IMPACT OF GOVERNMENT CAPITAL EXPENDITURE ON THE ECONOMIC GROWTH RATE OF NIGERIA

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ABSTRACT

Public expenditure strives to provide amenities for the general public as well as distribute resources among its citizens. Government spending can be divided into three main categories: consumption, transfers, and interest payments. Capital and recurrent expenditure make up the majority of government spending in Nigeria. These are further divided into administration, social and community services, economic services, and transfers. Recurrent spending, in contrast to capital spending, does not result in the creation of assets for the future or the reduction of any government liabilities. Recurrent expenses include payments for pensions, interest on prior debt, subsidies, and employee salaries. This study attempts to scientifically examine the effects of government capital expenditure in its disaggregated form (administration, social and community service, economic services, transfers, and government deficit) on Nigeria's economic growth rate from 1981 to 2021 in addition to evaluating how well government expenditure performed in the years following the pandemic in 2021. Secondary data sourced from the CBN statistical bulletin, 2021, were used in the analysis. Because the variables have a mixed order of integration, the study used the autoregressive distributed lag model. The bounds test showed a long-run association between the studied variables. The error correction model showed a strong

and positive association between administrative and economic services and the rate of economic growth in Nigeria.

Keywords: Capital expenditure, Economic growth rate, Administration services, Social and Community service, Economic services, and Transfers.

JEL Classification Code: C32, E12, H54, H55, O47.

1. INTRODUCTION

Government capital expenditures are funds used to develop buildings, machinery, equipment, educational and healthcare facilities, etc. Additionally, it covers the costs incurred by the government to make investments that will yield dividends in the future and to acquire fixed assets. Spending on development or investment has benefits that last for years in the future, and these expenditures are referred to as capital spending. Purchasing fixed and intangible assets, improving an existing asset, fixing an existing asset, and loan repayment are all considered capital expenditures. Repaying a debt is a capital expenditure because it reduces obligation in addition to creating assets.

The long-term character of capital investment, which results in the formation of assets, enables the economy to generate income for many years by expanding or upgrading manufacturing facilities and increasing operational effectiveness. Additionally, it raises labor force participation, assesses the state of the economy, and increases the economy's potential for future growth. Government spending continues to be a crucial tool in the development process. At all stages of growth and development, it is crucial to the operation of any economy. Today, the majority of industrialized and emerging nations employ public spending to alter the composition of national income, improve income distribution, and steer resource allocation in desirable directions (Assi et al., 2019; Vtyurina, 2020; World Bank, 2008).In various emerging nations, the variety in government spending patterns is anticipated to not only ensure stabilization but also to spur economic growth and increase employment possibilities (World Bank, 2015).

According to statistics made available by CBN (2023), the average amount of government capital expenditure increased from 1981 to 2021. After the pandemic has been entirely contained, one would reasonably anticipate that responsible governments would exercise greater caution in crucial economic sectors while purposefully paying closer attention to those that were most severely affected by its impacts. Public expenditure, a potent instrument in the toolbox of fiscal policy, can be used to not only reroute production but also to encourage and stimulate production through innovation, which will then lead to expansion in production, which will enhance output and employment.

The federal government of Nigeria spent 12,164.1 billion naira in 2021 compared to 10,231.7 billion naira in 2020, an increase of 18.87%. Government deficit spending increased from 6,248.6 billion naira in 2020 to 7,118.7 billion naira in 2021, an increase of 13.9%, but it still does not leave much to be desired (CBN, 2023). Even after the pandemic is over, all economic indicators continue to fall, and markets kept contracting as output plunged. It is clear that the main goals of government spending, such as the provision of public goods and resource redistribution, are still far from being met.

