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Budget Deficit, Inflation and Economic Growth in Nigeria: An Empirical Analysis

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Abstract

The taxonomy established by Wagner and Keynes on the effect of government expenditure on economic growth has continued to generate a series of empirical studies but so far no consensus has been achieved on the exact nexus between deficit financing and economic growth and when interacting with inflation variable. The study contributed to this debate by using the disaggregated Vector Autoregression (VAR) approach to investigate the impact of deficit financing on economic growth with inflation as an interaction variable. The study found, amongst others, that overall deficit financing had a positive and significant impact on economic growth when financed through external sources but had a deleterious effect when financed through domestic sources. This could be attributed to the crowding-out effect of the private sector when deficit financing is funded through the domestic loan market. The study also found that overall deficit financing is inflationary which also resulted in to decrease in real interest rates.
Keywords: Budget deficit; Inflation; Economic growth; Vector autocorrelation.

1. Introduction

The taxonomy established by Wagner and Keynes on the effect of government expenditure on economic growth has continued to generate series of empirical studies but so far no consensus have been achieved on the exact nexus between deficit financing and economic growth and when interacted with inflation variable (Adam and Bankole, 2000; Friedman, 1975; Niloy *et al.*, 2013). According to the Wagner's model, government expenditure is exogenous and cannot directly spur economic growth (Wagner, 1883). However, Keynes and other modern economic development theorists especially the Neo-Keynesians are of the view that government expenditure could boost economic activities through the multiplier effect (Eugen and Skinner, 2012; Keynes, 1936). Many countries especially the developing countries have been attracted by the Keynesian idea and have consistently intervened in their economies by way of massive public capital expenditures. In most of the cases, these expenditures are higher than the fiscal revenues accruing to the government leading to unbalancing of the annual budgets or what is technically known as budget deficits or deficit financing.

Budget deficit[1] is therefore, a deliberate fiscal policy approach by governments to spur economic growth in line with the Keynesian orthodoxy. According to the Keynesian model, budget deficit is crucial for economic development given its expansionary effect on employment, output and national income. This approach is favoured by development theorists and routinely recommended for developing countries that usually lack enough domestic savings and capital formation to build critical infrastructures to boost the productive capacity needed to activate economic growth. Moreover, economies of developing countries are characterised by low capacity and low participation of the private sector in economic activities, thus necessitating active government interventions by way of expansionary fiscal financing to raise domestic savings, gross capital formation and national income.

Fiscal deficit comes about because of increase in public spending with no corresponding increase in revenue. In other cases, fiscal deficit results from decrease in tax revenue without a concomitant decrease in public spending or a decrease in tax revenue while public spending remained unchanged or even rises. In most developing countries including Nigeria, government (public sector) plays a dominant role in economic activities which results in high fiscal bills which are usually financed by revenue from taxes and non-tax sources. In more often than not, revenues lags behind public expenditure resulting to unbalancing of the annual budgets. With low-tax-to GDP, it is

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[1] Budget deficit or deficit financing is the excess of government expenditure over its revenues within a given period, usually yearly. Budget deficit or deficit financing will be assumed to mean the same thing and will be used interchangeably in this study.

increasingly difficult for most developing countries to balance their annual budgets as the revenues always lag behind the level of public spending, leaving large deficits in the focus.

Although fiscal deficits were common before the emergence of the Keynesian theories, the macroeconomic theory underpinning this approach has undergone considerable changes since the Keynesian revolution. For instance, the pre-Keynesian presumption was that in peace time the budget should generally be balanced or even in surplus to pay off the government debt generated by war time deficits but that has not been the case as most developing countries have consistently run budget deficits in peace times (Fisher and Easterly, 1990).

Keynes provided a framework on how fiscal deficit behaviour should be analyzed. His earlier emphasis was on fiscal policy and deficit as components of aggregate demand. Keynes found no reason for angling for balance budget when an economy is in recession. Instead, Keynes argued for procyclicality approach, that is, the budget should be in balance on the average over the business cycle - in surplus during booms, and in deficit during recessions. This approach was later developed as a norm for fiscal behaviour by the Keynesian and Neo-Keynesians.

Moreover, by running budget deficits, government has made its intention that the excess expenditure over the accruable revenue will be funded by outside sources. Budget deficits are usually financed through two broad approaches, namely: public borrowing from internal and external sources; and money creation (sometimes through seignorage). Other approaches include: spending from external reserves, sale of government assets, privatisation and official development assistance. Expectedly, these methods of financing budget deficits have different implications for the achievement of other macroeconomic objectives. For instance, financing budget deficit through borrowing especially from external sources could lead to unsustainable debt burden (debt trap). The resultant debt servicing could deprive the government the needed resources to provide critical infrastructure to develop the productive capacity of the economy. Also, borrowing from domestic sources could led to 'crowding out effect' whereby private investment spending and interest sensitive consumer spending are denied credits in place of government or public sector investment. The real danger in government financing of deficit budget through domestic borrowing is that government will be competing with private investors for available loanable funds in the domestic economy which will lead to the private sectors being 'crowded out' of available loanable funds in the domestic market. Naturally, lenders prefer to lend to government than to private sectors because of the theoretical belief that government is the most credible debtor with zero default risk rating. However, government is not known to drive economic development as sustainably as the private sector. Indeed, Khan and Reinhart (1997) remarked that 'an economy can only grow faster and sustainably if the growth is driven by the private sector'.

