

# Effect of Government Recurrent Expenditure Components on Nigerian Economic Growth

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## Abstract

This study empirically investigated the effect of government recurrent expenditure components on Nigerian economic growth. Particularly, the study was focused on finding out the variables of government recurrent expenditure (in four component categories) that yield positive economic growth in Nigeria. Annual time series secondary data obtained from the Central Bank of Nigeria (CBN) statistical bulletin from 1999 to 2019 was used. Gross Domestic Product (GDP) was used as the dependent variable, while the four major components of government recurrent expenditure: administrative, economic, social and community services, and transfer expenditures were used as independent variables. The research design adopted was ex-post facto design while the analytical tool employed was Auto-Regressive Distributed Lag (ARDL) multiple regression analysis technique. Relevant preliminary tests such as Augmented Dickey-Fuller (ADF) unit root and Jarque-Bera normality tests were considered. Findings revealed that government recurrent expenditure disaggregated into Administrative expenditure (ADMINEX), Social and Community Services (SCDEX), Economic services (ESEX), and Transfers (TRES) contribute positively to economic growth in Nigeria. However, only expenditures on social and community development and transfers translate to significant economic growth for the period. It is therefore recommended that government should improve on recurrent expenditure especially those of social and community services and transfers which have been found to translate to substantial economic growth in Nigeria. Meanwhile, expenditures on administration and economic services should be regulated for a better standing of the Nigerian economy.

**Keywords:** Recurrent Expenditure, Economic Growth, Gross Domestic Product,

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## I. Introduction

Every sovereign nation's goal, including Nigeria's, is to raise citizens' living standards while promoting the country's economic growth and development. Economic development, on the other hand, is predicated on expansion. This explains why the main policy thrust of the government's development objectives in Nigeria is always growth. Essentially, policies aimed at transforming and restructuring real economic sectors are linked to economic growth. Nonetheless, because of the gap between savings and investment, the lack of sufficient domestic resources, savings, and investment to support and sustain the sectors is a major impediment to the country's economic development (Agbonkhese and Asekome, 2014). Savings provide much-needed funds for investment in emerging countries, such as Nigeria. An increase in savings leads to an increase in capital formation and production activities, which in turn leads to the creation of jobs and the reduction of government external borrowing, which, according to Harrod-model, Domar's promotes economic growth.

Recurrent government expenditures are made on a regular basis to keep government activities running. These expenses are frequently reflected in the budget, and they are thus identified as areas for development or improvement to which funds are allocated. They include all employees' regular salaries, money spent on essential services or regular infrastructure maintenance, and money spent on administration. Nigeria, on the other hand, has a wealth of resources that can be used to boost the country's economy. In Nigeria, there have been problems with mineral exploration and extraction. Oil has received a lot of attention as the country's main source of revenue. Other resources, particularly those that are solid, are frequently overlooked or dismissed. National growth has become very erratic as a result. As a result, there is insufficient funding for expenditures that can help the economy grow. Whereas the country urgently requires housing, rural electrification, enough megawatts to catalyze development, health maintenance and upkeep, works and road construction, and recurrent

employment expenditure. According to Anochie and Ude (2014), Nigeria has been experiencing difficulties in allocating sufficient funds for these expenditure components in its budgeting. The national expenditure components, ostensibly, are intended to drive growth and development in the country. Thus, the impact of government recurrent expenditure components on Nigerian economic growth was examined in this study.

The Federal Government of Nigeria's recurrent expenditure has steadily increased over time as a result of large receipts from crude oil production and sales. Despite the fact that Nigeria's recurrent expenditure has been steadily increasing, there are still public outcries about the state of the country's infrastructure. There are no infrastructures to improve commerce within the system, and no social amenities to improve the welfare of the average economy citizen. Nigeria, however, remains one of the world's poorest countries, with more than half of the population living on less than \$2 per day.

Recurrent government expenditures such as administration, economic services, social and community services, and transfers have been on the rise. Government recurrent expenditure on administration, for example, grew from N1228.99 billion in 2015 to N1584.06 billion in 2018 and N1916.64 billion in 2019. Recurrent social and community service expenditure increased from N79.63 billion in 2001 to N807.59 billion in 2015, and N1311.26 billion in 2019. Economic services recurrent expenditure increased from N255.78 billion in 2016 to N450.77 billion in 2019, while transfers expenditure increased from N1392.93 billion in 2014 to N3188.06 billion in 2019. (CBN Statistical Bulletin, 2019).

Despite the government's increased spending, key macroeconomic indicators such as the balance of payments, import obligations, inflation rate, and exchange rate have not improved the country's economic growth. The country's infrastructure (roads and power) had continued to deteriorate, while unemployment had risen. In response to these, Okoro (2013) expressed concern that government spending in Nigeria does not appear to have replicated the same level of economic growth, pointing out that government spending has grown at a faster rate than GDP over the same time period. Researchers and economic policymakers are also concerned about whether increased government spending is desirable in order to promote economic growth.

Previous empirical research on the subject shows that, while some scholars found a negative and insignificant effect of government spending on economic growth, others found a positive and significant effect. Some even claimed that there was no link between spending increases and real output growth. This study set out to re-echo the effect of government recurrent expenditure components on Nigerian economic growth using data from 1999 to 2019 based on these several competing perspectives with a lack of consensus in the results. This is to know the extent of the effect of administration recurrent expenditure, social and community services recurrent expenditure, economic services recurrent expenditure, and transfers recurrent expenditure on Gross Domestic Product (GDP) in Nigeria.

## **II. Review of Related Literature**

### **2.1 Conceptual Framework**

#### **2.1.1 Government Recurrent Expenditure**

Government expenditures are the costs incurred by the government for its own upkeep, as well as for society and the economy as a whole. All government consumption, investment, and transfer payments are included (Abdullah, 2010). Administration, economic services, infrastructure and social amenities, national security and defense, grants and aids, and interest on loans are the key components of government expenditure in Nigeria. Government spending, on the other hand, aids in the acceleration of economic growth and has an impact on the production pattern and component of output. It can be divided into two types: recurring and capital expenditures, which are combined to form an overall expenditure that includes all fees and net lending provided by governments (Mitchel, 2011).

