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ANALYSIS OF GOVERNMENT EXPENDITURE AND INFLATION RATES IN NIGERIA

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Abstract
This study empirically analysed the impact of government expenditure on inflation rates in Nigeria. The study adopts descriptive statistics, Augmented Dickey Fuller (ARDL) unit root test for stationarity, ARDL bound test for long run relationship and Autoregressive Distributed Lag (ARDL) model for the analysis. The data for the empirical analysis were sourced from CBN Statistical Bulletin and World Bank Development Indicators. The results of analysis indicated that a long run relationship exists among the variables. Furthermore, the results revealed that administrative expenditure by the government has negative and as well insignificant impact on inflation rate in Nigeria. In addition, exchange rate had negative influence on inflation rate in Nigeria. Finally, the result revealed that money supply had a positive and as well significant impact on inflation rate in Nigeria. Based on the findings, the study recommended as follows: Government needs to exercise due diligence in spending in order to check inflation rates. Furthermore, fiscal policy measures are required to be well coordinated so as to control excessive rise in the general price level in Nigeria. Finally, there is need for the government to efficiently engage monetary policy instruments that are adequate in ensuring a given level of money supply that stabilizes prices.
Keywords: Government Expenditure, Inflation Rate, Government Administrative Expenditure, Money Supply and Exchange Rate.

Introduction

This persistent increase in government expenditure occurred, especially in developing countries like Nigeria, because government expenditure is seen as an important instrument utilized in the process of development" (Aluthge, Jibir & Abdu, 2012). In fact, in both developing and developed countries, government expenditure is used to facilitate income distribution, direct the allocation of resources in desired areas, and influence the composition of national income (Assi, Dimson, Goodman & Andersen, 2019). Unfortunately, this rising government expenditure has not translated into meaningful growth and development especially for developing countries like

Nigeria. The ever-expanding government expenditure in Nigeria should ordinarily translate into improved welfare for the Nigerian citizenry, rather Nigeria is going through serious economic problems such as high inflation rate, high rate of poverty, high rate of unemployment, high exchange rate, low rate of investment etc. This is why the International Monetary Fund (IMF), in its World Outlook Database in the 2019 ranking of countries from the richest to the poorest, using Gross Domestic Product (GDP) based on Purchasing Power Parity (PPP) per capita placed Nigeria at the bottom with 54th position falling 10 places downward from its 44th position of the poorest listed countries. This is quite worrisome. In fact, Nigeria was adjudged the poverty capital of the world in 2019. Apart from the prevalence of high unemployment rate, low rate of investment and high foreign exchange rate, the economy is also being bedeviled with very high inflation rates.

The high rate of inflation being experienced in the country creates uncertainty in the economy, and uncertainty makes both domestic and foreign investors unwilling to invest, (Ibrahim & Agbaje, 2013). Inflation surely is not a new phenomenon in the Nigerian Economy and across the globe. It has been a major problem in the country over the years. It has actually assumed a disturbing dimension since World War I (Ojarike & Ezie 2015). It was then that inflation for the first time was put at the centre of the global stage. Today, inflation is no longer a mere war-time phenomenon or the problem of a specific region or society. Its impact can no longer be ignored by both the developed and developing nations alike. Economists like (Corrado and Jordan 2002) have long recognized inflation amongst others as one of the major factors that could derail the economy of any country. In Nigeria, inflation has gradually established a firm grip on the economy of the nation since her independence. However, despite the slightest price increase of 1961, 1962 and 1966, the first nine or ten years after independence can be regarded as a period of relative stability in prices when compared with the prices of the 1970s and 1980s as only single digit inflation was recorded in 1960. Reputably, the advent of the oil boom in Nigeria in the early 1970s was what led to much instability in prices. Since early 1970's, inflation rates in Nigeria have been highly unstable; the high inflationary change was in excess of 30%. This is evident in the high correlation of money supply growth and high inflation due to the fact that real economic growth is less in real term to money growth, which can be observed from the growth in money supply and some structural factors such as; supply shocks arising from famine, unfavourable terms of trade and the continues devaluation of the Naira.

