

Government Expenditure and Inflation Rate in Nigeria

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Abstract: *This study examined the effect of government expenditure on inflation rate in Nigeria within a period of 39 years spanning (1981-2019). The study specifically sought to ascertain the extent to which government expenditure on agriculture, government expenditure on education, government expenditure on health and government expenditure on telecommunications affected inflation rate in Nigeria. Four research questions were raised and four hypotheses formulated in line with the objectives of the study. Data were collected from the Central Bank of Nigeria (CBN) Statistical Bulletin. Government expenditure is broken into Government Expenditure on Agriculture (GOA), Government Expenditure on Education (GOE), Government Expenditure on Health (GOH) and Government Expenditure on Telecommunication (GOT) as the independent variables while inflation rate (INF) is the dependent variable. Multivariate regression based on Johanson Cointegration and Error Correction Model (ECM) were used to analyze the data. Our findings indicate that government expenditure on education has a positive and insignificant effect on the inflation rate. It was also discovered that government expenditure on agriculture and government expenditure on education have positive but insignificant effect on the inflation rate, while government expenditure on health and government expenditure on telecommunications have positive and significant effect on inflation rate. This study recommends that government should increase the allocation to the health and education sectors to increase the skill and health of economic operators which will enhance productivity. Government should also provide adequate infrastructure which will facilitate economic growth and reduce high inflation rate.*

Keywords: *government expenditure, inflation, Government Expenditure on Agriculture Government Expenditure on Education, Government Expenditure on Health, and Government Expenditure on Telecommunication*

1.1 Introduction

Inflation has been issue of Nigerian economy for over three decades. Statistics indicate that inflation in Nigeria has always been high, since inflation has significant effect on the life of individuals and other economic variables (Mohsen, Mohsen & Sadeq, 2016). In this context, understanding the roots of inflation can assist authorities in designing proper policies. On the other hand, government needs to spend in order to ensure stability of the economy, stimulate or enhance productivity or investment through direct public spending and investment according to the Keynesian view. Government also spends in order to redistribute income between the rich and the poor. Several theories have been advanced to explain this problem in different countries. Using a variety of instruments such as government spending, although in both theoretical and

practical experiences of countries have been proven that increases in government spending causes inflation, it's one of the significant issues in the possibility of achieving economic growth, Mohsen, Mohsen and Sadeq (2016).

Inflation is an inevitable circumstance of any economy in the world. It influences every country, negatively as well as positively, whether it is developed or developing country as well. Anyanwu (2011) stated that inflation is an important factor leading to social and economic instability and disorder. It is one of the most largely observed and tested economic variables both theoretically and empirically, its causes, impacts on other economic variables. Nigeria, being a developing country, could not overcome the continuously year to year climbing up inflation, and also its causes and consequences (Luis & Marco, 2015).

One of the challenges facing economy-managers especially in the Third World is inflation. It is so worrisome that it has contributed to the fall of governments. Inflation becomes dreadful when it subsists with high unemployment and the erosion of the monetary value of domestic currency. According to the neoclassical economists, inflation is a fundamentally monetary phenomenon by which there is a galloping rise in prices as a result of excessive increase in the quantity of money (Sanjeev, Benedict, Emanuele, & Carlos & Mulas-Granados 2005). To these economists, inflation results from the lack of monetary control (or monetary irresponsibility and indiscipline) with the concomitant effect of undermining the rule of business and the creation of confusion in markets, and financial ruins (Jhingan, 1997). The Nigerian economy has experienced this later aspect but most times there seems to be a separation of inflation from government monetary indiscipline. Hence, several reasons have been advanced as the causes of inflation in Nigeria. The Nigerian economy presently is characterized by stagflation, a situation of high level of unemployment and inflation existing at the same time.

1.2 Statement of the Problem

As far as Nigeria is concerned regarding inflationary effects it has experienced worst consequences reflected by poverty, food crises, price hike etc. over the last decades, inflation and government spending have attracted significant attention from finance, economics and development experts, though with mixed findings, the state of inflation rate in Nigeria has been in constant changes and this always affect the government spending. However in 1981 inflation was at 20.9%, in 1985 it stood at 17.8%, it increase to 54% in the year 1990 and reduce drastically to the tune of 5.70% in 1990, in 1996 it increase a bit to 6.6%, between 2005 and 2010 it was at 14.0 and 12.5 respectively. In 2015 inflation rate was 8.0 and 9.0 in 2016, between the period of 2017 and 2018 it was at 16.5%, sources (CBN 2018). However, records show that as government spending increased annually, inflation rate increases, more so when the economy has been under the management of the government for the greater period of time.