Government recurrent expenditures, in particular, relate to government spending that occurs on a regular basis throughout the year. Administrative expenses, expenditures on the provision of economic, social, and community services, and expenditures on transfer payments are all included (CBN, 2012; Aladejare, 2013). Year after year, recurring expenses are incurred on a regular basis. In other words, they are operating expenses that are required for government departments to function on a day-to-day basis. These expenses include civil administration, defense forces, public health and education, and government machinery maintenance. These expenditures must be made on a regular basis if government operations are to be maintained, and they must not result in the acquisition of permanent assets. They are divided into administration (general administration, defense, and internal security); social and community services (Education, Health, and Others); economic services, and transfers (public debt charges or interests for both internal and external debts, pensions and gratuities, and others such as transfer to contingency fund, net depreciation on investment revaluation, and extra-budget transfers) (Kanu, Ozurumba & IHEMEJE, 2014).

### **2.1.2 Administrative Recurrent Expenditure**

General administration, the National Assembly, defense, and internal security are all included in administrative recurrent expenditure. They are costs incurred by a company that aren't directly related to a certain function, such as manufacturing, production, or sales. These costs are tied to the organization as a whole, such as top executive salaries and general service costs. They are, however, non-technical costs that are required for an entity's basic operation. Administrative costs are usually set in stone. They are typically difficult to minimize because they are fixed.

### **2.1.3 Recurrent Expenditure on Social and Community Services**

Education, health, and other social and community service recurring expenditures are included. This expenditure promotes economic growth and aids in the reduction of income and wealth disparities among a country's population. If used wisely, it can be used to promote economic growth by facilitating trade as well as correcting externalities and regional imbalances. By extension, the size of a country's expenditure is a function of its national revenue, which is a function of the exploited resources available, and, by extension, patronage from abroad and locally. However, in Nigeria, social capital spending varies from government to government, year to year, and political system to political system, leaving only evidence of mismanagement, misapplication, and misuse of funds allocated for infrastructure development.

### **2.1.4 Recurrent Expenditure on Economic Services**

Recurrent expenditures, in general, are government administrative costs such as labor, salaries, interest on loans, and maintenance (Mulinge, 2016). Agriculture, building, transportation, and communication, among other economic services expenditure components, are all intended to help the economy grow. Nigeria, ironically, has yet to make a concerted effort to develop these vital areas.

### **2.1.5 Recurrent Expenditure on Transfer**

Internal and external debts comprise the transfer of state debt charges. It includes, among other things, national old-age pension plans, interest payments, subsidies, unemployment benefits, and welfare benefits for the poor. The government does not receive anything in exchange for such expenditures; rather, it contributes to the well-being of the people, particularly the weaker members of society. As a result of such spending, monetary incomes are redistributed across society.

### **2.1.6 Economic Growth**

When comparing one period of time to the next, economic growth refers to an increase in an economy's capacity to generate products and services. It is a prerequisite for economic development and affects the extent to which basic infrastructure is developed and amenities that make living easier are provided. Economic growth, according to Al-Shatti (2014), is defined as a rise in income or real gross national product (GNP) over time. It is an increase in a country's total production, or the total quantity of products and services produced. Economic growth is defined as the increase in a country's overall output, according to Krugman (2019). It is a steady increase in a country's per capita output or income, accompanied by increases in the labor force, consumption, capital, and trade volume.

Technological innovation and positive external forces are usually the driving causes behind economic progress. It is the most widely used metric for assessing an economy's performance, as well as the most essential aspect in determining a country's success. Typically, changes in the Gross Domestic Product (GDP) are used to gauge economic growth (GDP). GDP is the most comprehensive measurable measure of a country's overall economic activity, encompassing all private and public consumption, government spending, investments, and exports. It is often calculated on a yearly basis.

## **2.2 Theoretical Framework**

### **2.2.1 The Endogenous Economic Growth Theory**

Barro implemented the endogenous hypothesis in 1990. The idea recommends employing fiscal policies to boost the level and growth rate of per capita output within an economic model (e.g. government spending). As a result, fiscal policy includes both government taxes (income) and government spending. The endogenous theory is relevant to this study since it calls for the stimulation of economic theory by government spending, which typically includes both capital and recurrent expenditure.

Theoretical growth literature has primarily attempted to endogenize the long-run growth rate of output since the mid-1980s. As is well known, if fiscal policy impacts incentives to save or invest in new capital, the equilibrium capital-output ratio, and hence the level of the production path, but not its slope, changes in the neoclassical growth model (with transitional effects on growth as the economy moves onto its new path). Barro's (1990) endogenous growth models with public policy have a unique feature: fiscal policy can impact both the

output path's level and the steady-state growth rate. This means that government spending, which is a function of fiscal policy, may determine output and keep the economy growing at a constant pace.

Romer (1986, 1990), Lucas (1988), and Barro (1990), among others, pioneered endogenous growth theory, which identifies processes by which policy variables affect not only output levels but also steady-state growth rates. Barro was one of the first economists to try to endogenize the relationship between growth and fiscal measures (1990). He divides public finances into four categories: productive vs. non-productive spending, as well as distortionary vs. non-distortionary taxation. When government expenditure penetrates the private production function and contributes directly to output, it is termed productive. Otherwise, it is regarded ineffective and has no long-term impact on the pace of growth.

Economic growth, according to endogenous growth theory, is primarily driven by internal rather than external factors (Romer, 1994). According to endogenous growth theory, investments in human capital, innovation, and knowledge are major drivers of economic growth. The idea also addresses positive externalities and spillover effects of a knowledge-based economy, which will lead to economic advancement. The endogenous growth theory states that an economy's long-run growth rate is determined by policy initiatives. Policies that foster openness, competition, change, and innovation, according to endogenous growth theory, will boost growth (Fadare, 2010).

