Evaluating Government Consumption Expenditure Effect on Current Account in Nigeria

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Abstract: This study evaluates the effect of government consumption expenditures on the current account in Nigeria covering the periods from 1980 to 2019. The study answered the question, does government consumption expenditure affect the current account in Nigeria? Employing the Autoregressive Distributed Lag (ARDL) bound cointegration testing approach for evaluation, the unit root test results show a mixed order of stationarity. The ARDL bound test result shows that there exists a long-run relationship among the variables. The estimated coefficients of the long-run relationship are positive and statistically significant for the consumption expenditure, LOG (GCON), and the growth rate of GDP (GDPGR), at a 5% significant level. This shows that an increase in the government consumption expenditure results in a decrease in the current account balance of Nigeria. The coefficient of the budget deficit, DEFICIT shows a positive sign, indicating that government budget deficit leads to a current account deficit, thus supporting the twin deficit proposition. The study, therefore, recommends that the Federal Government of Nigeria should reduce the level of borrowing as this would reduce debt service payment.

Keywords: Government consumption; Current account; Bound cointegration; ARDL; Nigeria

JEL Classification: B22; C13; F32; H50; N47

1. Introduction

There had been several debates among scholars on the interaction effect between fiscal policy and balance of trade. Among the scholars include, Ahmed (1987) that there exists a negative relationship between increases in expenditures of the government and the balance of trade in the 18th and 19th centuries. Baxter (1995) that as the final consumption expenditures increase by 1%, it results in a 0.5% decline of the current account balance. The views of the neoclassical economists are that government consumption expenditures on goods and services affect both output and investments positively while spending based on worked hours negatively affect the two variables (see Baxter & King, 1993). While, Oseni and Onakoya (2013) were of the view that issuance of bonds by the government, raises the rate of interest, leading to higher consumption expenditure as a result of the wealth effect. High-interest rate leads to currency appreciation, and a loss in competitiveness sets in, coupled with a higher marginal propensity to consume, leads to deterioration of the current account (Oseni & Onakoya, 2013).

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On the other hand, Abbas, Bougha-Hagbe, Fatas, Moun, and Valleso (2011) stated that the question most economies have asked over time is, how has the adjustment of fiscal policy resulted in resolving problems relating to external balances? The continuous deterioration of the government budget, as well as trade deficit in most of the advance and emerging economies in the 1980s and 2000s, brought attention to the twin deficit hypothesis (Abbas, 2020). The hypothesis states that as the economy suffers fiscal shocks as a result of an increase in government expenditure or reduction in taxes, leading to a budget deficit, also results in a trade deficit. This implies that there is a positive correlation between budget deficit trade deficits (Abbas, 2020).

Government consumption expenditure is the values of both goods and services utilized by various agencies, departments, and institutions of governments, in the provision of goods and services to the population (Cavallo, 2005). These types of goods and services which include, national defense, administrative activities, are not easily provided by private business owners. On the other hand, the current account balances of countries are the differences between an economy's export and imports of goods and services, as well as income. It also includes the differences between an economy's national income and domestic investments and consumption. A greater amount of local expenditure especially in the advanced economies is mainly government consumption expenditures (Cavallo, 2005).

In Nigeria, the government's final consumption expenditure in 2003 was 23.926% of the Gross Domestic Product (GDP). In 2013, the Nigerian government spent a total of 41.6 billion dollars, thus placing the country 38th in the global rankings and a share of the global consumption expenditures to 0.31%. The final consumption expenditures in 2015 and 2016 were -11.897% and -15.116% respectively. The final consumption expenditures as a percentage of the GDP in 2017, was 4.6% of the GDP and 22.3 billion US dollars, in 2018, about 33.16% of the GDP (The World Bank, 2019). Figure 1 below shows the Nigerian government consumption expenditures from 1980 to 2019.