Also, empirical studies on the effect of government expenditure or public spending on inflation have provided mixed results, Dikeogu, (2018) maintained that government capital spending impacts negatively on inflation; government recurrent spending has a negative and an

insignificant impact on inflation. Amuka, Ezeoke, and Asogwa, (2016) Result reveals government capital expenditure on economic services is the major cause of inflation in Nigeria. Olayungbo (2013) The asymmetry causality test shows that a uni-directional causality exists from negative government expenditure changes (low or contractionary government spending) to positive inflation changes (high inflation) in the Vector Auto regression (VAR) model.

The persistence of these problems in Nigeria in spite of various policy measures to stabilize the economy, reduce inflation and the inconclusive debate regarding the actual effect of government spending on inflation motivated this study. Given the above statement the study examine the effect of government expenditure on inflation rate in Nigeria.

1.3 Objectives of the Study

The main objective of the study is to examine the effect of government expenditure on inflation rate in Nigeria. The specific objectives are to:

- i. assess the degree to which government expenditure on agriculture affects inflation rate in Nigeria.
- ii. examine the extent to which government expenditure on education affects inflation rate in Nigeria.
- iii. find out the extent government expenditure on health has affected the effect on inflation rate in Nigeria.
- iv. determine the extent government expenditure on telecommunication has inflation rate in Nigeria.

1.4 Scope of the Study

This study covers the period of 39 years (1981-2019). The choice of the scope was chosen based on the first time austerity measures were introduced leading to Structural Adjustment Program (SAP) of 1986 accompanied by steady increase in government spending. Geographically the study will be based in Nigeria. The included variables were on government expenditure on education, government expenditure on manufacturing sector government expenditure on health, government expenditure on agriculture, government expenditure on telecommunication sector output as well as inflation rate.

REVIEW OF RELATED LITERATURE

2.1 Conceptual Review

2.1.1 Government Expenditure

Government expenditure is the total in cash terms of the federal, state and the local government spending including transfers to the parastatals and the three levels of the government (Anyato,

2016). The allocation of function becomes necessary to provide both private and in particular social goods in appropriate mix with available resources. The provision of social and physical infrastructure through public investment and expenditure on some goods and services theoretical can directly improve productivity in the private sector through more efficient allocation of resources due to the special characteristics of social goods (spill over and externalities, non excludability) they will be provided at all or where they are produced the output will be inadequate and outrageously expensive if left in the hand of private individuals.

2.1.2 Inflation

In economics, inflation is a continuous rise in the general level of prices of goods and services in an economy over a period of time. When the general price level rises, each unit of currency buys fewer goods and services (Aminu & Zubairu 2012). Consequently, inflation also reflects an erosion in the purchasing power of money – a loss of real value in the internal medium of exchange and unit of account within the economy. A chief measure of price inflation is the inflation rate, the annualized percentage change in a general price index (normally the Consumer Price Index) over time. Inflation's effects on an economy are various and can be simultaneously positive and negative. Negative effects of inflation include an increase in the opportunity cost of holding money, uncertainty over future inflation which may discourage investment and savings, and if inflation is rapid enough, shortages of goods as consumers begin hoarding goods which will escalate the price in the future. Positive effects include ensuring that central banks can adjust real interest rates (intended to mitigate recessions), and encouraging investment in non-monetary capital projects.

2.2 Theoretical Framework

The Keynesian Perspective on Government Expenditure

In this study, demand pull theory was used to justify the Keynesian approach to inflation. The demand pull theory, which is the traditional and the most common type of inflation results, form the aggregate demand exceeding the supply of goods and services in an economy. The shortage in the supply could result from underutilization of resources due to inadequate spare parts resulting from high interest and exchange rates or the inability of the production to be increased rapidly. The demand-pull theory is sub-divided in to the monetarists and Keynesian views (Jhingan, 2002) but the Keynesian view is utilized for this study.

According to John Keynes and his followers (the Keynesian view), demand-pull inflation occurs when aggregate demand exceeds aggregate supply at full employment level of output that is attributing inflation to the relationship between the aggregate expenditure (C+I+G) and full employment level of output (Agba, 1994). This implies that only an increase in price above the full employment can be called inflation. Therefore, as long as an economy has not reached the level of full employment, any increase in money supply or the price would exhaust itself in raising the level of employment and output and not the general price level in the economy

(Bakare, 2000). They (Keynesians) emphasized non monetary influences such as government process (CBN, 1991), Keynes then explained inflation through the inflationary gap, which exists when the aggregate demand exceeds the level of output at full employment level (Vaish, 1978). This implies that once an economy has reached the point of full employment, any slight increase in aggregate demand over the available output will obviously lead to a rise in price.