Economic growth should be expected to follow a pattern consistent with government capital expenditures on administration, social and community service, economic services, transfers, and government deficits. This calls for an interest in empirical research into how government capital spending affects the rate of economic growth (RGDP). However, the main goal of this research is to examine Wagner's (1883) law of Ever-increasing State Activity in the context of Nigeria to determine whether or not public expenditure levels

follow economic growth as Wagner hypothesized.This study attempts to examine the time horizon determinants of government expenditure and, thus, advances knowledge in the area of the relationship between government capital expenditure and RGDP by drawing on prior research and using disaggregated data sets on government capital expenditure and RGDP variables.

2. ITERATUREREVIEW

2.1 Stylized Facts

With the hope that the spending will hasten the process of economic growth and development, Nigerian governments have been voting and spending enormous sums of money on infrastructure, overhead costs, and operating expenses over time. Nevertheless, the country's current circumstances seem to indicate that the economy is not experiencing a commensurate rate of output growth. According to the data that is currently available, Nigeria's public capital investment as a percentage of GDP has significantly decreased between 1981 and 2021. For example, the average public capital spending as a percentage of GDP for the years 1981 to 1989 was approximately 30.65 percent, with a mean of 3.41 and a mean growth rate of 1.72.Between 2001 and 2010, public capital expenditure as a percentage of GDP fell to 24.75 percent with a mean average of 2.5, and this downward trend has continued to the present as between 2015 and 2021, public capital expenditure as a percentage of GDP further decreased to 7.95 percent with a mean average of 1.14, while economic growth rate fell by an average of 1.09 during this time. The ongoing decline in public capital spending as a percentage of GDP is a sign that the Nigerian government is getting smaller and less involved in the economy.

Table 1: Trend Analysis of Government Capital Expenditures-RGDP Nexus

Year	Admin Services	Economic Services	Social Comm.	Transfers Services	Total	% of Total
1987	1.82	2.16	0.62	1.78	6.37	2.6
1988	1.9	2.13	1.73	2.59	8.34	2.64
1989	2.62	3.93	1.84	6.65	15.03	3.62
1990	2.92	3.49	2.1	15.55	24.05	4.86
1991	3.35	3.15	1.49	20.36	28.34	4.8
1992	5.12	2.34	2.13	30.18	39.76	4.39
2015	226.81	348.75	82.98	159.82	818.35	0.86
2016	147.72	278.95	68.8	158.14	653.61	0.64
2017	328.94	542.19	167.66	203.51	1,242.30	1.08
2018	446.25	753.49	203.42	278.94	1,682.10	1.3
2019	591.26	994.19	264.69	438.86	2,289.00	1.57
2020	417.14	701.4	186.74	309.61	1,614.89	1.05
2021	635.73	1,102.46	303.66	480.61	2,522.47	1.45

Sources: Federal Ministry of Finance, Office of the Accountant-General of the Federation

The process of deregulating the economy, which started in 1986 with the implementation of the Structural Adjustment Program, may be responsible for the ongoing drop in public capital expenditure as a percentage of GDP. This downward tendency may be related to the 2008–2009 global economic downturns and the process of switching from a military to a democratic government between 1998 and 1999. Additionally, overall government spending has been rising steadily in Nigeria from 1981 to 2021, with a breakdown showing average annual growth rates of 23.20, 41.24, 15.82, and 11.82 percent for the years 1981 to 1989, 1990 to 1999, 2000 to 2009, and 2010 to 2021, respectively (CBN, 2021).

2.2 Theoretical Literature

There are many theories that link public spending to economic performance. Yet, for the purposes of this study, two theories: the Keynesian theory of public expenditure and Wagner's law of increasing state activity were reviewed. Nonetheless, the Wagner's law of rising state activity serves as the study's foundation.

2.2.1 Keynesian theory of public expenditure

According to John Maynard Keynes (1883–1946), the government must interfere in the economy through taxation and government spending in order to foster output, growth, and employment in order to address persistent unemployment and depression. He also made the point that an adequate fiscal policy action must be implemented in order to address the issues of unemployment in the economy, which is a condition when output is below the level of full employment. This kind of policy could involve increasing tax rates, increasing spending by the government, or a mix of both. It should be noted that many governments recognize fiscal policy as an effective management tool for generating and utilizing tax money. The theory consists of two components: adjustments to government spending and adjustments to taxes.