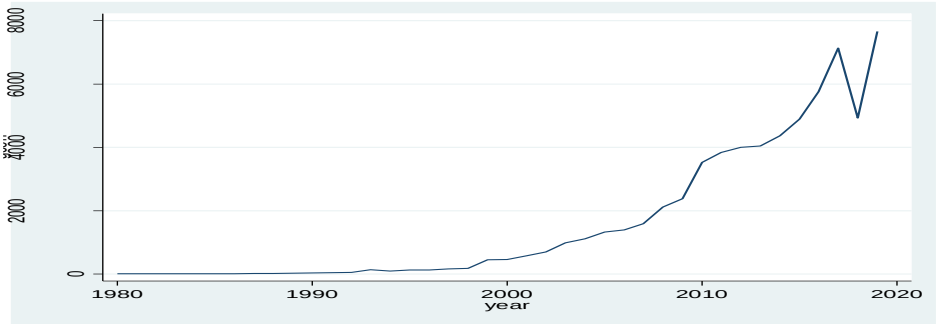

Figure 1. The Government Consumption Expenditures of Nigeria from 1980 -2019

From the figure, it could be seen that consumption expenditures of Nigeria were on a constant increment from 1980; it, however, decreased between 1987 and 1990. From the figure, the consumption expenditures of the government continued to increase on a higher scale from 2004 to 2019. The current account balance in 2000 was US$7.01 billion, in 2005, US$25.57 billion, and in 2008 US$29.34 billion (Sanni, Musa & Sani, 2019). There was a decline in 2011 to the tune of US$10.75 billion and in 2014 to US$1.28 billion. This drastic decline was attributed to higher import bills and deficits in both the services and income accounts of the country. As a result of a drop in the prices of crude oil, in 2015, the country recorded a deficit of US$15.44 billion and in 2016, there was a surplus of US$2.72 billion (Sanni, et al, 2019). However, in the second quarter of 2020, the current account revised from -4.9% of the GDP to -3.4%, thus moving in line with the balance of trade decline during the periods. During the second quarter of 2020, the country's balance of trade declined

negatively from -1.2% of the GDP to -4.0% (Proshare report, 2020). Figure 2 below shows the current account balance (CA) in Nigeria from 1980 to 2019:

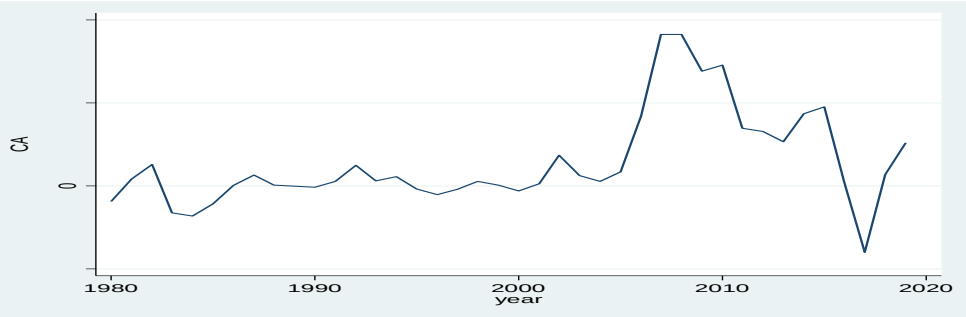

Figure 2. The Current Account Balance of Nigeria from 1980 -2019

A look at the figure of the country's current account showed a record low in the 1980s as the figures are close to negative. The figure showed an upward spike in the country's current account from 1981 to 1996, with a surplus for Nigeria in the 1990s. The figure showed the current account balance to be fluctuating in the period from 2000 to 2010; also, the country recorded a deficit in 2015 and a surplus in 2016 2018, and 2019 respectively.

Studies on the effect of government consumption expenditure had been conducted widely and yet no consensus was reached among scholars. Among the scholars include Kim and Roubini (2003) which showed that there exists a twin divergence for the US economy instead of a twin deficit. However, Ravn, Schmitt-Grohe, and Uribe (2012) noted that fiscal shocks reduce the current account for four industrialized economies including the US. And a study by Monacelli and Perotti (2007) for some Organisation of Economic Cooperation and Development (OECD) countries, noted a deteriorating balance of trade as a result of an increase in public expenditure and a little effect in the case of the US economy. Enders, Müller, and Scholl (2011) on the other hand argued that there is a possibility of having either twin deficit or twin divergence differences as a result of trade price elasticity. Though some institutions in support of a twin deficit approach push for fiscal consolidation in order to decrease the current account deficit, there is still a question on fiscal consolidation credibility in correcting imbalances in the current account in a situation where there exists a twin divergence phenomenon (Abbas, 2020).