In Nigeria, government expenditure over the years has maintained upward trajectory driven largely by increasing demand for infrastructural facilities. Data from the Nigeria Bureau of Statistics (2019) show that capital expenditure of the federal government and states have continued to rise in the last four decades, so also are the government revenues from the sale of crude oil and proceeds from royalties. Unfortunately, falling crude oil prices in the international market and intermittent disruptions of production in the Niger Delta area have affected revenues from crude oil. The federal government of Nigeria including the States are therefore, constrained to consistently unbalance the annual budgets with attendant consequences to the achievement of other macroeconomic objectives like low inflation and price stability.

It should be remarked that one of the primary duties of the Central Bank of Nigeria as enshrined in the CBN Ordinance of 1958 was to promote price stability and a sound financial system (CBN, 1958). This primary duty has subsisted in all subsequent amendments to the CBN Act; an indication of the critical role of price stability to the achievement of other macroeconomic objectives. However, the real challenge is how to maintain price stability in the face of persistent budget deficits with its naturally inflationary effects. For instance, in Nigeria, government has pursued deficit financing for most of the periods since the early 1970s. This has in turn, consistently push inflation levels above targets. Budget deficit arises in Nigeria partly as a result of government's deliberate action to unbalance the fiscal budgets due to its avowed expansionary effect in triggering economic activities and partly due to dwindling revenues to the government.

However, it is not yet clear empirically whether this approach to economic development has yielded the desired result for Nigeria since the last four decades. It is also not clear whether deficit financing can actually induce economic growth given the asymmetric interaction with inflation through the money supply mechanism. Studies have shown that deficit financing has a direct effect on inflation and economic growth when examined independently (for instance, Ariyo and Raheen, 1991; Diokno, 2010; Njeru and Randa, 1998; Paiko, 2012). However, little empirical attention has been given to the simultaneous effect of deficit financing on inflation and economic growth especially in a developing country context. Few studies that have delved into this evaluation found that deficit financing has only indirect effect on inflation through the money supply mechanism. Also, these studies used largely aggregate deficit financing with no attempt made to see the simultaneous effect of deficit financing on inflation and economic growth especially in the disaggregated form. Given the above contradictions, this study will investigate the simultaneous effect of disaggregated budget deficits on inflation and economic growth in Nigeria for the period 1980 - 2020.

The rest of the study proceeds as follows: Section 2 provides the context in which the study was undertaken and reviews the literature on budget deficit, inflation and economic growth in a developing country context. In section 3, we discuss the methodological approach adopted by the study while section 4 provides the estimation of the research equations and analysis of findings. Section 5 summarizes and concludes the study with recommendations for policy.

2. Research Context

Nigeria has historically had an unbalanced budget for most of the periods since the early 1970s. Indeed, since 1971 when the country had the first budget deficit post-independence, the practice of unbalancing the annual budgets has become a norm in the country's fiscal operation. This has also been accompanied by high level of inflation indicating some theoretical correlations. For instance, data from the Central Bank of Nigeria and Budget Office of the Federation show that for the most parts from 1970 to 2019, Nigeria has had unbalanced annual budgets with exception of 1971, 1973, 1974, 1979, 1995 and 1996 where budget surplus were NGN0.171billion, NGN0.166billion, NGN1.80billion, NGN1.16billion, NGN1.0billion and NGN32.05billion respectively (CBN, various years). Surprisingly, the highest budget surplus within the period under review was achieved in 1996 during the military regime of late General Sanni Abacha.

In terms of budget deficits, the country deficit financing has maintained a growth trajectory within the period under review. For instance, from a mere figure of NGN0.455billion in 1970, fiscal deficits rose to NGN2.82billion in 1978, NGN3.6billion in 1981, NGN35.76billion in 1991, NGN221.05billion 2001, NGN1.15trillion in 2011, NGN1.577trillion in 2015 and N2.17trillion in 2020 (CBN, 2021). Correspondingly, inflation level in Nigeria, as measured by the consumer price index[2] has also displayed increasing trend within the same period. For instance, using a 5-yearly trend, inflation figure which was 13.76 in 1970 rose to as high as 33.96% within five years in 1975 but fell to 9.97% in 1980. There was further decrease to 7.44% in 1985, 7.36% in 1990 before jumping again to as high as 72.84 in 1995. With the return to civilian rule in 1999, inflation was rein in at 6.93% in 2000. However, from 2005 to 2019, inflation level has never fallen within the target single digit except for 2015. For instance, average inflation figures within the last 15 years were 17.86% in 2005, 13.72% in 2010, 9.01% in 2015, 15.68% in 2016, 16.52% in 2017, 12.09% in 2018, 11.4% in 2019, and 13.25% in 2020 (NBS, 2021).