The endogenous growth model is an economic theory that claims that economic growth occurs as a direct outcome of internal processes within a system. More specifically, the theory states that improving a country's human capital will lead to economic growth through the creation of new technologies and more efficient and effective manufacturing methods. This viewpoint differs from neoclassical economics, which claims that technical advancement and other external factors are the primary drivers of economic growth. Endogenous growth theorists claim that today's industrialized countries' productivity and economies, when contrasted to those of pre-industrialized countries, show that growth was generated and sustained from within the country rather than through trade.

This research is based on the endogenous growth hypothesis, which claims that economic growth occurs as a direct outcome of internal processes within a system. This means that government spending, which is a function of fiscal policy, may determine output and keep the economy growing at a constant pace. Investing in human capital, creativity, and knowledge, in other words, is a substantial contribution to economic progress.

### **2.3 Empirical Review**

An empirical study was conducted by Modebe, Okafor, Onwumere, and Ibe (2012) on the impact of recurrent and capital expenditure on Nigeria's economic growth. The study used ordinary least squares multiple regression analysis techniques and spanned the years 1987 to 2010. While recurrent government expenditure had a positive and insignificant impact on Nigerian economic growth, capital spending had a negative and insignificant impact, according to the data.

Omokri, Agbedeyi, and Nwajei (2018) explored the determinants of recurrent expenditure that operate as economic development mediators in Nigeria empirically. The researchers used traditional least squares multiple regression analysis approaches in their research. According to the findings, the key mediators between crude oil prices, which is a major source of government revenue, and Nigerian economic growth include recurrent expenditure on Administration (M1), Social and Community Services (M2), and Transfers (M4). As a result, the government should strengthen recurrent expenditures, particularly those connected to administration, social and community services, and transfers, all of which have been proved to contribute to economic growth.

From 1985 to 2015, Abomaye-Nimenibo (2020) scientifically investigated how public expenditure effects economic growth in Nigeria. The Johansson co-integration test and regression analysis technique were used in this work. All of the model's variables exhibited a long-term relationship, and government capital expenditure has a positive and significant impact on Nigeria's economic growth, according to the data. With a coefficient of determination of 98.4 percent of the variance in the dependent variable explained by changes in the explanatory variables, government recurrent expenditure has a positive and significant impact on Nigerian economic growth. Based on our findings, we urge that the government raise recurring spending on salaries and transfer payments, as well as investment spending on education, health, agriculture, and basic infrastructure like as road and bridge construction.

To investigate the impact of government spending on economic growth, Nwadiubu and Onwuka (2015) employed a disaggregated approach. According to their findings, government total capital spending (TCAP), total recurrent expenditures (TREC), and government education spending (EDU) all have a negative impact on economic growth. Increasing government spending on transportation and communication (TRACO) and health (HEA), on the other hand, boosts economic growth. As a result, the report suggests that the government enhance both capital and recurring spending, including education spending, as well as ensure that money allocated for these sectors' development are effectively handled.

Nworji, Okwu, Obiwuru, and Nworji (2012) investigated the impact of government spending on economic growth in Nigeria using ordinary least squares multiple regression analytic approaches. During the study period, they discovered that capital and recurring expenditure on economic services had a negligible negative impact on economic growth. The study also found that capital transfers had a small positive impact on growth, whereas capital and recurring spending on social and community services, as well as recurrent transfers, had a significant positive impact.

Aiyedogbon, Ohwofasa, and Anyanwu (2015) used the ARDL model to examine the impact of public sector spending on economic development in Nigeria between 1981 and 2013. The findings reveal that, while government spending on administration and debt servicing has a favorable long-term and short-term influence on economic growth, spending on the economic and social sectors has a negative impact. According to the study, this conclusion could be linked to the high level of corruption in the public sector, where funds intended for the provision or maintenance of social-economic activities such as agriculture, roads, transit, schools, and hospitals are diverted for personal gain. The paper advocated that the government enhance spending in the social and economic areas while reducing indebtedness and debt servicing.

Ifere, Okoi, and Eko (2014) looked into the relationship between the National Assembly's spending and Nigeria's economic growth. The ordinary least square (OLS) estimate approach was used to achieve the research's goal, and datasets from 1999 to 2012 were used. Their findings found that spending on the national assembly has a considerable impact on economic growth (as measured by GDP), and that the contribution of the National Assembly (as measured by some bills enacted) has a big impact on economic growth. This need the passing of additional significant legislation in order to boost the Nigerian economy.

Akparhuere, Etebefia, and Nwankwo (2016) investigated whether government expenditure had a major impact on Nigeria's economic growth. The study used an ex-post facto design with secondary data, and the data was analyzed using the ordinary least squares regression technique. A high positive association between recurring expenditure and economic growth was discovered, as well as a considerable variation between capital expenditure, recurrent expenditure, and Nigeria's economic development. As a result of this study, Ministries, Agencies, and Departments should take the issue of government budgets and budgeting more seriously, as well as reduce or eliminate wastage, stimulate economic development by identifying people-oriented projects, match government spending with revenue allocation, and take the issue of government budgets and budgeting more seriously.

Chude and Chude (2014) investigated the impact of public education spending on economic growth in Nigeria from 1977 to 2012, focusing on disaggregated and sectoral expenditure analysis. The study used an ex-post facto research approach and applied the Error Correction Model (ECM) to time series data in order to analyze the long and short-run effects of public expenditure on economic growth in Nigeria. According to the data, total education investment in Nigeria is positively and substantially associated to long-term economic growth. As a result, the study concluded that factors both exogenous and endogenous to government spending influence economic growth in Nigeria.

Between the years 2000 and 2010, Njoku, Ugwu, and Chigbu (2015) assessed the impact of government spending on Nigerian economic growth. (1961-2013). Using a quantitative research methodology that used Augmented Dickey-Fuller to test for the stationarity of the variables with data sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin and UNCTAD Statistical B, the study discovered that government expenditure on (capital administration, recurrent social and community services, and recurrent economic services) contributes positively to GDP.

