

EMPIRICAL ANALYSIS OF GOVERNMENT CAPITAL EXPENDITURE AND ECONOMIC DEVELOPMENT IN NIGERIA

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ABSTRACT

This study examines the relationship between government expenditure and economic development in Nigeria, against the backdrop of persistent fiscal inefficiencies, corruption, and weak accountability that have limited the impact of rising public spending on citizens' welfare. Despite increased government expenditure over the years, Nigeria continues to experience high poverty, unemployment, and inadequate access to basic services, raising concerns about the effectiveness of fiscal policy in driving development. Anchored on Wagner's theory of increasing state activity and Keynesian theory, the study specifically investigates the impact of capital expenditure on Gross Domestic Product (GDP), Human Development Index (HDI), and Consumer Price Index (CPI) over the period 2001–2020. Using a correlational and ex-post facto research design, secondary time-series data were sourced from the Central Bank of Nigeria and related statistical publications, and analyzed using regression techniques. The findings reveal a significant positive relationship between capital expenditure and GDP, indicating that public investment contributes to economic growth. Similarly, capital expenditure shows a significant relationship with HDI, suggesting its relevance in improving human development outcomes. However, no significant relationship was found between capital expenditure and CPI, implying limited influence on price stability. The study concludes that while capital expenditure plays a vital role in enhancing economic growth and human development, its effectiveness is constrained by inefficiencies in public financial management. It therefore recommends improved monitoring, transparency, and strategic allocation of public funds toward productive sectors to ensure sustainable economic development in Nigeria.

INTRODUCTION

Developing countries, including Nigeria, have continued to experience widespread irregularities in public sector operations, resulting in public outcry, rising fraud, and weak confidence in economic institutions. These challenges are largely attributed to poor public finance planning and implementation, corruption, indiscipline, and lack of accountability, which collectively undermine economic performance and development. The consequences include low productivity, wastage of resources, idle capacity, and reduced competitiveness in international trade, especially when compared with advanced economies that produce higher-quality goods.

Sustained and equitable economic development remains a primary objective of government expenditure policy. Public expenditure plays a critical role in the formation of physical and human capital and is therefore essential for long-term growth (Enya et al., 2015). However, Nigeria has faced persistent challenges in translating increasing government expenditure into meaningful economic development outcomes. This has generated extensive debate among scholars, with some arguing that government spending promotes growth, while others contend that it is often inefficient and may hinder development (Aschauer, 2012). Nonetheless, government intervention through expenditure remains vital, particularly in economies characterized by market failures and structural weaknesses (Miles, 2003; Bonmwa & Ishmael, 2017).

Government expenditure encompasses spending on administration, economic services, social and community services, and transfers, with both capital and recurrent components (CBN, 2011; Echekeba & Amakor, 2017). Capital expenditure, such as investment in infrastructure, education, and healthcare, generates long-term benefits and enhances productivity, while recurrent expenditure covers operational costs, wages, and maintenance of public services (Oziengbe, 2013;

Alice, 2014). As a fiscal policy tool, government spending also plays a significant role in stabilizing the economy by addressing inflation, unemployment, and economic fluctuations (Taiwo, 2012). Economic development, broadly defined as sustained increases in national output and improvement in living standards, encompasses both quantitative growth and qualitative changes in welfare (USAID, 2014; Todaro & Smith, 2015). It involves poverty reduction, improved income distribution, and enhanced human development indicators such as education and health (Akpokerere & Ighoroje, 2013; IMF, 2012). While economic growth focuses on increases in output, development integrates broader socio-economic improvements (Jhinghan, 2011; Lipsey & Chrystal, 2017). In Nigeria, government expenditure has increased significantly over the years due to rising demand for public goods and services. Despite this growth, the expected improvements in economic development have not been fully realized, as a large proportion of the population still lives in poverty (CBN, 2020; World Development Indicators, 2020). This situation raises critical concerns about the efficiency and effectiveness of public spending. While some components of government expenditure, such as spending on health, education, and infrastructure, are known to stimulate development, others may have limited or even adverse effects (Nworji et al., 2012; Loto, 2012). Given these mixed outcomes and persistent socio-economic challenges, it becomes imperative to critically evaluate the impact of government expenditure on economic development in Nigeria. This study is therefore motivated by the need to assess whether rising public expenditure has significantly contributed to improving economic welfare and to identify areas where policy adjustments are necessary to enhance development outcomes.