It should be remarked that the two major goals of monetary policy are low inflation and low unemployment, but in reality, these goals are hardly achieved as there is always a conflict in achieving these two goals simultaneously. For instance, if government targets inflation by reducing money supply, it will create large and unutilised excess capacity in the economy and low employment. Conversely, if the government targets higher employment, the adoption of monetary and/or fiscal policy will move the economy along the short-run aggregate supply curve to a point of higher output but at a higher price. According to Abu and Abdulla (2010), as higher output is achieved, this is followed by lower unemployment, as firms need more workers when they produce less and low workers when they produce more. There is always a trade-off between the desired level of inflation and unemployment which could be complicated for monetary authorities especially when government is pursuing deficit financing. Given this obvious connection between budget deficit and inflation, there is need to investigate the nexus between budget deficit, inflation and long run economic growth in Nigeria.,

3. Review of Literature

3.1. Theoretical Literature

Budget deficit or deficit financing is a popular fiscal policy tool employed by governments to stimulate the economy. According to the Keynesian theory Keynes (1936), deficit financing involved the injection of funds into the economy to stimulate aggregate demand and transit from a period of unemployment to full employment. Deficit financing is both expansionary and inflationary thereby making it difficult to achieve the macroeconomic objectives of full employment and price stability at the same time. As a result of these contradictions, there is need to review both the Keynesian approach and other classical and neo-classical theoretical approaches in literature.

3.1.1. Keynesian Approach

John Maynard Keynes in his celebrated book "The General Theory of Employment, Interest and Money" (1936) advocated for the use of deficit financing as a fiscal policy tool to curb the triple problems of unemployment, low output/growth and national income (economic development). His views were underpinned by the Great Depression in the United States in the early 1930s. According to Keynes (1936), unemployment and depression was as a result of shortfall in aggregate demand. To this end, expansionary government policy in the form of increased public sector spending or a reduction in taxes could stimulate employment, output and income through the multiplier effect. Keynes was of the view that an economy is inherently unstable and needs to be steadied through vigorous government intervention through appropriate fiscal policies. Accordingly, deficit financing is an important tool to achieve a desired level of aggregate demand consistent with full employment. This will be most appropriate for economies facing a shortfall in aggregate demand or an economy in recession or depression.

However, Keynes views of deficit financing being able to stimulate the economy towards full employment and growth is anchored on the multiplier effect. The multiplier effect is based on the assumption of the existence of unutilized human and material resources in the economy. Therefore, an increase in government spending or a cut in tax will increase both investment and consumption, hence leading to expansion of output in multiples of the government expenditure. However, the quantum of growth in output will depend on the marginal propensity to consume (MPC) by the consumers. In other words, government spending will increase total output in line with the level of MPC in the economy. That means, a country with high MPC will witness more rapid growth in total output with government spending than a country with lower MPC.

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[2] Consumer price index is a reflection of the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services usually measured by the Laspeyres method.

3.1.2 Classical Theory

The major premise of the Keynesian multiplier effect has been attacked by the classical economists who argue that deficit financing can ultimately stifle economic growth especially if the fiscal deficit is largely financed by borrowing from the domestic market, the so-called "crowding out effect". When government borrows from available loanable funds in the domestic market, the private investors are crowded out, leaving government as the principal investor in the economy. And as Khan and Reinhart (1997) observed, economic growth can only be sustainable if it is driven by the private sector. Therefore, deficit financing is counterbalanced by the crowding out effect on private sector investment and this will in turn stifle economic growth. Moreover, deficit financing could increase the public debt burden and the resultant service obligation could deprive the government the funds needed to develop critical infrastructure for productive capacities. Furthermore, the multiplier effect will not activate if the economy is already operating at full employment. In that case, an increase in government expenditure funded by debt or seignorage will only lead to inflation and will not stimulate growth in output, employment or national income.

3.1.3. Neo-classical Theory

The neo-classical theorists seem to align with the views of the classical economists that deficit financing could have adverse effect on economic growth through inflationary pressures and weakening of government savings. The major tenets of the neo-classical theorists in deficit financing is that it could weaken government savings and put undue pressure on interest rate which can only be counterbalanced by private savings. However, the crowding out effect will not allow the mitigation of government weakened savings by private savings. This will ultimately, lead to fall in output in the long-run. Besides, the manner in which the deficit is financed is also capable of affecting the level of consumption and investment. For instance, if deficit financing is financed from public borrowing from the domestic loanable funds, it will crowd out private investments and weaken economic growth.

