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Effect of Government Administrative and Social Expenditure on Economic Growth in Nigeria as Moderated by Monetary Policy Rate

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Abstract

The study exploits the effect of public administrative and social spending on economic growth in Nigeria as moderated by monetary policy rate. This study adopts the ex post facto research design and collected data from the CBN and National Bureau of Statistics over the period 1986 to 2022 culminating in thirty-six (36) years. The study conducted the unit root test using the Augmented Dickey-Fuller test and found all variables to be stationary at level which denotes that there will not be any spurious result in the study. From the analysis, the study found that there is an existence of an equilibrium relationship among the variables and over 98% of disequilibrium can be corrected over a year. From the OLS, the study found that the monetary policy rate has a significant moderating effect on the relationship between government administrative expenditure and economic growth in Nigeria. On the other hand, the study found that the monetary policy rate has a non-significant moderating effect on the relationship between public social expenditure and economic growth in Nigeria. The study concludes that the monetary authority should be sensitive in directing its policies such as interest rates because they indirectly impact government expenditures that can propel economic growth. The study recommends that the monetary authority use an expansionary monetary policy to reduce interest rates and encourage more investment, stimulating economic growth in Nigeria.

Keywords: Administrative Expenditure, Social Expenditure, Economic Growth, Monetary Policy Rate.

Introduction

Government spending is widely recognised as a crucial element within the framework of public expenditure on a global scale. The economic impact of public expenditure is assessed based on various indicators of socio-economic development, including infrastructure development, poverty alleviation, unemployment rates, maternal mortality rates, and macroeconomic stability. In light of the prevailing economic downturn and its consequential effects, the government assumes a pivotal role by augmenting its expenditure with the aim of stimulating economic expansion. While the majority of macroeconomic models indicate that an increase in government expenditure will lead to a positive impact on output, there are variations among these models in terms of the anticipated effects on consumption resulting from such a policy intervention (Danmola et al., 2013). The response of the latter variable, being the greatest component of aggregate

demand, plays a crucial role in determining the magnitude of the government spending multiplier.

Meanwhile, the rationale for the existence of government anywhere, including Nigeria, can be viewed from the perspective of the institutions of property rights, rule of law, governance, security, enforcement of the rule of law, etc. Nigeria is a federal state with three tiers, with multiple and diverse ethnic and other socio-political differences, which most often determine the volume and rate of spending (Onuorah, 2012). The nature of public spending (in Nigeria) depends majorly on the revenue – of which oil controls a greater percentage – and which is also determined by the vagaries of world market interactions. The other institutional factors that can influence public spending and economic growth include institutional, social capital, and social characteristics (Abu & Abdullahi, 2010). All these affect nations' investment directly as they create harsh environments and insecurity, which increases transaction costs and mar the private investment for growth.

Government spending is the expenses the government incurs in carrying out its programmes. It also involves all the expenses that the public sector incurs for its maintenance for the benefit of the economy. Generally, government expenditure in Nigeria can be categorized into two component parts; namely capital expenditure and recurrent expenditure. Capital expenditure is incurred on the creation or acquisition of fixed assets (new or second-hand) while recurrent expenditure is incurred on the purchase of goods and services, payment of wages and salaries, and settlement of depreciation on fixed assets. In the words of Babatunde (2018), an increase in government spending on socio-economic activities and infrastructural development is a stimulus for economic growth. The implication of the above observation is that government spending on social services and infrastructure that supports economic activities is germane to economic prosperity. For instance, administrative expenditure, social expenditure, transfer expenditure, economic expenditure, and defense expenditure have effects on economic outcomes in raising the productivity of labour and increasing the growth of national output (Onipe & Joseph, 2022). This study focuses on administrative and social expenditure.