Government spending is a tool that brings stability in the short run but need to be done cautiously as too much of public expenditure would lead to inflationary situation while too little of it would lead to unemployment. From the Keynesian thought, public expenditure can contribute positively to economic growth. Hence, an increase in the government consumption 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 multiplier. The Keynesian analysis of government expenditure formed the bases for this research.

Relevance of the Theory to the Study

Of all economists who discussed the relation between public expenditures and economic growth, 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 instrument to promote economic growth. From the Keynesian thought, public expenditure contributes positively to economic growth. Hence, an increase in government consumption 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.

2.3 Empirical Review

Edeme, Emecheta, and Omeje (2017) investigated the effect of public health expenditure on inflation rate in Nigeria from 1986-2015, as captured by life expectancy at birth and infant mortality rates. The result shows that public health expenditure and health outcomes have long-run equilibrium relationship on inflation rate. Furthermore, the results showed that an sustained increase in public health expenditure triggered inflation rate. In addition, urban population and HIV prevalence rate significantly affects health outcomes, while per capita income exhibits no effect on health outcomes in Nigeria. The findings suggest that public health expenditure remains a necessary component in improving health outcomes in Nigeria.

Kairo, Mang, Okeke and Aondo (2017) studied the relationship between human capital development and government expenditure. Data were collected over the period 1990-2014. Autoregression Distributed Lag (ARDL) and impulse response function were adopted for the estimation. The Bound Test was used to determine that a long run relationship exists between HDI and GOVEXP. The results demonstrated that both in the long and short run, government spending has remained positive but to a very large extent insignificant to human capital development in Nigeria. This is why Nigeria's per capita income has remained low for a long

time in the world ranking. This study therefore strongly recommends that government spending should largely be focused on human development through specialized high technology-driven schools and efficient and effective health facilities.

Omitogun (2014) examines the determinants of public health expenditure in Nigeria between 1990 and 2012.. Econometric model was formulated where total government health expenditure was regressed on real gross domestic product; population; health expenditure share in total government expenditure (proxy for government developmental policy on health sector); unemployment rate; consumer price index (proxy for health care prices); and political instability.. Regression analysis shows that real gross domestic product and health expenditure share in total government expenditure are positively related to total health expenditure and are significant at 1%and 5% level of significance respectively. Unemployment and political instability have a negative relationship on gross total health expenditure of the government though not statistically significant. It was recommended, among others, that Government Budgetary allocation to health sector should be increased to the WHO prescribed level of 15% of government annual budgetary allocation. This will make government health expenditure to have a robust effect on Nigerian health status and meet WHO recommended budgetary allocation to the sector.

Bakare and Olubokun (2011) investigated the relationship between health care expenditures and inflation rate in Nigeria from 1990-2009. The ordinary least square multiple regression analytical method was used to examine the relationship between health care expenditures and inflation rate. The variables were on Gross Domestic Product, Gross Capital Formation, Health Care Expenditure and Secondary School Enrolment. The data analysis showed a significant and positive relationship between health care expenditures and inflation rate. The study thus recommended that Nigerian policy makers should pay closer attention to the health sector by increasing its yearly budgetary allocation to the sector. Nevertheless the key to good results lies not in ordinarily increasing particular budgetary allocation but rather in implementing a public finance system that, to the extent possible, links specific expenditure and revenue decisions and ensure the usage of the allocated fund as transparently as possible.

Obasikene (2017) examined government expenditure on health and its impact on the inflation rate, 1986 -2014. Multiple regression techniques of the ordinary least squares (OLS) where inflation rate is the dependent variable, responsive to capital expenditure, recurrent expenditure and money supply.. The results revealed that government expenditure (capital and recurrent) and broad money supply have negative relationship with inflation rate in Nigeria. Particularly, government capital expenditure has significant positive effect on the growth of Nigerian economy. The government recurrent expenditure has a non-significant positive effect on economic growth in Nigeria. The study recommended that the Independent Corrupt Practices and other Related Offences Commission and the Economic and Financial Crimes Commission should be reformed and strengthened in order to promote transparency in the conduct of government spending. The Nigerian government should also adopt a public medium term

expenditure framework to ensure predictable and sustainable public expenditure at all levels of government.