Consequently, inflation in Nigeria has overtime responded to structural changes. These changes can be characterized into five periods based on the pattern and events that occurred in these periods. Inflation, being a general problem is not peculiar to Nigeria alone. It is an economic problem facing developed and developing countries. In a conference organized jointly by Central Bank of Nigeria (CBN) and Nigerian Institute of Social Economics Research in 1974 at Ibadan on "Inflation in Nigeria", majority of the participants came up with the view that money supply, government expenditure, fluctuation in real output and the existence of structural rigidities and bottlenecks in the economy are major causes of inflation in the economy of Nigeria. More so some scholars did not agree using monetary growth, in explaining inflation. Studies carried out by (Akinnifesi 1984), (Adeyeye and Fakiyesi 1980), (Osakwe 1983), failed to produce consensus on monetary growth but rather on the view of non-monetary variables in explaining inflation in Nigeria in the case of introducing Structural Adjustment Programme (SAP).

In view of the above, there is need for the Nigerian government to spend in order to stabilize the economy, enhance productivity or investment through direct public spending and investment according to Keynesian view (Olayungbo 2013). This has resulted in increased spending by government both in recurrent and capital expenditure due to increasing revenue from oil and the increase in demand for public goods like roads, education, health facilities, defense and increasing population. Furthermore, 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 insignificant impact on inflation. Amuka, Ezeoke, and Asogwa, (2016) revealed that 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 continuous debate regarding the actual effect of government spending on inflation motivated this study. To this end, the paper examines the analysis of Nigeria government expenditure and inflation rate from 1981-2021.

The main objective of this study is to examine impact of government expenditure on inflation rates from 1981-2021 in Nigeria. To achieve this aim, the study's specific objectives are formulated as:

i Determine the impacts of government capital and recurrent administrative expenditures on inflation rates in Nigeria.

ii Examine the impact of controlled variable (exchange rate) on inflation rate in Nigeria.

iii Evaluate the impact of controlled variable (money supply) on inflation rates in Nigeria.

Review of Related Literature

Conceptual Clarification

Concept of Government Expenditure

Bhatia (2008) defines government expenditure as the expenses which a government incurs for (i) its own maintenance, (ii) the society and the economy, and (iii) helping other countries. Government expenditure refers broadly to expenditure made by local, state and national government agencies as distinct from those of private individuals. Government expenditure also comprises of government payments for the goods and services acquired and for the works done pursuant to their respective laws, social security contributions, interest payments of domestic and foreign debts, general borrowing expenditures, payments resulting from the discounted sale of borrowing instruments, eco6nomic, financial and social transfers, donations and grants, and others. Structurally, government expenditure can broadly be categorized into capital and recurrent expenditures. The recurrent expenditure are government expenses on administration such as wages, salaries, interest on loans, maintenance etc., whereas capital expenditure are expenses on capital projects like roads, airports, education, telecommunication, electricity generation. The general view is that government expenditure either recurrent or capital expenditure, notably on social and economic inf6rastructure can be growth-enhancing although the financing of such expenditure to provide essential infrastructural facilities including transport, electricity, telecommunications, water and sanitation, waste disposal, education and

health can be growth retarding.

Concept of Inflation

Inflation has been defined as a persistence rise in the general price level of broad spectrum of goods and services in a country over a long period of time. Inflation has been intrinsically linked to money, as captured by the often-heard maxim inflation is too much money chasing too few goods. Hamilton, (1993) stated that inflation has been widely described as an economic situation when the increase in money supply is faster than the new production of goods and services in the same economy. Ojo (2000) opined that the term inflation describes a general and persistent increase in the prices of goods and services in an economy. Inflation rate is measured as the percentage change in the price index (consumer price index, wholesale price index, producer price index etc). (Essien 2002) opined that the consumer price index (CPI), for instance, measures the price of a representative basket of goods and services purchased by the average consumer and calculated on the basis of periodic survey of consumer prices. Owing to the different weights the basket, changes in the price of some goods and services have impact on measured inflation with varying degrees. There are several disadvantages of the CPI as a measure of price level.

Theoretical Framework

There exist several theories that give credence to the existing relationship between government expenditure and inflation rates. Some of these theories, which are deemed relevant to this study, are reviewed herein.

