such as salaries, debt servicing, overheads, and the like, which hardly lead to employment generation. The result further showed that revenue shock exerted a short-lived negative impact on unemployment in Nigeria. This outcome demonstrated that an increase in revenue can lead to the reduction in unemployment in the short-run through hiring of more employees by the government or carrying out some projects that require temporary employment of people, thus leading to a reduction in the unemployment rate and increase in employment level in the short-run.

Maku and Alimi (2018) investigated the impact of fiscal policy instruments on employment generation in Nigeria within the periods of 1980-2015. The study used the Augmented Dickey-Fuller test to estimate the stationarity level, Engel Granger cointegration test for long-run relationship, and ordinary least square for long-run estimates. The findings show that government spending and manufacturing output had a negative impact on the unemployment rate in Nigeria. It suggests that government spending and output from the manufacturing industry reduce the unemployment rate in Nigeria. However, tax revenue and agricultural output have a direct impact on the unemployment rate in Nigeria.

Very recently, George-Anokwuru (2025), investigated the influence of fiscal policy on employment generation in Nigeria utilizing data from 1985 to 2020. The study which applied the Error correction Model (ECM) showed that aggregate government expenditure has a positive but insignificant influence on the employment rate. Also, in their study on the effect of fiscal policy on unemployment in Nigeria, Davies, Echekoba & Ezu (2023) employed an ex-post facto research design while relying on the autoregressive distributed Lag (ARDL) and Granger causality techniques to analyze the data. The result of the Granger Causality test reveals that government recurrent expenditure (p-value 0.0187< 0.05), government capital expenditure (p- value 0.0030< 0.05), government transfer payment (p-value 0.0204< 0.05), and fiscal deficit (p-value 0.0100 < 0.05) have significant effect on unemployment in Nigeria. On the other hand, revenue from taxation (p-value 0.4126> 0.05) has no significant effect on unemployment in Nigeria. Similarly, government capital expenditure (p-value 0.0109 < 0.05) and government transfer payment (p-value 0.0481 < 0.05) have a significant positive relationship with unemployment; government recurrent expenditure (p-value 0.0821 > 0.05) and fiscal deficit (p- p-value 0.1094 > 0.05) have an insignificant positive relationship with unemployment. Conversely, revenue from taxation (p-value 0.0484 < 0.05) has a significant negative relationship with unemployment in Nigeria.

Ihekwereme, Odili & Ihekwereme (2025) investigated the effectiveness of taxation and public expenditure on employment generation in Nigeria from 1980 to 2022. The model was built on Keynesian fiscal policy framework using the multiple regression analysis method. Given the order of integration, the Johansen Co-integration procedure and Error Correction Model (ECM) were applied. It was found that unemployment was negatively affected by petroleum profits tax, while non-oil taxes, capital expenditure and recurrent expenditure had positive effects on unemployment with the petroleum profits tax and capital expenditure having the most significant effects.

3.0 METHODOLOGY

Secondary data from 1974 to 2014 were obtained from the statistical bulletin of the Central Bank of Nigeria (CBN) and the National Bureau of Statistics (NBS) to investigate the impact of fiscal policy on private consumption and employment in Nigeria. In specifying the empirical model, the study was anchored on the Keynesian theory. The dependent variables for this study are private consumption and aggregate employment, while the key fiscal policy variables like gross domestic product (income), government expenditure, tax revenue, wage rate, and broad money supply were identified as the independent variables. That is:

PCON = f (GDP, GEXP, TREV, MS2) (1)

Equation (1) in its econometric linear form is specified as follows

$$LOG(PCON) = \alpha_0 + \alpha_1 LOG(GDP) + \alpha_2 LOG(GEXP) + \alpha_3 LOG(TREV) + \alpha_4 LOG(MS2) + U_1 \quad (2)$$

Where:

PCON = private consumption in Nigeria (in million naira)

GDP = Nominal Gross Domestic Product, representing income in Nigeria (in million naira)

GEXP = Government Expenditure in Nigeria (in million naira)

TREV = Tax Revenue in Nigeria (in million naira)

MS2 = Broad Money Supply in Nigeria (in million naira)

Where U_1 is the random error term denoting other variables not captured by the model and $\alpha_{0\ to}\ \alpha_4$ are the parameters of the estimates with the a priori expectations $\alpha_1, \alpha_2, \alpha_3, \alpha_4 > 0$.