Boussalem, Boussalem, and Abdelaziz (2014) investigated the causality and co-integration relationships between public spending on health and inflation rate in Algeria during 1974-2014 using annual data. This study concentrated on time series co-integration and causality in ECM framework. The findings revealed that there is a long-run causality from public spending on health to inflation rate while it is not observed any short-run causality from public spending on health to inflation rate. The lack of strong link from public spending on health to inflation rate is not necessarily a reason to reallocate health investment away from the health sector. The improvements in health status will be, worth the effort even if they turn out to have little effect on growth.

Chinedu, Daniel and Ezekwe (2018) ascertain impact of sectoral spreads of government expenditure on inflation rate in Nigeria from 1980 to 2017. The data were subjected to Unit Root, Johansen Cointegration, and Error Correction test and Durbin-watson test. The study concluded that there was positive impact of sectoral spreads of government expenditure on inflation rate in Nigeria. Three variables on sectoral Government expenditure among five sectoral Government expenditure variables have long-run relationship with real GDP. This study's conclusion confirmed Wagner's law that increase in economic growth was achieved as a result of increase in Government expenditure. The study verified that Government expenditure on Agriculture and Defence have statistical significant effect on economic performance in Nigeria while Government expenditure in transportation and communication, health and education were not statistical significant. Based on above stated findings, the study made the following recommendations: Nigeria government should promulgate more anti-corruption agencies to speed-up prosecution and execution of judgment on public fund looters.

Oluwatoyin Folasade and Fagbeminiyi (2015) public health spending on inflation rate in Nigeria between 1979 & 2012. This study made use of the Johansen Co-integration and the Vector Error Correction Model (VECM) econometric technique to determine the long-run relationship between public spending on health and health outcomes in Nigeria. The study found out that public spending on health has a negative significant relationship with inflation rate in Nigeria. It was also discovered that environmental factors such as carbon dioxide emissions which was used in this study affects individuals' health. Therefore, based on the findings of this study, it recommends that the government should introduce programmes that will cause awareness concerning the effect of carbon dioxide emissions on individual's health and should advice people and industries on how to deal with it. It should also separate residential and industrial areas to avoid any hazard caused from carbon dioxide emissions. Also, the government should increase and restructure the public expenditure allocation to the health sector.

2.4 Summary of the Empirical Findings

The reviewed scholarly works investigated the link between government expenditures on inflation rate while employing related variables which include government expenditure on

agriculture, health, education and telecommunication. The empirical results were mixed and thus divergent. Towards a consensus, the studies recommended an increase in budgetary allocation/funding among others. However, it is pertinent to state that expenditures by rule of thumb should be immediately felt through its contribution to own sectoral output. Thus, from the above summary, some key questions that comes to mind, remains fundamental pathway which the previous studies did not consider. Therefore, answering questions as to whether these expenditures translate to growth of the immediate education sectoral output, health, agriculture and telecommunication or not, before regressing it (expenditure) on inflation rate becomes imperative. By implication, inferences from these findings may constitute policy issues if used without caution. As an improvement on previous studies, the present study seeks to contribute to existing literature by examining the link between these forms of educational expenditures while incorporating educational sectoral output, government on agriculture, government expenditure on health, and government expenditure on telecommunication as a new variable, as well as reexamining its effect on inflation rate.

2.5 Gap in Literature

In brief, the relationship between government expenditure on inflation rate of Nigeria has been explained based on literature from previous researchers. However, it is noted that the researchers obtained different result for the relationship between the government expenditure on inflation rate. The reason for inconsistency in result may be due to the fact that researchers conducted their studies in different countries and thus, the data and policies are different. Therefore, examine the significant relationship for government expenditure and the independent variables to get the accurate result as compared to the previous findings by other researchers. From the discussion above, the findings revealed that there is correlation between the government expenditure on agriculture, government expenditure on education, government expenditure on education and the inflation rate. This chapter also reviewed the theoretical framework between government expenditure on inflation rate.. However as the first of its kind the study analyzed detailed effect of government expenditure on inflation rate. in Nigeria between the period of 1981-2019 For the next chapter, this study will discuss the methodology and technique that will be use for the estimation of the relationship of government expenditure on inflation rate for the study in Nigeria.

METHODOLOGY

3.1 Research Design

The type of research design adopted on this study is Ex-post facto research. Ex-post facto design usually involves the study of independent and dependent variables. Therefore, it gives no room for manipulation of any of the variables. The data for the variables already exist in various reliable sources such as CBN Statistical bulletin

3.2 Nature and Sources of Data

Data for the study are from secondary sources and are sourced from publications of the Central Bank of Nigeria (CBN), Statistical Bulletin, between 1981 and 2019. The following data are sourced: total government expenditure on agriculture, government expenditure on Education, government on expenditure Health, Government expenditure on telecommunication and real gross domestic product.