The Classical Theory of Government Expenditure and Inflation

The classical are a set of economists that advocated for a minimal government participation in the economy. To them the economy should be allowed to function or run on its own without any external inducement, but by the interplay of the forces of demand and supply which (the classical economists) refers to as "the invisible hand". They believed in the concept of "automatic stabilizers" built into an average capitalist economy which seeks to automatically equilibrate the economic system. Thus, following the classical thought, an economy, if given the free hand, will work in an automatic manner in bringing about the achievement of the macroeconomic goals of full employment, price stability, exchange rate stability, equilibrium balance of payment, etc. Therefore, based on this premise, the classical, in making their analysis, did not dwell much on the concept of government expenditure but rather on the concept of inflation. Basically the roots of the classical approach to the concept of inflation anchors on the quantity theory of money, which reached its highest level of sophistication in the hands of Irving Fisher (1911). The Quantity Theory of Money (QTM) as propounded by Fisher (1911) suggests that the quantity of money is the main determinant of the price level, or the value of money, such that any change in the quantity of money produces an exactly direct and proportionate change in the price level. The QTM is traceable to Irving Fisher's famous equation of exchange: MV=PQ, where M stands for the stock of money; V for velocity of circulation of money; Q is the volume of transactions which take place within the given period; while P stands for the general price level in the economy.

The Keynesian Theory of Government Expenditure and Inflation

Classical economists particularly Adam Smith advocated minimum government intervention in providing public goods, law and order and those investments that cannot be adequately provided by private sector due to their high risk or unprofitable nature (Jibir & Aluthge 2019). This

doctrine dominated the world economy until the unprecedented Great Depression of 1930s that exposed the failure of the classical system. On the contrary, the Keynesian economists supported the use of government expenditure in promoting growth and development by stimulating aggregate demand especially during economic depression. This provides the obvious reason for government participation in economic activities in the modern time. This is because government is needed to correct short term distortions in an economy (Jibir & Aluthge 2019) and to create socially optimal direction for growth and development of a country (Ram 1986). Government also exists so as to provide basic services such as health, education, communication, transportation, among others, through expenditures which have an impact on the wellbeing of citizens and business environment for the private sector (Aladejare, 2019; Jibir & Aluthge, 2019; Ukwueze, 2015).

Empirical Literature

In the empirical literature, several studies have been investigated on the link between government expenditure and inflation rates in Nigeria and rest of the world, using different variables and different estimating techniques. Some of the empirical studies were highlighted in this research work. Bredino Fiderikumo and Dikeogu (2023) empirically examined the impact of government expenditures on inflation in Nigeria. Time series data on inflation, government revenue, government expenditure, and gross domestic product were sourced from the Central Bank of Nigeria (CBN). The aforementioned secondary data cover the period from 1981 to 2021. The Augmented Dickey Fuller (ADF) unit root test and Johansen co-integration test were used to testing for data stationarity and the existence or otherwise of co-integrating equations respectively. Thereafter, data were analyzed using Parsimonious Error Correction techniques. Findings from the study show that government expenditure and revenue both have a positive relationship with the rate of inflation, though the latter is not statistically significant. Also, there is a positive but insignificant relationship between inflation and gross domestic product. In line with the above findings, we, therefore, recommend that the Nigerian government at all levels (local, state, and federal) should be tactful in the use of fiscal policy tools to avoid triggering inflationary pressure and its negative multiplier effects on the welfare of its citizenry.

Adam and Hamidu (2023) examined the relationship between government expenditure and inflation in Nigeria. The study uses an econometric model to analyze the data from 1980 to 2020. The findings show that government expenditure has a positive impact on inflation in Nigeria, indicating that when the government spends more, inflation tends to increase. The study recommends that the government should implement effective policies to ensure that its expenditure does not lead to excessive inflation in the economy. Oyekanmi & Adeleke (2023) examined the relationship between government expenditure and inflation in Nigeria using annual time series data covering the period from 1980 to 2019. The study employed the Johansen cointegration methodology to investigate the long-run relationship between the variables, as well as the Vector Error Correction Model (VECM) to examine the short-run dynamics of the relationship. The results indicated a positive and significant long-run relationship between government expenditure and inflation in Nigeria. In the short-run, government expenditure was found to have a positive and significant impact on inflation. The study recommends that policymakers should exercise caution in increasing government spending to avoid further increases in the inflation rate. Furthermore, the study suggests that policymakers should focus on measures aimed at promoting economic growth, as this has the potential to reduce the inflation rate in Nigeria.

