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GOVERNMENT CAPITAL EXPENDITURE AND ECONOMIC PERFORMANCE OF NIGERIA

[1]Prof. Ndubuisi J. Ihe, & [2] Nnabuife Shadrach Sunday

[1&2]Department of Accountancy, Imo State University, Owerri, Imo State, Nigeria

K E Y W O R D S

A B S T R A C T

This study investigated the effect of government capital expenditure and economic performance of Nigeria 1990 to 2020. The study employed secondary source of data collection. Data collected were analyzed through the use of vector error correction model. The findings revealed that government capital expenditure on economic services have positive effect on economic performance, community service and transfer have negative significant effect on economic performance respectively, while government capital expenditure on administration has negative insignificant effect on economic performance. The study concluded via the result of the joint effect of the predictors that government capital expenditure has significant impact on the performance of Nigeria economy. The study therefore recommended that government should channel more funds to community services and administration in order to increase the welfare of the citizen.

Background of the study

The focus of every good government is to improve and redirect its distribution of income and public expenditure in other to eradicate extreme poverty. This option now has an important potential in most developing countries for two reasons.

First, government capital expenditure has become a significant fraction of national income. The present information available on the personal distribution of income indicates that this expenditure is also quite large compared with the share of national income received by the poorest groups of the population. Hence, changes in the direction of this expenditure can have a significant effect on the real income of the lowest income groups: in a country where government expenditure and the income of the poorest 20 percent of the population account for 25 and 5 percent, respectively, of the gross national product (GNP), reallocating 10 percent of the fiscal budget to this group would increase its income by 50 percent (Maku, 2009). Government spending

has been identified as a major tool in improving the standard of living of citizens in a country. Various spending on recurrent and capital projects such as building of schools, provision of goods and affordable healthcare, payment of salaries or casual wages, provision of good roads, electricity and clean water are determinant of standard of living. (Nurudeen and Usman 2010).

When there is increased spending on these infrastructures there is tendency of improving standard of living in a nation. For instance, policy interventions to reduce mortality may require increase public spending or similarly, it may be necessary to spend more on educational programs that aim to increase primary completion rates. However what matters is not only how much was spent but also how effectively this money was spent. There are a handful of countries that suggest an inconsistent relationship between changes in public spending and outcomes. For example, according to World Bank (2003), Thailand has increased public spending on primary schooling more than Peru did, yet primary school completion fell in Thailand and increased in Peru. Likewise, an analysis of Malaysia over the late 1980's found little association between public spending on doctor and infant mortality and the increase in construction of public schools in Indonesia that occurred in the 1970's did not have a significant positive impact on school enrollment (Akpan, 2005).

The cross-country association between public spending and outcomes after controlling for national income, is found to be statistically and substantively weak. The message is not that public funding cannot be successful, rather it is commitment and appropriate policies, backed by effective public spending that can achieve these goals.

Public expenditure is not always effective in providing quality services and reaching the intended beneficiaries who are after the poor and this partly explains why spending has a weak relationship with outcomes which is to improve social and economic outcomes while increasing confidence in public.

To address this, government must tackle not only the technical or managerial questions of how much to spend on one input relative to another but also the institutional and political context that generate these decision (Son, 2009).

The achievement of sustainable economic growth conveys to the citizens, is a privilege of an improved standard of living, high level of literacy and employment, improved healthcare and infrastructure, including adequate protection of life and property within the domain. It is known fact that all these involve a whole lot of processes, just as no amount of economic performance can be achieved without commensurate conscious efforts on the part of individuals, government and its agencies.

While some societies prefer to pursue such initiatives through private-oriented (market mechanism) programmes, some others may go for government efforts with others caught in between the two. (It is however, instructive to note that there is a strong division in opinion as to whether government expenditure helps or hinders economic performance). Advocates of bigger government such as Lampman (2016), argue that government programmes provide valuable "public goods" such as education and infrastructure. It is also their claim that increases in government spending can boost economic performance by making more money available to individuals.

At the international arena, these include the works of Igbodaro (2010), where they argued that the relationship is negative; Loto (2011), response is that it is not significant; Kneller (1998) contend that rising deficits tend to have an adverse effect on growth in Organization for Economic Cooperation and Development (OECD) countries while Obademi (2012), concludes that to an extent public services are considered an input to production, a positive linkage arises between the size of government and economic growth. Kweka and Morrissey (2010), Onakoya and Somoye (2013) who opine that no consistent evidence exists for a significant relationship between capital expenditure and growth.

The consensus between Kweka and Morrissey (2010) and Menyah and Wolde-Rufael (2012) is that the actual relationship between capital expenditure and performance is far from being understood and therefore calls for more empirical research. The above view has further been amplified by Fan and Rao (2013) as they lend their support thus: many developing countries are currently undergoing substantial macroeconomic adjustments. It is not clear how such programs are affecting government expenditure and hence long-term economic performance and poverty reduction. Fan and Rao emphasize that it is important to monitor trends in the levels and composition of government expenditures, and assess the causes of change over time. It is even more important to analyze the relative contribution of various expenditures to production performance and poverty reduction, as this will provide important information for more efficient targeting of these limited and often declining financial resources in future.

Therefore, in the last decade Nigeria has metamorphosed from the level of Billions in naira to trillions in naira on the expenditure side of the budget. The effects of this expenditure are largely unnoticeable on the citizenry (Muretola, 2011).

Although, this problem of cross-sectional analysis appears to have been addressed by the study conducted on budget and capital expenditure across Nigerian states by Eboh, Amakom and Oduh (2014) its greatest pitfall lies with the fact that it concentrated on selected states of Nigeria and again appear to be more of a study on

expenditure/revenue sources than the effect of public expenditure on economic performance. Hence Eboh &Amakom (2014) have this to say: However, the functional distribution of capital budget estimates is generally aligned to economic and social services, it is not clear how and to what extent public spending leads to concrete effective results in human, social and economic growth. Additional research is needed to ascertain how budgets and public spending have translated to public goods and services and the extent to which they impact upon the investment climate in the states. It will suffice therefore, that this observation by Eboh et al (2014), is not only limited to the relationship between public expenditure and economic performance in Nigeria, but has actually ascended a general out-look just as Egbetunde and Fasanya (2013) re-echoed.