According to Keynesian economics, spending is what increases output, which in turn produces income and employment. This theory is founded on the idea that overall expenditure, or aggregate demand, encourages businesses to provide goods and services. Hence, if overall expenditure in an economy decreases due to increased saving or pessimism about the future state of the economy, business enterprises will respond by reducing their output. Hence, decreased spending causes decreased output. Naturally, this causes many other macroeconomic factors to decrease.

Government involvement in the economy primarily takes the form of controls over selected sectors or industries. Different interventions are used depending on the needs or goals the government wants to accomplish.

2.2.2 Wagner's law of increasing state activity

The concept of growing state activity is known as Wagner's Law after German political economist Adolph Wagner (1835), who created it after doing empirical research on Western Europe at the end of the 19th century. He maintained that rising industrialization and economic growth are related to the growth of government spending. According to Wagner, the proportion of public spending in overall spending rises as a country's real income per capita rises during the industrialization process. "*The advent of modern industrial society will result in increasing political pressure for social progress and increased allowance for social consideration by industry*," the law stated.

Three focal bases were created by Wagner (1835) for the increase in state spending. First, as industrialization progresses, public sector work will take the place of private sector work. Administrative and protective state responsibilities will become more important. Second, governments had to offer social and cultural services including public health care, retirement insurance, food subsidies, emergency relief for natural disasters, environmental preservation initiatives, and other welfare services. Thirdly, rising industrialization will result in technological advancements and the emergence of monopolistic huge corporations. Governments will need to use financial resources to provide social and merit goods in order to counteract these consequences.

Adolf Wagner emphasized that the growth of national income is an endogenous factor that affects governmental spending. As a result, public spending is determined by national revenue.

2.3 Empirical Literature Review

For both developed and developing countries, empirical evidence on the impact of government spending on output growth presents two opposing perspectives. Some studies found that government spending fosters a nation's development and output growth, while others suggested that government spending has a detrimental impact on output growth.

Regression analysis was used in the study by Olugbenga and Owoeye (2007) to examine the connections between government spending and economic development in a group of 30 OECD nations during the years 1970–2005. Their research revealed a long-term link between government spending and economic expansion. Government spending had a strong positive impact on economic growth in India between 1950 and 2007, according to research by Ranjan and Sharma (2008), who also demonstrated the co-integration of the two sets of variables. In a cross-sectional examination of the relationship between government expenditure and economic growth in 71 countries, Cooray (2009) used an econometric model that integrates both the size and quality of governance. The results revealed that both were positively correlated with economic growth. For the years 1947 to 2002, Liu et al. (2008) looked at the causal connection between GDP and public spending. The findings of the causality test showed that increasing government spending drives up GDP. The trivariate causality test was used by Loizides and Vamvoukas (2005) to examine the connection between government spending and economic growth using data sets on Greece, the United Kingdom, and Ireland. The outcome demonstrated that economic growth in the three countries is influenced by the size of the government. Using data from Greece between 1958 and 2004, Katrakilidis and Tsaliki (2009) showed a long-run equilibrium link between public expenditure and output in their analysis of the causal nexus between public spending and output growth. Government spending and economic growth have a very significant positive link, according to studies by Gupta (2018) and Diyoke, Yusuf, and Demirbas (2017). Government spending has a beneficial impact on output growth, according to Idris and Bakar (2017). Using the Granger causality test, Komain et al. (2007) evaluated the link between government spending and Thailand's economic growth and discovered a strong positive impact of government spending on economic growth.