As studies on the effect of fiscal policy on current account balance continued to attract debates among researchers without conclusive evidence, theoretical debates on current account balances explaining variations in fiscal measures had centered on macroeconomic models. Among the models include the Mundell–Fleming, and Ricardian Equivalent models. In the Mundell–Fleming approach, fiscal deficit causes current account deficit, while the Ricardian equivalent hypothesis posits that deficit financing, either through reduced taxes or by issuing bonds does not change the present value wealth of individual households, since both temporarily reduced taxes and issuance of bonds represent future tax liabilities (Kim, 1995; Oseni & Onakoya, 2013).

Following the twin-deficit hypothesis, it is expected that the recorded fiscal deficit is accompanied by a huge current account deficit (Kim & Roubini, 2004). On the other hand, the Keynesian principle suggests that increases in fiscal deficit as a result of expenditure increment, households will be compelled to utilize the additional income to boost consumption, thereby causing national saving, both public and private to decline (Ekundayo, 2011). The implication of this is that the country would resort to borrowing unless the local investment activities decrease enough to offset the shortfall in the saving

rate. Nonetheless, the Keynesian approach centered on the fact that there is a positive interaction effect between fiscal deficits and private consumption, implying that higher deficit results in higher private consumption expenditures. This viewpoint however may not be realistic according to Briotti (2005), based on the literature on the expansionary effect of fiscal consolidation.

It, therefore, becomes crucial to understand the effect of government consumption on current account dynamics in Nigeria, as the performance of the economy in the recent past has been discouraging. For instance, since the Nigerian government embarked on the Structural Adjustment Programme (SAP), geared towards liberalization of the economy, it has in practice led to a decline of the economy, and further worsened the current account imbalances (Oseni & Onakoya, 2013). Thus understanding current account dynamics, might lead to a mitigation of these effects; though it is still unclear what the current account determinants are, and also, not yet if the imbalances are sustainable. Equally, the burden of debt service repayments has also contributed to the huge current account deficits of the country. As an import-dependent economy, consumption expenditures which constituted a greater part of the total expenditures, and a greater share of the total output, have resulted in a huge trade deficit for the country. This study, therefore, tends to answer the following questions: how do government consumption expenditure shocks affect current account balance in Nigeria? What are the other variables that affect the current account balance in Nigeria? The overall objective of this research is therefore to evaluate the effect of government consumption expenditure shocks on the current account in Nigeria.

2. Literature Review

In the literature, it is argued that that there are opposite effects of the consumption expenditures on goods and hourly worked on key macroeconomic variables which include, private investment and the total output. These variables are the key determinants of the current account (Cavallo, 2005). The Neo-Classical school posits that there is a positive effect between expenditures on goods, output, and investment; and a negative effect between hourly work (Baxter & king, 1993; Finn, 1998). However, Baxter (1995) noted that expenditures on hourly worked, are smaller in magnitude than the goods expenditures on the current account. According to the author, a 1% increase in the hourly worked, decreases the current account to 0.5% of the GDP.

Studies on fiscal policy effects on current account balance according to Abbas et.al. (2011) include effect on consumption, tradable goods demand, and investment. A large part of the local demand for goods is always accounted for by the government, thus depending on the propensity of import, a change in the demand for import by the government leads to a movement in the balance of trade. Also, changes in the rate of exchange affect the current account by altering the relative prices of non-tradable goods (Abbas et.al. 2011). An increased government spending on non-tradable goods like real estate sectors or services can lead to exchange rate appreciation, thereby tilting forward private consumption and production away from tradable goods. Other channels through which fiscal policy affects the current accounts include the country's risk premia and rate of interest (Abbas et.al, 2011).

2.1. Government Expenditures as a Measure of the Size of Government

In the literature, there exist several ways through which the size of government is measured. According to Alesina, Glaeser and Sacerdote (2001), these measures are typically based on, either

total expenditure of the government, or general consumption expenditures. The authors were of the view that the relative measure of the government size is the expenditure ratio of government and that depicts how the government utilizes local resources. However, Leonard (1986) argued that the budget might not actually state clearly, the true size since it may not account for the government 'quiet size' activities. The government's role in an economy, therefore, goes beyond the collection of revenues and spending (Leonard, 1986).