Egbetunde and Fasanya (2013) used annual time series data to assess the impact of government spending on economic growth in Nigeria from 1970 to 2010. In this study, the long-run and short-run relationships between government spending and economic growth in Nigeria are investigated using the boundary testing (ARDL) approach. Their findings show that total government spending has a negative influence on growth, which is consistent with previous research. Recurrent spending, on the other hand, was determined to have a negligible positive influence on growth. As a result, government investment on infrastructure, social, and economic activities should be increased.

Using Nigeria as a case study, Abubakar (2016) employed the Vector Error Correction Model (VECM) and Impulse Response Function (IRF) to examine the disaggregate influence of the components of public spending on economic growth. The long-run association finding demonstrates that Recurrent Transfer Payments (RTR), Capital Socio-Economic Expenditure (CSE), and Openness (OPP) have a negative and significant impact on economic growth, but Recurrent Administration Spending (RAD) has a statistically negligible negative impact. In the long run, Capital Administration Expenditure (CAD), Investment (INV), and Labor (LAB) all have a positive and considerable impact on Economic Growth. The model's short-run dynamics revealed that RAD and OPP have a positive and considerable impact on Nigeria's economic growth, but RTR has a significant negative impact. The significance of the other variables was not statistically significant. The Impulse Response Function (IRF) revealed that GDP responded positively to shocks in RAD and INV

throughout the periods studied, whereas the responses to RTR, CAD, CSE, and OPP were negative. The study's policy suggestions include a thorough redesign of Nigeria's public spending structure, shifting more spending toward capital expenditure rather than the current pattern of around 70% recurrent and 30% capital.

From 1970 to 2014, Ogbuagu and Ekpenyong (2015) examined the short- and long-run effects of government recurrent and capital expenditure on economic development. The Autoregressive Distributed Lag (ARDL) Model, often known as the "Bound Testing Approach" to cointegration, was used, and the results revealed that recurrent expenditure had a positive and long-term impact on GDP. Surprisingly, capital investment has a negative short-run coefficient, and this effect fades over time. In addition, the Toda-Yamamoto causality test reveals a one-way causality from GDP to government spending (Wagner's Theory).

Mulinge (2016) looked at the impact of recurrent government spending on economic growth in Kenya from 1980 to 2014. It broke down recurring government spending into three categories: social services, general government administration, and debt servicing. For unit root, the author used the Augmented Dickey-Fuller test and for cointegration, the autoregressive distributed lag technique. The findings demonstrated that recurring public expenditure and economic growth in Kenya had a long-term link. The data demonstrated that recurring public expenditure on government social services and debt had a positive association with growth, whereas government recurrent expenditure on administration had a negative link with growth. Government spending on debt and administration, on the other hand, was statistically negligible in promoting economic development, whereas government recurrent spending on social services was statistically significant.

### 2.4.2 Gap in Literature

On the empirical review, two strands of literature can be deduced from the review of past empirical studies. The influence of government expenditure categorised as recurrent and capital expenditure on economic growth was studied in one strand, while the effect of functional classification of government expenditure on economic growth was studied in the other. The goals of this study are aligned with the Central Bank of Nigeria's classification of government recurrent expenditure into four distinct components: administration, social and community services, economic services, and transfers. As a result, no previous empirical study has examined or investigated the impact of government spending alongside the four recurrent expenditure components. In addition, this analysis extended the use of 2019 data, which had previously been omitted from previous studies.

## III. Methodology

### 3.1 Research Design

The design of the study is *ex-post facto*. The researcher made optimal use of secondary data collected from the Central Bank of Nigeria Statistical bulletin which holds data for government finances and economic performances. *Ex-post facto* research design is used because recurrent expenditure components of administration, social and community services, economic services, transfers and gross domestic product are historic and already in existence. The population of the study comprises all recurrent expenditure components in Nigerian budgets from 1999-2019. The study selected four recurrent expenditure components of administration, social and community services, economic services and transfers from National Budgets from 1999-2019. For the analysis of data gathered, the regression analysis was applied in testing all the hypotheses. The signs of the coefficients were relied upon in describing the direction and strength of the linear relationship between the variables while the t-statistics and p-value were relied upon in determining the magnitude of the effect of government recurrent expenditure on Nigeria's economic growth.

This study adopted a multivariate regression model following studies by Mulinge (2016) and Omokri, *et al* (2018) with little modifications. The Auto-Regressive multiple regression model is laid thus:

$$\text{LogGDP}_{t-i} = \beta_0 + \beta_1 + \beta_2 + \beta_3 + \beta_4 + \varepsilon$$

Where,

$\text{LogGDP}_{t-i}$  = natural log of Gross Domestic Product at time lag t-i

$\text{LogADMINEX}_{t-i}$  = natural log of Administrative Expenditure at time lag t-i

$\text{LogSCDEX}_{t-i}$  = natural log of Social and Community Development Expenditure at time lag t-i

$\text{LogESEX}_{t-i}$  = natural log of Economic Services Expenditure at time lag t-i

$\text{LogTREX}_{t-i}$  = natural log of Transfer Expenditure at time lag t-i

$\beta_0$  = Regression constant or intercept of the regression equation

$\beta_1, \beta_2, \beta_3$  and  $\beta_4$  are the regression coefficients for the respective independent variables

$\varepsilon$  = Error term

IV. Data Presentation And Analysis

4.1: Data Presentation

Table 4.1 below shows the annual time-series data of the study variables: recurrent expenditure on administration (ADIMNEX), recurrent expenditure on economic services (ESEX), recurrent expenditure for social and community services (SCDEX), and recurrent expenditure on transfers (TRES) from 1999-2019. The data were presented in their logged forms.