While a positive and significant relationship between government spending and economy growth have been established, there are much significant negative or no relationship between an increase in government capital expenditure and economic performance. That is; the actual relationship between capital spending and performance is far from being understood and therefore call for more empirical research. Following these mixed finding the research questions and objectives below arose.

Purpose of the Study

The main objective is to investigate the effect of government capital expenditure on economic performance in Nigeria. The specific objectives are to;

1. evaluate the effect of government capital expenditure on administration on Real Gross Domestic Product.
2. examine the impact of government capital expenditure on social community service on Real Gross Domestic Product.
3. assess the effect of government capital expenditure on economic service on Real Gross Domestic Product and,
4. evaluate the effect of government capital expenditure on transfer on Real Gross Domestic Product.

Research Questions

The Research was guided by the following research questions;

1. What is the effect between government capital expenditure on administration and Real Gross Domestic Product?
2. To what extent has government capital expenditure on social and community service affected Real Gross Domestic Product?

3. What is the impact of government capital expenditure on economic service on Real Gross Domestic Product?
4. To what extent has government capital expenditure on transfers affected Real Gross Domestic Product?

Research Hypotheses

H_{01}: There is no significant relationship between government capital expenditure on administration and Real Gross Domestic Product.

H_{02}: Government capital expenditure on social and community service has not affected Real Gross Domestic Product to a great extent.

H_{03}: There is no significant relationship between Government capital expenditure on economic service and Real Gross Domestic Product.

H_{04}: Government capital expenditure on transfer has not affected Real Gross Domestic Product.

Scope of the Study

Content Scope

This study on government capital expenditure and economic performance of Nigeria covered the period of 1990 to 2020. In the course of this study, emphasis will be on government spending and its effect on the economy

Variable scope

Government capital expenditure is disaggregated to administrative expenditure (General administration, defense, internal security, and national assembly), social and economic service (education, Health and other social and community service), Economic service (Agriculture, construction, transport, communication and other economic service) and real gross domestic product (RGDP).

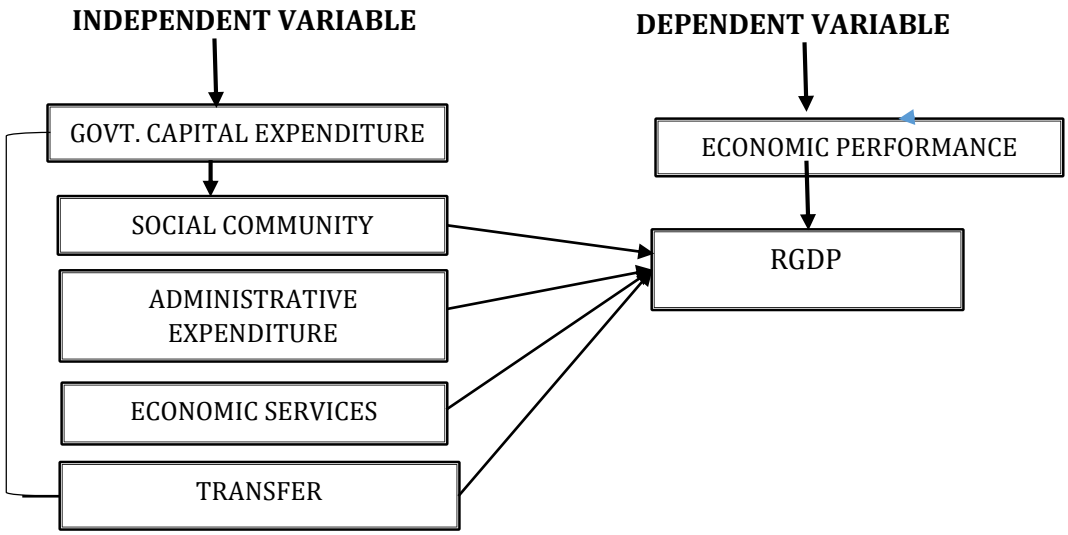
Geographical Scope

Research of this nature could have been more educating and complete if it includes other economies in Africa, however because of both time and financial requirements on such work, we limit the study to Nigerian economy.

Review of Related Literature

Conceptual Framework

The chart below reveals the dependent and independent variable as used in the research work. Economic performance was proxied by Real gross domestic product while government capital expenditure was disaggregated into administrative expenditure, social and community service, economic services, transfer payment.



Source: Researchers Desk, 2023

Concept of Public Expenditure

Government Spending refers to public expenditure on goods and services and is a major component of the GDP. Government spending policies like setting up budget targets, adjusting taxation, increasing public expenditure and public works are very effective tools in influencing economic performance (Modebe, Onwumere, and Imo, 2012).

Capital expenditures are those expenditures used in providing capital goods and services to the populace for example building of railway, dam, etc. Recurrent expenditures are those incurred on either day to day basis, or weekly, monthly, or even yearly basis and they include administration, internal security expenses, wages and salaries of public workers.

According to Isedu (2002), one-way capital expenditure impacts economic performance is the creation of employment. The multi-hydra problem of unemployment in the economy is reduced to the barest minimum. Another way it affects economic performance is the re-allocation of resources to every sector of the economy. Resources are moved from the surplus areas to the deficit areas where they are needed with, thus opening up vast opportunities which will improve the citizens of the country.