2.2. A Cross Country Study on Government Consumption Expenditure

Cross-country studies on government consumption expenditure show that in 2013, the Nigerian government spent a total sum of 41.6 billion dollars on consumption expenditures. This amount brings the country on par with other countries like Greece 41.6 billion dollars, the Czech Republic 41 billion dollars, Ireland 40.6 billion dollars, Algeria 39.7 billion dollars, Malaysia 42.3 billion dollars, and Portugal 43.1 billion dollars respectively. Also, the country's consumption expenditures far exceeded that of the neighboring countries. For instance, consumption expenditures for countries like Cameroun in the same year 2013, was 3.4 billion dollars, Chad 2.6 billion dollars, the Republic of Niger, 1 billion dollars, and the Republic of Benin 0.93 billion dollars respectively. As a percentage of the GDP, Nigeria's consumption expenditures in 2015 and 2017 were 5.94% and 4.6% respectively. The consumption expenditures as a percentage of the GDP in 2017 for Ghana was 8.8%, Niger 15.8%, and Cameroun 11.5% respectively (The World Bank, 2019).

3. Empirical Literature

Bhavesh and Prabheesh (2017) investigate macroeconomic and external factors that affect current account balance in India from 1997 to 2012. The study shows that the twin deficit hypothesis that fiscal deficit reduction ameliorates the current account deficit applies. Işık, Yılmaz, and Kılınç (2017) evaluate the relationship between current account balance and credit to firms in 26 OECD countries from 2005 to 2015. The study results indicate that credit to households and firms has a negative effect on the current account balance in the short run while credit to firms and government has a positive effect in the long run. Klemm and Iakova (2013) investigate growth following investment and consumption-driven current account crises for industrialized countries. The results show that a deficit reversal that follows investment boom is identified with better growth than those following consumption booms. The study finds that large current account deficits are a result of consumption or non-productive investment booms. On the examination of the effect of fiscal policy on Nigeria's current account, Oseni and Onakoya (2013) using the Structural Vector Auto Regression (VAR) model approach, show that expansionary fiscal policy has a positive effect on the output and exchange rate and negatively impacts the current account balance.

3.1. Limitations of the Previous Studies

From the reviewed literature, it is evident that since a study by Cavallo (2005) for the US economy, few studies had been conducted on the effect of government consumption expenditure on the current account of countries. Most studies had either focused on how macroeconomic variables affect current accounts (see Bhavesh & Prabheesh, 2017; Işık et al, 2017; Klemm & Iakova, 2013; Oseni &Onakoya, 2013; Nickel & Vansteenkiste 2008). A recent study on government expenditure and current accounts

by Abbas (2020) evaluated the twin deficit approach for the US economy. Thus, it is evident that few studies had been conducted for emerging and developing economies. This study, therefore, fills the gap in the literature by extending the work from 1980 to 2019, using an ARDL estimation procedure.

4. Methodology of Research

4.1. Data analysis method

The study adopts an Auto Regressive Distributive Lag (ARDL) model approach for evaluation. The current account balance is the dependent variable, while government consumption expenditures, budget deficit, gross domestic product, and interest rate are the independent variables. The model for the effect of government consumption expenditures on current account in Nigeria is therefore specified as follows:

$$CA = \text{F}(GCON,\ GDPGR,\ INTR,\ DEFICIT) \tag{1}$$

where

CA = The current account balance

GCON = The Government consumption expenditure

GDPGR =The growth rate of Gross Domestic Product

INTR = Interest rate

DEFICIT = government budget deficit

In order to establish a linear relationship between the dependent variable and the independent variables, the econometrics model is therefore specified as follows:

$$CA = \alpha_0 + \alpha_1 \text{GCON} + \alpha_2 GDPGR + \alpha_3 INTR + \alpha_4 DEFICIT + \mu_t \tag{2}$$

where

μ_t = Error term

α_0 = the constant term

α 's = the parameters to be estimated

For a statistical reason the variables are transformed into lin-log equations as follows:

$$CA = \alpha_0 + \alpha_1 \text{LOG(GCON)} + \alpha_2 GDPGR + \alpha_3 INTR + \alpha_4 DEFICIT + \mu_t \tag{3}$$