The Employment model is,

EMP =f (GEXP, TREV, WAGE, MS2) (3)

Where:

EMP = Total Employment in Nigeria (in millions)

GEXP = Government Expenditure in Nigeria (in million naira)

TREV = Tax Revenue in Nigeria (in million naira)

WAGE = Minimum Wage Rate in Nigeria (in naira)

MS2 = Broad Money Supply in Nigeria (in million naira)

Equation 3 in its econometric linear form can be specified as follows.

$$LOG(EMP) = \beta_0 + \beta_1 LOG(GEXP) + \beta_2 LOG(TREV) + \beta_3 LOG(WAGE) +]\beta_4 LOG(MS_2) + U_2 \quad (4)$$

Where: U_2 is the random error term and β_0 to $\beta_5$are the parameter estimates with the a priori expectations $\beta_1, \beta_2, \beta_4 > 0$, and $\beta_3 < 0$

3.1 Techniques of Analysis

To analyze the data, the study employed Descriptive Statistics, Unit Root Test via the Augmented Dickey-Fuller and Phillips-Peron tests, and Error Correction Model.

3.2 Unit root tests

To ensure that the time series data used in the study are stationary and to avoid spurious regression results, unit root test was conducted. Both the Phillips-Perron (PP) test and the Augmented Dickey-Fuller (ADF) test were used to evaluate the unit root. For this, the ADF and PP equations were estimated as follows:

$$\Delta y_t = \alpha_0 + \alpha_1 \Delta y_{t-1} + \sum_{j=1}^{j} \beta_i \Delta y_{t-1} + \varepsilon_t \qquad (5)$$

$\triangle Y_t = Y_t - Y_{t-1}$ is the difference operation of the series, Yt,

$\triangle Y_{t-1} = Y_{t-i} - Y_{t-2}$ is the first difference operation of the lagged value of Y_t (i.e. Y_{t-1});

e_t = the random error term; and α_0, α_1 and β_1 are the parameters of the estimates.

Also, the following equation is given using the Phillips-Perron (1988) test as well:

$$y_1 = \beta_0 + \Phi y_1 + U_t \qquad (6)$$

Where:

β_0 and Φ are parameters of the estimates, and U_t is the term for chanced error.

The null hypothesis using the PP test requires that if $\Phi = 1$, then the series is non-stationary or has a unit root, but if $\Phi<1$, then the series is stationary.

3.3 Co-integration test

A co-integration test was conducted to determine the variables with long-term relationships. A set of time-series variables may be in equilibrium or have a long-term relationship, according to the basic idea of co-integration, provided that the series are integrated in the same order. Lack of co-integration indicates that these variables do not have a long-term relationship because, in theory, they may wander arbitrarily far apart (Dickey, Jansen, and Thornton, 1991). The long-run equilibrium relationship between a few chosen macroeconomic variables in the model was examined using Johansen and Juselinus's (1990) multivariate co-integration approach. The following equation was used to generate the vector autoregression model of order p(VAR (p)).

$$\Delta y_t = \Pi y_{t-1} + \sum_{i=1}^{k-1} \Gamma_i \Delta y_{t-i} + C + \varepsilon_t. \qquad (7)$$

In this equation, Yt is the (n x 1) vector of macroeconomic variables in period t, C is the (n x 1) vector of constant terms, I (i=1...k-1) is the (n x n) coefficient matrix of short-run dynamics, and ε_t is the (n x n) vector of error term, which is independent of all explanatory variables. Using the trace test and maximum eigenvalue test, the cointegration test was carried out and it was established that Co-integration is a sufficient condition for an Error Correction Model formulation.