Statement of the Problem

Despite the persistent increase in government expenditure in Nigeria, the challenge of translating such spending into meaningful economic growth and development has remained a major concern. This is evident in the high rates of unemployment, illiteracy, and widespread poverty, with over 65% of the population living on less than US\$1 per day. Additionally, about 70% of Nigerians lack access to adequate healthcare, clean and portable water, and other basic necessities of life (WHO, 2018). These conditions suggest that rising public expenditure has not significantly improved the welfare of citizens.

Furthermore, macroeconomic indicators continue to reflect poor economic performance. According to the World Bank (2020), Nigeria's balance of payments position, high import obligations (35.2 billion USD), rising inflation rate (15.7%), unstable exchange rate (380.07), high unemployment rate (17.2%), and low national savings (13.1% of GDP) indicate that the country has not achieved substantial economic progress over the past four decades, despite being the largest economy in Africa with a GDP of about US\$446.543 billion. This raises concerns about the effectiveness and efficiency of government expenditure in driving economic development.

Although numerous empirical studies have examined the relationship between government expenditure and economic performance, most have focused largely on gross domestic product (GDP) as a proxy for growth and have concentrated on aggregate capital and recurrent expenditures over limited time periods. This approach has created a gap in the literature, particularly in understanding how specific functional components of public expenditure influence broader measures of economic development.

Consequently, there is a need to re-examine government expenditure by disaggregating it into its functional components recurrent expenditure (administration and transfers) and capital expenditure (economic services and social and community services) while incorporating more comprehensive indicators such as Human Development Index (HDI) and Consumer Price Index (CPI), alongside GDP. Additionally, the moderating role of inflation rate requires attention. Addressing these gaps over a longer period (2001–2020) will provide deeper insights into the effectiveness of government expenditure in promoting sustainable economic development in Nigeria.

The aim of this study is to examine government expenditures and economic development in Nigeria. Specifically, the study attended to the following objectives

1. Evaluate the relationship between capital expenditure and gross domestic product (GDP).
2. Evaluate the relationship between capital expenditure and human development index (HDI).
3. Evaluate the relationship between capital expenditure and consumer price index (CPI).

Research Questions

1. What is the relationship between capital expenditure and gross domestic product (GDP)?
2. How does capital expenditure relate to human development index (HDI)?
3. What is the relationship between capital expenditure and consumer price index (CPI)?

Research Hypotheses

Ho₁: There is no significant relationship between capital expenditure and gross domestic product (GDP).

Ho₂: There is no significant relationship between capital expenditure and human development index (HDI).

Ho₃: There is no significant relationship between capital expenditure and consumer price index (CPI).

REVIEW OF RELATED LITERATURE

Conceptual Framework

Government Expenditures

Following the aftermath of the Great Economic Depression of the 1930s that culminated in the birth of the Keynesian Economics School of thought, the attention of a significant number of nations has been drawn to the relevance of government involvement in stabilizing and regulating aggregates of the general economy. That development was in contrast to the prevailing classical view about the working principles of the invisible hands of demand and supply that interplay to create necessary adjustments in relation to output determination and employment (Johnson et al. 2001; Shaikh 2009; Backhouse 2015).

There are two major categories of economic policies that have been widely utilized over a vast period of time for the general purpose of economic stabilization and for the achievement of some essential macroeconomic goals and objectives in specific terms. These policies are fiscal and monetary. Although the two policies are different in terms of their structure and the application of their fundamental instruments, however, they are generally targeted at achieving similar goals and objectives of maintaining economic stability in most nations (Beetsma and Jensen 2005; Claeys 2006). While the latter is generally a formidable instrument in the hands of the apex bank of various nations, the former exists as an important economic instrument in the hands of the governments of various nations.

According to Taiwo (2012), government's spending is a fiscal instrument which serves as useful role in the process of controlling inflation, unemployment, depression, balance of payment equilibrium and foreign exchange rate stability. In the period of depression and unemployment, government spending causes aggregate demand to rise and production and supply of goods and services follow the same direction, Wikipedia (2020), defines government spending or expenditure as an expenditure that includes all government consumption, investment, and transfer payments.