4.2. Method of Result Evaluation

This study utilizes the Augmented Dickey-Fuller (ADF) test for the stationarity test. This is because, the Auto Regressive Distributed Lag (ARDL) bound test procedure is conducted based on the assumption that, the variables under consideration are either integrated of order zero or order one. Hence order of integration was determined using the ADF test procedures. The null hypothesis that guided the test is stated as follows: H0: β=0 (β has a unit root); H1: β upper critical bound, H0 is

rejected and concludes that the variables under consideration are cointegrated, otherwise, it is not accepted. However, if F-statistic ≥ lower critical bound ≤ upper critical bound, then the decision becomes inclusive. If the null hypothesis of no cointegration is rejected, a vector error-correction model (VECM) is therefore estimated (Narayan & Narayan, 2006). The VECM model is therefore specified as follows:

$$\Delta CA_t = \beta_0 + \sum_{i=1}^{n} \beta_{1i} \Delta CA_{t-1} + \sum_{i=0}^{n} \beta_{2i} \Delta LOG(GCON)_{t-1} + \sum_{i=0}^{n} \beta_{3i} \Delta GDPGR_{t-1} + \sum_{i=0}^{n} \beta_{4i} \Delta INTR_{t-1} + \sum_{i=0}^{n} \beta_{5i} \Delta DEFICIT_{t-1} + \delta_1 CA_{t-1} + \delta_2 LOG(GCON)_{t-1} + \delta_3 GDPGR_{t-1} + \delta_4 INTR_{t-1} + \delta_5 DEFICIT_{t-1} + \varepsilon \ldots\ldots\ldots (4)$$

where

Δ = Difference operator

εt = Stochastic term

Conducting ARDL bound test, an Ordinary Least Square (OLS) is estimated firstly in order to establish if there exists a long-run relationship between the variable under consideration. The test is based on an F-Statistic for the joint statistical significance of the lagged variables. The null hypothesis of no cointegration ($H_0 : \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = 0$) is evaluated using the Pesaran et.al. (2001) procedure. The underlining assumption is therefore stated as follows: if the F-statistic is > upper critical bound, H0 is rejected and concludes that the variables under consideration are cointegrated, otherwise it is not accepted. However, if F-statistic ≥ lower critical bound ≤ upper critical bound, then the decision becomes inclusive. If the null hypothesis of no cointegration is rejected, a vector error-correction model (VECM) is therefore estimated (Narayan & Narayan, 2006). The VECM model is therefore specified as follows:

$$\Delta CA_t = \alpha_0 + \sum_{t=1}^{n} \alpha_{1i} CA_{t-1} + \sum_{t=1}^{n} \alpha_{2i} \Delta LOG(GCON)_{t-1} + \sum_{t=1}^{n} \alpha_{3i} \Delta GDPGR_{t-1} + \sum_{t=1}^{n} \alpha_{4i} \Delta INTR_{t-1} + \sum_{t=1}^{n} \alpha_{5i} \Delta DEFICIT_{t-1} + \lambda ECM_{t-1} + \mu_t \ldots\ldots\ldots (5)$$

where:

ECM = The error correction term

λ = the error coefficient

4.3. Presentation and Analysis

The descriptive statistics for the variables under consideration are therefore presented in table 1 below:

Table 1. The Descriptive Statistics

	CA	GCON	GDPGR	INTR	DEFICIT
Mean	2.916950	3.667327	18.80231	6.275542	-613.4903
Median	2.462145	2.084226	6.419219	6.959583	-102.5900
Maximum	20.73932	9.448340	550.5400	11.06417	32.05000
Minimum	-6.289509	0.911235	-7.060000	0.316667	-4913.820
Std. Dev.	5.590810	2.809908	86.35847	2.785681	1148.532
Skewness	1.046099	0.861125	6.056597	-0.555914	-2.381948
Kurtosis	4.412237	2.282249	37.80187	2.515798	7.965212
Jarque-Bera	10.61951	5.802180	2263.166	2.451020	78.91340
Probability	0.004943	0.054963	0.000000	0.293608	0.000000
Sum	116.6780	146.6931	752.0923	251.0217	-24539.61
Sum Sq. Dev.	1219.029	307.9277	290853.6	302.6407	51445929
Observations	40	40	40	40	40