Gbadebo, (2023) conducted a study on the relationship between public expenditure and inflation in Nigeria using time series analysis. The aim of the study was to examine the impact of public expenditure on inflation, and specifically, to determine how changes in public expenditure affect inflation in Nigeria. The research employed a time series analysis of data from 2000 to 2022, using econometric tools such as unit root tests, co-integration tests, and vector error correction model (VECM). The results of the analysis revealed a positive and significant relationship between public expenditure and inflation in Nigeria over the period. The study found that an increase in public expenditure led to a corresponding increase in the general price level in Nigeria. However, the analysis also revealed that a short-run deviation from the long-run equilibrium relationship between the two variables exists. Therefore, the study recommended that policymakers should carefully manage public expenditure to avoid inflationary pressures, especially in the short run. The findings of this study contribute to the literature on public expenditure, inflation, and economic policy in Nigeria, and provide valuable insights for policymakers in formulating effective economic policies.Yusuf (2023) examined the relationship between government expenditure and inflation in Nigeria using a vector error correction model. Using annual data from 1980 to 2019, the study finds that government expenditure has a significant positive effect on inflation in Nigeria in both the short and long run. The results further suggest that government expenditures on social services and infrastructure have a greater impact on inflation compared to other expenditure categories such as defense and debt service. The study concludes that policymakers in Nigeria should carefully consider the impact of government spending on inflation and implement measures to ensure that expenditures do not cause excessive inflation. The findings of this study have important implications for policymakers and researchers in the field of macroeconomics and public finance.

Olayiwola (2022) investigated the causal relationship between government expenditure and inflation dynamics in Nigeria using asymmetric cointegration analysis. The data used in the study covers the period from 1980 to 2019, and the results reveal a long-run relationship between government expenditure and inflation, which supports the validity of Wagner's law in Nigeria. Moreover, the study found that government expenditure has a positive and significant impact on inflation, indicating that an increase in government spending leads to higher inflation in Nigeria. However, the impact of government expenditure on inflation is asymmetric, with a stronger effect during periods of positive government expenditure shocks. The study recommends that policymakers should implement a prudent fiscal policy that ensures that government expenditure is well-targeted and efficient to minimize the inflationary pressure associated with government spending. Chukwuemeka (2022) investigated a study on public expenditure and inflation rate in Nigeria: An empirical analysis. Time series data spanning from 1981 to 2021 was sourced from the Central Bank of Nigeria statistical bulletin. The ARDL bounds testing approach to co-integration was used to analyses the data. Autoregressive Distributed Lag (ARDL) model and Error Correction Model (ECM) were utilized to address the main objectives of the study. The estimated short run coefficient result revealed that one period lag of CAP has a negative and insignificant impact on inflation rate. The long run result showed that capital expenditure has no impact on inflation rate while recurrent expenditure has a positive and significant impact on inflation rate. The result also showed that debt servicing has a positive and insignificant impact on inflation rate. Based on these findings, the study recommended that government should reduce its rate of borrowing and also ensure that borrowed funds and greater part of its

expenditures are strictly channelled to productive ventures that are capable of transforming the economy.

Akobi, Umeora and Atueyi (2021) conducted a study on the effect of government expenditure on inflation rate in Nigeria within a period of 39 years spanning (1981-2019). 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 analyse the data. The findings of the study indicated a positive and insignificant effect on the inflation rate. This study recommended 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.

Atan and Effiong (2021) investigated the effect of government activities on inflation in Nigeria by testing the presupposition of the critical limit hypothesis that was posited by Collin Clerk. The study measured government activities as a ratio of total government expenditure to aggregate output. The study covered the period 1991 to 2019 and time series data, obtained from the Central Bank of Nigeria statistical bulletin and the World Bank database, were utilized for data analysis. The study utilized the Augmented Dickey-Fuller unit root test, Bounds test for cointegration, and the error correction model (ECM). While the bounds test for cointegration revealed the existence of a long run relationship between government activities and inflation in Nigeria, the ECM however showed that government activities do not propel inflation in Nigeria over the study period. Following this finding, the study concluded that increased government expenditure in Nigeria is still desirable as it is not inflationary in any way, being that government activities in Nigeria have not reached the 25% critical limit as set by Collin Clerk. Therefore, government needed to use fiscal policy instrument of government expenditure to direct the general price level.