3.2. Review of Empirical Literature

The empirical literature on the relationship between deficit financing, inflation and economic growth is broad but with conflicting outcomes. There is however, a broad consensus among economists especially the monetarist that inflation is strictly a monetary phenomenon. A leading figure in this direction is Milton Friedman in his Quantity Theory of Money. According to his theory, the growth in the quantity of money is the major determinant of the level of inflation. Others however, have argued that inflation is not a monetary phenomenon especially in a developing country context. For instance, Mortaza (2006) argued that inflation is not a monetary phenomenon but is caused by fiscal imbalances and deficiencies in sound domestic economic policies. Studies by Sergent and Wallace (1981), Montiel (1989), Ljungqvist and Sargent (2000), Fischer *et al.* (2002) and Catão and Macro (2003) show that growth in money supply, depreciation in exchange rate occasioned by fiscal imbalance are major determinants of inflation. These studies provide justification that growth in the quantity of money is not the sole determinant or even the major determinant of inflation in developing countries contrary to the quantity theory of money.

Separate studies by Montiel (1989), Dormbusch *et al.* (1990) found evidence that suggests that deficit financing tends to accommodate, rather than drive, inflation. The authors attribute this mainly to a combination of exchange rate shock and inflationary inertia.

In the celebrated study by King and Plosser (1985) on the effect of deficit financing on money creation (using seignorage) and inflation in the United States and twelve other countries, the study found no significant impact of deficit financing on inflation. Using both OLS regression and Vector Auto Regressions (VARs), the study found no causality between deficit financing, money creation and inflation in the United States and the 12 selected countries.

De Hann and Zelhorst (1990), in their cross country study comprising 78 countries, mostly developing countries found no strong connection between deficit financing and inflation. Using the OLS regressions, the study found that there was a weak connection between deficit financing and inflation during very high inflation episodes but no connection during periods of small or moderate inflation episodes.

Faini (1991), investigated the impact of deficit financing on inflation in Morocco using the Vector Auto-regression (VAR). The study found an insignificant impact on inflation. The result of the study seems to suggest that inflation level in Morocco has been low despite the prevalence of deficit financing episodes. His finding does not support macroeconomic postulation that large fiscal deficits fuel inflation.

In contrast, a study by Njeru and Randa (1998) in Kenya found that deficit financing through the injection of high powered money increases the monetary base and in turn stimulates high level of inflation. Similar result was found in the study by Tchokote (2004) in Cameroun. Using the disaggregated VAR approach, Tchokote found that deficit financing stimulates inflation directly and real balances indirectly through the inflation mechanism.

However, findings from the study by Fischer *et al.* (2002) differed remarkably from the findings in the study in Kenya and Cameroun. Fischer *et al.* (2002), study used a sample of 94 countries which were grouped into two groups: high-inflation and low-inflation countries. The study using simultaneous econometric model found that fiscal deficits are main determinants of inflation. The study also found that changes in fiscal financing have no significant inflationary effect in low inflation countries, or during low inflation episodes in historically high-inflation countries. The study found that deficit financing fuels inflation in high inflation and developing countries only.

The findings that deficit financing fuels inflation in developing countries mainly was corroborated by the study by Catão and Macro (2003). Catao and Terrones study was very robust in its scope and econometric modeling. The study used a large dataset of 107 countries spanning a period of 1960 – 2001. Using the Structural Vector Auto-regression (SVAR), the study found that there was significant positive impact of deficit financing on inflation among

the high-inflation and developing countries in the dataset and low and weak association between deficit financing and inflation among the low-inflation advanced economies.

Results of studies in Nigeria display similar pattern. For instance, Onwioduokit (1999), in analyzing the causality between inflation and fiscal deficits, stresses that although fiscal deficit causes inflation, there was no feedback between them. Feedback exists between inflation and inflation deflated by GDP, and it takes about two years for fiscal deficit to impact on inflation in Nigeria.

Adeboye (2008) examined the long run relationship between deficit financing and economic growth. The study used non-parametric methodology that incorporated gross capital formation and investment as interacting variables. The study used 64 developing countries grouped into three categories, A, B and C based on their level of deficit financing (small, moderate and large respectively). The study found that deficit financing had significant impact on economic growth for countries with high gross capital formation and investments but an investment poison for countries with low gross capital formation and investment.

Wosoweil (2013) investigated the impact of deficit financing on macroeconomic aggregates for the period 1980 – 2010. The study used OLS regressions and Engel Granger cointegration approach to estimate the models. The study showed an insignificant negative relationship between deficit financing and economic growth. The Engel Granger cointegration shows a bi-directional relationship between deficit financing and economic growth. The study did not incorporate the effect of deficit financing on inflation or the simultaneous effect of deficit financing on economic growth and inflation.

The contradictory findings from several studies, as noted above, suggest that empirical research, on the average, has had little success in establishing a strong and statistically significant connection between fiscal deficits and inflation across a broad range of countries and inflation spectrum. Overall, these studies establish the statistical significance of the macroeconomic assertion of fiscal deficit-inflation relationship across a broad range of countries and inflation rates.