Dimensions of the Independent variable

Capital Expenditure

Capital expenditure refers to the amount spent in the acquisition of fixed (productive) assets (whose useful life extends beyond the accounting of fiscal year) (Abiodun & Osagie, 2018). Adeyemi (2010), capital expenditure refers to the expenditure earmarked for specific projects that can last for many years. It includes investment in buildings, roads, airport, petrochemical project etc. Felix and Santos (2014), capital expenditure is usually seen as expenditure creating future benefits, as there could be some lags between when it is incurred and when it takes effect on the economy. Otiwu, et al.

(2018), capital expenditures are investments with multiplier effects on the economy in terms of public benefits. Capital expenditures are for fixed assets, which are expected to be productive assets for a long period of time. Ande (2012), capital expenditure are expenses on projects which are permanent in nature. They include money spent by government on building roads, schools. Bridges, hospitals, industries and other permanent investments. Chude, et al. (2019), capital spending, which is spending on physical assets like roads, bridges, hospital buildings and equipment. Capital spending is long term as it does not have to be renewed each year it is also called spending on social capital. Korman and Brahasrene (2007), capital expenditure is spending on assets. It is the purchase of items that will last and will be used time and time again in the provision of a good or service.

Economic Development

According to Onuoha (2011), economic development is commonly defined as the economic growth plus structural transformation in the economy. This implies that economic development goes beyond growth. It encompasses changes in the composition of output and in the allocation of inputs by the different sectors of the economy. Onuoha (2011), further argued that economic development is a multidimensional process, which involves the reorganization of the entire economic and social system. That is, it involves improvement in the income and output of an economy as well as total changes in the social, institutional and administrative structures. Arelu (2014), notes that the growth and development of the Nigerian economy has remained largely stunted and stagnant over the years as a result of many factors, one of which is the challenge of corruption and ineffective use of tax revenues to the benefits of payers of such taxes and over reliance on oil revenue.

Buckles in Oleka and Okwo (2005), posited that gross domestic product which measures economic growth is the total market value of all final goods and services produced within the political boundaries of an economy during a given period. The GDP could be either nominal or real. However, real GDP depicts better the rate of growth. Nominal GDP is obtained just by multiplying the quantity of each product by its price and adding the results. But the real GDP of 1993, for example, is the sum of 1993 production of various goods and services valued at 1992 prices.

Measures of Economic Development

Gross Domestic Product (GDP)

Callen (2018), gross domestic product (GDP) is an inflation-adjusted measure that reflects the value of all goods and services produced by an economy in a given year, expressed in base year prices, and is often referred to as "constant-price," "inflation-corrected" GDP. Unlike nominal GDP, real GDP accounts for changes in price levels and provides a more accurate figure of economic development. Tim (2018), one thing people want to know about an economy is whether its total output of goods and services is growing or shrinking. But because GDP is collected at current, or nominal, prices, one cannot compare two periods without making adjustments for inflation. To determine "real" GDP, its nominal value must be adjusted to take into account price changes to allow us to see whether the value of output has gone up because more is being produced or simply because prices have increase. A statistical tool called the price deflator is used to adjust GDP from nominal to constant prices.

Human Development Index (HDI)

The concept of human development index (HDI) looks beyond GDP to a broader definition of well-being. It provides a composite measure of three dimensions of human development: living a long and healthy life (measured by life expectancy), being educated (measured by adult literacy and enrolment at the primary, secondary and tertiary level) and having a decent standard of living (measured by purchasing power parity, PPP, income) (Ozeingbe, 2013). James (2019) stated that the HDI is a summary measure for assessing long-term progress in three basic dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living. A long and healthy life is measured by life expectancy.

Consumer Price Index

A price index is a measure of the proportionate, or percentage, changes in a set of prices over time. A consumer price index (CPI) measures changes in the prices of goods and services that households consume. Such changes affect the real purchasing power of consumer's incomes and their welfare. As the prices of different goods and services do not all change at the same rate, a price index can only reflect their average movement. A price index is typically assigned a value of unity, or 100, in some reference period and the values of the index for other periods of time are intended to indicate the average proportionate, or percentage, change in prices from this price reference period. Price indices can also be used to measure differences in price levels between different cities, regions or countries at the same point in time.