Contrarily, the following research found negative relationships between government spending and economic expansion: For a sample of 96 nations, Laudau (1983) looked at how government spending affected economic growth and discovered that it harmed actual output. Similar to this, Abu-Bader and Abu-Qarn (2003) examined the causal relationship between government spending and economic growth in Egypt, Israel, and Syria using multivariate co-integration and variance decomposition methods. A bidirectional and long-term negative association between government spending and economic growth was found by the bivariate framework. Using Italian data from 1861 to 2008, Forte and Magazzino (2016) investigated the relationship between public spending and output growth and discovered a non-linear relationship for Italy. Churchill, Ugur, and Yew (2016) looked at the relationship between public spending and production growth; the findings supported the widely held view that having a big government is bad for growth. Using Turkish data for the years 1950–2010, Oktayer and Oktayer (2012) looked at the relationship between public spending and output growth, however, they were unable to detect any long-term co-integration between the variables of interest. Using the VECM model, Molefe and Choga (2017) examined the effect of government spending on economic growth in South Africa from 1990 to 2015; their findings revealed a long-term inverse link between government spending and economic growth.

Numerous studies have attempted to look into the impact of the connection between government spending and economic growth in Nigeria. Government capital spending has

been shown by Fajingbesi and Odusola (1999) to significantly improve real output. Oyinlola (1993) used Nigeria as a case study to examine the relationship between defense spending and economic growth and discovered that it was favorable. According to Ogiogio's (1995) study, there is a long-term link between government spending and economic growth. Chimobi (2016) looked into the relationship between national income and government spending in Nigeria and discovered a consistent, long-term link between the fiscal variable and economic growth. According to Babatunde (2018), spending on transportation, communication, health care, and education has a favorable and considerable impact on Nigeria's productivity. According to Oyinlola and Akinnibosun's (2013) research, capital expenditures have a favorable and considerable impact on economic growth over the long and short terms. Similar to this, Ebong, et al. (2016) used VECM to analyze the impact of capital and recurrent spending on economic growth in Nigeria from 1970 to 2012 and discovered that capital spending on infrastructure had a positive and significant impact on economic growth in both the short and long terms. Aluthge et al. (2021) looked into how government spending affected Nigeria's economic expansion. The study's results, which used the Autoregressive Distributed Lag model, showed that capital spending had a positive and significant impact on economic growth both in the short term and the long term.Ibrahim, et al. (2022) looked into how public health spending in Nigeria affected health indices. The study used the Error Correction model, and its results showed a long-term connection between health indicators, healthcare spending, gross domestic product (GDP) per person, carbon dioxide emissions, literacy level, and urban population. Ikubor, et al. (2022) used the ARDL model in their study on government capital investment in the economic services sector and economic growth in Nigeria, and the results showed a substantial positive association between government spending and economic growth.In a study by Oriakhi, 2021, who used a vector error correction model to examine poverty reduction, government spending, and economic growth in Nigeria, the results showed a bi-directional causal relationship between total government spending and decreasing poverty there. Mohammed and co. (2021). Public spending and economic growth in Nigeria: Using the Smooth Transition Regression (STR) model in a non-linear study, it was discovered that public spending had a positive and significant influence on economic growth in Nigeria.

However, several empirical research conducted in Nigeria does not support the idea that there is a long-term link between government spending and economic growth. Akpan (2005) investigated the connection using a disaggregated approach. His analysis took into account capital, recurring, administrative, economic, social, and community service expenditures, as well as transfers. The majority of government expenditure components in Nigeria and economic growth were found to be unrelated in the study. The impact of government spending on economic growth in Nigeria from 1970 to 2008 was examined by Nurudeen and Usman (2010) using a disaggregated analysis approach. They discovered that total capital expenditure, total recurrent expenditure, and expenditure on education harm economic growth. In his empirical investigation of the connection between tax revenues and spending on economic expansion, Suleiman (2009) discovered evidence in favor of Wagner's law of ever-rising public finance. Using the Vector Error Correction Model for 1981–2015, Olayungbo and Olayemi (2018) According to data from Nigeria, government spending has a negative and considerable impact on economic growth over the long and short terms. Olayungbo and Olayemi's findings were corroborated by Awode and Akpa's (2018) analysis while accounting for structural breaks in the ARDL model (2018). Usman et al. (2011) used a multivariate time series framework to examine how public spending in Nigeria affected the increase in output, and they discovered that spending on administration, communication, education, and transportation had a short-term negative