Table 4.1: Annual time series data of the research variables

Years	LogGDP	LogADMINEX	LogSCDEX	LogESEX	LogTRES
1999	16.9267748787111	5.212977319381022	4.267877612982976	4.46682723636635	4.67823475685
2000	16.98049098295562	4.97348709846075	4.440177611315912	3.35305700633422	5.31659923023
2001	17.04503120593541	5.197391447958076	4.377390906269353	3.97048057499972	5.58296985444
2002	17.18134705605754	5.58541176635407	5.025129740246708	3.96934807204742	5.41676684675
2003	17.27212521936804	5.730002375632231	4.630935393874118	4.56507709242165	6.16887824672
2004	17.37144556373961	5.726098281139616	4.900746020558973	4.07380166099077	6.41460584023
2005	17.43918324531426	6.07458712250074	5.02157523413459	4.16371514014677	6.50817283403
2006	17.5042776195124	6.258050656265029	5.268734064006363	4.37814410740966	6.38696349090
2007	17.57490457690237	6.439925285677242	5.547791213108276	5.18777679084867	6.26752307717
2008	17.64442398940503	6.594440819156629	5.807932257672971	5.74859649044599	6.60619062115
2009	17.72465139553408	6.571471024691139	5.869833492313256	6.04881322062519	6.45480540430
2010	17.81576903417345	7.018795633771128	6.311553304478671	6.33283547978684	6.77803376241
2011	17.86748751811464	7.14076995009161	6.666244070309742	5.73818390137353	6.86294617985
2012	17.9086859876839	7.055657908905632	6.672108891944149	5.43851399704132	7.04368379621
2013	17.96211104515473	7.013753591204486	6.738235429545385	5.67411333299415	6.87505645202
2014	18.02254944346523	6.900569523167411	6.652566211113622	5.58499893866624	7.23916472126
2015	18.04996381330611	7.11394797283643	6.694054503994511	5.61807933246323	7.32647219277
2016	18.04456709173661	7.152268856032539	6.653572455070759	5.54431770000518	7.52389721743
2017	18.04221262069408	7.188639296932919	6.83698940808881	5.81380211969475	7.69125491557
2018	18.06114373607036	7.367746450444866	6.988164073483866	5.92037125699974	7.87658532863
2019	18.08363791795599	7.558328931983021	7.178743785992199	6.11095723159271	8.06716786031

Source: Author’s extract from CBN statistical bulletin and official website

4.2 DATA ANALYSIS

4.2.1: Descriptive Statistics

The descriptives statistics of the variables are provided in table 4.2 below.

Table 4.2: Summary Statistics of the Variables

	LogGDP	LogADMINEX	LogSCDEX	LogESEX	LogTRES
Mean	17.64394	6.470206	5.835731	5.128658	6.623142
Median	17.72465	6.594441	5.869833	5.544318	6.606191
Maximum	18.08364	7.558329	7.178744	6.332835	8.067168
Minimum	16.92677	4.973487	4.267878	3.353057	4.678235
Std. Dev.	0.391019	0.790974	0.980352	0.875562	0.874799
Skewness	-0.500599	-0.528747	-0.262985	-0.491700	-0.383899
Kurtosis	1.896361	1.961586	1.554409	1.888365	2.669633
Jarque-Bera	1.942866	1.922022	2.070581	1.927455	0.611325
Probability	0.378540	0.382506	0.355123	0.381468	0.736635
Sum	370.5228	135.8743	122.5504	107.7018	139.0860
Sum Sq. Dev.	3.057924	12.51280	19.22178	15.33218	15.30547
Observations	21	21	21	21	21

Source: Author’s Eviews 10.0 Output

There is evidence that the series of GDP, recurrent administrative expenditure, recurrent expenditure on economic services, recurrent expenditure on social and community services, and recurrent expenditure on transfers are skewed to the left, as shown in table 4.2, which shows descriptive and normality statistics of the study variables (negatively skewed). They are grouped on the left side of the distribution, in other words. The standard deviations are minimal, indicating that the data series is not volatile.

The kurtosis statistics measure the degree of peakedness of the distribution. The result shows that there is no excess kurtosis across the data series. The normality of the probability distribution is further justified by the Jarque-Bera statistics. The probability values of the Jarque-Bera statistics is greater than 0.05, hence, it is accepted that the series of the variables fit into a normal and smooth curve.

**4.2.2 Stationarity Test**

A time series is considered to be stationary if its mean and variance are independent of time. If the time series is non-stationary, that is, having a mean and or variance changing over time, it is said to have a unit root (Johannes et al, 2011). Stationarity is important in econometrics as most time series data exhibit unit root problems. If a time series is non-stationary, standard regression analysis will provide erroneous conclusions. When regressing a time series variable on others, the tests statistics show a positive link between these variables even when there is none.

**Fig. 1: Line Graph of the Natural Log Values of the Variables**

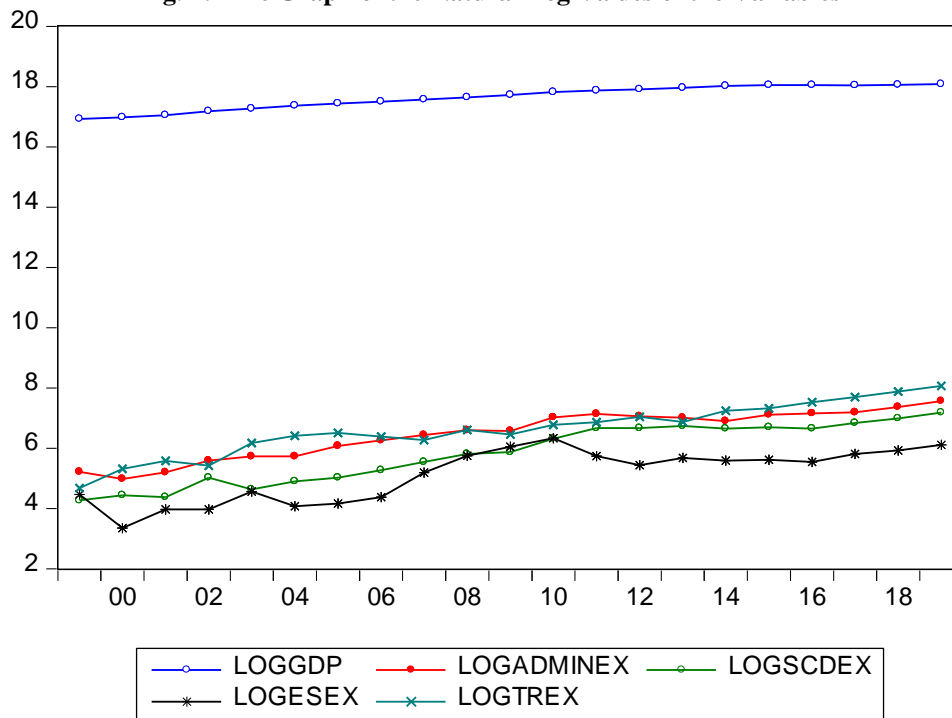


Fig. 1 above shows the line graph for all the increasing and sloping upwards from left to the right suggesting that its mean and variance are not independent of time. The representation of the dataset in figure 1 above confirms the non-stationarity status of our dataset and hence the application of the Differenced-Stationary Process (DSP) using the Augmented Dickey-Fuller unit root approach.