From table 1 above, the descriptive statistics indicated that from 1980 to 2019, four of the variables under study showed averaged positive mean values and one variable, DEFICIT indicates a negative mean value, all with 40 observations. The standard deviation indicated that the highest standard deviation is recorded by the variable DEFICIT, while the least standard deviation is recorded by variable INTR. The Jarque-Bera (JB) test of normality for the variables under consideration revealed that four of the variables are significant at a 5% level.

4.4. Correlation

In order to ascertain the degree of relationship between the current account, government consumption expenditure, the growth rate of GDP, the interest rate, and budget deficit, a correlation is therefore conducted. The result in table 2 below, it shows that there exists a positive relationship between the current account and the independent variables. The relationship shows GCON (42%), GDPGR (16%), INTR (13%), and DEFICIT (08%) respectively.

Table 2. The Correlation Matrix

	CA	GCON	GDPGR	INTR	DEFICIT
CA	1.000000	0.429179	0.165047	0.133535	0.087661
GCON	0.429179	1.000000	-0.099005	0.318045	-0.378987
GDPGR	0.165047	-0.099005	1.000000	-0.163225	0.077115
INTR	0.133535	0.318045	-0.163225	1.000000	-0.353169
DEFICIT	0.087661	-0.378987	0.077115	-0.353169	1.000000

4.5. Unit Root Test

The results of the Augmented Dickey-Fuller (ADF) unit root test obtained are presented in table 3 below as follows:

Table 3. The ADF Unit Root Test Results

Variable	Level difference	Prob.	First difference	Prob.	Order of integration
CA	-2.810097	0.0663	-5.967427	0.0000**	I(1)
GCON	-2.669140	0.0887	-5.915466	0.0000**	I(1)
GDPGR	-6.160989	0.0000**			I(0)
INTR	-2.136564	0.2321	-6.536317	0.0000**	I(1)
DEFICIT	-6.007475	0.0000**			I(0)
Note: * , ** and *** denote 1% ,5% and 10% critical values respectively					

From table 3 above, the results showed that two of the variables, CA, GCON, and INTR are stationary at the first difference I(1) at 5% significant levels in the ADF test procedure. The other two variables, GDPGR, and DEFICIT are stationary at the level difference I(0) at 5% significant levels in the ADF test procedure respectively. Therefore, since there exists a mixed order of stationarity among the variables, an ARDL model Procedure is therefore conducted. Oteng-Abaiye & Frimpong (2006) stated that instead of utilizing the Johanson cointegration approach which requires that all variables are integrated of order one I(1), an ARDL that incorporates variables that are I(0) and I(1) are therefore utilized.

4.6. Auto Regressive Distributed Lag (ARDL), Bound Testing Approach

The study tries to establish whether there exists a long-run relationship among the variables under study by conducting a bound cointegration test procedure. An F-statistic to test the long-run relationship is therefore computed. An automatic lag length of ARDL ARDL (2, 4, 1, 0, 0) is adopted. The result of the ARDL bound cointegration test is presented in table 4 below:

Table 4. The ARDL Bound Test Result

Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	k
F-statistic	7.210474	4
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

The ARDL bound test result from table 4 above indicated that the F- Statistic value is greater than the critical value bounds at both 1%, 5%, and 10% significance levels respectively. We can see that the value of 7.210474 is higher than 2.86 and 4.01 critical values at 5% significant levels. The hypothesis of no long-run relationship is therefore rejected. Thus it showed that the ARDL model estimated is proven to determine the long-run slope-estimated coefficients and the short-run dynamic-estimated coefficients. Hence there exists a long-run relationship between CA, GCON, GDPGR, INT, and DEFICIT.