3.4 Error Correction Model

The dynamics of a variable around I units stable equilibrium value were discovered using an error correction model (ECM). Its main purpose was to estimate how quickly short-run disequilibrium would transit to long-run equilibrium. Because of this, the decision rule demands that the coefficient of the error-correcting factor have a negative sign, be less than 1, and be statistically significant. Thus, the more adjustments move quickly towards the long-run equilibrium the larger the absolute value of the coefficient. In terms of error correction mechanism (ECM), the short-run relationships based on the pertinent equations can be represented as follows:

$$\Delta Y_t = \delta_0 + \sum_{j=1}^{k} \beta_{ij} \Delta Y_{t-j} + \sum_{j=1}^{k} \lambda_{ij} X_{t-j} + \theta ECM_{t-i} + U_{1t} \qquad (8)$$

Where Y is the dependent variable; ECM is the error correction factor; β_{ij}, δ_0, θ, and λ are slope parameters; U_t represents the white noise error term.

4.0 EMPIRICAL RESULTS

4.1 Descriptive Statistics for the Underlying Series

The descriptive statistics provide an overview of the key statistical characteristics of the variables selected for this study. It was used to ascertain the stability of the time series data. The variables comprise the following: Private Consumption (PCON), Employment (EMP), GOVERNMENT Expenditure (GEXP), Tax Revenue (TREV), Wage Rate (WAGE) and Broad Money Supply (MS2). The descriptive statistics for each variable are shown in table 1 below.

Table 1: Descriptive Statistics Result

	PCON	EMP	GDP	GEXP	TREV	WAGE	MS2
Mean	16018890	40123451	22070339	1590147.	1367061.	5376.136	4684583.
Median	2436752.	35339942	2705575.	382716.4	188120.6	363.0000	379567.0
Maximum	91345862	90470165	1.28E+08	7813741.	6399100.	18000.00	27068575

Minimum	13688.50	15019800	21475.24	5942.600	1622.500	60.00000	3031.330
Std. Dev.	26675369	19106203	36500066	2171460.	1856797.	6735.076	7745154.
Skewness	1.696104	1.166647	1.593118	1.264513	1.160165	0.996351	1.619902
Kurtosis	4.509737	3.594908	4.147765	3.363917	3.108910	2.547360	4.310881
Jarque-Bera	25.27504	10.63000	21.02735	11.96875	9.892288	7.655532	22.39368
Probability	0.000003	0.004917	0.000027	0.002518	0.007111	0.021758	0.000014
Sum	7.05E+08	1.77E+09	9.71E+08	69966447	60150685	236550.0	2.06E+08
SumSq Dev.	3.06E+16	1.57E+16	5.73E+16	2.03E+14	1.48E+14	1.95E+09	2.58E+15
Observations	44	44	44	44	44	44	44

Source: Author's computation.

Statistics in table 1 show that the mean values of the variables are: N16018890 million for private consumption, 40123451 million for employment, N22070339 million for gross domestic product, N1590147.0 million for government expenditure, N1367061.0 million for tax revenue, N5376.136 thousand for wage rate and N4684583.0 million for broad money supply.

The maximum values of the variables are: N91,345,862 million for private consumption spending, 90470165 million for aggregate employment, N127,762,545.58 million for gross domestic product, N7813741 million for government expenditure, N6399100.00 million for tax revenue, N18,000.00 for wage rate and N27068575 million for broad money supply.

The minimum values of the variables are: N13688.50 for private consumption, 159 9800million for aggregate employment, N21475.24 million for gross domestic product, N5942.60 million for government expenditure, N1622.50 million for tax revenue, N60.00 for wage rate and N3031.33 million for broad money supply.

All the distributions for the variables are favorably skewed, according to an analysis of the skewness of the different distributions. The distributions for private consumption spending, total employment, gross domestic product, government spending, tax revenue, and broad money supply are leptokurtic, according to an analysis of kurtosis, whereas the distribution for wage rate is platykurtic because its kurtosis value is less than 3.