The stationarity properties of the time series are further ascertained via the Augmented Dickey-Fuller test which the results are presented below.

**Table 4.3: Augmented Dickey-Fuller (ADF) unit root test**

Variables	ADF statistic	C.V. @ 5%	p-value (ADF stat.)	Inference
LogGDP	-3.25	-3.03	0.0328	1(0)
LogADMINEX	-5.15	-3.67	0.0031	1(1)
LogSCDEX	-6.18	-3.67	0.0004	1(1)
LogESEX	-5.76	-3.67	0.0010	1(1)
LogTREX	-5.75	-3.67	0.0010	1(1)

Source: Author’s Eview output

The Augmented Dickey-Fuller (ADF) test reports above reveal that all the variables were not stationary at the level and hence the application of The DSP (Differenced-Stationary Process). At this stage, those variables which were not stationary at their level forms became stationary. Hence, the dynamic ARDL approach was used in testing the hypotheses.



### 4.3: Regression result and Test of Hypotheses

The regression result for the test of formulated hypotheses is as presented in table 4.4 below:

**Table 4.4 ARDL Regression result of the dependent and independent variables**

Dependent Variable: LogGDP  
 Method: ARDL  
 Sample (adjusted): 2000 2019  
 Sample: 1999 2019  
 Included observations: 20 after adjustments  
 Model selection method: Akaike info criterion (AIC)  
 Dynamic regressors (4 lags, automatic): LogADMINEX, LogSCDEX, LogESEX, LogTREX  
 Fixed regressors: C  
 Number of models evaluated: 1200  
 Selected Model: ARDL(1, 0, 1, 1, 0)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	15.39774	0.306736	50.19874	0.0000
LogADMINEX	0.030777	0.117149	0.262715	0.7966
LogSCDEX(-1)	0.171164	0.073661	2.323666	0.0357
LogESEX(-1)	0.037134	0.042134	0.881317	0.3930
LogTREX	0.122835	0.038250	3.211352	0.0063
R-squared	0.990360	Mean dependent var		17.64394
Adjusted R-squared	0.986228	S.D. dependent var		0.391019
S.E. of regression	0.045887	Akaike info criterion		-2.981927
Sum squared resid	0.029479	Schwarz criterion		-2.633753
Log likelihood	38.31024	Hannan-Quinn criter.		-2.906365
F-statistic	239.7067	Durbin-Watson stat		1.354573
Prob(F-statistic)	0.000000			
Inverted AR Roots	.91			

**Source:** Author's Eviews 10.0 computation

The hypothetical statements (null forms) are laid as below:

- H<sub>01</sub>: Administration recurrent expenditure does not significantly affect Gross Domestic Product (GDP) in Nigeria.
- H<sub>02</sub>: Social and community services recurrent expenditure does not significantly affect Gross Domestic Product (GDP) in Nigeria.
- H<sub>03</sub>: Economic services recurrent expenditure does not significantly affect Gross Domestic Product (GDP) in Nigeria.
- H<sub>04</sub>: Transfers recurrent expenditure does not significantly affect Gross Domestic Product (GDP) in Nigeria.

#### Decision rule

The decision criterion is to accept the null hypothesis if the probability of the t-statistic is > 0.05. Otherwise, reject the null hypothesis and accept the alternate hypothesis.

#### Hypothesis one's conclusion

Recurrent expenditure on administration (LogADMINEX) contributes favorably to GDP growth in Nigeria, as seen in table 4.4 above. As a result, a 100 percent rise in LogADMINEX results in a 3.1 percent increase in Nigeria's economic growth. We can support the null hypothesis and conclude that recurrent expenditure on administration has no significant influence on Nigeria's Gross Domestic Product (GDP) with a t-statistic value of 0.263 and an associated probability value of 0.7966 > 0.05.

#### Hypothesis two's conclusion

The percentage contribution of recurrent expenditure on social and economic services to GDP is 17.1 percent, according to the regression result in table 4.4. We may determine that recurrent expenditure on social and community services has a positive and substantial effect on Nigeria's Gross Domestic Product based on a t-statistic value of 2.32 and an associated probability value of 0.0357 < 0.05. As a result, the null hypothesis is rejected at a 5% level.

### **Hypothesis three's conclusion**

Government recurrent expenditure on economic services has a coefficient value of 0.037, as indicated in table 4.4. The implication is that a 100% increase in economic service spending would result in a 3.7 percent increase in GDP in Nigeria. The null hypothesis is supported by the t-statistic value of 0.881 and related p-value of  $0.3930 > 0.05$ , and we infer that recurrent expenditure on economic services has a positive but small influence on Nigeria's GDP (GDP).

### **Hypothesis four's conclusion**

Recurrent expenditure on transfers has a coefficient of 0.123, a t-statistic of 3.211, and a p-value of 0.00630.05, according to Table 4.4. The implication is that government recurrent spending on transfers has a positive and large impact on Nigeria's GDP (GDP). At a 5% level of significance, the null hypothesis is thus rejected.