4.7. Testing for the Long Run Relationship

The long-run model for the relationship between consumption expenditures and the current account is therefore presented as follows:

Table 5. The Long Run Coefficients Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(GCON)	2.010212	1.062763	1.891495	0.0707
GDPGR	0.428390	0.154150	2.779054	0.0104
INTR	-0.005125	0.222177	-0.023065	0.9818
DEFICIT	0.000786	0.000646	1.216984	0.2354
C	-1.124287	1.717884	-0.654461	0.5190

The results showed that the estimated coefficients of the long-run relationship are positive and statistically significant for LOG (GCON) and GDPGR at the 5% level. The positive coefficient of the variable LOG(GCON) implied that the consumption expenditure contributed significantly to the decrease in the current account of Nigeria in the long run. The finding conforms to the study by Cavallo (2005) that consumption expenditures of the governments overestimate its role while accounting for current account movement. The estimated results showed that the coefficient of the growth rate of GDP (GDPGR) indicates a positive sign and is significant statistically. Thus there exist a positive relationship between the GDPGR and the current account in Nigeria. This suggests that as the income increases, it results in an increase in spending by the households on imported consumable goods. The implication is that it results in a current account deterioration. The finding is consistent with the findings of Tarawalie (2014) that there exists a positive relationship between the current account deficit and the real GDP for Sierra Leone. The coefficient of the DEFICIT indicates a positive sign and is insignificant statistically at a 5% significant level. The positive coefficient showed that a government budget deficit leads to a current account deficit, thus supporting the twin deficit proposition. The finding goes in line with studies conducted by Onafowora, and Owoye (2006) for Nigeria and that of Tarawalie (2014) for Sierra Leone. However, the monetary policy variable, interest rate shows a negative sign and is insignificant statistically. The results conform to the findings of Corsetti, Meier, and Müller (2006) that the rate of interest responded negatively for the US economy as against the theoretical prediction of positive response.

4.8. The Estimated Short Run ARDL Regression Model

The ARDL (1, 4) is selected based on the Akaike information criterion.

Table 6. The Short Run Error Correction Dynamics

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CA(-1))	0.388433	0.148153	2.621837	0.0149
DLOG(GCON)	4.539311	1.760108	2.578995	0.0165
DLOG(GCON(-1))	-0.366517	2.219855	-0.165108	0.8702
DLOG(GCON(-2))	3.470234	2.215205	1.566552	0.1303
DLOG(GCON(-3))	2.279325	1.893102	1.204016	0.2403
D(GDPGR)	-0.067215	0.143681	-0.467805	0.6441
D(INTR)	-0.005098	0.220935	-0.023072	0.9818
D(DEFICIT)	0.000781	0.000671	1.165255	0.2554
ECM(-1)	-0.994725	0.172116	-5.779403	0.0000
R-squared = 0.770424 F-statistic = 7.321873 Prob(F-statistic) = 0.000025				
Adjusted R-squared = 0.665202 Durbin-Watson stat= 2.001526				

Table 5 above indicates that the short-run error-correction term result ECM(-1) from the ARDL model estimate is negative as expected with a value of -0.994725 and is statistically significant. This implies that there is a possibility for cointegration and therefore the existence of a long-run relationship among the variables. We can therefore conclude that the gap between the long-run equilibrium value and the actual value of the dependent variable CA is corrected with the speed of adjustment equal to -0.99 percent annually. It also showed that there exists a backward move towards equilibrium.The coefficient of determination indicates a value of 0.770424 and the adjusted with a value of 0.665202. This shows that 66% of variations in the dependent variable (CA) are explained by independent variables. The F-statistics results indicate that the overall model is significant with a value of Prob(F-statistic)= 0.000025; while the Durbin-Watson (DW) statistics value of 2.001526 indicates the absence of serial correlation in the model under consideration.

4.9. Diagnostic Test

Under the diagnostic tests conducted, the Normality test results are presented in figure 3 below, shows that the average mean value is -2.96e-16 and a median value of -0.280477. The maximum value is 4.223925 and the minimum value is -7.014235. Evidence from the Jarque – Bera (JB) test indicates that the null hypothesis is therefore rejected and the error terms of the model are normally distributed.