Theoretical Framework

Wagner's Theory of Increasing State Activity of (1893)

Wagner's theory is named after the German political economist Adolph Wagner (1835-1917), who developed a "theory of increasing state activity". He argued that government growth and development is a function of increased industrialization and state economic activities. Wagner stated that during the industrialization process, as the real income per capita of a nation increases, the share of public expenditures in total expenditures increases. The theory cited that "The advent of modern industrial society will result in increasing political pressure for social progress and increased allowance for social consideration by industry".

Wagner (1893), designed three focal bases for the increased in state expenditure. Firstly, during industrialization process, public sector activity will replace private sector activity. State functions like administrative and protective functions will increase. Secondly, the development of modern industrial society would give rise to increasing political pressure for social progress and call for increased allowance for social consideration in the conduct of industry. Thus, governments, needed to provide cultural and welfare services like education, public health, old age pension or retirement insurance, food subsidy, natural disaster aid, environmental protection programs and other welfare functions. Thirdly, increased industrialization will bring out technological change and large firms will tend to monopolize. Governments will have to offset these effects by providing social and merit goods through budgetary means.

In his *Finanzwissenschaft* (1883) and *Grundlegung der et al.* (1893), Adolf Wagner pointed out that public spending is an endogenous factor, which is determined by the growth of national income. Hence, it is national income that causes public expenditure.

Keynesian Theory of Public Expenditure and Economic Development (1936)

The Keynesian theory (1936), of public expenditure and economic development was propounded by John Maynard Keynes' (1883 - 1946). All economists who discussed the relation between public expenditures and economic development, Keynes was among the most noted with his apparently contrasting viewpoint on this relation. Keynes regards public expenditures as an exogenous factor which can be utilized as a policy instruments promote economic development. From the Keynesian thought, public expenditure can contribute positively to economic development. Hence, an increase in the government expenditure is likely to lead to an increase in employment, profitability and investment through multiplier effects on aggregate demand. As a result, government expenditure augments the aggregate demand, which provokes an increased output depending on expenditure multipliers.

Keynesian's theory favoured government intervention to correct market failures. Keynesian theory criticized the classical economists to put too much emphasis on the long run. According to Keynes, "we are all dead in the long run". Keynes believed depression needed government intervention as a short-term cure. Increasing saving will not help but spending. Government will increase public spending giving individuals, purchasing power and producers will produce more, creating more

employment. This is the multiplier effect that shows causality from public expenditure to national income.

Keynes categorized public expenditure as an exogenous variable that can generate economic growth instead of an endogenous phenomenon. Hereby, Keynes believed the role of the government to be crucial as it can avoid depression by increasing aggregate demand and thus, switching on the economy again by the multiplier effect. It is a tool that bring stability in the short run but this need to be done cautiously as too much of public expenditure lead to inflationary situations while too little of it leads to unemployment.

Reason for the Adoption of Wagner's Theory of Increasing State Activity

The Wagner's theory tends to be a long-run phenomenon not short run of Keynes: the longer the time-series, the better the economic interpretations and statistical inferences. This theory is relevant in Nigeria since the increased GDP, HDI and CPI of Nigeria overtime accelerated by industrialization has attracted more government expenditure in order to expand provision of public goods and other essential state services. The theory concentrated on the demand side of the government expenditure while overlooking the supply side and it also dwelt on industrialization as the only driving force for increased public spending.

Secondly, Musgrave and Musgrave (1988), in support of Wagner's theory, opined that as progressive nations industrialize, the share of the public sector in the national economy grows continually.

Thirdly, in the broad analysis of Wagner's theory in Nigerian context, there are three reasons of expanding scope of public activity: (a), as Nigeria industrial activities increases there is an increased complexity of legal relations and communications and it induces government to produce the regulatory framework that will accompany the greater intricacy of relations among economic agents. Additionally, increased urbanization and population density forces government to greater public expenditures on law and order and other socioeconomic regulations. (b), as income increases, societies demand more education, entertainment, a more equitable distribution of income, and generally more public services. In Nigeria, there is continuous expenditure increase in education, agriculture, recreational centers, etc. (Wagner felt that the income elasticity of demand for these public services was greater than unity). (c), the technological needs of an industrialized society require larger amounts of capital infrastructure than are forthcoming from the private sector, hence the need for government to step in to fill in the gap.