3.3 Model Specification

The fundamental and linear equation which forms the model is drawn from the theoretical literature and empirical literature reviewed in the previous chapter. It is observed that there is a causal link between government expenditure and the Nigerian economy. In this section, we pursue the same objective further by specifying our model. The model is then used to verify the government expenditure determinants on the Nigerian economy. The Study modified the work of (Mohsen, Mohsen & , Sadeq 2016) which examined the short and long run relationship between government expenditure on agriculture, adopted this as their model

$$Inf= f(GOVT, GR, LQ)$$

Where

INF = Inflation rate

GOVT = Government expenditure

GR = Growth rate

LQ = Liquidity rate

Our present study modified the above model to suit our objectives as follows

$$INF=F(GOA, GOE, GOH, GOT).$$

Where

INF = Inflation rate

GOA = Government expenditure on Agriculture

GOE = Government expenditure on Education

GOH = Government expenditure on Health

GOT = Government expenditure on Telecommunication

f = Functional notation

The econometric equation of the model can be expressed as;

$$INF = \beta_0 + \beta_1 GOA + \beta_2 GOE + \beta_3 GOH + \beta_4 GOT + \mu$$

Where;

β_0 is the constant intercept which shows the level of INF

β_1 =coefficient of parameter GOA

β_2 = coefficient of parameter GOE

β_3 =coefficient of parameter GOH

β_4 =coefficient of parameter GOT

μ = the stochastic error term or disturbance variable.

The model can be re-write in an logged form

$$INF = \beta_0 + \text{Log } \beta_1 GOA + \text{Log } \beta_2 GOE + \text{Log } \beta_3 GOH + \text{Log } \beta_4 GOT + \mu$$

Where

Log=logged values of the variables

3.4 Method of Data Analysis

The study employed ordinary least square (OLS) method of estimation to establish the importance of the independent variables on the dependent variables. The (OLS) is the most efficient method because of the "Best Linear Unbiased Estimator" (BLUE) properties. The result is always satisfactory and simple to comprehend. The model equation will be estimated using a variety of analytical tools, including the unit root test and co-integration test.

3.5. A'priori Expectation

This is based on the principle of economic theory. There, our results can be checked for their reliability with both the size and sign of economic a'priori expectation.

$a_1, a_2, a_3, a_4 > 0$

PRESENTATION AND ANALYSIS OF DATA

4.0 Preamble

This chapter presents the empirical results and discussion of findings, Ordinary Least Square was used as techniques for the analysis, the result was subjected to different statistical and econometrics test. We begin by discussing the order of integration of the interest variables, after presenting the data for analysis.

4.1 Unit Root Test

The first stage of co-integration and Error Correction Model is to test for unit root. The whole analysis then proceed from it. Konya (2004) maintains that there exists unit root in most time series. Therefore, it is necessary to analyze whether the series are stationary or not whenever time series data are involved. The presence of unit root implies that the time series under

investigation is non-stationary, the absence of a unit roots shows that stochastic process is stationary. The Augmented Dickey-Fuller (ADF) test is employed in this test

Table 4.1 Unit Root Test

variable	ADF	Integration	Significant
INF	-5.818753	1(1)	1%
GOA	-6.932570	1(1)	1%
GOE	-4.907351	1(1)	1%
GOH	-6.382154	1(1)	1%
GOT	-4.917703	1(1)	1%

Source: Author’s computation using E-view 9.1

Finally, the ADF test was conducted on government spending and Inflation rate and the results presented in table 4.2 show that null hypothesis of unit roots was rejected after differencing once. Hence, the variable is clearly integrated of order one and at 1% level of significant respectively.

4.2 Co-Integration test

Given that all the variables are integrated of order one, co-integration test was carried out to establish whether the variable though individually non-stationary could be co-integrated as a group and also to establish the existence of a long-run relationship among them. The Johansen procedure is used to achieve this. The results of this test are presented in Appendix. Both trace statistic and maximum eigenvalue test are used to determine the number of co-integrating vectors. The test statistic rejects the null hypothesis in favour of three co-integrating relationship at 5% significant level. But the maximum eigenvalue test indicates also two co-integrating relation at the 5% level. The long run coefficients emanating from the co-integration relationship normalization on the economy is presented in Table 4.3. The table 4.3 below shows the summary of Mackinnon Haug-Michelis co-integration result.