influence on economic growth. The OLS multiple regression model was used by Nworji et al. (2012) to examine the impact of public spending on economic growth in Nigeria. They discovered that both capital and recurrent spending on economic services had a negligible impact on economic growth throughout the study. Okwu et al. (2022) using the Autoregressive Distributed Lag Model to examine government spending on education and the development of human capital in Nigeria, showed that recurrent and capital spending on education had adverse, insignificant effects on the gross secondary enrolment rate, whereas recurrent spending on health had a favorable, insignificant effect.Public expenditure and infrastructural development in Nigeria: a comparative examination of democratic and military regimes was the subject of a study by Temidayo et al. in 2022. The study's results, which were obtained using the ARDL estimating method, showed that public spending on communication, transportation, and education has an insignificant but favorable impact on economic growth. In their study "Financial development, public health expenditure and health outcomes: evidence from Nigeria," Akintunde, et al. (2022) used the Autoregressive Distributed Lag Model with Bounds Testing to demonstrate that government spending on health has a negative short-term impact on health outcomes (life expectancy) while having a positive long-term impact.

3. METHODOLOGY

3.1 Theoretical Framework

Public spending only influences a country's transitional growth rate under the neoclassical framework; the steady-state growth rate is unaffected (Arrow & Kurz, 1970). However, a variety of models linking public capital spending with a country's long-term growth rate have been developed as a result of the recent profusion of studies on endogenous growth (Barro, 1990; Devarajan, et al., 1996; Gemmell, et al. 2016; King & Rebelo, 1990). According to endogenous growth theories like Barro (1990), public spending may have both short-term and long-term effects on a nation's economic growth.The novel feature of Barro (1990) and Sala-i-Martin and Barro (1995) public-policy endogenous growth models support that public spending can affect a nation's production path level as well as its steady-state growth rate. This opens up the possibility of using endogenous growth models to examine how government spending affects economic growth.

3.2 Model Specification

Thus, we employ the public-policy endogenous growth model with public capital spending as the explanatory component since the purpose of this study is to evaluate the impact of government expenditure on economic growth in Nigeria. Thus, public capital spending is utilized as a proxy for capital, which is further divided into administrative, social, and community services, as well as economic services, transfers, and government deficits. Equation 1 describes the Cobb-Douglas production function as the economy's overall production function within the context of an endogenous model.

$Yt = f(K_t, g_{1t}, g_{2t})$ …….(1)

where Y is the level of output, K is the amount of private capital that is readily available, g_1 and g_2 are the components of government spending, and t is the period. We omit private capital as a separate parameter in the production function, following Barro (1990), Devarajan et al. (1996), and Gemmell et al. (2016).

Thus, equation 1 can be re-specified in the linear form as:

RGDP = f(Admin, Economic, Social, Transfers, GovtDeficit)……(2)

Where: RGDP = Real Gross domestic product, Admin = Administrative services, Economic = Economic services, Social = Social and Community Services, Transfers = Transfers services, GovtDeficit = Government deficits.

Similarly, equation 2 can be re-specified in econometric form as:

$RGDP = \alpha + \alpha_1 Admin + \alpha_2 Economic + \alpha_3 Social + \alpha_4 Transfers + \alpha_5 GovtDeficit + \mu_t$…… (3)