Table 2: Augmented Dickey-Fuller (ADF) test

Variable	ADF statistic				
	Level	Critical value	1st difference	Critical value	Remarks
		at 5%		at 5%	
LPCON	-0.693246	-2.931404	-4.869612	-2.93316	I(1)
LEMP	-0.300052	-2.931404	-6.998953	-2.93316	I(1)
LGDP	-0.239123	-2.931404	-5.067472	-2.93316	I(1)
LGEXP	-0.489556	-2.933158	-8.791599	-2.93316	I(1)
LTREV	-0.804884	-2.931404	-7.913025	-2.93316	I(1)
LWAGE	-0.610788	-2.931404	-7.01015	-2.93316	I(1)
LMS2	-0.562884	-2.933158	-3.84684	-2.93316	I(1)

Source: Author's Computation

Table 3: Phillips-Perron (PP) test

Variable	PP statistic				
	Level	Critical value	1st difference	Critical value	Remarks
		at 5%		at 5%	
LPCON	-0.640476	-2.931404	-4.951554	-2.93316	I(1)

LEMP	-0.257587	-2.931404	-7.067253	-2.93316	I(1)
LGDP	-0.267703	-2.931404	-5.054065	-2.93316	I(1)
LGEXP	-0.576671	-2.931404	-8.460923	-2.93316	I(1)
LTREV	-0.786624	-2.931404	-8.002867	-2.93316	I(1)
LWAGE	-0.610788	-2.931404	-7.01015	-2.93316	I(1)
LMS2	-1.053515	-2.931404	-3.84684	-2.93316	I(1)

Source: Author's Computation

The stationarity - unit root test result reveals that none of the variables is stationary at level. All the variables are stationary at first differences 1(1). That is, they became stationary after first differencing. The results of the variables being stationary at 1(1) make it inappropriate for the application of the Ordinary Least Squares (OLS) method, therefore, the tests to determine the long-run relationship can be achieved with the aid of the Johansen Co-integration test, which is presented in Table 4.

4.2. Cointegration test

To examine the long-run equilibrium relationships among the variables, the cointegration test was conducted.The use of the common cointegration test based on the multivariate technique of Johansen and Jesulius (1990) satisfied the criteria since the variables are integrated of order I(1). The decision rule states that if the estimated trace and maximum Eigen values are higher than the critical values, the null hypothesis of no co-integration is rejected and it is determined that the model's variables have a long-term link with one another. Tables 4 and 5 present the cointegration test based on the trace test and the maximum eigenvalue test.

Table 4: Trace test

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.806796	209.4182	125.6154	0.0000
At most 1 *	0.770641	142.0139	95.75366	0.0000
At most 2 *	0.605005	81.64274	69.81889	0.0042
At most 3	0.425016	43.55855	47.85613	0.1195
At most 4	0.292098	20.86861	29.79707	0.3659
At most 5	0.147147	6.705185	15.49471	0.6121
At most 6	0.004363	0.179271	3.841466	0.6720
Trace test indicates 3 cointegratingeqn(s) at the 0.05 level				
* Denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Source: Author's Computation

Table 5: Maximum eigenvalue test

Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.806796	67.40432	46.23142	0.0001
At most 1 *	0.770641	60.37116	40.07757	0.0001
At most 2 *	0.605005	38.08419	33.87687	0.0148
At most 3	0.425016	22.68994	27.58434	0.1871
At most 4	0.292098	14.16342	21.13162	0.3518
At most 5	0.147147	6.525914	14.26460	0.5467

At most 6	0.004363	0.179271	3.841466	0.6720
Max-eigenvalue test indicates 3 cointegratingeqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Source: Author's Computation

Based on the trace test and maximal eigen value test, the co-integration test shown in Tables 4 and 5 reveal the existence of three co-integrating equations at the 5% level of significance. This is because in each of the three cointegrating equations, the calculated trace test and maximum eigen value test statistic values were all higher than the crucial values at the 5% level of significance. The findings indicate that the variables are co-integrated and that there is an equilibrium relationship over the long term between them. This indicate that the dependent variables were affected over the long term by the independent factors.