## **V. Discussion of Findings**

Government recurrent expenditure on administration has a positive but negligible effect on Nigeria's Gross Domestic Product, according to this analysis (GDP). The findings of this study back up Aiyedogbon et al. (2015) and Abubakar (2016)'s work in Nigeria. This finding contradicts the findings of Ifere et al. (2014) and Njoku et al (2015). It somewhat contradicts Mulinge's (2016) findings in Kenya and Omokri's et al's (2018) findings in Nigeria.

According to the findings of our research, government recurrent investment on social and community services has a favorable and considerable impact on Nigeria's GDP (GDP). This conclusion is consistent with Chude and Chude (2014) and Njoku, et al. (2015) findings in Nigeria. It also agrees with Mulinge (2016)'s findings in Kenya and Omokri, et al findings . 's in Nigeria. It contradicts the findings of Nwadiubu and Onwuka (2015), Aiyedogbon, and others (2015).

Government recurrent expenditure on economic services has a positive but negligible effect on Nigeria's Gross Domestic Product, according to this study (GDP). This conclusion backs with the findings of Njoku et al. (2015), who conducted their research in Nigeria. This conclusion contradicts the findings of Nigerian researchers Nworji et al (2012) and Aiyedogbon et al (2015).

Government recurrent expenditure on transfers has a positive and considerable effect on Nigeria's Gross Domestic Product, according to this study (GDP). This is consistent with findings from Aiyedogbon et al. (2015) in Nigeria, Mulinge (2016) in Kenya, and Omokri et al. (2018) in Nigeria. The result, on the other hand, contradicts Njoku et al(2015) .'s and Abubakar's findings (2016). The finding contradicts Mulinge (2016) and others in terms of magnitude.

Furthermore, the overall finding of this study, that government recurrent expenditure has a positive impact on Nigerian economic growth, is consistent with the findings of Modebe, et al (2012), Egbetunde and Fasanya (2013), Ogbuagu and Ekpenyong (2015), Akparhuere, et al (2016), and Abomaye-Nimenibo (2017). (2020). It contradicts, among other things, the findings of Nwadiubu and Onwuka (2015).

### **5.1 Summary of Findings**

Findings arising from the analysis are summarized thus:

- i) Government recurrent expenditure on administration has a positive but insignificant effect on Nigeria's Gross Domestic Product (GDP).
- ii) Government recurrent expenditure on social and community services has a positive and significant effect on Nigeria's Gross Domestic Product (GDP).
- iii) Government recurrent expenditure on economic services has a positive but insignificant effect on Nigeria's Gross Domestic Product (GDP).
- iv) Government recurrent expenditure on transfers has a positive and significant effect on Nigeria's Gross Domestic Product (GDP).

## **VI. Conclusion and Recommendations**

Nigeria's recurrent expenditure has been on the increase recently and its effect on economic growth has not been ascertained. Two strands of literature exist on the effect of government expenditure on economic growth studies. One strand focused on determining the effect of government expenditure classified into recurrent and capital expenditure on economic growth while the other strand of literature focused on ascertaining the effect of functional classification of government expenditure on economic growth. This study, however, empirically investigated the effect of government recurrent expenditure components on Nigerian economic growth with the specific objectives streamlined alongside the Central Bank of Nigeria classification of government recurrent expenditure into four distinct components of administration, social and community services, economic services and transfers. Findings from the study suggest that while Government recurrent

expenditure on social and community development services and transfers have a positive and significant effect on Nigeria's Gross Domestic Product (GDP), Government recurrent expenditure on administration and economic services have a positive but insignificant effect on Nigeria's Gross Domestic Product (GDP). Given the findings, the study recommends as follows:

- i) That the federal government of Nigeria should reduce expenditure on general administration and national assembly while enhancing expenditure on defence and internal security. This will in turn enhance the investment climate in Nigeria for the attraction of foreign and domestic direct investment for enhanced economic growth.
- ii) More expenditures on social and community services (e.g., education and health) should be encouraged since it translates to substantial positive growth in Nigeria's economic growth. This will go a long way to enhance the social welfare of the citizenry and by extension, the overall growth of the country's economy.
- iii) A positive and insignificant effect of government expenditure on economic services implies that adequate funding is not been provided for expenditures on agriculture, construction, transport and communication, and other economic services. Therefore, the federal Government should ensure adequate allocation to fund expenditures on agriculture, construction, transport and communication, and other economic services so that this sector can have a significant influence on the economic growth of the country.
- iv) A positive and significant effect of government expenditure on transfers implies that transfer expenditure especially on pensions and gratuities, contingencies/ subventions are been properly taken care of. This is evidenced by the public outcry of non-payment of pensions and gratuities by the federal government. Therefore, the government should continue to pay pensions and gratuities, provide for subventions as this provides money for pensioners. Money spent by this group of people will have a multiplier effect on the economy and hence contributes positively and significantly to economic growth.

This study has widely contributed to knowledge on the subject area, decomposing the government recurrent expenditure into administration, social and community services, economic services and transfers, and finding their respective influence on the economic growth of Nigeria. This study had equally added to the existing literature on the subject matter. It had equally exposed the current situation on the interaction between government recurrent expenditure components and Nigeria's Gross Domestic Product (GDP) growth using Central Bank of Nigeria data of 2019. The topic of this study can further be extended to assess the effect of government capital expenditure components on economic growth as no single study can address gaps that exist in the literature on government expenditure on economic growth. This topic of this study can also be further extended to assess the effect of government recurrent expenditure components on other economic development indicators such as human development index, life expectancy, per capita real income etc. This will enhance comparisons of the findings of this study with the findings of suggested areas of further studies. This will also enable the generalization of the findings in the area of government expenditure and economic growth.