It became necessary to re-specify the study's model as an autoregressive distributed lag (ADRL) model using the ARDL bound test procedure because the variables under investigation have mixed order of integration (I(0) and I(1)):

$$RGDP = \alpha + \Omega_1 RGDP_{t-1} + \Omega_2 ADMIN_{t-1} + \Omega_3 ECONOMIC_{t-1} + \Omega_4 SOCIAL_{t-1} + \Omega_5 TRANSFERS_{t-1} +$$

$$\Omega_6 GOVTDEFICIT_{t-1} + \sum_{1=0}^{q} \Delta RGDP_{t-1} + \sum_{1=0}^{q} \Delta ADMIN_{t-1} + \sum_{1=0}^{q} \Delta ECONOMIC_{t-1} + \sum_{1=0}^{q} \Delta SOCIAL_{t-1} +$$

$$\sum_{1=0}^{q} \Delta TRANSFERS_{t-1} + \sum_{1=0}^{q} \Delta GOVTDEFICIT_{t-1} + \mu t \quad \text{.....(4)}$$

Where: RGDP, Admin, Economic, Social, Transfers, and GovtDeficit remain as previously defined. Similarly, α denotes the constant, q denotes the lag lengths, Ω_1 - Ω_6 are coefficients to be estimated

The alternative hypothesis that there is a long-term relationship between the variables is used to test the null hypothesis that there is no co-integration between the variables. The following is a specification of the hypothesis:

H0: $\Omega_1 = \Omega_2 = \Omega_3 = \Omega_4 = \Omega_5 = \Omega_6 = 0$

H1: $\Omega_1 = \Omega_2 = \Omega_3 = \Omega_4 = \Omega_5 = \Omega_6 = 0$

3.3 Data

The impact of government capital expenditure on the economic growth rate in Nigeria from 1981 to 2021 was examined using time series data. The Statistical Bulletin of the Central Bank of Nigeria served as the primary data source for all study variables, including economic growth rate, administration services, social and community service, economic services, transfers, and government deficit (2021).

4. ESTIMATION AND ANALYSIS OF RESULTS

4.1 Descriptive Statistics

The descriptive statistics (mean, median, standard deviation, minimum, maximum, skewness, and the Jarque-Bera statistics) of the various variables under investigation are crucial to consider, as given in table 4.1 below.

Table 4.1: Results of Descriptive Statistics

	RGDP	Admin	Economic	Social	Transfers	Govtdeficit
Mean	4.028537	140.1835	254.0765	67.62812	89.88425	-923.1877
Median	4.3	53.2795	200.8619	30.03252	30.1755	-117.2371
Maximum	21.177	635.7288	1102.465	303.6626	480.6115	32.0494
Minimum	-10.75	0.2627	0.6563	0.2376	0.000001	-7118.708
Std. Dev.	6.200023	167.3193	277.2859	80.03301	121.2011	1734.778
Skewness	0.443476	1.293415	1.27857	1.185235	1.70395	-2.30448
Kurtosis	4.572239	4.102039	4.326509	3.634651	5.253613	7.466158
Jarque-Bera	5.566806	13.50638	14.17676	10.28743	28.51644	70.36467
Probability	0.061828	0.001167	0.000835	0.005836	0.000001	0.000001
Sum	165.17	5747.525	10417.13	2772.753	3685.254	-37850.69
Sum Sq. Dev.	1537.61	1119830	3075499	256211.3	587588.6	1.20E+08
Obs.	41	41	41	41	41	41

Source: Author's Computation

Since the mean and median of the variables in the table are reasonably close to one another and show no severe outliers, the variables are eligible for the study. The statistics for skewness, kurtosis, and standard deviation show that there are no appreciable differences across the variables.

4.2 Unit Root Test

The test of stationarity in this study used the Augmented Dickey-Fuller (ADF) test and Phillips-Perron test methods. If the ADF or PP test statistic is greater than the critical values in an absolute sense at a 5% level of significance, the null hypothesis of non-stationarity is rejected. Thus, all the variables are non-stationary at levels except for RGDP and GovtDeficit, according to the ADF and PP results.