The link between public expenditure and economic growth has attracted considerable interest on the part of researchers both at the theoretical as well as empirical levels. Unevenly speaking, one may distinguish between two opposing views: on the one hand, there is the Keynesian approach according to which government spending is an important policy tool to be used to ensure a reasonable level of economic activity; correct short-term cyclical fluctuations in aggregate expenditure, and secure an increase in productive investment (Poku at el., 2022). The opposite view is that excessive state intervention in economic life affects growth performance in a negative way for two reasons: first, because government operations are often conducted less efficiently, they reduce the overall productivity of the economic system, second, because excessive government expenditure (usually accompanied by high taxation levels) distorts economic incentives and results in suboptimal economic decisions (Barro, 1990).

On the other hand, monetary policy is a deliberate action of the monetary authorities to influence the quantity, cost, and availability of money credit in order to achieve the desired macroeconomic objectives of internal and external balances (CBN, 2011). The action is carried out by changing money supply and/or interest rates with the aim of managing the quantity of money in the economy. Thus, monetary policy as a technique of economic management to bring about sustainable economic growth and development has been the pursuit of nations and formal articulation of how money affects economic aggregates dates back to the time of Adams Smith and later championed by the monetary economists. Since the expositions of the role of monetary policy in influencing macroeconomic objectives like economic growth, price stability, equilibrium in the balance of payments, and a host of other objectives, monetary authorities are saddled with the responsibility of using monetary policy to grow their economies.

As a percentage of GDP, recurrent expenditure increased in Nigeria from 1.2 percentage points to 8.8 percent. Most of the components of recurrent expenditure increased relative to their levels in 2019. As a proportion of Federal Government revenue, capital expenditure was 30.1 percent, exceeding the stipulated minimum target of 20.0 percent under the WAMZ secondary convergence criteria. The data speaks volumes that the economy does not grow at a fast rate as the growth rate of government expenditures. It is expected that as the public expenditure expands output is expected to expand also because public expenditure should be translated into output growth. Or does it imply that much of the public expenditure finds its way into some other paths different from the intended routes?

Statement of the Problem

Empirical studies on the effect of government spending on economic growth reported results such as positive effects, negative effects, and those who could not establish a relationship between government spending and economic growth (Adelowokan, 2015; Agbonkhese & Asekome, 2016; Egbetunde & Fasanya, 2013; Odusola, 2016; Ogunmuyiwa & Ekpo, 2017). In Nigeria, there has not been an agreement on the nature and impact of government expenditure on economic growth. However, other studies for instance (Adegboyo & Olaniyan 2021; Akpan, 2005; 2016; Babatunde, 2019; Oluyemi et al., 2021) found that the various dimensions of public expenditure are positively related to economic growth. From this review, there is no consensus among researchers on the nature and impact of public expenditure on the performance of Nigeria (and indeed other countries) leaving the area amenable for further investigation in Nigeria. These mixed results and inconclusive arguments are posited due to differences in their study periods, test statistics used, sources of their data, and study jurisdictions among others, which necessitated this study to close these gaps by providing further empirical evidence on the impacts of government spending on economic growth in Nigeria.

In addition to the above, it has been observed that government spending in Nigeria has been on the rise, however, the rising government expenditure may not have been translated to meaningful growth and development, as Nigeria ranks among the poorest

nations in the world. A good number of Nigerians have continued to live below the poverty line of less than US$ 1 per day (Okoro, 2013). Despite, the ever-increasing rate of government expenditure in recent times by the federal government of Nigeria, there seems not to be commensurate growth in the economy. Thus, there is doubt if past government expenditures at the federal level were actually released to finance appropriate expenditure items as budgeted for or maybe the funds are mismanaged. The foregoing doubt informed this study. This simply means that there is a need to investigate whether the rises in public expenditure have been accompanied by a rise in the output of the Nigerian economy. The data on the fluctuations of the GDP and public (government) expenditure are inexhaustible. This makes it expedient to understand the nature of such fluctuations in the macroeconomic variables and how they impact the output of the economy.