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## APPENDIX I

### UNIT ROOT TEST RESULT

Null Hypothesis: LOGGDP has a unit root  
 Exogenous: Constant  
 Lag Length: 1 (Automatic - based on SIC, maxlag=4)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.246769	0.0328
Test critical values:		
1% level	-3.831511	
5% level	-3.029970	
10% level	-2.655194	

\*MacKinnon (1996) one-sided p-values.  
 Warning: Probabilities and critical values calculated for 20 observations  
 and may not be accurate for a sample size of 19

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(LOGGDP)  
 Method: Least Squares  
 Date: 09/12/20 Time: 16:53  
 Sample (adjusted): 2001 2019  
 Included observations: 19 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGGDP(-1)	-0.057056	0.017573	-3.246769	0.0051
D(LOGGDP(-1))	0.345079	0.183912	1.876325	0.0790
C	1.044990	0.317429	3.292042	0.0046

R-squared	0.694816	Mean dependent var	0.058060
Adjusted R-squared	0.656668	S.D. dependent var	0.035527
S.E. of regression	0.020817	Akaike info criterion	-4.762170
Sum squared resid	0.006933	Schwarz criterion	-4.613048
Log likelihood	48.24062	Hannan-Quinn criter.	-4.736933

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F-statistic	18.21371	Durbin-Watson stat	2.197967
Prob(F-statistic)	0.000075		

Null Hypothesis: D(LOGADMINEX) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic - based on SIC, maxlag=4)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.146096	0.0031
Test critical values:		
1% level	-4.532598	
5% level	-3.673616	
10% level	-3.277364	

\*MacKinnon (1996) one-sided p-values.

Warning: Probabilities and critical values calculated for 20 observations  
 and may not be accurate for a sample size of 19

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(LOGADMINEX,2)  
 Method: Least Squares  
 Date: 09/12/20 Time: 16:54  
 Sample (adjusted): 2001 2019  
 Included observations: 19 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGADMINEX(-1))	-1.070638	0.208049	-5.146096	0.0001
C	0.250589	0.086477	2.897758	0.0105
@TREND("1999")	-0.009685	0.006547	-1.479398	0.1585
R-squared	0.628519	Mean dependent var		0.022635
Adjusted R-squared	0.582083	S.D. dependent var		0.239394
S.E. of regression	0.154760	Akaike info criterion		-0.749949
Sum squared resid	0.383208	Schwarz criterion		-0.600827
Log likelihood	10.12451	Hannan-Quinn criter.		-0.724711
F-statistic	13.53540	Durbin-Watson stat		2.066741
Prob(F-statistic)	0.000363			

Null Hypothesis: D(LOGSCDEX) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic - based on SIC, maxlag=4)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.181811	0.0004
Test critical values:		
1% level	-4.532598	
5% level	-3.673616	
10% level	-3.277364	

\*MacKinnon (1996) one-sided p-values.

Warning: Probabilities and critical values calculated for 20 observations  
 and may not be accurate for a sample size of 19

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(LOGSCDEX,2)  
 Method: Least Squares

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Date: 09/12/20 Time: 16:55  
 Sample (adjusted): 2001 2019  
 Included observations: 19 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGSCDEX(-1))	-1.413962	0.228729	-6.181811	0.0000
C	0.266258	0.120217	2.214806	0.0416
@TREND("1999")	-0.005714	0.009137	-0.625397	0.5405
R-squared	0.704983	Mean dependent var		0.000962
Adjusted R-squared	0.668105	S.D. dependent var		0.375740
S.E. of regression	0.216465	Akaike info criterion		-0.078837
Sum squared resid	0.749713	Schwarz criterion		0.070285
Log likelihood	3.748949	Hannan-Quinn criter.		-0.053599
F-statistic	19.11705	Durbin-Watson stat		1.830911
Prob(F-statistic)	0.000057			

Null Hypothesis: D(LOGSEEX) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic - based on SIC, maxlag=4)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.756018	0.0010
Test critical values:		
1% level	-4.532598	
5% level	-3.673616	
10% level	-3.277364	

\*MacKinnon (1996) one-sided p-values.  
 Warning: Probabilities and critical values calculated for 20 observations  
 and may not be accurate for a sample size of 19

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(LOGSEEX,2)  
 Method: Least Squares  
 Date: 09/12/20 Time: 16:57  
 Sample (adjusted): 2001 2019  
 Included observations: 19 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGSEEX(-1))	-1.092655	0.189828	-5.756018	0.0000
C	0.314027	0.192798	1.628792	0.1229
@TREND("1999")	-0.014708	0.015700	-0.936805	0.3628
R-squared	0.683871	Mean dependent var		0.068650
Adjusted R-squared	0.644355	S.D. dependent var		0.627798
S.E. of regression	0.374394	Akaike info criterion		1.016923
Sum squared resid	2.242733	Schwarz criterion		1.166045
Log likelihood	-6.660765	Hannan-Quinn criter.		1.042160
F-statistic	17.30612	Durbin-Watson stat		1.638039
Prob(F-statistic)	0.000100			

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Null Hypothesis: D(LOGTREX) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic - based on SIC, maxlag=4)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.751898	0.0010
Test critical values:		
1% level	-4.532598	
5% level	-3.673616	
10% level	-3.277364	

\*MacKinnon (1996) one-sided p-values.  
 Warning: Probabilities and critical values calculated for 20 observations  
 and may not be accurate for a sample size of 19

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(LOGTREX,2)  
 Method: Least Squares  
 Date: 09/12/20 Time: 16:58  
 Sample (adjusted): 2001 2019  
 Included observations: 19 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGTREX(-1))	-1.263605	0.219685	-5.751898	0.0000
C	0.227971	0.134459	1.695470	0.1094
@TREND("1999")	-0.003530	0.010010	-0.352661	0.7289
R-squared	0.679078	Mean dependent var		-0.023567
Adjusted R-squared	0.638962	S.D. dependent var		0.388807
S.E. of regression	0.233620	Akaike info criterion		0.073696
Sum squared resid	0.873252	Schwarz criterion		0.222818
Log likelihood	2.299884	Hannan-Quinn criter.		0.098934
F-statistic	16.92815	Durbin-Watson stat		2.228459
Prob(F-statistic)	0.000113			

Ogbu, Samuel Oche, et. al. "Effect of Government Recurrent Expenditure Components on Nigerian Economic Growth." *IOSR Journal of Business and Management (IOSR-JBM)*, 23(10), 2021, pp. 09-23.