Table 4.2: Unit Root Tests Results

	ADF Tests		**Order of Int.**	**PP Tests**		**Order of Integration**
	Level	**First**		**Level**	**First**	
ADMIN	-0.3325	-5.34208	I(1)	-1.58988	-9.36311	I(1)
ECONOMIC	-2.25382	-8.07142	I(1)	-1.96319	-8.46629	I(1)
GOVTDEFICIT	5.07819	2.30151	I(0)	6.552448	-4.03538	I(0)
SOCIAL	-2.31037	-7.82676	I(1)	-2.19918	-9.97535	I(1)
TRANSFERS	-1.00604	-9.81897	I(1)	-2.32768	-10.0331	I(1)
RGDP	-5.21179	-8.33642	I(0)	-5.24357	-22.4991	I(0)
5% level	-3.52976	-3.52975		-2.93694	-2.93898	

Source: Author's Computation

The findings of the unit root tests showed mixed order of integration, with administrative, economic, social/community, and transfer services being integrated at order one (I(1)), while government deficits and RGDP are integrated at levels (I(0)). requiring the usage of the ARDL bound test.

4.3 Bound Test of Co-integration

If the F-test value is greater than the upper and lower limits of Pesaran et al. (2001) at the 5% level of significance, the bound test null hypothesis of no co-integration is rejected.

Table 4.3: Bound Test Result

F-Bounds Test			Null Hypothesis: No levels of relationship	
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	4.337448	10%	1.81	2.93
k	5	5%	2.14	3.34
		2.5%	2.44	3.71
		1%	2.82	4.21

Source: Author's Computation

At the 5% level of significance, the calculated F-test statistic (4.34) from table 4.3 above is higher than the upper critical bound values, or (4.34 > |2.14||3.34|). Since the test results unmistakably demonstrated that the variables have established linkages, the bound test result verified that the null hypothesis of no co-integration cannot be accepted.

4.4 Estimated Long-run Coefficients

The table below shows the long-run estimates of the relationships between the variables admin, economic, social, transfers, and government deficit, where RGDP is the dependent variable.

Table 4.3: Coefficients of Long Run Parameters

Levels Equation				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
ADMIN	0.10974	0.06131	1.78995	0.0451
ECONOMIC	0.05895	0.02132	2.76482	0.0103
GOVTDEFICIT	0.00241	0.00132	1.81904	0.0404
SOCIAL	0.09511	0.09571	0.99368	0.3295
TRANSFERS	0.00358	0.02386	0.14998	0.8819

Source: Author's Computation

According to the projected results of the long-term association, the economic growth rate in Nigeria is significantly and favorably correlated with administrative services, economic services, and government deficits. On the other hand, the relationship between Nigeria's economic development rate and social/community services and transfers is negligible and supportive. A unit increase in administrative services will result in an 11 percent increase in Nigeria's economic growth rate, while an increase in economic services will result in a 6 percent increase. While a unit increase in the government deficit will result in an increase of 0.2% in Nigeria's economic growth.

4.5 Estimated Short-run Dynamics

To estimate the ARDL-bounds tests, the study used four lags as the default automation option by the Akaike Information criteria. Considering that the Akaike Information criteria was thought to be more suitable for estimating smaller samples, to be consistent with Pesaran, Shin (2001).

Table 4.3: Coefficients of Short Run Dynamics

ECM Regression				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ADMIN)	0.002649	0.026102	0.101482	0.9199
D(ADMIN(-1))	0.066704	0.033741	1.976914	0.0487
D(ADMIN(-2))	0.081386	0.0295	2.758859	0.0105
D(ECONOMIC)	0.011452	0.014198	0.806585	0.4272
D(ECONOMIC(-1))	0.043475	0.018831	2.308669	0.0292
D(ECONOMIC(-2))	0.048674	0.015339	3.173291	0.0038
CointEq(-1)*	-0.826636	0.148398	-5.570407	0.0000
R-squared	0.618359	Durbin-Watson stat		2.00327
Adjusted R-squared	0.520944	F-statistic		5.30374
Prob(F-statistic	0.000377			

Source: Author's Computation

Table 4.3 above showed that administrative services and economic services have positive and statistically significant coefficients at the 5% level of significance, showing that expenditures on administrative services and economic services have positive and significant relationships with Nigeria's economic growth rate. A unit increase in administrative services over a two-year lag will result in an increase in RGDP in Nigeria of 7% and 8%, respectively, whereas an increase in economic services over the same two-year lag will result in an increase in RGDP in Nigeria of 4% and 5%, respectively. The

coefficient estimate for the error correction term (CointEq(-1)*) is negative and statistically significant (-0.826636) indicative of a long-run relationship among the variables and more importantly indicative of a high speed of adjustment. That is, equilibrium will be restored at a speed of 83 percent annually.