Research Questions and Hypotheses of the Study

The study among others sought to answer the following questions;

i. What is the moderating effect of the monetary policy rate on the relationship between administrative expenditure and growth in Nigeria?
ii. What is the moderating effect of the monetary policy rate on the relationship between social expenditure and growth in Nigeria?

The following hypotheses guided the study;

H_o1: Monetary policy rate has no significant moderating effect on the relationship administrative expenditure and growth in Nigeria

H_o2: Monetary policy rate has no significant moderating effect on the relationship between social expenditure and growth in Nigeria

Literature Review and Theoretical Explanations

Conceptual Framework

Administrative Expenditure

Administrative expenditure means those expenditures for the administration of fundraising and tourism promotion. Administrative expenditures shall include salaries and payroll taxes, personal services contracts, and travel expenses not to exceed the amounts provided in the State Travel Reimbursement Act, Section (Economic Watch, 2010). According to Hilderbrand (2013), *administrative expenses* are the *costs* an organization incurs not directly tied to a specific function such as manufacturing, production, or sales. Administrative expenses are costs that cannot be linked to a specific function in an organization. According to Tuovila (2022), administrative expenses are expenses an organization incurs that are not directly tied to a specific core function such as manufacturing, production, or sales. These overhead expenses are related to the organization as a whole, as opposed to individual departments or business units. Also known as General and Administrative expenses, the costs are categorized separately from Sales & Marketing and Research costs.

From an accounting perspective, administrative expenses are expenses that are incurred by a company, regardless of whether the company produces or sells anything. This type of

expense is shown on the income statement, typically below the cost of goods sold and lumped with selling expenses, forming a selling, general, and administrative expense line item. Expenses that do not link to the production or the selling process and is not part of research and development is classified as administrative expense. As a result, general and administrative expenses do not fall under the cost of goods sold and are not in inventory. General and administrative expenses are also typically fixed costs in nature, as they would stay the same regardless of the level of sales that occur. For instance, a public company must hire external auditors to audit its financial statements and footnotes on a regular basis. An audit fee is typically not associated with a production process, but this cost is still incurred regardless of whether a company produces anything or not (Blokhin, 2021). Administrative expenses are costs related to the general administration of the business. This category of costs does not relate specifically to any business function such as production and sales. These costs are incurred at the corporate level, rather than by individual departments or business units. Looking at cost behavior, most administrative costs are fixed, though some are also variable and mixed (Huang & Padilla, 2002).

Social Expenditure

Social expenditure is government expenditures channeled into the education sector, health sector, housing, and other social services (CBN Statistical Bulletin, 2010). According to Victor (2015), social expenditure is the provision by public (and private) institutions of benefits to, and financial contributions targeted at, households and individuals in order to provide support during circumstances that adversely affect their welfare, provided that the provision of the benefits and financial contributions constitutes neither a direct payment for a particular good or service nor an individual contract or transfer. Thus, social expenditure can be provided by both public and private institutions, but transfers between households are not within the scope of social expenditure. Social expenditure is unrequited, and it does not include market transactions such as payments in return for the simultaneous provision of services of equivalent value.

Social expenditures are a measure of the extent to which countries assume responsibility for supporting the standard of living of disadvantaged or vulnerable groups (Jolanta, 2012). Abu and Abdullahi (2010), posit that social spending is comprised of the volume of resources committed to policies associated with functions such as environmental protection; housing and community amenities; health; recreation, culture and religion; education, and social protection. Social expenditure comprises cash benefits, direct in-kind provision of goods and services, and tax breaks for social purposes. Benefits may be targeted at low-income households, the elderly, disabled, sick, unemployed, or young persons. To be considered social, programmes have to involve either redistribution of resources across households or compulsory participation. Social benefits are classified as public when the general government that is central, state, and local governments, including social security funds controls the relevant financial flows. All social benefits not provided by the general government are considered private. Private transfers between households are not

considered social and are not included here. Net total social expenditure includes both public and private expenditure. It also accounts for the effect of the tax system by direct and indirect taxation and by tax breaks for social purposes (Jolanta, 2012).