Table 4.2: Johansen Co-integration Test

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	Critical Value 0.05	Prob.**
None *	0.975660	227.1972	69.81889	0.0000
At most 1 *	0.846241	100.8656	47.85613	0.0000
At most 2 *	0.501828	37.20515	29.79707	0.0058
At most 3	0.233392	13.51359	15.49471	0.0973
At most 4 *	0.123377	4.477079	3.841466	0.0343
Trace test indicates 3 cointegrating eqn(s) at the 0.05 level *denotes rejection of the hypothesis at the 0.05 level **Mackinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
None *	0.975660	126.3316	33.87687	0.0000
At most 1 *	0.846241	63.66047	27.58434	0.0000
At most 2 *	0.501828	23.69156	21.13162	0.0213
At most 3	0.233392	9.036513	14.26460	0.2831
At most 4 *	0.123377	4.477079	3.841466	0.0343
Max-eigenvalue test indicates 3 cointegrating eqn(s) at the 0.05 level *denotes rejection of the hypothesis at the 0.05 level **Mackinnon-Haug-Michelis (1999) p-values				

Source: Author’s Compilation Using E-views 9 Output

The result of Johansen co-integration test is shown in Table 4.2 above. The result shows that there exist three (3) co-integrating equations at 5% level of significance. This is because the trace statistic is greater than critical values at 5%. This shows that there exists a long run relationship between government spending and all the explanatory variables. The result indicates that in the long run, the dependent variables can be efficiently anticipated using the specified independent variables and, thus, we proceeded to estimate the Error Correction Model (ECM) so as to reconcile the short-run dynamics with long-run disequilibrium of the variables. The Error Correction Model results are presented in table 4.3 below.

4.3 Regression Result

The full part of our regression result for this analysis is attached as an appendix to this study. However, the diagnostic tests or some key statistics or the variable that needs to be interpreted is shown below.

Table 4.3 Error Correction Model Result

Variable	Coefficient	Std.error	T-test	Prob
C	6.721934	0.070548	95.28185	0.0000
LGOA	0.006009	0.005202	1.155143	0.2569
LGOE	0.002390	0.001467	1.629492	0.1133
LGOH	0.015711	0.002177	7.216736	0.0000
LGOT	0.015759	0.003708	4.250395	0.0002
ECM(-1)	-0.945965	0.047217	-2.003427	0.0000
R-Squared: 0.784338; Adjusted R-squared: 0.771812 ;F-statistic: 389.6582; Prob(F-statistic): 0.000000; Durbin-Watson Stat: 1.624904				

Source: Author's Compilation Using E-views 9 Output

The results presented above will be analyzed using three criteria; economic a priori criteria, statistical criteria and econometric criteria.

The R^2 which is the coefficient of determination or the measure of goodness of fit shows the degree of variation in the dependent variables. The closer R^2 is to 100%, the better the fit of the model. From the regression result, R^2 is 0.78%. This implies that the independent variable can explain about 78% of the variations in the dependent variable, leaving the remaining 22% which would be accounted for by other variables outside the model as captured by the error term.

The adjusted R^2 is 77% meaning that even with an adjustment in the dependent variables, they can still explain about 77% of the change in the dependent variable. The F-statistics measures the overall significance of the explanatory parameter. From the result in table 4.3 above, our computed value F-statistics is 389.6582 while the probability is 0.0000, Since the probability of the F-statistics in the computed output is less than the desired 0.05 level of significance, we accept and state that there is a significant relationship between the variance of the estimate and that of the dependent variable.

The specific objectives are addressed using the coefficient of regression and its corresponding t-statistics were used to test the hypothesis of the study. The result is as shown on the equation below:

$$\text{INF} = 6.721934 + 0.006009 \text{LGOA} + 0.002390 \text{LGOE} + 0.015711 \text{LGOH} + 0.015759 \text{GOT}$$

Extent Government Expenditure on Agriculture Affects Inflation rate in Nigeria

From the estimated coefficient result of the regression in table 4.3 above, we find out that government expenditure on agriculture has a positive relationship with inflation rate given its value as 0.006009, this in conformity with a priori expectation because a unit increase in government expenditure on agriculture increase inflation rate by 6 unit. However, government expenditure on agriculture is 1.155143; this implies is statistically insignificant in affecting inflation rate, This further suggest that the government spending on agriculture has not affected inflation rate in Nigeria. This finding provides us opportunity to reject alternative hypothesis and accept null hypothesis which states that Government Expenditure on Agriculture has no significant effect on Economic Growth in Nigeria

Extent government expenditure on education affects Inflation rate in Nigeria.