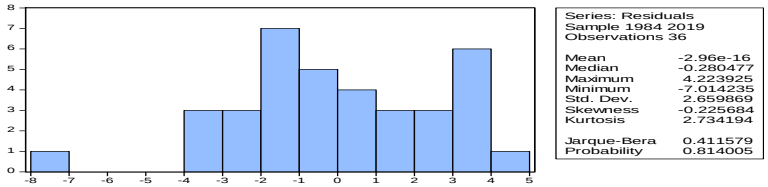

Figure 3. The Normality Test Result

Equally, the serial correlation and Heteroskedasticity tests results as presented in table 7 below, shows that the null hypotheses of no serial correlation are accepted and the Heteroskedasticity test results indicate that the error term of the variables is homoscedastic.

Table 7. The Diagnostic Tests Results

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1.193896	Prob. F(2,22)	0.3219
Obs*R-squared	3.524736	Prob. Chi-Square(2)	0.1716
Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.135632	Prob. F(11,24)	0.3785
Obs*R-squared	12.32355	Prob. Chi-Square(11)	0.3398
Scaled explained SS	4.749205	Prob. Chi-Square(11)	0.9427

4.10. Stability Test

The stability test procedure is conducted using the Cumulative Sum of Recursive Residuals (CUSUM) and the Cumulative Sum of Squares of Recursive Residuals (CUSUMSQ) in line with Durbin, Brown and Evans (1975). To ascertain if the ARDL estimated results are stable, the CUSUM and CUSUMSQ test results are presented in figures 4 and 5 below:

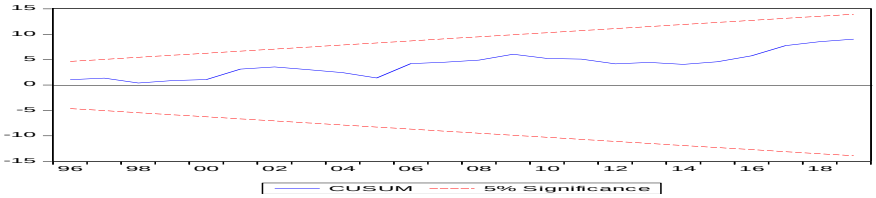

Figure 4. The CUSUM test result

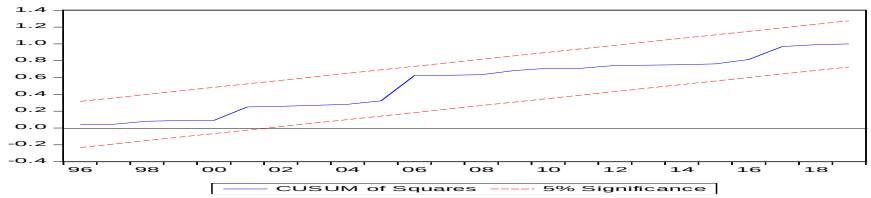

Figure 5. The CUSUM of Squares Test Result

From the figures 4 and 5 above, the critical bounds within the straight lines are significant at 5% level. The CUSUM and CUSUMSQ tests with a blue lines are equally within the area restricted by the lines; thus, the null hypothesis for CUSUM and CUSUMSQ are rejected and the conclusion is that the estimated models are effective with stable recursive residuals.

5. Conclusion and Policy Recommendations

This study contributes to the body of knowledge by evaluating the interaction effect between government consumption expenditure and current account in Nigeria covering the periods from 1980 to 2019. It is noted that Consumption expenditures, such as goods and services used by agencies and departments of the government cannot be economically produced by business enterprises. Examples are public administration and defense. This study particularly evaluated government consumption expenditures on goods and services to ascertain its effect on the current account in Nigeria. Thus, the study answered the question, does government consumption expenditure affect the current account in Nigeria? The stationarity test results for the variables indicate a mixed order of stationarity among the variables. The bound cointegration test results are proven to determine the long-run slope-estimated coefficients and the short-run dynamic-estimated coefficients. The short-run error-correction term

result ECM(-1) from the ARDL model estimate is negative and is statistically significant. This implies that there is a possibility for cointegration and therefore the existence of a long-run relationship among the variables. Based on the findings of the study, the policy recommendations are as follows: The Federal Government of Nigeria should reduce the level of borrowing as this would reduce debt service payment affecting the country's current account balance. There should be more funds allocated to sectors that create employment opportunities for the teeming population.

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