Economic Growth

Economic growth is a sustained rise in the output of goods, services, and employment opportunities with the sole aim of improving the economic and financial welfare of the citizens (Odo et al., 2016). Harque and Kneller (2008) have defined economic growth as an increase in a country's productive capacity, identifiable by a sustained rise in real national income. Economic growth is an important issue in economics and is considered as one of the necessary conditions to achieve better outcomes on social welfare, which is the main objective of economic policy. It is thus an essential ingredient for sustainable development. Economic growth in a country is proxied by Gross Domestic Product (GDP). Thus, in this study, it is conceptualized as the monetary value of all goods and services produced in an economy over a specified period, usually one year.

Economic growth is also, used to imply a movement from a lower equilibrium condition to a higher one. Neo-classical economics, however, assumes that economic development could be achieved if a country whose original economic condition is static is able to generate and sustain an annual increase in its GDP at rates more than 5 percent or at least higher than its population growth rate. Economic development is presumed to have taken place in such a situation since it implies an increase in per capita income. The neoclassical concept relates to economic growth rather than economic development. However, this idea is applied to development, given the experience of developed economies. It is expected that the benefits of growth would spread to all facets of the economy through pecuniary and technological externalities (Komain & Brahmasrene, 2007).

Monetary Policy Rate

Monetary policy is the deliberate use of monetary instruments (direct and indirect) at the disposal of monetary authorities such as the central bank in order to achieve macroeconomic stability. Monetary policy is essentially the tool for executing the mandate of monetary and price stability. Monetary policy is essentially a programme of action undertaken by the monetary authorities, generally, the central bank, to control and regulate the supply of money to the public and the flow of credit with a view to achieving predetermined macroeconomic goals (Dwivedi, 2005). Monetary policy is one of the tools of controlling the money supply in an economy of a nation by the monetary authorities in order to achieve desirable economic growth. Governments try to control the money supply because most governments believe that its rate of growth has an effect on the rate of inflation. Hence, monetary policy comprises those government actions designed to influence the behaviour of the monetary sector.

Monetary policies are effective only when economies are characterized by well-developed money and financial markets like developed economies of the world. This is where a

deliberate change in monetary variables influences the movement of many other variables in the monetary sector. Monetary policy has thus been known to be a vital instrument that a country can deploy for the maintenance of domestic price and exchange rate stability as a critical condition for the achievement of sustainable economic growth and external viability (Adegbite & Alabi, 2013). Monetary policy may be inflationary or deflationary depending upon the economic condition of the country. Contractionary policy is enforced to squeeze down government spending to combat rising inflation and expansionary policy is used to stimulate an economy by boosting demand through monetary and fiscal stimulus. Also, expansionary policy moderates economic downturns and recessions (Chen, 2023).

In Nigeria, monetary policy has been used since the Central Bank of Nigeria was saddled with the responsibility of formulating and implementing monetary policy by the Central Bank Act of 1958. This role has facilitated the emergence of an active money market where treasury bills, a financial instrument used for open market operations and raising debt for government, have grown in volume and value becoming a prominent earning asset for investors and a source of balancing liquidity in the market. Two major periods have characterized monetary policy in Nigeria: the post and pre-1986 periods. Before 1986, direct monetary control was used to achieve price stability in Nigeria, while the emphasis shifted to market mechanisms after the 1986 market liberalization (Uchendu, 2009). Prior to 1986, direct monetary instruments such as selective credit controls, administered interest and exchange rates, credit ceilings, cash reserve requirements, and special deposits to combat inflation and maintain price stability were employed.