Fourthly, number of public finance studies adopted the Wagner's law approach which states that national income causes public expenditure, mainly through an increase in demand for public services. Within this framework, public expenditure is treated as a behavioral variable, similar to private consumption.

Thus, the study is anchored on Wagner's theory of increasing state activity; the study will verify Wagner's theory through hypotheses testing whether or not government expenditure (recurrent expenditure and capital expenditure) and economic development (gross domestic product (GDP), Consumer price index (CPI) and human development index (HDI) possess a long-run equilibrium relationship (cointegrated), and whether or not GDP or CPI and HDI Granger causes government expenditures and vice versa. If these conditions are met, Wagner's hypotheses are verified. The examination of these economic relationships is based on annual time-series for a period of 20 years (2001-2020), taken from the central bank of Nigeria (CBN) statistical bulletin, national abstract of statistics (NAS) and www.worldometers.info.com. All the variables are express in natural logarithms terms for testing purposes.

Empirical Reviews

Many researchers have attempted to study government expenditure and economic development, some of these eminent scholars includes: Udofia and Godson (2016), investigated the impact of federal government expenditure on the Nigerian economic growth. The main objective of this study was to ascertain whether there is a relationship between federal government expenditure and

economic growth in Nigeria. The study adopted Correlational design. The study adopted Ordinary Least Square estimation technique to estimate the model specified using time series data for the period 2001-2014. Gross Domestic Product was used as the dependent variable while federal government capital and recurrent expenditures were used as the independent variables. The result from the regression analysis shows that federal government capital and recurrent expenditures have a positive effect on GDP. The data used in the analysis were gotten from Central Bank of Nigeria (CBN) Statistical Bulletin. The study recommended that federal government should direct more of its recurrent expenditure towards economic and community services as they accelerate economic growth. The study also recommended proper management of public funds allocated to the agricultural sector and manufacturing industries as they have the potential of raising the nation's production capacity and providing employment for citizens in the country.

RESEARCH METHODOLOGY

Research Design

The study adopted both correlational and ex-post facto designs. A correlational research aims at determining the relationship between variables, to ascertain the extent to which variations in one variable are associated with variations in another. The correlational survey design was adopted because to the study intended to determine the relationship between government expenditure and economic development.

Ex-post facto design investigates possible cause and effect of the relationships, by observing an existing state of affairs and searching back-to-back through the available data for possible or plausible causal factors. Since data are collected after the event under investigation has taken place, the research design is called an ex-post facto design – the researcher cannot manipulate both the independent and dependent variables or to randomize his subjects since they are already documented facts.

Population of the Study

The population of the study is the entire Nigeria, (the 36 states and federal capital territory). Covering Twenty (20) years (2001-2020) federal government of Nigeria expenditure and its economic development index in Nigeria.

Sample and Sampling Techniques

In this study the population is also assumed as the sample size.

Instrumentation

The instrument of the study was annual time series data extracted from Central Bank of Nigeria (CBN) Statistical Bulletin 2020, National Abstract of Statistics (NAS), and National Bureau for Statistics and www.knoema.com, from the period of 2001 – 2020.

Method of Data Analysis

The formulated research questions were analyzed with descriptive statistics. The hypotheses were tested using the least square panel data regression analysis with the aid of E-view (12) The regression analysis was adopted because according to Baridam, (2001), in studies of independent and dependent variables that are both measurable in terms of scales, the regression method is most suitable as it expresses the relationship between the variables

Model Specifications

Thus, on the basis of the theoretical framework, the study adopted the regression formula adopted in the work of Ujah et al. (2018) and Edwin (Nmesirionye et al. 2019, 2019), Elsenburg (2006) and Onyinyechi (2011), etc with some modifications. The model is specified as:

$$Y = f(a_0 + bX_1) + Et$$

Where:

- y = Criterion variable
 f = Function
 x = Independent (explanatory) variables
 a = Intercept
 b = Slopes

In functional form, our hypotheses model are:

H0₁: GDP = f(GCEX)..... (i)

Where:

- GDP = Gross Domestic Product
 GCEX = Government Capital expenditure

H0₂: HDI = f(GCEX)..... (ii)

Where:

- HDI = Human Development index
 GCEX = Government Capital expenditure

H0₃: CPI = f(GCEX)..... (iii)

Where:

- CPI = Consumer Price Index
 GCEX = Government Capital expenditure

In order to reduce the base of the predictor variable to match the criterion variable a logarithm transformation of the values shall be made. Hence the final econometric equations as shown below:

Where;

- LOGGDP* = Natural logarithm of Gross Domestic Product
NLCPI = Natural logarithm of Customer Price Index
LOGHDI = Natural logarithm of Human Development Index
 GCEX = Natural logarithm of Government Capital expenditure

RESULTS AND DISCUSSION

Data Presentation

Table 4.1: Time-series Data for gross domestic output (GDP), human development index (HDI), government capital, expenditure (GCEX), consumers price index (CPI)

YEAR	GCEX (N'B)	GDP (N'B)	HDI (INDEX)	CPI (%)	INFRT
2001	438.70	25,267.54	0.465	16.50	18.873
2002	321.38	28,957.71	0.468	12.20	12.876
2003	241.69	31,709.45	0.445	23.80	14.031
2004	351.25	35,020.55	0.463	10.00	14.998
2005	519.47	37,474.95	0.466	11.60	17.863
2006	552.39	39,995.50	0.477	8.50	8.225
2007	759.28	42,922.41	0.481	6.60	5.388
2008	960.89	46,012.52	0.487	15.10	11.581
2009	1,152.80	49,856.10	0.492	12.00	12.555
2010	883.87	54,612.26	0.500	11.80	13.720
2011	918.55	57,511.04	0.507	10.30	10.840
2012	874.70	59,929.89	0.514	12.00	12.217
2013	1,108.39	63,218.72	0.521	8.00	8.475
2014	783.12	67,152.79	0.525	8.00	8.062
2015	818.35	69,023.93	0.527	9.60	9.009

2016	653.61	67,931.24	0.534	18.60	15.675
2017	1,242.30	68,490.98	0.525	15.40	16.523
2018	1,682.10	69,799.94	0.534	11.40	12.094
2019	2,289.00	71,387.83	0.539	11.98	11.4
2020	1,614.89	70,014.34	0.542	15.75	13.25

Source: Central Bank of Nigeria (CBN) Statistical Bulletin 2020, National Abstract of Statistics (NAS), National Bureau for Statistics and www.knoema.com, from the period of 2001 – 2020.

Data Analysis

4.2.1 Descriptive Statistics

The descriptive statistics of the data used were first critically examined in order to achieve the specific objectives stated in chapter one of this study. The data series descriptive statistics provide useful information about sample statistics like mean, median, minimum, maximum value, skewness and kurtosis.

Table 4.2 Descriptive statistics

	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	Prob
GDP	52814.0	56061	71387	25267.0	15725	2.33374	3.64970	1.890	0.388
HDI	0.5006	0.5035	0.5420	0.4450	0.0300	2.21720	3.7098	1.5442	0.4620
CPI	12.4565	11.890	23.800	6.600	4.1088	1.04847	4.04827	4.5800	0.1012
GCEX	908.336	846.52	2289.0	241.69	509.3	1.06526	3.92234	4.4915	0.105
GREX	3093.71	3162.1	8121.6	579.30	2084.	0.88000	3.10536	2.5906	0.273

Source: Researcher's E-view (v.12) computation Result, 2023

Table 4.2 Summary of Results

Variables	Order of Diff. & Intercept	ADF Statistics	Test critical values at		probability
LOGGDP	First difference and individual intercept	-5.745453	1%	-3.959148	0.0008
			5%	-3.081002	
			10%	-2.681330	
LOGHDI	First difference and individual intercept	-5.824335	1%	-3.857386	0.0002
			5%	-3.040391	
			10%	-2.660551	
LOGCPI	First difference and individual intercept	-4.250587	1%	-3.886751	0.0049
			5%	-3.052169	
			10%	-2.666593	
LOGGCEX	First difference and individual intercept	-6.762051	1%	-4.004425	0.0008
			5%	-3.098896	
			10%	-2.690439	

Source: Researcher's E-view (v.12) computation Result, 2023

From the above table, all the variables are stationary since the ADF values are greater than the corresponding critical values and the probability is less than 0.05 for all variables. Therefore, the data becomes stationary at first difference integrated of order 1 that is {recurrent expenditure (GREX), gross domestic product (GDP) human development index (HDI). consumer price index (CPI) and capital expenditure) are 1(1).