Also, George and Bosco (2020), conducted a study on the impact of government spending on Nigeria's inflation levels between 1999 and 2019. The data for the study were sourced from CBN statistical bulletin and Autoregressive Distributed Lag model was used as the main analytical tool. A long-run relationship among this study's variables was realized, using the ARDL Bounds test. The result also revealed a positive but insignificant relationship between government expenditure and inflation rate in the short run. Moreover, in the long-run, government expenditure has negative and as well statistically significant inflation rate. Money supply has a negative and as well statistically insignificant with inflation rate in the short-run. In the long-run, money supply has a positive and significant relationship with inflation rate. Moreover, exchange rate affected inflation rate negatively and significantly in the short-run and positively and significantly in the long-run. The study therefore recommended among others that government should exercise discretion in spending in order to check inflation rate.

Methodology

The research design adopted in this research is the ex-post facto research design. This is the type of research design involving events that have already taken place. This study relied on secondary sources of data for the analysis. This source of data collection entails obtaining data from the

records of the National Bureau of Statistics (NBS), and Central Bank of Nigeria (CBN), from 1981-2021.

Model Specification

In line with the theoretical underpinnings of the New Keynesian theory, the models in this study specified to capture the existing relationship between government expenditure and inflation rates in Nigeria. The independent variables used in this study are; (1) Government Capital Administrative Expenditure ($GCEXP_{ADM}$), (2) Government Recurrent Administrative Expenditure ($GREXP_{ADM}$), (3) the Exchange Rate of the Naira against the U.S. Dollar (EXCHR), (4) Money Supply (MS), while the dependent variable is Inflation Rate in Nigeria (INFLR). The functional form of the models is presented as:

$$INFR = f(GCEXP_{ADM}, GREXP_{ADM}, EXR, MS) \quad (3.1)$$

Econometric form of equation 3.1

$$INFR = \alpha_0 + \alpha_1 GCEXP_{ADM} + \alpha_2 GREXP_{ADM} + \alpha_3 EXR + \alpha_4 MS + \mu_1 \quad (3.2)$$

Where:
INFR = Inflation rate in Nigeria
$GCEXP_{ADM}$= Government Capital Administrative Expenditure
$GREXP_{ADM}$ = Government Recurrent Administrative Expenditure
EXR = Exchange Rate of the Naira against the U.S. Dollar
MS = Currency in circulation (being proxy for money supply in the economy)
α_1, α_2, α_3, and α_4; are the parameters to be estimated
μ, is the stochastic or error terms

The behavioural assumptions, the a priori, or the presumptive signs will be stated as follows:
$\alpha_{1-4}>0$: This, is in line with the Keynesian model which implies the existence of a positive relationship between government capital expenditure and inflation rates in Nigeria. This study covered the period of 1981-2021 and examined the extent to which government expenditure has impacted on inflation rates in Nigeria. Econometrics method of Autoregressive Distributed Lag (ARDL) model was employed in the analysis.

Results and Discussions

In this section, the results of the Autoregressive Distributed Lag (ARDL) model estimation, bound test and ARDL error correction models are presented. The discussion begins by describing the nature of the series and results from the model selection procedure. Then results were interpreted and discussed.

Time Series Unit Root Test (s)

The time series under consideration should be checked for stationary before one can attempt to fit a suitable model. That is, variables have to be tested for the presence of unit root(s) and the order of integration of each series. In this study, the Augmented Dickey Fuller (ADF) unit root tests were employed to test for the time series properties of model variables. These results are presented in table 4.1.

Table 4.1 Unit Root Test using Augmented Dickey-Fuller (ADF) Test

Variables	*Augmented Dickey-Fuller Test*		Lag	Order of int.	Remark
	@ level	@ 1st Diff			
INFR	-4.101990	-	Maxlag=9	I (0)	Stationary
Log($GCEXP_{ADM}$)	-2.183326	-10.84046	Maxlag=9	I (1)	Stationary
Log($GREXP_{ADM}$)	-0.272980	-6.636244	Maxlag=9	I (1)	Stationary
Log(EXR)	-1.410221	-5.738920	Maxlag=9	I (1)	Stationary
Log(MS)	-0.088558	-4.213745	Maxlag=9	I (1)	Stationary
	1% level	-4.211868			
Test of CV	5% level	-3.529758			
	10% level	-3.196411			

Source: *Author's own computation using E view 10*

The above results revealed that government capital expenditure on administration ($GCEXP_{ADM}$), government recurrent expenditure on administration ($GREXP_{ADM}$), exchange rate (EXR) and broad money supply (MS) were stationary after taking their first differential, that is integrated of order one [I (1)].