4.3 Parsimonious error correction estimates of the private consumption equation.

Table 6 depicts parsimonious error correction estimates of the empirical results of the estimated private consumption spending equation.

Table 6: Parsimonious result of private consumption equation

Dependent Variable: D(LPCON)				
Method: Least Squares				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.049204	0.032959	1.492890	0.1442
D(LGDP)	0.549293	0.106790	5.143692	0.0000
D(LGDP(-1))	0.357184	0.112025	3.188429	0.0030
D(LGEXP(-1))	0.126188	0.071332	1.769020	0.0854
D(LTREV(-1))	-0.042939	0.045500	-0.943707	0.3516
ECM1(-1)	-0.339482	0.131448	-2.582635	0.0140
R-squared	0.608036	Durbin-Watson stat		1.880342
Adjusted R-squared	0.553597	F-statistic		11.16904
		Prob(F-statistic)		0.000002

Source: Author's computation

The outcome, which is shown in the above table, demonstrates that the error correction factor has the anticipated negative sign for its coefficient and is statistically significant, as theorized. Only roughly 34% of the disequilibrium in private consumption expenditure was corrected back to equilibrium in one year, according to the magnitude of the error correction variable's coefficient, which was 0.339. This showed a gradual transition from short-term disequilibrium to long-term equilibrium.

The computed short-run equation has a moderately good fit and a moderately high explanatory power, as indicated by the R-squared of 0.608 and the corrected R-squared of 0.553. The modified R-squared value of 0.553 demonstrates that changes in the independent variables accounted for almost 55% of the systemic variation in the dependent variable.

The total model was statistically significant at the customary 1%, 5%, and 10% levels of significance, according to the F-statistic value of 11.169 and its low probability value of 0.000002. This is the case since the probability value of 0.000002 was less than 0.01, 0.05, and 0.1 for the 1%, 5%, and 10% levels of significance, respectively. This indicates that the independent and dependent factors both affect the dependent variable.

The no autocorrelation zone of the Durbin-Watson crucial regions was where the Durbin-Watson statistics value of 1.880 fell, which was larger than the upper boundary value and less than 4-du. This demonstrates that the estimated model's estimation of autocorrelation is unproblematic. The residual terms are not interconnected since autocorrelation did not exist. Because of this, the computed regression equation is well-defined and behaved.

Income (gross domestic product), as shown by an analysis of the short-run dynamics of the private consumption spending equation, positively affects private consumption spending in Nigeria. The Keynesian absolute income consumption hypothesis is consistent with this result. Ceteris paribus, a one percent rise in income led to an increase in consumption spending of about 0.55 percent in real terms. In Nigeria, income that lagged by a certain amount had a favorable impact on consumption spending in keeping with expectations from the outset. This implies that, ceteris paribus, an increase in income

of one percent during the period led to an increase in consumption spending of roughly 0.36 percent. With their low probability values of 0.0000 and 0.0030, the variables are statistically significant at the standard one, five, and ten percent levels of significance.

The outcome also demonstrates that government spending has a favorable effect on private consumption spending in Nigeria one period later, as predicted by theory. This indicates that increased government spending in Nigeria sparked an increase in consumer spending. The outcome demonstrates that, ceteris paribus, a one percent rise in government spending over the given period led to an increase in private consumption spending of roughly 0.13 percent. Given that the one-period lagged government spending had a probability value of 0.0854, which is larger than 0.05 but less than 0.1, it is also statistically significant at the 10% level of significance.

Meanwhile, results showed that a period lagged of tax revenue has a negative impact on private consumption spending in Nigeria. In real terms, the result showed that a one percent increase in tax revenue resulted in a decrease in private consumption spending by approximately 0.04 percent, ceteris paribus. The variable was, however, not statistically significant, given its high probability value of 0.3516.