4. Methodology
4.1. Data

The study used secondary data. Data on deficit financing was sourced from government annual budgets as published by the Budget Office of the Federal Government of Nigeria while data on inflation level and gross domestic products were sourced from the Central Bank of Nigeria (CBN) Annual Statistical Bulletins and the World Bank Development Indicator for the period 1980-2020. The standard Keynes-Wicksell Three Asset Money Growth economic model was adopted following the works of Makin (1983), Serven (1996), Tchokote (2004) and Ergun and Tuck (2006), Jamshaid *et al.* (2010).

The base model for explaining the nexus between deficit financing, inflation and economic growth is given as:

$$g/f_t = \alpha_0 + \alpha_1 k_t + \alpha_2 s/k_t + \alpha_3 i\text{-}p^e_t + \mu_t \qquad (1)$$

Where g/f is the economic growth function, dependent on the level of inflation k, volume of accumulated average savings s/y, the real interest rate $i\text{-}p^e$ and e is the error term.

We assume that real interest rate will equal rate of inflation in a constrained model we have developed and to reflect the level effect of fiscal deficit financing in an unrestrictive form, we re-state equation (1) as:

$$Lgdpp/y_t = \alpha_0 + \alpha_1 y_t + \alpha_2 Ls/y_t + \alpha_3 i\text{-}p^e_t + \alpha_4 INFLb_t + \mu_t \qquad (2)$$

Where; $gdpp_t$ is real growth per capita income as a ratio of aggregate output. y_t is economic growth, $i\text{-}p^e$ is the real interest rate, s/y is the savings output ratio and INFLb is the inflation measure. μ_t is the error term, L (in front of variables) is the log indicator for growth rate.

We abstract from equation (2) the non-negativity function where $\boldsymbol{\alpha_0}\text{-}\boldsymbol{\alpha_4}$ are the parameters coefficients……. $\boldsymbol{\alpha_0, \alpha_1 \dots \alpha_4 > 0}$

$$L(GDP/P) = \alpha_0 + \alpha_1 LGDP + \alpha_2 LSavgdp + \alpha_3 RINTR + \alpha_4 INFLb + \mu_t \qquad (3)$$

$$\alpha_0, \alpha_1 \dots \alpha_4 > 0$$

It should be noted that most of the studies on the nexus between deficit financing and economic growth make use of intervening variables such as real interest rate, real economic growth as a ratio of economic output proxied by gross domestic products, the money supply as a ratio of gross output, either treated in the partial deficit financing or full deficit financing policy regimes. While others measure deficit financing regimes and use dummy variables of zero and one (0- for pre deficit financing regime and 1—for deficit financing period) to capture regime change; this technique fails to capture the progression sequence of regime switch in the system ignoring the fact that deficit financing policy at various point in time may differ given that deficit financing regimes is a dynamic exercise involving different aspects and in aggregate reflects varying level of degree in fiscal policy outcomes.

To avoid paying for the penalty of losing full deficit financing information, we construct an index to measure the degree of deficit financing in aggregate. To do this we consider three components of deficit financing in the system and record a 0 or 1 score for each components following observations as various fiscal policy reforms are implemented in the country overtime. After which, an aggregate of the scores is taken to give us a close proxy of the degree of deficit financing aggregate.

As a time series study, the study adopted the standard co-integration technique suggested by Johansen and Juselius (1992) and Engle and Granger (1987). The co-integration technique was to ensure that the variables have the same order of integration over the time series. The study also tested the bounds of the co-integration using the Autoregressive Distributed Lag model (ARDL) suggested by Pesaran *et al.* (2001). It has been argued that one of the finesse of the ARDL is its ability to eliminate or reduce the endogeneity problem usually encountered in time

series properties. In other words, with the ARDL approach, there may be no need to be worried with the order of integration of variables in the time series.

As suggested by Pesaran *et al. (2001)*, two critical bounds, namely, the upper and lower critical bounds are used to test for the co-integration. The lower critical bounds are used where the variables are of 1(0) order while the upper critical bounds are for variables of I(1) order.

For this study, the ARDL used the unrestricted Error Correction Model as:

$$\Delta y_t = \alpha_0 + \lambda_1 y_{t-1} + \lambda_2 x_{t-1} + \sum_{i=1}^{k} \alpha_1 \Delta y_{t-i} + \sum_{i=1}^{k} \alpha_2 \Delta x_{t-i} + \mu_t$$

Both the null hypothesis of no co-integration and alternate of existence of co-integration are tested using the F-statistic as:

$H_0 = \lambda_1 = \lambda_2 = \ldots \ldots = \lambda_n = 0$

$H_1 = \lambda_1 = \lambda_2 = \ldots \ldots = \lambda_n \neq 0$

As suggested by Pesaran *et al. (2001)*, we assume that there is no co-integration if the computed value of the F-statistics falls below the upper critical bound and we assume co-integration if the calculated value of the F-statistics falls above the upper critical bounds. However, the result will be inclusive if the computed value of the F-statistics is tangent on intersection of the lower and upper critical bounds.