Capital expenditure is an aspect of capital budgeting that has to do with the analytical process of making decisions on investment by considering the viability of one investment to the other. As posited by Hilton, Maher and Selto 2012), capital asset refers to the resources, other than human, which a firm procures and utilizes for productive or profit-earning purposes. When a capital asset is acquired by means of

purchase or construction, a company is said to be making capital expenditure (investment) in non-current assets (Horngren, 2014). The Nigerian economic environment is a growing one, and for a growing economy to have a place in the comity of nations, the real sector must be developed and sustained. It is apparent that manufacturing is the pivot of the real sector of an economy, and it goes with capital assets. Capital assets have deferred expenses and determine the production capacity of a manufacturing firm. It involves strategic investments which have long-term commitments of corporate policy that enhances particular technologies, products, and markets (Desai, Wright and Chung, 2012)

Government Expenditure on Transfers

In macroeconomics and finance, a transfer payment (also called a government transfer or simply transfer) is a redistribution of income and wealth by means of the government making a payment, without goods or services being received in return. These payments are considered to be non-exhaustive because they do not directly absorb resources or create output (Bishop 2012), Examples of transfer payments include welfare, financial aid, social security, and government subsidies for certain businesses.

Unlike the exchange transaction which mutually benefits all the parties involved in it, the transfer payment consists of a donor and a recipient, with the donor giving up something of value without receiving anything in return. Transfers can be made both between individuals and entities, such as private companies or governmental bodies. These transactions can be both voluntary and involuntary and are generally motivated either by the altruism of the donor or the malevolence of the recipient. (Lampman & Robert, 2016).

For the purpose of calculating gross domestic product (GDP), government spending does not include transfer payments, which are the reallocation of money from one party to another rather than expenditure on newly produced goods and services. (Hall. & Lieberman 2012).

The challenge posed by transfer payments is that they do not produce outcomes that are economically advantageous. Governments pool taxes and other sources of revenue together and spend the money to further a certain agenda. Some of the spending pays for goods and services, such as buildings, equipment, and government worker salaries. These expenditures are exchanges in which money is traded for something with a recognized value. The payments may be viewed as boosting industrial activity and employment. However, government transfer payments do not boost production or economic activity. For example, foreign aid does not necessarily prompt

foreign trade (*Evans, 2014)*. Additionally, some argue that welfare programs, such as unemployment benefits, reduce incentives to take paid work.

Furthermore, the macroeconomic effect on transfer payments is reduced in the lower income countries and regions/states. The reasons for such disparity are the following:

- the level of transfer payments is subject to the fiscal capacities of the administering entity
- the size of transfer payments is generally dependent on the previous earnings of the beneficiary
- largest share of transfer payments is typically administered to the older age groups, which constitute to a smallest share of population of the lower income countries, regions or states

Government Expenditure on Administration

According to Antra (2015) expenditures on administration includes all expenditures on National defense, Courts of law, Correction and rehabilitation services, policing, fire service etc that cannot be allocated to more specific functions. It consists of outlays for central accounting, auditing, budgeting and staffing; for tax administration and collection, for the administrative costs of servicing the public debt. Prior to the 1997 historical revision, operation and maintenance of government buildings and provision of computer services were included and provision of defense. The category is broken down into the following seven sub-functions:

(a) **National defence** - Includes outlays for the armed forces and military bases and installations; it also covers expenditures related to defense research, military hospitals and colleges and schools located on military bases (Antra).

(b) **Courts of law** - Includes outlays pertaining to the judicial system including the Supreme Court of Canada, Federal Court of Canada, Tax Court of Canada, provincial superior courts which include both a court of general trial jurisdiction and a provincial court of appeal, provincial courts that deal with a broad range of criminal matters, litigation in the area of family law and the civil litigation in which the amount at issue is relatively small. The expenditures of the administrative tribunals which are an integral component of the judicial system are also included. These tribunals deal with labour relations, individual claims of discrimination in areas like employment, housing and access to services and facilities customarily available to the public. This sub-function also includes any expenditures concerning prosecuting, such as outlays for attorneys, coroners,

witnesses, jurors, court interpreters and premises used in the judicial process (Antra).

(c) **Correction and rehabilitation services** - Consists of outlays in respect of the incarceration and rehabilitation of individuals convicted of criminal action and sentenced to terms in penitentiaries, jails and other detention establishments. This sub-function also covers expenditures for probation services (Antra).

(d) **Policing** - Includes outlays pertaining to the maintenance of law and order. It comprises expenditures for the establishment, training, operation, maintenance and equipment of police forces; specialized training establishments; transportation, communication and laboratory equipment, as well as weapons and related equipment. It also accounts for expenditures for the purchase of police services from other governments or private agencies, for the custody and detention of arrested persons pending their release on bail or appearance before court of law and for expenditures on forensic science (Antra).

(e) **Firefighting** - Provides for outlays pertaining to the prevention, investigation and extinction of fire, to fire investigation officers, to fire fighting forces, to specialized training establishments, to fire trucks and fire-fighting equipment. It also takes into account expenditures on the purchase of firefighting services from other governments or non-government sources (Antra).

(f) **Regulatory measures** - Includes outlays for a wide array of services provided specifically to ensure that the public interest objectives are achieved. Under the sub-function "Regulatory measures" are recorded outlays pertaining to trusteeship services; ombudsmen and adjudicator or referee services; protection of borrowers, consumers and investors; commercial standards and business practices; superintendents of insurance; rent control; human rights; regulation of profession; film censorship; motor vehicle driver licenses and highway safety; industrial accident prevention; liquor licensing boards; the registry of land titles; the inspection of buildings; electrical systems, plumbing and gas installations and other systems likely to give rise to safety problems. However, where the purpose of the program is to protect or to foster a particular industry or activity, the cost is classified under the same function as the industry or activity to which it relates. For example, the federal government outlays pertaining to the Canadian Radio-television and Telecommunications Commission (CRTC) are classified under the sub-function "Telecommunications."

(g) **Other protection of persons and property** - Includes outlays for special actions taken to cope with emergency situations and expenditures for

permanent organizations established to deal with such contingencies [e.g., the rescue operations of the Canadian Coast Guard (CCG)]. It also includes expenditures on animal and pest control services and on activities of a protection nature not covered by the other sub-functions (Antra, 2015).