Empirical Review

Onipe and Joseph (2022) investigated the relationship between public expenditure and economic performance in Nigeria. The empirical time series data was collected from the Central Bank of Nigeria Statistical Bulletin covering 1981-2015. The data were analyzed using descriptive statistics, Augmented Dickey-Fuller unit root test, correlation, and multiple regression analysis. The findings reveal that aggregate public expenditure has a significant effect on economic performance. However, the results show that when public expenditure is decomposed into administration, defense, economic, social, and transfers, only expenditure on transfers has a significant effect on economic performance.

Stanley et al. (2020) investigated the effect of government public expenditures on Nigeria's economic growth and development using the sectorial economic function approach. The real Gross Domestic Product (GDP), which is the outcome variable in this study, was employed as the proxy for economic growth while the government's expenditures on administrative services, economic services, social and community services, and transfers were used as the predictor variables in this study. Secondary data was exclusively used in this study and the data was analyzed using Eviews10. These data were sourced from the World Bank Databank and the Central Bank of Nigeria Statistical Bulletin 2017, and it spans from 1986 to 2016. Various econometric techniques were employed - descriptive statistics, unit root tests, co-integration tests, Vector Equilibrium Correction Model, residual

diagnostic tests, and Wald coefficient diagnostic test. Surprisingly, the results from the cointegration test and Vector Error Correction Model estimate reveal that all the predictor variables, apart from expenditure on administration, have a positive relationship with economic growth. While expenditures on economic services and social and community services have a positive and significant relationship with economic growth, government transfers have a positive but insignificant relationship with economic growth. Emphatically, expenditure on administrative services has a significant negative relationship with economic growth. The result from the Wald coefficient diagnostic test reveals that there is short-run causality running from the public expenditure aggregates to economic growth.

Onuarah (2018) examined the composition of sectoral expenditure allocation and the Nigerian economy. The study used total government expenditure on administration, economic service, social community service, and transfer as the dependent variable, while real gross domestic product was used as a proxy for economic growth. The OLS estimation technique was used to analyze the variables. The study found that the variables are directly related to the RGDP. Thus, the researcher recommended that the government should channel its expenditure to sectoral spending because it reduces the cost of government spending on public welfare.

John (2017) examined the federal government capital expenditure on the growth of the Nigerian economy from 1985-2014, using federal government expenditure on administration, economic service, social and community service, and transfer. The multiple regression estimation technique was used to analyze the data. The study found that a positive federal government capital expenditure on administration and social community services had a positive relationship with GDP; while economic service and transfers have a negative relationship with GDP.

Echekoba and Amakor (2017) explored the impact of government expenditures such as expenditures on General administration, Defense, Education, and Health on the GDP of Nigeria (1983-2016). Time series data were generated from the Central Bank of Nigeria (CBN) statistical bulletins of various years spanning from 1983 to 2016. The Ordinary Least Square (OLS) method of estimation was used in the multiple regression analysis. The result showed that expenditure on General Administration has a positive impact and significant relationship with economic growth; Expenditure on Defense has a negative impact but a significant relationship with GDP; Expenditure on Education has a positive and highly significant relationship with economic growth, and Expenditure on Health has a positive but insignificant impact on GDP. Nazifi (2014) investigated the impact of federal capital expenditure on economic growth in Nigeria from 1980-2010. To establish this empirical fact, the study employed a multiple regression model of Ordinary Least Squares using secondary data. From the result, the Total Capital Expenditure (TCE), Capital expenditure on administration (ADM), capital expenditure on social community services (SCS), and capital expenditure on transfers (TRF) have a positive impact on economic growth in Nigeria; this implies an increase in these variables will cause positive change in economic

growth. On the contrary, Capital expenditure (ECO) has a negative impact on economic growth in Nigeria.

Agbonkhese and Asekome (2016) assessed the impact of administrative expenditure on the growth of the Nigerian economy, and to ascertain whether there is a relationship between gross domestic product (GDP) and government expenditure in Nigeria. It covers the period of 1981 – 2011 and the Ordinary Least Square (OLS) method of econometric technique was used. The econometric analysis indicates that although there is a positive relationship between the dependent and independent variables, the adjustment of economic growth or gross domestic product was a fair one which made it difficult to reject the null hypothesis.