4.4 Post Estimation Diagnostic test for private consumption

Many diagnostic tests were performed to see whether the estimated equation was adequate. The estimated model's condition of stability was examined using the Ramsey RESET test and the cumulative sum of recursive residuals (CUSUM) test. To verify the existence of normality or sufficiency of the estimated model, normality tests like the Q-statistic test, Breusch-Godfrey serial correlation Lagrange Multiplier (LM) test, the Q-statistic, and the autoregressive conditional heteroscedasticity (ARCH) test were conducted. Table 7 provide a summary of the test results.

Table 7: Diagnostic test

Test statistic	Value(prob.)
Ramsey RESET Test	1.724110
	(0.1980)
Breusch-Godfrey Serial Correlation LM Test	0.230540
	(0.7954)
Breusch-Pagan-Godfrey Heteroscedasticity Test	1.578833
	(0.1992)

Note: values in parenthesis are probability values
Source: Author's computation

It was determined that the estimated equation is stable by the Ramsey RESET test statistic of 1.724110 and its high probability value of 0.1980. There is no autocorrelation issue in the model, as evidenced by the Breusch-Godfrey serial LM test statistic of 0.230540 and its high probability value of 0.7954. This shows that the residual terms are independent and that the calculated equation has no autocorrelation.

Because there is no issue with heteroscedasticity, as indicated by the Breusch-Pagan-Godfrey Heteroscedasticity Test value of 1.578833 and its high probability of 0.1992, the disturbance terms have a normal distribution. The calculated equation is suitable and behaves properly, according to the results of the different tests that were run.

4.5 Parsimonious error correction result of the aggregate employment equation

Table 8 displays the estimated outcomes of the employment equation's error correction model.

Table 8: Parsimonious error correction result of the aggregate employment level

Dependent Variable: D(LEMP)				
Method: Least Squares				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.068659	0.021720	3.161099	0.0034
D(LEMP(-1))	0.132131	0.152160	0.868367	0.3917
D(LGEXP)	0.060810	0.036267	1.676734	0.1033
D(LTREV)	0.053855	0.023556	2.286232	0.0290
D(LTREV(-2))	0.046309	0.020130	2.300564	0.0281
D(LWAGE(-2))	0.048124	0.020448	2.353529	0.0249

D(LMS2(-1))	-0.114303	0.085775	-1.332580	0.1921
D(LMS2(-2))	0.123006	0.088566	1.388865	0.1745
ECM2(-1)	-0.278703	0.099455	-2.802289	0.0085
R-squared	0.663264	Adjusted R-squared		0.629080
F-statistic	3.452456	Durbin-Watson stat		1.925319
Prob(F-statistic)	0.005633			

Source: Authors' computation.

The outcome, which is shown in the above table, demonstrates that the error correction factor has the anticipated negative sign for its coefficient and is statistically significant, as theorized. Only around 28% of the disequilibrium in the overall employment level was corrected back to equilibrium within a year, according to the magnitude of the error correction variable's coefficient, which was 0.279. This shows a gradual transition from short-term disequilibrium to long-term equilibrium.

The estimated short-run equation had an R-squared of 0.663 and an adjusted R-squared of 0.629, indicating a reasonably good fit and a moderately strong explanatory power. Particularly, the adjusted R-squared of 0.629 demonstrated that fluctuations in the independent variables account for about 63 percent of the systemic variation in the dependent variable.

The total model was statistically significant at the customary one percent, five percent, and ten percent levels of significance, as indicated by the F-statistic value of 3.452 and its low probability value of 0.005633. Given that the probability value of 0.005633 is less than 0.01, 0.05, and 0.1 for 1%, 5%, and 10% levels of significance, respectively, this is the case, indicating that the independent factors affect the dependent variable jointly.