Social and Community Services

Ighodaro & Okiakhi (2010) is of the view that covers actions taken by a government, either alone or in co-operation with the citizenry, to offset or to forestall situations where the well-being of individuals or families is threatened by circumstances beyond their control. It goes beyond the concept of welfare which covers assistance (transfers) and services to individuals who are so disadvantaged that the universal social security services are inadequate to provide for their well-being or who fail to qualify for support from those services.

Government Expenditure on Economic Services

According to Chude & Chude (2013) Economic services expenditure captures Resource conservation and industrial development - This function includes a wide array of services related to the conservation and development of natural resources and the development and promotion of industries.

Government Spending and Economic Performance in Nigeria

Since independence in 1960, Nigeria has witnessed many different regimes, both civilian and military regimes with varying economic policies for growth. The first regime was the democratically elected civilian government under Tafawa Balewa in 1960 which was in power up to 1966, when it was terminated by military coup in 1966. Economic activities under this regime were overwhelmingly in the hands of private sectors and public command of economic resources was relatively low. This era was characterized by smaller size of government (lower level of government spending).

After the 1966 coup, Nigeria came under military rule with coups and counter coups which brought different military administrations in Nigeria. From 1966 to 1979, Nigeria was ruled by different military administrations. In 1979, the second democratic government was elected, with Alhaji Shehu Shagari as the president of Nigeria. By 1983 democracy was dethroned by a military coup headed by Major Gen. Muhammadu Buhari.

From 1979 to 1999, the military ruled Nigeria again. From 1999 to the present time, Nigeria has been ruled by a civilian government.

The economic policies of these different regimes differ greatly from each other. Some have the objectives of reduction in government expenditure, government

disinvestment, expanded government investment, liberalization, privatization and globalization.

From the above scenario, we can say that economic outcome (performance) is largely associated with the political process. Therefore, the issue of government expenditure and economic performance can be discussed in relation to economic policies of the various military and civilian regimes that have ruled this country.

Theoretical Review

Expenditure Theory- popularized by John Maynard Keynes in 1930

The English economist, John Maynard Keynes popularized the use of government expenditure as a stabilization tool. In his writing of the Great Depression of the 1930s, Keynes argued that output and employment were well below their potential level because there was insufficient total demand. If demand could be increased, output and employment could be expanded and the economy would return to its full employment potential. Moreover, Keynes believed this could be achieved with expansionary fiscal policy.

During a recession, Keynes argued that rather than balancing its budget, the government should increase its spending, reduce taxes, and shift its budget toward a deficit. According to Keynes, higher levels of government spending would directly increase total demand. Further, lower taxes would increase the after-tax incomes of households and they would spend most of that additional income, which would also stimulate total demand. Thus, the Keynesian prescription to cure a recession was a larger budget deficit. In contrast, if the economy was experiencing a problem with inflation during an economic boom, Keynesian analysis called for restrictive fiscal policy to temper excessive demand. In this case, reductions in government spending, higher taxes, and a shift of the budget toward a surplus would reduce total demand and thereby help to fight inflation.

Thus, Keynes rejected the view that the government's budget should be balanced. He argued that appropriate budgetary policy was dependent on economic conditions. According to the Keynesian view, governments should run budget deficits during recessionary times and surpluses during periods when inflation was a problem because of excessive demand. Can fiscal policy be used to reduce economic instability? The Keynesian view of fiscal policy swept the economics profession and, by the 1960s, it was also widely accepted by policy makers. During that era, most economists believed that fiscal policy exerted a powerful impact on the economy and that it could be instituted in a manner that would smooth the ups and downs of the business cycle. However, this is more difficult than was initially perceived. If changes in fiscal policy

are going to exert a stabilizing impact on the economy, they must be timed correctly. Proper timing of fiscal changes is difficult.

Empirical Review

Several works have been done by different researchers using different techniques on effect of government capital expenditure on economic growth in Nigerian.

Maku (2009) examined the link between government spending and economic growth in Nigeria over the last three decades using time series data to analyze the model and regression real GDP on private investment, human capital investment. He tested for the presence of stationary in the variables using the Augmented Dicker Fuller (ADF) unit root test, and used the co-integration test to establish the long-run relationship among variable, the Error Correction Model (ECM) was used. Empirical results showed that public and private had insignificant effects economic growth during the review period.

Abu and Abdullahi (2010) in their study, Government expenditure and economic growth observes that rising government expenditure has not translated to meaningful development as Nigeria still ranks among world's poorest countries. In an attempt to investigate the effect of government expenditure on economic growth modeling RGDP = f(TCAP, TREC, EDU, TRACO, HEA) , the study employed a disaggregated analysis. The results reveal that government total capital expenditure (TCAP), total recurrent expenditures (TREC), and government expenditure on education (EDU) have negative effect on economic growth. On the contrary, rising government expenditure on transport and communication (TRACO), and health (HEA) results to an increase in economic growth.

Arewa and Nwakahma (2013) investigated the long-run relationship between government expenditures and a set of macroeconomic variables (GDP, consumer price index and unemployment) using annual data collected from CBN statistical bulletin for a period of 1991 to 2011. The study adopted the Johansen multivariate cointegration for its estimation procedure and discovers that there is long-run relationship between government expenditure and the specified macroeconomic variables. It also discovers that an increase in capital expenditure improves economic bliss, while recurrent expenditure is detrimental to growth. Finally, the findings show that most of the variables do not Granger cause each other, but however, recurrent expenditure Granger cause prices, in the same vein capital expenditure does granger cause unemployment.

Egbetunde and Fasanya (2013) analyzed the impact of public 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 public 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. Therefore, government should increase its spending on infrastructure, social and economic activities and also check corruption.