Egbetunde and Fasanya (2013) analyzed the impact of administrative expenditure on economic growth in Nigeria during the period 1970 to 2010 by employing the bounds testing (ARDL) approach. The bounds test suggested that the variables of interest put in the framework are bound together in the long run. The associated equilibrium correction was also significant confirming the existence of long-run relationships. The findings indicated that the impact of total administrative spending on growth was negative which is consistent with other past studies. Recurrent expenditure however was found to have little significant positive impact on growth.

Theoretical Foundation

The theoretical framework on which this study is based is the Keynesian ISLM framework with a Philips curve superimposed on it to determine inflation. The mechanism is such that changes in monetary policy (usually specified as exogenous shifts in monetary aggregates) affect the money supply, which changes interest rates to balance the demand with supply (Chuku, 2009). The changes in interest rates then affect investment and consumption, which later causes changes in output and eventually prices. Modifying the classical quantity theory of money, the Keynesians believe that money supply, through its transmission mechanism, has an indirect effect on the real GDP. Monetarists while agreeing with Keynes that in the short run economy does not operate at full employment, therefore expansionary monetary policy may work positively in the long run, they support classists that rising money supply will increase inflation only. Therefore, they suggest that the policy must accommodate the increase in real GDP without changing the price level (Landau, 1983). Most of the modern economists are of the view that long-run growth depends upon enhancement of productivity. If an appropriate monetary policy is supplemented by the external environment of suitable liquidity, interest rate, robust demand, soft assistance from the World Bank of the financial institutions and debt rescheduling would lead to sustainable economic growth in the long run (Russell, 2010).

Monetarists strongly believe that monetary policy has a greater impact on economic activity as unanticipated change in the stock of money affects output and growth; as such the stock of money must increase unexpectedly for the central bank to promote economic growth. In fact, they are of the opinion that an increase in government spending would crowd out the private sector and such can outweigh any short-term benefits of an

expansionary fiscal policy (Al-Yousif, 2010). On the other hand, the concept of the liquidity trap, which is a situation in which real interest rates cannot be reduced by any action of the monetary authorities, was introduced by Keynesian economics. Hence, in a liquidity trap, an increase in the money supply would not stimulate economic growth because of the downward pressure of investment owing to the insensitivity of interest rates to the money supply. John Maynard Keynes recommends fiscal policy by stimulating aggregate demand in order to curtail unemployment and reduce it in order to control inflation. While there are several studies on these debates between Keynesian and Monetarist in developed countries, only fragmented evidence has been provided on these issues in the case of Nigeria (Adefeso & Mobolaji, 2010). A case for the use of monetary policy will be further pursued with the view to understanding the effectiveness of monetary policy in enhancing economic growth in Nigeria.

Methodology and Model Specification

This study adopts the ex post facto research design. Given the intended objective to be achieved, this study used secondary sources for the purpose of data collection. The data was collected from sources such as the World Bank, CBN Statistical Bulletin, and the Nigerian Bureau of Statistics. The study covers a period from 1986 to 2022. This study conducted the unit root test which is necessary to avoid any form of spurious and misleading results. The regression model adopted for this study is derived from similar works of Dore (2022); Samuel and Lawrence (2021) and Bounsaythip and Inthakason (2022) with slight modifications to suit the peculiarities of this study. The modifications made were in the use of variables and model framework. The implicit representation of the model is expressed as:

$$RGDP = f(AE, SE - - - - - - - - - - - - - - - - - (1)$$

Taking the natural logarithm form of the model, which allows for easy interpretation of their coefficient as elasticity's, the model in equation (1) is expressed as:

$$\text{RGDP} = \beta_0 + \beta_1 LAE + \beta_2 LSE + \beta_3 \text{LAE} * \text{MPR} + \beta_4 \text{LSE} * \text{MPR} + \mu t - - - - - (2)$$

Where: RGDP= Real Gross Domestic Product, MPR= Monetary Policy Rate (Moderator Variable); LAE = Log Administrative Expenditure, LSE = Log Social Expenditure, μ_t =Stochastic or error term, β_0 = Regression constant or the intercept, β_1-β_4= Regression parameters or slope coefficient.