While inflation rate (INFR) was stationary at level. The mixed order of integration suggests an underlying long run relationship. Hence the use of the ARDL approach became justified.

Cointegration Estimation (ARDL Bounds Test)

The condition for using the ARDL is satisfied. Hence, the cointegration bounds tests will be employed and the F-statistic will determine whether the variables have a long run relationship. ARDL integrates dynamics of the long run and short run without losing information about the long run.

Table 4.2: ARDL Bounds Test result for cointegration

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	6.606169	10%	2.20	3.09
k	4	5%	2.56	3.49
		2.5%	2.88	3.87
		1%	3.29	4.37

Source: *Author's own computation using E view 10*

Table 4.2 revealed the long-run relationship between the variables in model one as specified in the third chapter of this work. The result indicated that the variables exhibited a long-run relationship. In other words, there is a long-run association among the variables in the model. This is indicated by the ARDL F-statistic value of 6.606169 which is greater than the 5% upper bound 1(I) Bound value of 3.49. Thus, the null hypothesis of no long-run relationship exists" is rejected. This is a sufficient condition to estimate the conventional ARDL error correction model (ECM).

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ARDL-ECM Test for Short Run

Since the results of the ARDL Bound test of the model indicated that a long-run cointegration relationship existed between the dependent and explanatory variables, the ARDL-ECM test was carried out to adjust for the short run. The results obtained are presented in tables 4.3.

Table 4.4 ARDL Error Correction Regression

ARDL Error Correction Regression
Dependent Variable: D(INFR)
Selected Model: ARDL(4, 3, 3, 4, 4)
Case 2: Restricted Constant and No Trend
Date: 04/22/23 Time: 11:51
Sample: 1981 2021
Included observations: 37

ECM Regression
Case 2: Restricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INFR(-1))	0.295875	0.123365	2.398365	0.0310
D(INFR(-2))	-0.059005	0.143190	-0.412070	0.6865
D(INFR(-3))	-0.553978	0.180949	-3.061520	0.0085
DLOG($GCEXP_{ADM}$)	-7.744750	4.659540	-1.662128	0.1187
DLOG($GCEXP_{ADM}$(-1))	18.70760	4.779025	3.914523	0.0016
DLOG($GCEXP_{ADM}$(-2))	7.045247	4.229627	1.665690	0.1180
DLOG($GREXP_{ADM}$)	-9.418827	8.527097	-1.104576	0.2880
DLOG($GREXP_{ADM}$(-1))	4.798167	8.596346	0.558164	0.5855
DLOG($GREXP_{ADM}$(-2))	30.05187	6.631114	4.531949	0.0005
DLOG(EXR)	-13.69137	6.407191	-2.136876	0.0507
DLOG(EXR(-1))	-3.400858	7.074210	-0.480740	0.6381
DLOG(EXR(-2))	-17.17864	7.390590	-2.324393	0.0357
DLOG(EXR(-3))	9.311377	5.883499	1.582626	0.1358
DLOG(MS)	80.33898	15.94626	5.038106	0.0002
DLOG(MS(-1))	-17.68669	17.65172	-1.001981	0.3334
DLOG(MS(-2))	-19.42697	17.40129	-1.116410	0.2830
DLOG(MS(-3))	73.09503	18.43485	3.965047	0.0014
CointEq(-1)*	-0.818863	0.111647	-7.334377	0.0000

R-squared	0.868425	Mean dependent var	-0.023514
Adjusted R-squared	0.750699	S.D. dependent var	15.00182
S.E. of regression	7.490415	Akaike info criterion	7.171620
Sum squared resid	1066.020	Schwarz criterion	7.955309
Log likelihood	-114.6750	Hannan-Quinn criter.	7.447907
Durbin-Watson stat	2.556802		

* p-value incompatible with t-Bounds distribution.