Okoro (2013) examined the relationship between government spending and economic growth in Nigeria using time series data of 32-year period (1980-2011), this study investigated the impact of government spending on the Nigerian economic growth. Employing the ordinary least square multiple regression analysis to estimate the model specified. Real Gross Domestic Product (RGDP) was adopted as the dependent variable while government capital expenditure (GCEXP) and government recurrent expenditure (GREXP) represents the independent variables. With the application of Granger Causality test, Johansen Cointegration Test and Error Correction Mechanism, the result shows that there exists a long-run equilibrium relationship between government spending and economic growth in Nigeria. The short-run dynamics adjusts to the long-run equilibrium at the rate of 60% per annum.

Chude and Chude (2013) while studying the impact of government expenditure on economic growth in Nigeria (1977-2012) found that total government expenditure on education has significant effect on Gross Domestic Product (GDP). The study suggested that Government should direct its expenditure towards the productive sectors like education as it would reduce the cost of doing business as well as raise the standard living of poor ones in the country. Again, Chude and Chude (2013) concluded that Government should ensure that capital expenditure and recurrent expenditure are properly managed in a manner that it will raise the nation's production capacity.

Onakoya and Somoye (2013) used the three stage least squares and the macro-econometric model of simultaneous equations to look at the impact of public capital expenditure on different sectors of the Nigerian economy. They concluded that public capital expenditure impacts positively on the Nigerian economy.

Antra Bhatt (2015) investigated the active nature of public expenditure components and public debt through an inter-temporal optimization framework based on Turnovsky (2007). the study explained that public expenditure is classified as 'productive' and 'less-productive' based on the rationale that a percentage of the

productive public expenditure corrects disequilibrium in the public debt in the long-run. The study reported the 'second-order' conditions from the model which stated that as physical infrastructure increases, the marginal social value of a unit of capital reduces, meaning that beyond its optimal level, an increase in physical infrastructure could still affect public debt inversely; however, this will be at the cost of 'crowding out' of private investment.

He used Indian Public Finance data (1980-2013) to test the theoretical representation and analyses of the relationship between public expenditure and debt, using time series methods to discuss the hypothesis that capital expenditure of government is productive public expenditure. The result of the correlation, co integration and ECM shows that real capital expenditure is co integrated with real public debt of the Central and the General government and in the long run, real capital expenditure adjusts to bring real public debt on a convergent path. The amount of disequilibrium corrected is 0.01 and 0.035 for the Central and the Consolidated General Government respectively. He recommended that key policy implications towards increasing public capital expenditure in the Indian economy should be made while complementing it with private investment stimulus to stabilize public debt in the long run.

Duc-Anh, Phu and Arnelie (2015) analyzed the correlation among government expenditure, tax on returns to asset, public debt, and economic growth. The authors described public debt in two forms, domestic and external debt. Their study shows that an increase in the tax rate on returns to asset leads to an increase in government expenditure, consumption, and domestic debt which brings uncertain impact of tax rate on external debt. They further explained that when the productivity of capital on production is low (high) and the tax rate is lower (higher) than a threshold, the relation between external debt and the tax rate will have a bell-shaped form, i.e. external debt firstly rises then decreases with the tax rate. Grace (2014) examined the implications of shocks of public debt and government expenditure on human capital development and growth looking at the role of fiscal constraints through the introduction of government budget constraint for a set of preferred developing countries from 1980-2013.

The study captured fiscal challenges facing developing countries in developing human capital which is essential for sustainable growth. The results disclosed that high stocks of public debt, beyond the 30-40% debt/GDP threshold, affect human capital on output growth by limiting government expenditure resources available for developing human capital. The result of the study also indicates that government expenditure has a positive role to play in developing human capital and sustainability seems uncertain

for countries that have fiscal constraints. The study concluded that developing countries that are faced with fiscal challenges like, high public debt and poor revenue prospects for government expenditure sustainability should not depend on domestic resources but seek global support on capacity building (human capital development). The author suggests public debt management strategies and efficient government expenditure management frameworks supported by sustainable revenue prospects to provide fiscal sustenance thrust to enhance the growth process in developing countries. Joshua, Kenneth and Nurudeen and Usman (2010) investigated the effect of government expenditure on economic growth in Nigeria by employing disaggregated analysis from 1985-2012. The model estimated was RGDP = f(TEA, TEES,TET, TRACO, HEA).

The results reveal that government total expenditure administration (TEA), total expenditures economic service (TEES), and (TET) have negative effect on economic growth. On the contrary, rising government expenditure on transport and communication (TRACO), and Tranfer (TET) results to an increase in economic growth. The study therefore recommended among others that government should increase both capital expenditure and recurrent expenditure, including expenditures on social and community service, as well as ensuring that funds meant for the development of these sectors are properly managed. Secondly, government should increase its investment in the development of transport and communication, in order to create an enabling environment for business to strive.

Uguru, (2016) studied the link between public debt and government expenditure in Nigeria from 1980 to 2013. Using data from Central Bank of Nigeria Statistical Bulletin for the years under consideration, the author estimated a model with public debt as the dependent variable and the independent variables were capital expenditure and recurrent expenditure respectively.

The author made use of the ordinary least square estimation technique at 5% level of significance which revealed a significant relationship between public debt and government expenditure in Nigeria. Based on his result, he recommended the government of Nigeria to hurriedly reduce its recurrent expenditure and focus more on capital expenditure so as to meet the Vision 20:2020. He also suggested the need for diversification of the economy so as to reduce much reliance on crude oil proceeds and thereby reducing the tendency of the government contracting more debt obligation.

Ebong, et al (2016) examined the impact of capital and recurrent expenditure on economic growth in Nigeria over the period 1970-2012 using VECM. The result reveals that capital expenditure on infrastructures positively and significantly influences economic growth in both short and long runs. Onifade, et al (2020) using

ARDL model and 1981-2017 Nigerian data, discovered that recurrent expenditure negatively impacts on national output whereas capital expenditure, albeit insignificantly, positively affects GDP. The findings of these studies have validated the propositions of Barro's (1990) endogenous model that productive expenditures have the potentials to boost level output and economic growth rate in both short and long runs.