Table 1: Measurement of Variables

Variable	Type	Measurement	Content Validity
Economic Growth	Dependent	Measured by Real Gross Domestic Product (RGDP)	Dore (2022); Samuel and Lawrence (2021)
Monetary Policy Rate	Moderator	Measured by interest rates using bank lending rates at time t.	Ufoeze et al. (2018); Bounsaythip and Inthakason (2022)
Administrative Expenditure (AE)	Independent	Natural log of total Administrative Expenditures incurred throughout the period of the study	Dore (2022); and Bounsaythip and Inthakason (2022)
Social Expenditure (SE)	Independent	Natural log of aggregate value Social services throughout the period of the study	Dore (2022); Samuel and Lawrence (2021) and Bounsaythip and Inthakason (2022)

Source: Author's Compilation, 2023.

Results and Discussions

Table 2: Augmented Dickey-Fuller (ADF) Result

Variables	ADF-statistics	Critical value	Order of integration
RGDP	-4.077261 (0.0001)	-1.948495	I(0)
LAE	-6.091117 (0.0000)	-1.948495	I(0)
LSE	-5.233944 (0.0000)	-1.948495	I(0)
LAE*MPR	-6.991104 (0.0000)	-2.929734	I(0)
LSE*MPR	-2.794480 (0.0063)	-1.948686	I(0)

Source: author's computation, 2023.

From the stationarity result obtained, all the employed variables proved to be stationary at level, this shows that the study is highly reliable as it will not in any way produce a spurious result, and as such, there is the need to ascertain the equilibrium relationship among the variables (Table 1).

Table 3: OLS Result
Dependent Variable: D(GDP);
Method: Least Squares
Date: 08/19/23 Time: 13:40
Sample (adjusted): 1986 2022
Included observations: 36

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.002358	0.042719	-0.055207	0.9563
L(LAE)	0.167273	0.072009	2.322949	0.0256
L(LSE)	-0.156970	0.062734	-2.502142	0.0168
L(LAE*MPR)	0.100382	0.028402	3.534382	0.0011
L(LSE*MPR)	0.109366	0.079822	1.370132	0.1787
ECM(-1)	-0.984181	0.170711	-5.765193	0.0000
R-squared	0.596923	Mean dependent var		-0.008589
Adjusted R-squared	0.543887	S.D. dependent var		0.419208
S.E. of regression	0.283117	Akaike info criterion		0.440211
Sum squared resid	3.045900	Schwarz criterion		0.683510
Log-likelihood	-3.684645	Hannan-Quinn criter.		0.530438
F-statistic	11.25497	Durbin-Watson stat		1.961942
Prob(F-statistic)	0.000001			

Source: author's computation, 2023

Table 2 presents the R2 which indicates the explanatory power of the entire variables jointly. The value of R2 of 0.596923 coefficient of determination is an indication that approximately 60% of the total variation in our dependent variable will be explained by our selected independent variables, while the remaining 40% is explained by other variables not expressly captured in our model but covered by the error term. Based on the individual explanatory variables, the result showed that government expenditure on administration relates positively and significantly with gross domestic product with the co-efficient of 0.167273; which implies that a percentage change in government expenditure on administration, all things being equal will bring about 0.17% increase in GDP while holding other variables constant. As expected, government expenditure on social services revealed a negative and significant relationship with gross domestic product over the years of the study. Thus, this result could be a result of the high level of corruption among the policymakers. Notwithstanding, the implication of the co-efficient is that a 1% increase in government expenditure on economic services will lead to approximately a 0.16% decrease in gross domestic product holding other variables constant.