Moreover, as suggested by Pesaran *et al. (2001)*, once we are satisfied with the existence of co-integration in the time series variables, we go ahead to determine the lag order of the series. In this study, we do this using the Akaike Information Criteria. This should enable us to estimate the long run relationship between the variables using the Error Correction Model.

Using the approaches we have nominated above, we generate five computable ADRL series that specified the deficit financing, inflation and economic growth nexus:

$Dfgdp_t^{Agg}$ = Aggregate domestic financing as a ratio of current GDP

$Xtfgdp_t^{Agg}$ = Aggregate external financing as a ratio of current GDP

$Osfgdp_t^{Agg}$ = Aggregate other sources of financing as a ratio of current GDP

$INFgdpd_t^{Agg}$ = Aggregate rate of inflation as a ratio of current GDP

$Msgdpd_t^{Agg}$ = Aggregate money supply as a ratio of current GDP

5. Estimation of Research Equations and Analysis of Findings

5.1. Unit Root Test

With the ADRL bounds test for co-integration, the need for checking the order of co-integration is eliminated. However, to be certain that the computed coefficient is not spurious, we check for the unit root using the Dickey Fuller Generalized Least Square. The result is presented in Table 1.

Table-1. Dickey Fuller Generalized Least Square Result

{Intercept and No Trend}					DF-GLS {Intercept and Trend}				
	At Level		At First Difference		At Level		At First Difference		
Variables	Lag	T-Statistics	Lag	T-Statistics	Lag	T-Statistics	Lag	T-Statistics
Loggdp	0	0.023611	0	-4.166321***	1	-1.456001	0	-4.444399***
LogDfgdp^{Agg}	0	-1.204441	0	-5.400871***	0	-1.213345	0	-7.009854***
Log Xtfgdp$_t^{Agg}$	0	-1.602445**	0	-6.665432***	0	-3.113455	0	-8.544421***
Log Osfgdp$_t^{Agg}$	0	-2.345677**	0	-8.324564***	0	-2.834567	0	-8.622221***
Log Msgdpd$_t^{Agg}$	1	-1.012245	0	-4.000344***	1	-1.023211	0	-3.777612***
LogRgdp	0	3.067223**	0	-5.435433***	0	-1.004444	0	-5.644322***
RINTR	0	-2.704032***	3	-1.278876	0	-4.02345***	0	-5.887654***
INFLb	0	-0.400654	0	-9.443256***	0	-3.402212	1	-7.008543***
Critical Levels of Significance:					Critical Levels of Significance:				
1%	-2.525606		1%	-2.708865	1%	-3.444309	1%	-3.888798
5%	-1.843233		5%	-1.888765	5%	-3.099976	5%	-3.143321
10%	-0.911593		10%	-1.500087	10%	-2.78888	10%	-2.503321

Source: Author's Computation.
Note: ***, **,*Indicates critical values; 1%, 5%, and 10% respectively.

The time series properties of the variables are stationary when differenced at I(I). As shown in table 1, the absolute value of the generated t-statistics is above the critical bounds at least by five percentage point. All the variables were either stationary at level or after first difference. Specifically, only the interest rate was integrated at level.

5.2. Testing for Bounds of Cointegration

As suggested by Pesaran and Shin (2003), we used the upper critical bounds to analyse the cointegration coefficients for the study. To generate the coefficients for the short and long run relationship among the cointegrating time series, we use the Ordinary Least Squares (OLS) regression. The overall significance of the coefficients will be estimated using the F-test statistics.

The resultant coefficients are shown below:

5.3. Equation One: Aggregate Deficit Financing

The F-statistics shows there is existence of co-integration among the time series variables. This is clearly evident as the F_{Loggdp}^{Agg} (LogDmfgdp^{Agg}| LXtfgdp$_t^{Agg}$, Log Osfgdp$_t^{Agg}$, RINTR, INFLB) at approximately 7.0 for ARDL (1, 0, 0, 1, 1) is higher than the value for upper bound critical 4.101 at 5% significance level. We therefore, reject null hypothesis of no co-integration and affirm that there exist co-integrating long-run relationships among the variables.

Null hypothesis: the regression parameters are zero for the variables
L_{Loggdp} (-1), L D_{fgdp} (-1), $L_{Xtfgdpt}$(-1), R_{INTR} (-1), I_{NFlb} (-1)
H_o: $\lambda_1=\lambda_2=\lambda_3=\lambda_4=\lambda_5=0$
H_1: $\lambda_1=\lambda_2=\lambda_3=\lambda_4=\lambda_5\neq0$
Asymptotic test statistic:
Wald chi-square(5)=9.277, with p-value=0.0001125
F-form: F(5, 27)=3.11376, with p-value=0.0045433
Source: Authors analysis.