Ebaid and Bahari (2019) using data for Kuwait found a unidirectional causality running from expenditure to economic growth. Additionally, Olayungbo and Olayemi (2018) using Vector Error Correction Model for 1981-2015 Nigerian data established government expenditure have negative and significant impact on economic growth in both short and long runs. While controlling for structural breaks in ARDL model, Awode and Akpa (2018) supported the findings of Olayungbo and Olayemi (2018); though the findings of the former are insignificant. These studies' findings neither contradict nor affirm the submissions of neoclassical growth models and Wagner's law. This is debatable given that the findings are established in developing countries battling with bribery and corruption.

Gap in Literature

The prompting of this research is to investigate the effect of government capital expenditure on economic growth in Nigeria by studying the existing works of authors in respect to their methodology, research design, scope of coverage and findings.

In the work of Uguru (2016), who studied the link between public debt and government expenditure employed the use of ordinary least square techniques, he did not subject data collected to stationarity test to ascertain its consistence over time. Hence, this study differs in methodology since it employs the use of diagnostic test (ADF unit root test, heteroscedasticity test etc) to ascertain the estimation method that is suitable for the research so as to get a realistic outcome.

Chude and Chude (2013) and Onakoya and Somoye (2013), while studying the impact of government expenditure on economic performance in Nigeria employed multiple regression ordinary least square methods which also differ in methodology of this study.

It is evidence from the work of Arewa and Nwachukwu (2013), Egbetunde and Fasanye (2013), Olugbenga and Owoye (2007), Muritala and Taiwo (2011) that their study differs in scope since the most recent of their work captured data up to 2013, while this research extended its scope to 2018.

In relation to the findings of the existing works reviewed, it was discovered that the findings of the empirical works reviewed showed mixed results. Like in the work of

Nworji, Okwu, Obiwuru and Nworji (2012), Arewa and Nwachukwu (2013), Maku (2009), Muritala and Taiwo (2011), indicated an insignificant relationship between public expenditure and economic growth while the works of Onakoya and Somoye (2013), Okoro (2013), Ogujiuba and Adeniyi (2004), revealed that public expenditure has significant effect on economic performance. However, this study seeks to investigate the present effect of government capital expenditure on economic performance in Nigeria today.

Research Design

This study adopted expost facto research design. The purpose for adopting this design is to determine a cause-and-effect relationship between an independent variable and a dependent variable. The independent variable, however, cannot be manipulated or altered, in which ex post facto studies will look at how a particular characteristic, trait, or past occurrence affects the dependent variable. Annual data were sourced from Central Bank of Nigeria Statistical Bulletin of various years for the disaggregated variables of capital expenditure as independent variable while real gross domestic product was used to measure economic performance. The researcher employed regression analysis via e-view Statistical packages.

Sources of Data Collection

This study utilized secondary source as the sole source of data collection. The data were sourced from the Central Bank of Nigeria (CBN) online published bulletin & Reports. The quantitative data collected covered the various proxies for the dependent and independent variables of the study namely; Government Capital Expenditure on Administration (CEA), Government Capital Expenditure on Social and Community Service (CESCS), Government Capital Expenditure on Economic Services (CEES) and Capital Expenditure on Transfer payment (CETP); and Real Gross Domestic Product (RGDP) for the period of 31 years covering 1990 – 2020. the selected period was recommended by my supervisor considering the period of admission which was current as at when the topic was approved.

Method of Data Analysis

Regression Analysis was employed in the analysis of data with the aid of E-view statistical package Version 10.0. The choice of this technique for this study is based on the fact that regression analysis describes the nature of the relationship between the two key classes of variables (dependent and independent) by expressing the relationship in a mathematical form. That is, it provides an estimated equation which expresses the functional relationship between the dependent and independent; such that one variable can be predicted given the value of the other variable. Individual

significance test using t-statistics (prob) was utilized in the hypothesis test. The researcher thus adjudged this technique as being suitable for the analysis of this study. However, the F-statistics was adopted in testing each of the four hypotheses of this study.

Model Specification

The regression technique adopted in this study is typified in the following linear model: Y = F(X) - - - - (1)

Where:

Y represents the dependent variable (Nigeria Economic performance)

X represents the independent variable Public expenditure)

To capture the proxies for the variables in the four specific objectives of the study, the following models are developed:

Model one

RGDP = F(CEA, CESCS, CEES, CTP) …….. (2)

RGDP = $\alpha + \beta_1$ CEA + β_2 + CESCS + β_3 CEES + β_4 CETP+ Ɛ …….. (3)

Where:

RGDP = Real Gross Domestic Product of Nigeria (at constant basic prices)

CEA = Government Expenditure on administration

CESCS = Capital Expenditure on social and Community Services

CEES = Capital expenditure on economic Services

CETP = Capital expenditure on Transfer payment

α is the intercept of the multiple regression line

β_1, β_2, β_3, β_4 β_5, β_6, β_7 & β_8 are the coefficient of the explanatory (independent) variables

Ɛ is the stochastic variable or error term

Data Presentation

Data collected for this study include data on Real Gross Domestic Product (RGDP), Government expenditure on administration (CEA), government capital expenditure on social and community services (CESCS), Government capital expenditure on economic services (CEES) and Government capital expenditure on transfer payment (CTP) *see appendix 1.*

Data Analysis

Data analysis in this study was carried out using vector error correct ion model, cointegration and causality test. The data were subjected to some diagnostic test such

as jaguar bera test for normality, heteroskedasticity test for consistence of variance, Augumented Dicken Fuller test for stationarity of the data set, test for multicollinearity as presented in chapter 3 of this work.