The Durbin-Watson statistics value of 1.925 falls into the no autocorrelation zone of the Durbin-Watson crucial regions, is more than the upper boundary value, which is less than 4-du, and is also greater than the upper boundary value. The results demonstrate that the estimated model does not have an autocorrelation issue. The residual terms are not dependent on one another because there is no autocorrelation. As a result, the computed regression equation has good specification and behavior.

Examination of the employment equation's short-run coefficient reveal that employment one period earlier has a favorable effect on employment in the present period. So, employment in the current time is favorably influenced by the level of employment in the preceding period. According to the outcome, a rise in employment during the previous period led to an increase in employment during the current period of about 0.13 percent in real terms.

The coefficient of government spending is positive, showing that, in keeping with a priori expectations, there is a positive relationship between government spending and total employment in Nigeria. This translates to an increase in employment of roughly 0.06 percent, ceteris paribus, for every percent rise in government spending. Despite the high probability value of 0.1033, the variable did not statistically significantly affect the level of employment.

Further examination of the result showed that tax revenue has a positive impact on aggregate employment levels in Nigeria. This means that an increase in tax revenue brings about an increase in aggregate employment. Real increases in tax revenue of one percent in the current period and two periods later led to increases in aggregate employment levels of about 0.05 and 0.04 percent, respectively. According to statistics, tax revenue from the present period and two previous periods had a significant impact on aggregate employment levels at the 5% level of significance. This is due to the fact that their low probability values of 0.0290 and 0.0281, respectively, were less than 0.05.

Meanwhile, the result showed that wage rate exerted a negative influence on aggregate employment in Nigeria. This outcome supports theoretical predictions, demonstrating that a rise in wage rates results in a decline in the labor force's employability. According to the findings, a one percent rise in the wage rate two periods later led to a 0.5% drop in total employment. Given that its low probability value of 0.0249 was less than 0.05, the variable's impact on aggregate employment was likewise statistically significant at the 5% threshold of significance.

Lastly, two periods lagged of broad money supply has positive influence on aggregate employment in Nigeria during the period of evaluation. This indicates that as the money supply grows, the economy becomes more monetized, which raises investment, output, and employment levels. Thus, a one percent rise in the broad money supply across two periods led to an increase in aggregate employment of roughly 0.12 percent, ceteris paribus. However, given its high probability value of 0.1745, the variable was not significant in terms of its influence on total employment at any of the standard one, five, or ten percent thresholds of significance.

4.6 Post Estimation Diagnostic test for employment

Many diagnostic tests were performed to see whether the estimated equation was adequate. The estimated model's condition of stability was examined using the Ramsey RESET test and the cumulative sum of recursive residuals (CUSUM) test. To verify the existence of the normality or sufficiency of the estimated model, normality tests like the Q-statistic test,

Breusch-Godfrey serial correlation Lagrange Multiplier (LM) test, the Q-statistic, and the autoregressive conditional heteroscedasticity (ARCH) test were conducted. The test findings are compiled in Table 9.

Table 9: Diagnostic test

Test statistic	Value(prob.)
Ramsey RESET Test	0.531507
	(0.4704)
Breusch-Godfrey Serial Correlation LM Test	0.518882
	(0.6003)
Breusch-Pagan-Godfrey Heteroscedasticity Test	2.002936
	(0.1131)

Note: values in parenthesis are probability values

Source: Authors computation.

It was demonstrated that the estimated equation is stable by the Ramsey RESET test statistic of 0.531507 and its high probability value of 0.4704. As this was going on, the Breusch-Godfrey serial LM test statistic of 0.518882 with its high probability value of 0.6003 demonstrate that the model is autocorrelation-free. This means that the residual terms are independent and that the calculated equation has no autocorrelation.

The results of the Breusch-Pagan-Godfrey Heteroscedasticity Test, which showed a value of 2.002936 and a high probability of 0.1131, indicate that there is no heteroscedasticity issue and that the disturbance terms are therefore normally distributed. The calculated equation is sufficient and behaves as expected, according to the results of the different tests that were ran.