The coefficient of regression (0.002390LGOE) indicates that health (HE) has positive effect on the Inflation rate in Nigeria. Government expenditure on education has a positive impact given its value as 0.002390; this is in conformity with our a priori expectation, this further implies that increase in government expenditure on education increases the Inflation rate by 2%. Government expenditure on health is statistically insignificant on the Inflation rate, this were as a result of low t-statistics and high probability value. However this result laid credence of low government expenditure on education in Nigeria and as a result we reject alternative hypothesis and accept null hypothesis which states that government expenditure on education has no significant effects on Inflation rate in Nigeria

Extent government expenditure on health affected Inflation rate in Nigeria.

From the result of our regression in table 4.3 above, it is discovered that government expenditure on health has a positive impact on Inflation rate given its value as 0.015711 this is in conformity with theoretical expectation because increase in government expenditure on health increase the Inflation rate by 15%. From the t-statistics Colum it was discovered that Government expenditure on health is statistically significant (7.216736) at 10% level of significant on the Inflation rate. The result from t-test compels us to reject null hypothesis and accept alternative hypothesis which implies that government expenditure on health has significant effect on Inflation rate in Nigeria.

Extent government expenditure on telecommunication affects Inflation rate growth

Government expenditure on telecommunication has a positive impact on the Inflation rate growth given its value as 0.015759; this is in conformity with theoretical expectation, however the increases on government spending on telecommunication, this will increase the performance of Inflation rate in Nigeria. From the t-statistics Colum it was discovered that Government expenditure on telecommunication is statistically significant (4.250395) at 10% level of significant on the Inflation rate.. As a result of this findings null hypothesis will be rejected while the alternative will be accepted which states that government expenditure on telecommunication has significant positive effects on Inflation rate in Nigeria

The Durbin-Watson statistics is used to test for the presence or otherwise of autocorrelation in our model. When the value of Dw is closer or a little above 2, it means the absence of autocorrelation amongst the explanatory parameters (Koutsoyiannis 1997). From table 4.3 above, it is discovered that the Durbin Watson is (1.6.), and this does satisfy the above stated condition. This means the absence of autocorrelation among the explanatory variables. Finally, the Error Correction Mechanism (ECM) which is used to correct for disequilibrium from of estimated result is ECM (-1) is significant with an appropriate negative sign. Its negative coefficient of (-0.745965) shows that there is a stable long-run equilibrium relationship between the variable. The ECM shows also that changes in the independent variables will cause the dependent variable to converge on its equilibrium path.

4.4 Discussion of findings

Government Expenditure on Agriculture: The study found that Government Expenditure on Agriculture has no significant effect on inflation rate in Nigeria. The nature of the effect on agriculture has no translated into a meaningful growth in Nigeria. For any country to experience economic growth, investment in agriculture and innovation is inevitable. That is why it's very important for both the public and private sector to motivate people to be innovative. However, diversifying an economy properly in other non-oil sector is likely to influence the economic growth via the following three ways; performance of the agricultural sector, manufacturing sector and solid mineral.

The implication of these findings is that, for agricultural sector to be functional, productive and to achieve their aim and purposes, the agricultural sector need to satisfy the expected needs of the individual, and earn much revenue for government. Agricultural output growth can increase growth in the non-agricultural sector of the economy via diverse means some of which are direct and indirect. This further disagreed with the findings of Idoko, and Jatto, (2018) who found a positive and significant relationship between government expenditure on agriculture and inflation rate in Nigeria. The findings also corroborate with the findings of Iganiga and Unemhilin (2011) that Agricultural output is a pertinent determinant to economic performance in Nigeria.

Government Expenditure on education: The study found that government expenditure on education has a insignificant positive effect on inflation rate in the Nigeria. The Government spending on education has not spur inflation rate from the finding. A nation with highly educated and skilled people would likely enjoy a better economic development. But the efficient use of labour and capital resources for greater productivity requires that the workers are well trained and skilful. The training and skills acquisition are mainly accumulated through education. Education is an economic good because it is not easily obtainable and therefore need to be apportioned or traded. The implication is that education is essentially the capacity to understand new information and adapt one's behavior accordingly; economies that have the greatest number of highly-skilled workers will more rapidly adopt and implement the most efficient technologies. The finding is not in line with the study of Mohd., Muhammad, and Razak, (2012) government expenditure on health has a positive effect on inflation rate of Nigeria.

Government Expenditure on Health: The study found that Government Expenditure on Health in Nigeria. Government spending on health spurs inflation rate in Nigeria. Further to this is that healthcare sector output is an endogenous variables and determinants of inflation rate in successive healthcare sector output in Nigeria. This explains that growth and quality of healthcare is an accumulative of efforts and success of previous years. Thus, continuous development in healthcare resources in forms of human capital (personnel) and equipment is apt to growing the inflation rate. Thus, the right form of manipulation for health sector will manifested to greater inflation rate. However, money supply rightly impacts growth positively but credit to private sector, though positive, had no significant effect in the model. Improved in government spending on health would translate to increased inflation rate. Edeme, Emecheta, and Omeje. (2017) corroborates this findings by stating that, public health expenditure and health outcomes have long-run equilibrium relationship. This means that, health system indicators and technological advances may also have impact on health expenditure as has been documented in previous literature.