Presentation of Diagnostic Test Result and Interpretation

Unit Root Test for Stationarity

Table 2: Unit root test with the ADF statistic

Variable	Level of integration	T-statistic	Critical Value	Observed level P-value (5%)
RGDP	I (1)	-3.959104	-2.976263	0.0248
CEA	I (1)	-4.684041	-2.976263	0.0009
CESCS	I (1)	-3.751298	-2.976263	0.0089
CEES	I (1)	-4.900210	-2.976263	0.0005
CTP	I (1)	-3.203787	-2.976263	0.0308

Source: E-view Output

The table above reveal all parameter estimate were integrated in order one. This show the data are consistent overtime. Hence, we can further test for long run relationship

Cointegration Test

Unrestricted Cointegration Rank Test
(Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.919564	160.0892	69.81889	0.0000
At most 1 *	0.816937	92.04137	47.85613	0.0000
At most 2 *	0.662824	46.19740	29.79707	0.0003
At most 3 *	0.430191	16.84431	15.49471	0.0311
At most 4	0.059562	1.658055	3.841466	0.1979

The cointegration result presented above indicate four cointegrating equations. This implies that all the parameter estimate entered will co-move in the long run towards equilibrium.

Test for Multicollinearity

Variance inflation factor was used to test for presence of multicollinearity in the model. Below is VIF result;

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C(1)	0.024238	37.03370	7.033070
C(2)	0.033515	14.09042	5.393387
C(3)	0.041636	17.47014	6.955628
C(4)	21.58314	26.36185	2.130974
C(5)	9.028803	9.718703	7.787234
C(6)	20.36853	11.41298	8.803780
C(7)	36.74006	13.95300	9.19176
C(8)	1.492779	2.519591	2.398182
C(9)	1.830193	2.493407	2.438576
C(10)	2.459284	5.395296	3.950973
C(11)	4.599064	8.219718	6.314037
C(12)	549994.4	39.70909	NA

The above result revealed VIF as 7.0, 5.4, 6.9, 2.1, 7.8, 8.8, 9.2, 2.4, 3.9 and 6.3. This implies that there is no correlation among variable. Indicating that the variables were independent of themselves since the VIF<10.

Estimated Vector Error Correction Model Result

Estimated result

VECM

	Coefficient	Std. Error	t-Statistic	Prob.
C(ECM)	-0.362860	0.155684	-2.330743	0.0352
D(RGDP(-1))	1.063271	0.183070	5.808000	0.0000
D(RGDP(-2))	-0.337673	0.204050	-1.654850	0.1202
D(CEA(-1))	-6.660357	4.645766	-1.433640	0.1736
D(CEA(-2))	-2.861469	3.004797	-0.952300	0.3571
D(CESCS(-1))	-10.87600	4.513150	-2.409846	0.0303

D(CESCS(-2))	-2.342936	6.061358	-0.386536	0.7049
D(CEES(-1))	3.334340	1.221793	2.729054	0.0163
D(CEES(-2))	-3.132878	1.352846	-2.315768	0.0362
D(CTP(-1))	-4.335199	1.568210	-2.764424	0.0152
D(CTP(-2))	-2.557620	2.144543	-1.192618	0.2528
CONSTANT	1881.582	741.6160	2.537137	0.0237

R-squared	0.910098	Mean dependent var	1930.378
Adjusted R-squared	0.839461	S.D. dependent var	1497.718
S.E. of regression	600.0961	Akaike info criterion	15.93609
Sum squared resid	5041615.	Schwarz criterion	16.51675
Log likelihood	-195.1692	Hannan-Quinn criter.	16.10330
F-statistic	12.88409	Durbin-Watson stat	1.985433
Prob(F-statistic)	0.000017		

Source: E-view version 9.0 statistical Result, 2023

Test of Hypotheses

Test of Hypothesis One

H_0: There is no significant relationship between government capital expenditure on administration and gross domestic product.

In testing for significance of relationship between government expenditure on administration (CEA) and (GDP), the result shows a negative relationship with T-statistic value of -1.433640 and P-value of 0.1736. The result indicating the P-value of 0.1736 is greater than 0.05, the researcher study, therefore accepts the null hypothesis and concludes that there is no significant relationship between government expenditure on administration and gross domestic product**.** This implies that government budgeted spending on administration contributes insignificantly to performance of Nigeria economy

Test of Hypothesis Two

H_0: There is no significant relationship between government capital expenditure on social and community service and gross domestic product.

The calculated result reveals t-statistics of government capital expenditure on social and community services as -2.409846 with a corresponding P-value of 0.0303. The result indicates that the P-value of 0.0303 is less than 0.05, this implies that there is a significant relationship between government capital expenditure on social and community service and gross domestic product**.** However, it is thus believed that the

significant relationship related to performance shows the government ability to channel more finance to social and community services in Nigeria.

Test of Hypothesis Three

H_0: government capital expenditure on economic services has no significant effect on gross domestic product.

The result on hypothesis three shows significant relationship between government capital expenditure on economic service and gross domestic product, the result indicates a significant relationship with the coefficient of 3.334340 and statistic value of 2.79054 with P-value of 0.0163. Since the result indicate P-value of 0.0163 which is less than 0.05, we therefore reject the null hypothesis indicating there is significant relationship between government expenditure on economic service and gross domestic product.

Test of Hypothesis Four

H_0: government capital expenditure on transfer does not significantly affect gross domestic product.

The test of hypothesis four shows a relationship between government capital expenditure on Transfers and GDP, the t-statistic and its corresponding P-value was obtained as -2.764424 with P-value of 0.0152. Since the result indicate P-value of 0.0152 which is less than 0.05, we therefore reject the null hypothesis which shows significant relationship between government capital expenditure on Transfers and gross domestic product.

Discussion of Findings

The findings from the analysis and test statistics are discussed in line with the empirical review carried out in the second chapter of this study. Discussion of the findings are as follows:

1. In respect of the first objective and the first hypothesis of this study, we find that the government capital expenditure on administration has an insignificant negative effect on Nigeria's economic performance. This result agrees with Nurudeen and Usman (2010) who hold that government capital expenditure on administration in Nigeria has no effect on the economic performance of Nigeria. This aligns with, Ighodaro and Okiakhi (2010) to the extent that government spending on administration reveal negative and insignificant effect on economic performance.
2. With respect to the second objective and second hypothesis of this study, the study holds that government capital expenditure on social and community

services revealed negative and significant relation with economic performance of Nigeria. This finding agrees with Amassoma, Nwosa, and Ajisafe (2011) whose error correction model analysis shows a negative and significant relationship between Real GDP and government capital expenditure on social and community services. The finding further supports the works of Ojujiuba and Adeniyi (2004) and Lolo (2011) that government capital expenditure on social and community services has not substantially affected the performance of Nigeria economy.