We proceed to estimate the long and short run relationship having confirmed the existence of co-integration among the variables.
Long Run: Model 1-using observations 1980-2020 (T=40).

Table-2. OLS Regression (Dependent Variable: Lrgdp$_t$)

	Coefficient	*Std. Error*	*t-ratio*	*p-value*	**Significance**
Const	0.356153	0.067051	5.311708	0.0000	
RINTR	0.411121	0.206549	1.990429	0.0498	***
FINF	0.163631	0.020610	7.939417	0.0000	
Ldfgdp$_t$	0.773322	0.031965	24.19245	0.0001	***
LMsgdpd$_t$t	0.087607	0.049036	17.24019	0.0026	*
R-squared		0.873271	Adjusted R-squared		0.851073
Schwarz criterion F-stat 0.001020		-24.0043	Durbin-Watson		1.098640

Note: ***, **, *Indicates critical values; 1%, 5%, and 10% respectively.

At prob>F value of 0.001020 less than 5 percent as shown in Table 2 above, the OLS model is very significant, and fitted the data reasonably well. Based on the results obtained, the OLS shows that deficit financing, inflation and real interest rate affected the growth in GDP. The coefficient of the growth rate on aggregate deficit financing is positive (0.773322) and significant (p = 0.0001<0.05). By implication, a percentage change in deficit financing leads to approximately 0.08% increase in the real growth of gross domestic product. This is in conformity with the apriori expectation.

The R-squared adjusted shows that the explanatory variables explained approximately 85% of the variations in the dependent variable. The remaining 15% variation in the dependent variable is accounted for by other factors embedded in the error term.

5.4. Result of Error Correction Model for Short Run

Using observations 1980-2020 (T=40).

Table-3. OLS Regression (Dependent Variable: ΔLrggdp$_t$)

|	*Coefficient*	*Std. Error*	*t-ratio*	*p-value*	**Significance**
Const	0.845397	0.049036	17.24019	0.0000	
ΔLDfgdp$_{t-1}$	0.142846	0.046080	3.099968	0.0023	*
ΔDfgdp$_t$	0.087607	0.041894	2.091137	0.0321	
ΔLMsgdpd$_t$	0.565245	0.064012	8.830273	0.0000	***
ΔRINTR$_t$	0.337183	0.060492	5.574041	0.0018	***
ΔRINTR$_{t-1}$	-0.060813	0.010253	-5.931383	0.0038	
ΔINFlb$_t$	0.058622	0.039269	1.492851	0.0140	
ΔINFb$_{t-1}$	-0.367028	0.218497	-1.679789	0.0176	**
ECM$_{t-1}$	-0.079708	0.047945	-1.662473	0.0004	***
R-squared	0.801204	Adjusted R-squared			0.810541
Schwarz criterion	-32.45371	Durbin's h			-0.006830

Table 3 shows that there is a significant speed of adjustment in the movement from the previous year to the current year. The coefficient of the lagged error correction model is negative and significant. By implication, the

resultant coefficient of lagged ECM_{t-1}, demonstrate the existence of long run relationship among the variables.

The OLS regression shows that the estimates are reliable and the goodness of fit is confirmed by the high explanatory power of the short-run dynamic estimates. Overall, the R-squared adjusted account for 81% of the variation in the dependent variable while the remaining 19% is accounted by variables not explicitly included in the model.

As suggested by Pesaran *et al. (2001)*, we estimated the stability of resultant coefficients of the error correction model by a graphical method using the Cumulative Sum (CUSUM) and the Cumulative Sum of Square (CUSUMSQ) of the Recursive Residual which shows that the coefficient is stable over the sample period.

Figure-1. CUSUM and CUSUMQ Test for Equation One ECM Equation
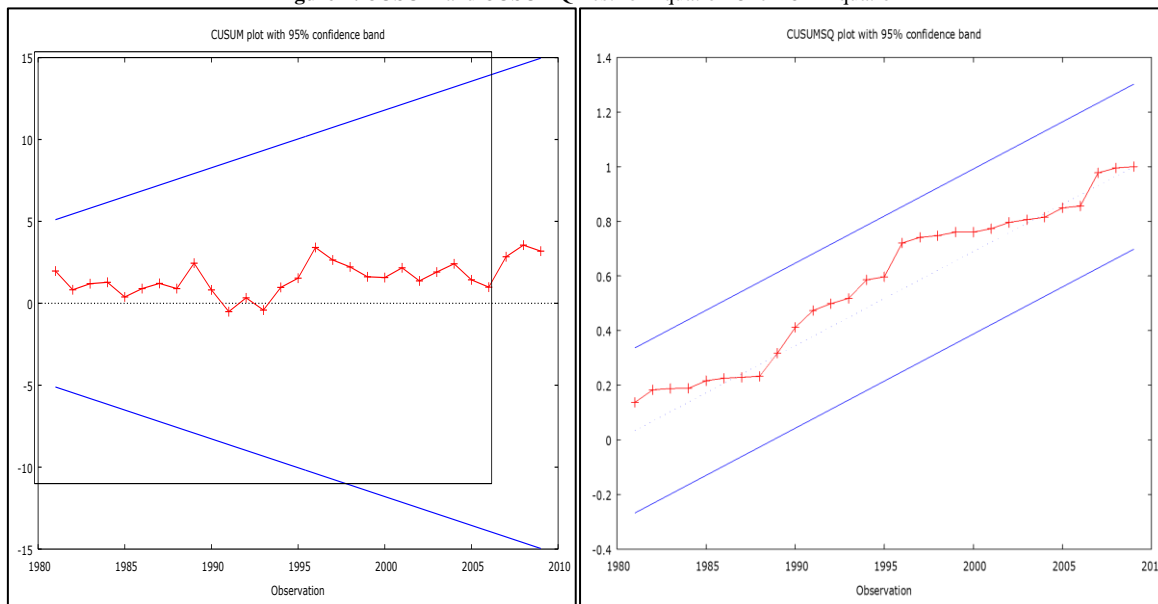
5.5. Equation Two: External Financing to GDP