As moderated, the 0.100382 coefficient of interaction between monetary policy rate and government expenditure administration is an indication of a positive relationship with GDP. Holding other variables constant, a percentage increase in MPR and administrative

expenses will bring about a 0.1% increase in gross domestic product. Also, it was found to be significant at 95% confidence following its probability of 0.0011. The study also provided evidence that suggests that the monetary policy rate has no significant moderating effect on the relationship between social government expenditure and economic growth in Nigeria. This is evidenced by the coefficient of 0.109366 with a probability of 0.1787; this indicates a positive and insignificant moderating relationship between the variables of interest in Nigeria for the period under study.

The F-statistics of 11.25497 and probability of 0.0000011 is an indication that the overall model is statistically significant. The value of Durbin Watson which lies between 1.96 is an indication of the absence of autocorrelation.

Table 4: Johansen Co-integration Result

Date: 01/26/16 Time: 17:32

Sample (adjusted): 1986 2023

Included observations: 36 after adjustments

Trend assumption: Linear deterministic trend (restricted)

Series: GDP LAE LSC MPR

Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)				Prob.**
Hypothesized No. of CE(s)	**Eigenvalue**	**Trace Statistic**	**0.05 Critical Value**	
None *	0.616083	133.8405	88.80380	0.0000
At most 1 *	0.583340	92.67537	63.87610	0.0000
At most 2 *	0.432212	55.02954	42.91525	0.0020
At most 3 *	0.388818	30.69125	25.87211	0.0116
Trace test indicates 3 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized No. of CE(s)	**Eigenvalue**	**Max-Eigen Statistic**	**0.05 Critical Value**	**Prob.****
None*	0.616083	41.16512	38.33101	0.0230
At most 1*	0.583340	37.64583	32.11832	0.0095
At most 2	0.432212	24.33829	25.82321	0.0775

At most 3*	0.388818	21.17153	19.38704	0.0273
Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level				
*denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

The trace statistics from the result above indicate the existence of three co-integrating equations as can be seen from its probability of 0.0116 at 5% level; this is an indication of equilibrium relationship among the variables. However, it is not enough to prove the existence of a long-run relationship since disequilibrium could arise in the short run. As such, we need to ascertain the short-run and long-run dynamics using an error correction model. From the result of the error correction model as depicted in Table 2 above, ECM was rightly signed and statistically significant at the 98% speed of adjustment approximately. The implication of this is that over 98% of disequilibrium in our dependent variable can be corrected by the selected independent variables over a year.

Conclusion

The study exploits the effect of public administrative and social expenditure on economic growth in Nigeria as moderated by monetary policy rate over the period 1986 to 2022. Subjecting all the variables to percentage changes, they were all found to be stationary at level which denotes that there will not be any spurious result in the study. From the analysis, the study found that there is an existence of an equilibrium relationship among the variables and over 98% of disequilibrium can be corrected over a year. From the OLS, all the variables were found to be positively related to GDP as postulated economic theories except government expenditure on social services which relates negatively to gross domestic product. The study concluded that monetary policy is more effective than fiscal policy in Nigeria, and the monetary authority should be sensitive in directing its policies such as government administrative expenditure that can propel economic growth.

Recommendations

From the findings and conclusion, the following recommendations were made:

- The study recommends that the monetary authority should use an expansionary monetary policy to reduce interest rates and encourage more investment, stimulating economic growth in Nigeria.
- Federal government capital expenditure on administration should be increased in future budgets since it has a positive and effective relationship with economic growth in Nigeria.
- The government should monitor expenditures made with respect to social services to ensure that such spending is channeled into the policies intended and the policies capable of stimulating economic growth through the improvement of the welfare of citizens.

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