Summary of Results Findings

Table 4.3 Summary Computation of Hypotheses Results

Hypotheses	Coefficient	Std. Error	T-Stat	P-Value 0.05	Statistical Decision	Result
H0 ₁	4.50E-05	9.00E-06	5.000057	0.0471	Significant	Rejected H0 ₄
H0 ₂	6.15E-05	0.000464	1.232513	0.8960	Not significant	Not rejected H0 ₅
H0 ₃	-0.001034	0.001886	1.548457	0.5901	Not Significant	Not rejected H0 ₆

Source: Researcher's E-view (v.12) computation Result, 2023

The results of the study's hypotheses were provided in accordance with the statistical decision rule: "if the probability value (PV) is less than 0.05 alpha level, we reject the null hypotheses and accept significant associations," as shown in the summary of hypotheses table above. Meanwhile, we accept the null hypothesis and accept an insignificant association if the probability value (PV) is greater than the 0.05 alpha level. Hence:

H0₁: There is a significant relationship between capital expenditure and gross domestic product of government expenditures and economic development in Nigeria.

H0₂: There is no significant relationship between capital expenditure and human development index of government expenditures and economic development in Nigeria.

H0₃: There is no significant relationship between capital expenditure and consumer price index of government expenditures and economic development in Nigeria.

Discussion of Findings

H0₁: There is no significant relationship between capital expenditure and human development index of government expenditures and economic development in Nigeria

The result of the descriptive statistics analysis of table 4.1 for capital expenditure and human development index show an average of 908.336 and 0.5006, respectively. On the other hand, null hypothesis one was rejected with a (P-Value of 0.0471 lower than 0.05). Hence, there is significant relationship between capital expenditure and human development index of government expenditures and economic development in Nigeria. This finding was in line with Nazifi (2014), researched on the capital expenditure and its impact on economic growth in Nigeria: 1980-2010. The multiple regression model of Ordinary Least Square was used to analyze the data. The findings of the study showed that total capital expenditure, capital expenditure on administration, capital expenditure on social community services and capital expenditure on transfers have positive impact on economic growth in Nigeria. Also, Taiwo and Abayomi (2011), examined the relationship between government current and capital expenditure in Nigeria using ordinary least square on series from 1970 to 2008, and they found a significant positive relationship between the economic growth and capital and recurrent expenditure. Gemmill and Kneller (2001), investigated the relationship between fiscal policy and growth of the European economy in the long run using the time series and panel data. Findings revealed that non-productive government expenditure does not stimulate economic growth in Europe, while productive expenditures of the government stimulate economic growth. Having reviewed the related literature, it is crystal clear that quite a number of studies have been done on government spending on economic growth but very few have centered on the various components of government expenditure. On this premises, this empirical study tends to identify various components of government expenditure that significantly contribute to the growth of the Nigerian economy.

Ho₂: There is no significant relationship between recurrent expenditure and consumer price index of government expenditures and economic development in Nigeria

The result of the descriptive statistics analysis of table 4.1 for recurrent expenditure and consumer price index show an average of 3093.71 and 12.4565, respectively. On the other hand, null hypothesis one was accepted with a (P-Value of 0.8960 higher than 0.05). Hence, there is no significant relationship between recurrent expenditure and consumer price index of government expenditures and economic development in Nigeria. This finding was in line with Tajudee and Ismail (2013), studied the impact of public expenditure on economic growth in Nigeria during the period 1970 to 2010 used annual times series data. The study employed the bounds testing (ARDL) approach to examine the long run and short run relationships between public expenditure and economic growth in Nigeria. The bounds test suggested that the variables of interest put in the framework were bound together in the long-run. The associated equilibrium correction was also significant confirming the existence of long-run relationships. Our findings indicated the impact of total public spending on growth to be 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.