Government Expenditure on Telecommunication: The study found that government expenditure on telecommunication has a significant positive effect in inflation rate. This implies that a reliable telecommunications networks can improve the productivity and efficiency of other sectors of the economy and enhance the quality of life in generally.

Furthermore, the endogenous influence of telecommunications sector itself ignites positive growth effects on the sector. The individual contributions of the telecommunications sector variables are quiet interesting and the efforts at optimising telecommunications sector output would require to spur inflation rate of the Nigerian economy. Ajiboye (2007) also argued that telephone spending has a positive impact on inflation rate because it provides a stimulant to economic growth and that as economies become more highly developed, they need more communications.. Nwakanma, Asiegbu, Eze, and Dibia (2015) found that Government Expenditure, Number of Telecom Subscribers and Private Investment collectively have significant impact on inflation rate in Nigeria.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of the Findings

The major tenet of this study is to critically examine the impact of government expenditure on inflation rate in Nigeria. The study period spanned from 1981-2019. This study specifically examined the nature of government expenditure on the inflation rate. Thus, it was hypothesized that government expenditure has a significant impact on the inflation rate.

A linear regression model was employed to analyze the data, The result of our estimated model revealed some important issues that need to be stressed.

a) It was discovered that government expenditure on agriculture has positive short run effect and insignificant impact on inflation rate. The findings also corroborate with the findings of Iganiga and Unemhilin (2011) that Agricultural output is a pertinent determinant to economic performance in Nigeria

b).It was also revealed from the result of our estimated model that government expenditure on education has a positive short run and insignificant impact on inflation rate. The finding is not in line with the study of Mohd., Muhammad, and Razak, (2012) government expenditure on health has a positive effect on inflation rate of Nigeria.

c.) It was also discovered that government expenditure on health has short run positive effect and significant impact on inflation rate. Edeme, Emecheta, and Omeje. (2017) corroborates this findings by stating that, public health expenditure and health outcomes have long-run equilibrium relationship.

d) It was also discovered that government expenditure on telecommunication has short run positive and significant impact on inflation rate. Nwakanma, Asiegbu, Eze, and Dibia (2015) found that Government Expenditure, Number of Telecom Subscribers and Private Investment collectively have significant impact on inflation rate in Nigeria.

e. Lastly, our variables when tested for cointegration using the Johansen co-integration test, were found to be co-integrated and as such the Error Correction Mechanism was employed to correct for the long-run equilibrium relationship between the variables.

5.2 Conclusion

The findings of this work show that government spending has contributed significantly to the inflation rate: From the findings of our study, the study has yielded dependable empirical evidence and thus concludes that government expenditure has significant determinants in Nigeria.

5.3 Recommendations

In the light of these research findings, the following recommendations are presented.

- i. CBN should do more to encourage borrowing by bringing the lending rate to single digit to boost agricultural production output.
- ii. There is also need for more visible involvement of the private sector in education investment; this can be achieved if the enabling environment and necessary incentives are provided
- iii. The Federal Government of Nigeria (FGN) should increase and restructure the public expenditure allocation to the health sector in order to provide more health facilities, drugs, laboratories, equipment, amongst other things). This can be achieved via the right channeling of funds to the productive arms, adequate management of funds and resources in order to prevent corruption and to aid the development of health services
- iv. It is also recommended that steady power supply be provided by the Nigerian government since that is the major problem facing telecom operators, which in turn will reduce operating cost for the telecom operators as well as reduce the cost of using the services offered by the telecom industry.

5.4 Contributions to Knowledge

This study contributed to knowledge by modifying the work of Mohsen, Mohsen &, Sadeq (2016) who have their model as $Inf F = (GOVT, GR, LQ)$

Where

- INF = Inflation rate
GOVT = Government expenditure
GR = Growth rate
LQ = Liquidity rate

The model is modify as

$$INF = \beta_0 + \beta_1 GOA + \beta_2 GOE + \beta_3 GOH + \beta_4 GOT + \mu$$

Where

- INF = Inflation rate
GOA = Government expenditure on Agriculture
GOE = Government expenditure on Education
GOH = Government expenditure on Health
GOT = Government expenditure on Telecommunication

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