The plot of CUSUM and CUSUMSQ statistics at the 5% critical lines revealed that they clearly wander in between the critical lines, indicating the stability of Nigeria's estimated private consumption spending - fiscal policy equation. The Q-statistic result was used to determine the normality or adequacy of the estimated model. The Q-statistic result is shown in Table 10.

Table 10: Q-statistic

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob*
. | . |	. | . |	1	-0.055	-0.055	0.1345	0.714
. |*. |	. |*. |	2	0.151	0.148	1.1656	0.558
.*| . |	.*| . |	3	-0.201	-0.190	3.0320	0.387
. |*. |	. | . |	4	0.086	0.054	3.3841	0.496
. | . |	. | . |	5	-0.015	0.047	3.3948	0.639
.*| . |	.*| . |	6	-0.130	-0.200	4.2479	0.643
. | . |	. | . |	7	-0.048	-0.030	4.3650	0.737
.*| . |	.*| . |	8	-0.158	-0.123	5.7035	0.680
. | . |	. | . |	9	0.043	-0.024	5.8041	0.759
. | . |	. |*. |	10	0.072	0.137	6.0984	0.807
. | . |	.*| . |	11	-0.060	-0.132	6.3100	0.852
. | . |	. | . |	12	0.010	-0.013	6.3157	0.899
. | . |	. | . |	13	0.002	0.071	6.3159	0.934
. |*. |	. | . |	14	0.085	-0.033	6.7916	0.942
. | . |	. | . |	15	-0.056	-0.051	7.0080	0.957
. | . |	. | . |	16	-0.059	-0.058	7.2576	0.968
. | . |	. | . |	17	0.027	0.037	7.3126	0.979
.*| . |	.*| . |	18	-0.139	-0.144	8.7980	0.964
. |*. |	. | . |	19	0.103	0.059	9.6552	0.961
.*| . |	. | . |	20	-0.125	-0.063	10.969	0.947

*Probabilities may not be valid for this equation specification.

Source: Authors' computation.

According to the Q-statistic presented in Table 10, there are high probability values for the 20 lag periods. The series was determined to be white noised by the low Q-statistic values with high probability values, and as a result, the residual components in the model did not exhibit any autocorrelation. This implied that the value of the residual in a certain time was independent of or unconnected to the value of the residual terms in a different period. Additionally, it suggested that there was no co-variation between the residuals.

5. Conclusion and Recommendation

The study was undertaken to investigate empirically the impact of fiscal policy on private consumption and employment in Nigeria. There has been debate as to whether fiscal policy actions of the government have any significant impact on the economy in terms of increasing or crowding-in private consumption and generating employment. However, in Nigeria the huge government spending over the years has seemed not to produce the desired outcomes as the country has continued to record poor socio-economic indices in spite of the huge revenue and expenditure made by the government. This study contributes to the understanding of the relationship between fiscal policy actions and household consumption as well as employment generation in Nigeria. The study employed the Ordinary Least Squares (OLS) estimation technique within the Cointegration analysis and the Error Correction Modeling. Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) were used to test for the unit root. The empirical results of the study revealed that government expenditure exerted positive and significant impact on private consumption spending, and positive but insignificant impact on impact on the rate of employment in Nigeria. This means that the huge government expenditure have not effectively helped to increase the level of aggregate employment in Nigeria. Similarly, tax revenue exerted a negative and significant impact on aggregate employment, and negative but insignificant impact on private consumption spending in Nigeria. Other results of the study revealed that wage rate has negative and significant impact on aggregate employment in Nigeria. Lastly, broad money supply has positive influence on aggregate employment in Nigeria. Based on its findings, the study recommends that government should adopt prudent macroeconomic policies such as expansionary fiscal policy during the period of economic recession and contractionary fiscal measure during the period of boom. Specifically, the government should increase and sustain its spending decision on basic infrastructure such as electricity, transport /communication facilities, education and health. Also tax revenue should be efficiently mobilized and channeled to capital projects capable of generating employment opportunities in Nigeria.

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