Ho₃: There is no significant relationship between capital expenditure and consumer price index of government expenditures and economic development in Nigeria

The result of the descriptive statistics analysis of table 4.1 for capital expenditure and consumer price index show an average of 908.336 and 12.4565, respectively. On the other hand, null hypothesis one was accepted with a (P-Value of 0.5901 higher than 0.05). Hence, there is no significant relationship between capital expenditure and consumer price index of government expenditures and economic development in Nigeria. This finding was in line with Babalola, et al. (2015), investigated the impact of government expenditures on adjudged critical sectors on economic growth in Nigeria (1984-2013). The necessary residual tests were conducted and the analysis was found to be reliable. The specific ARDL estimates of the analysis reveals that government expenditure on defense retards the economic growth and government expenditure on agriculture promote the economic growth while government expenditure on education and transport/communication have no impact on economic growth in the long-run. In the short run, none of the government expenditure on these sectors contributes to the growth objective. The study concludes that the reason for the failure of public expenditures to achieve the fiscal objectives is not unconnected to the fact that the level of fiscal indiscipline in these sectors is outrageous to the extent that it serves as drag to the economic growth. Consequently, the study decries policy prescription that the Government expenditures on these sectors should be increased except in the education sector to meet the UNDP recommendation. And, further recommends that fiscal indiscipline in whatever manner among the political office holders and government officials must be mitigated to the barest minimum by ensuring that the fund budgeted are actually spent on the right course. The government should avoid the proliferation of anti-graft agencies but strengthen the available ones (EFCC and ICPC) by necessary legislations to carry out their functions diligently without unnecessary political interference.

**SUMMUARY, CONCLUSION, RECOMMENDATIONS AND CONTRIBUTION
TO SCHOLARSHIP**

Summary of the Study

This study investigated the extent of relationship between government expenditures and economic development in Nigeria from 2001 to 2020. Three objectives, research questions and hypotheses were formulated to guide the study. Studies related to this study were critically reviewed under three under headings of; conceptual reviews, theoretical framework and empirical studies. The review was guided in accordance to the dimension (Capital Expenditure) of the independent

variables and measures (Gross Domestic Product, Human Development Index and Consumer Price Index) of the dependent variable of the study. Inflation rate was used as moderator variable.

Thus, the results of the study's hypotheses results were provided in accordance with the regression statistical analysis and decision rule of probability value (PV) of 0.05 alpha level. Hence:

1. There is a significant relationship between capital expenditure and gross domestic product of government expenditures and economic development in Nigeria.
2. There is a significant relationship between capital expenditure and human development index of government expenditures and economic development in Nigeria.
3. There is no significant relationship between capital expenditure and consumer price index of government expenditures and economic development in Nigeria.

Conclusion

In Nigeria, available statistics below show that federal government expenditure yearly has continued to rise over the years. This is believed to arise from oil and non-oil revenues. Likewise, there has been an increasing demand for public goods such as roads, electricity, education, health and security, food, etc., that would stimulate gross domestic products, human development index level and favorable consumer price index level. Thus, the study examined government expenditures and economic development in Nigeria from 2001 to 2020. Government expenditure is an important instrument for government in functioning and controlling the economy whether developed or underdeveloped.

Hence from the results of the hypotheses the study concludes that there is a significant relationship between capital expenditure and gross domestic product of government expenditures and economic development in Nigeria. And there is a significant relationship between capital expenditure and human development index of government expenditures and economic development in Nigeria.

Recommendations

The findings of the study have important policy implications which led to making of the following recommendations below.

1. The study recommends better continues management of capital expenditure has it impact significantly on gross domestic product.
2. To increase the development rate of the economy, the government must adopt stringent controls on its capital expenditures on economic services such as; on infrastructure, agriculture, power or electricity and transportation, so as to reduce fraud, fund diversion and mismanagement.
3. Policy makers should exhibit a high public expenditure management capacity to ensure that the recurrent expenditure is properly and effectively managed in a manner that it will achieve the outcome for which it's intended for. In this manner the government should plan well before implementing projects so as not to abandon these projects in the long run. This raises the need for transparency, probity and accountability on how public expenditure is spent.

Contribution to Scholarship

1. The study also utilized the two functional public expenditure categories (capital expenditure) introduced by central bank of Nigeria, as dimension of government expenditure which were used in filling the gap in empirical literatures.
2. This study rigorously complied 2001 – 2020 (20) years secondary data from central bank of Nigeria (CBN) statistical bulletins, national abstract of statistics (NAS), national bureau for statistics and www.knoema.com to adequately fill this gap.
3. This study developed four panel regression models for capturing the casual relationships between dimensions of government expenditure (capital expenditure and recurrent expenditure) and economic development measures (gross domestic product human development index and consumer price index) in Nigeria.

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