3. The study revealed in the third hypothesis that the coefficient of government capital expenditure on economic services is positive and significantly related to real gross domestic product. This means that the government spending on economic services effect the performance of the economy. This agrees with Duc-Anh, Phu and Arnelie (2015) who showed that increase in government spending on economic activities result in increase on economic performance. It also disagrees with Egbetunde and Fasanya (2013) whose study showed no significant effect between government capital expenditure and economic performance.
4. The fourth finding of this study in respect of the fourth objective and hypothesis of this study revealed government capital expenditure on transfer is negative and insignificant affect performance of Nigeria economy. This finding is consonance with most of the previous studies reviewed in this work. For instance, it agrees with Amassoma, Nwosa, and Ajisafe (2011) who found that government capital expenditure on transfer payment inversely relate to economic performance. This implies that a percentage increase in government spending on transfers will result to a significant fall in the performance of the economy.

Summary of Findings

This research investigates on government capital expenditure and economic performance in Nigeria. Government capital expenditure was disaggregated into government expenditure on administration, government capital expenditure on social and community service, government capital expenditure on economic service and government capital expenditure on transfers as predictors while real gross domestic product was used as proxy for economic performance. Data on the proxies were collected from the CBN statistical bulletin and were analyzed using vector error correction model. The findings from the analysis are summarized as follows:

1. Government capital expenditure on administration has insignificant negative effect on Nigeria's RGDP.
2. Government capital expenditure on social and community service has significant negative effect on the nation's RGDP.
3. Government capital expenditure on economic services has significant positive impact on the nation's RGDP.
4. There is a negative but significant relationship between government capital expenditure on transfer and the nation's RGDP.

Conclusion

Based on the above-mentioned findings, the study concludes as follows:

Firstly, government spending in respect to administration, social and community service and transfers have not shown any significant effect on Nigeria's economic performance; Notwithstanding, when government capital expenditure was viewed from the perspective of expenditure on economic service, the public expenditure shows significant positive effect on the nation's economic performance; However, the joint test reveals capital expenditure on administration social and community services, economic service, and transfers jointly impact on economic performance.

Finally, the error correction equation value of 36% reveals that all parameter estimate will attain equilibrium at the speed of 36% all things being equal.

Recommendations

In view of the findings and conclusion above, the study offers the following recommendations:

1. There is need for increase in government capital expenditure on administration. This shortfall in administrative funding is traceable to defense and security arm of the nation. Thus, fiscal attention should channel towards this area.
2. The government should channel more funds to social and community services in order to increase welfare of the citizens. This shortfall is traceable to faulty health care system conditions and low human development index in the nation.
3. Although, capital expenditure on economic services revealed significant effect on economic performance, government still need to channel more fund so as to increase the magnitude effect on economic services on the economy.

Suggestion for Further Research

Further study on the impact of government capital expenditure on economic development disaggregating economic development into human development and employment rate is recommended for future researchers.

Contributions to Knowledge

Having empirically study government capital expenditure and economic performance, the study contributed to the body of knowledge in the following areas;

The study explicitly x-ray the key variables of public expenditure and the spending pattern of government in the Nigerian economy. At a glance one can single out the sector in need of remedial support by the government.

The finding of this study serves as reliable source for policy making, since information and data collected are genuine.

The study serves as source of information for those researching on related topic, since it cut across all expenditures of the country.

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Appendix 1

YEAR	RGDP N'B	CEA N'B	CESCS N'B	CEES N'B	CTP N'B
1990	21,462.73	2.92	2.10	3.49	15.55
1991	21,539.61	3.35	1.49	3.15	20.36
1992	22,537.10	5.12	2.13	2.34	30.18
1993	22,078.07	8.08	3.58	18.34	24.50
1994	21,676.85	8.79	4.99	27.10	30.04
1995	21,660.49	13.34	9.22	43.15	55.44
1996	22,568.87	14.86	8.66	117.83	71.58
1997	23,231.12	49.55	6.90	169.61	43.59
1998	23,829.76	35.27	23.37	200.86	49.52
1999	23,967.59	42.74	17.25	323.58	114.46
2000	25,169.54	53.28	27.97	111.51	46.70
2001	26,658.62	49.25	53.34	259.76	76.35
2002	30,745.19	73.58	32.47	215.33	0.00
2003	33,004.80	87.96	55.74	97.98	0.01
2004	36,057.74	137.77	30.03	167.72	15.73
2005	38,378.80	171.57	71.36	265.03	11.50
2006	40,703.68	185.22	78.68	262.21	26.27
2007	43,385.88	226.97	150.90	358.38	23.04

2008	46,320.01	287.10	152.17	504.29	17.33
2009	50,042.36	291.66	144.93	506.01	210.20
2010	54,612.26	260.20	151.77	412.20	59.70
2011	57,511.04	231.80	92.85	386.40	207.50
2012	59,929.89	190.50	97.40	320.90	265.90
2013	63,218.72	283.65	154.71	505.77	164.27
2014	67,152.79	229.63	111.29	393.45	48.75
2015	69,023.93	226.81	82.98	348.75	159.82
2016	67,931.24	147.72	68.80	278.95	158.14
2017	68,490.98	328.94	167.66	542.19	203.51
2018	69,799.94	446.25	203.42	753.49	278.94
2019	71,387.83	591.26	264.69	994.19	438.86
2020	70,014.37	417.14	186.74	701.40	309.61

Source: CBN Statistics Bulletin 2021. All the data are in equal form (billion naira)