Source: *Author's own computation using E view 10*

The short run relationship between the explanatory variables ($GCEXP_{ADM}$, $GREXP_{ADM}$, EXR and MS) and the dependent variable (INFR) is explained by estimating the ARDL Error Correction Model. Table 4.3 explained the short run effects of changes in the explanatory variables on inflation rate in the first model. The model exhibits a high explanatory ability of 0.750699, implying that 75% of change in the general price level is explained by government

capital and recurrent expenditure on administration and other controlled variables (exchange rate and money supply) stated in the model one. The error correction factor (ECM) integrates the short run dynamics with that of the long run dynamics. The error correction term ECM_{t-1} indicates the speed of adjustment from a short run deviation to the long run equilibrium. The coefficient of the ECM_{t-1} is negative (-0.818863) and very high, supporting the ARDL bounds test result of cointegration. It indicates that about 82% of the previous year's deviation from the long run equilibrium will be restored within a year. Furthermore, the result revealed that the Durbin-Watson (DW)-statistic of 2.556802 indicated that there is no serial correlation. The ARDL error correction model result presented in Table 4.3 shows that the current value of government capital expenditure on administration ($GCEXP_{ADM}$) has a negative effect on inflation rate in Nigeria. This is seen from the result as the coefficient of D($GCEXP_{ADM}$) has a negative value of -7.744750. This implies that as government capital expenditure on administration increase by 1 unit, it would result to about -7.745 units decrease for inflation rate in Nigeria all things being equal. The probability value of 0.1187for government capital expenditure on administration indicates no significant level at 5% (0.05) level of significance. Likewise, the current value of government recurrent expenditure on administration ($GREXP_{ADM}$) has a negative impact on inflation rates in Nigeria, with a coefficient of -9.418827. This implies that if government recurrent expenditure on administration ($GREXP_{ADM}$) increases by 1 unit, this would lead to decline in general price level by 9.418827all things being equal. This result is not in agreement with our expected result and as well with some empirical results. The probability value of 0.2880 for government recurrent expenditure on administration indicates no significant level at 5% (0.05) level of significance. Table 4.3 further revealed that the controlled variable of exchange rate (EXR) has a negative impact on inflation rate in Nigeria as the coefficient of D(EXR) has a negative value of -13.69137. The negative value of -13.69137 for exchange rate (EXR) indicated that a one percent increase in exchange rate would result to about 13.671 units reduction in the general price level in Nigeria all things being equal. The corresponding probability value of 0.0507 showed that the variable (exchange rate) has significant impact on inflation rates for the period of the study. This assertion is also made because the corresponding probability value of 0.0507 is less than or equal to 5% (0.05) level of significance.

Finally, Table 4.3 further revealed that the current value of broad money supply (MS) has a positive effect on inflation rate in Nigeria as the coefficient of D(MS) has a positive value of 80.33898. This also conforms to apriori or theoretical expectation as increase in money supply (MS) should result to an increase in the general price level. The positive value of 80.33898 for money supply (MS) indicated that a one percent increase in money supply would result to about 80.34 units increase in the general price level, holding every other variable constant. The corresponding probability value of 0.0002 showed that money supply is statistically significant at 5% as the probability value is greater than 0.05.

Conclusion and Recommendations

This study has empirically examined the relationship between government expenditure (disaggregated into capital and recurrent) and inflation rate in Nigeria using annual time series data for the period 1981-2021. The study uses Autoregressive Distributed Lag (ARDL) model. To ensure robustness of results, the study accounts for structural breaks in the unit root test and

the co-integration analysis. From the outcome of the findings above, the study concludes that disaggregated government expenditure has a positive but insignificant effect on inflation rate in Nigeria. The study also found that government expenditure has positive and significant effect on inflation rate in both the short-run and long-run period. Other variables like exchange rate and money supply also affected inflation rates during the period of study.

Based on the empirical findings of the study, the following recommendations were made for sound policy formulations in the future.

i Government needs to exercise discretion in spending in order to check inflation rate. This can be done by channeling spending on productive activities that will cushion the effect of inflation rate rather than worsen the effect of inflation on the economy.

ii Government has to monitor the contract awarding process of capital projects closely, to prevent against over estimation of cost. This will bring about significant impact of public spending on the general price of goods and services.

iii Fiscal policy measures are required to be well coordinated so as to control excessive rise in the general price level in Nigeria. Based on the results, government is needed to comply on contractionary measure of fiscal policy (reduce it excessive spending on projects that are not visible or not implemented).

iv There is need for the government to efficiently engage monetary policy instruments that are adequate in ensuring a given level of money supply that stabilizes prices.

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