According to the coefficient of determination R^2 (0.618359), the explanatory variables collectively account for 62 percent of the fluctuations in RGDP, with variables outside the model accounting for the remaining 40 percent of these variations. The explanatory variables are jointly statistically significant at the 5% level of significance, according to the F-statistic (5.303740), which is significant at a level of 5%. The absence of auto-correlation or serial correlation in the model is indicated by the Durbin-Watson statistic, (2.003268) and is higher than the coefficient of determination, R^2 (0.618359).

4.4 Post-Estimation Tests

It became essential to carry out the required post-estimation tests, such as the Ramsey Reset test for linearity, functional form, and specification error, the Jarque-Bera test for normality, the Breusch-Godfrey Serial Correlation LM Test, and the Heteroskedasticity Test, to ensure the reliability and validity of the estimates from the dynamic model for meaningful analysis and policy making. Table 4.4 below provides a summary of the outcomes of these tests.

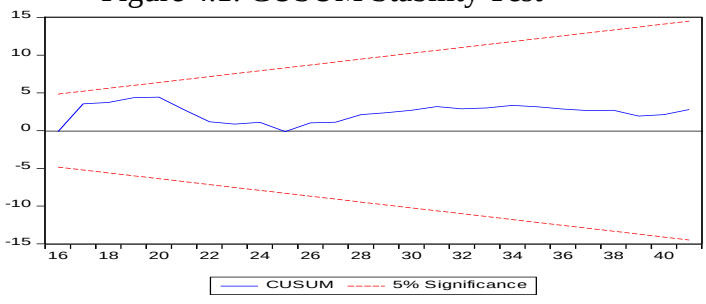
Table 4.4: Summary of Post-Estimation Tests Results

TEST	STATISTIC	VALUE	P-VALUE
Ramsey RESET Test	F-statistic	3.188286	0.0863
Normality Test	Jarque-Bera	4.053611	0.131756
Serial Correlation LM Test	Chi-Square	2.43892	0.2954
Heteroskedasticity Test	Chi-Square	11.25723	0.5070

Source: Author's Computation

The Breusch-Godfrey serial correlation LM test provided proof that there was no serial correlation in the model, while the Ramsey Reset test demonstrated that the model had the right functional form and was correctly specified. The model's residuals were found to be normally distributed and homoskedastic according to the Jarque-Bera test for normality and the heteroscedasticity test respectively. The CUSUM stability test in figure 4.1 below revealed that the CUSUM plot is within the 5% critical boundaries, indicating that the model is stable and appropriate for making long-term decisions.

Figure 4.1: CUSUM Stability Test



5.CONCLUSION AND RECOMMENDATIONS

The study provided empirical evidence that government capital spending in administrative services and economic services have positive and significant effects on economic growth rates in the long-run and short-run, while deficit spending by the government only has positive, significant effects on the real gross domestic product (RGDP) over the long term. The RGDP is positively impacted by other components of capital expenditures, but these

impacts are negligible. This reinforces the idea of ever-increasing state activity put out by Wagner (1813).

The following recommendations were made based on the study's findings:

- Capital expenditures on economic services and administrative services should receive more attention, and expenditures should be focused primarily on productive economic activities, to stimulate activities in the economic sectors for effective growth in RGDP.
- The proportion of government total expenditure that goes toward capital expenditure financing should be increased because these components exert a great influence on RGDP

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