As remarked earlier, one of the beauty of ADRL bound testing approach is that it is capable of estimating both the short and long run cointegration among the time series variables. To this end, it is important to estimate the residual of the long run relationship and establish the parameters in terms of sign, direction and magnitude as suggested by the error correction model. As can be seen below, the F-statistics shows that there is no long run cointegrating relationship among the variables (F_{Dfgdp}^{Agg} (LXftgdp^{Agg} | Losfgdp, Lmsgdp, RINTR, INFLB).

Null hypothesis: the regression parameters are zero for the variables
Ldfgdp(-1), Lxftgdp(-1), RINTR(-1), INFLB(-1), Losdgdp (-1)
Asymptotic test statistic:
Wald chi-square(5)=7.19032, with p-value=0.206866
F-form: F(5, 25)=1.43806, with p-value=0.245336
Source: Authors analysis.

Given that there is no long run cointegration among the time series properties, we move on to estimate the long and short run coefficients of the variables.

Table-4. OLS Regression (Model 2: OLS, Using Observations 1980-2020 (T=40)
Dependent Variable: Δ**Lrggdp**$_t$)

	Coefficient	*Std. Error*	*t-ratio*	*p-value*	**Significance**
Const	-2.91173	0.483713	-6.0195	<0.00001	***
Lrgdp	0.503488	0.13913	3.6188	0.00093	***
Lxfdp	0.39877	0.335015	1.1903	0.24194	
RINTR	-0.00194791	0.00330705	-0.5890	0.55963	
INFLB	-0.0675056	0.033258	-2.0298	0.05004	*
R-squared	0.523849	Adjusted R-squared			0.491717
F(4, 35)	10.43223	P-value(F)			0.000011
Log-likelihood	-0.564010	Akaike criterion			11.12802
Schwarz criterion	19.57242	Hannan-Quinn			14.18125
Rho	0.781523	Durbin-Watson			1.462137

Note: ***, **, *Indicates critical values; 1%, 5%, and 10% respectively.

The resultant coefficient for OLS model 2 shows that deficit financing from external borrowing has positive and significant impact on economic growth proxied by gross domestic product. However, the growth in deficit financing

through external borrowing is not proportionate to growth in gross domestic product, an implication that deficit financing through external borrowing has not yielded the optimal result expected. Moreover, the result in Table 4 shows that real interest rate – a crude proxy for accounting for inflation, had negative and insignificant effect on economic growth.

In terms of robustness, these results are not spurious given that the Durbin-Watson coefficient exceed the R-square value (0.52), which given the rule of thumb as suggested by Granger and Newbold (1974) and Gujarati and Porter (1999), we can conclude the results are not spurious.

Table-5. Result of OLS Regression for ECM-Short Run Model 2

|	Coefficient	Std. Error	t-ratio	p-value	Significance
Const	0.011467	0.0322007	0.3561	0.72515	
$\Delta Lxf\_gdp_{t-1}^{Agg}$	0.116131	0.196682	0.5904	0.56091	
$\Delta Lxf\_gdp_{t-2}^{Agg}$	-0.188441	0.194815	-0.9673	0.34391	
$\Delta Lrgdp_t$	-0.014807	0.152862	-0.0969	0.92371	
$\Delta Lrgdp_{t-1}$	0.011048	0.156472	0.0706	0.94434	
$\Delta Lmsgdp_t$	0.028061	0.403602	0.0695	0.94520	
$\Delta Lmsgdp_{t-1}$	0.170376	0.372529	0.4573	0.65190	
$\Delta Lmsgdp_{t-2}$	0.616121	0.354352	1.7387	0.09606	*
$\Delta RINTR_t$	0.003522	0.0019408	1.8152	0.08315	*
$\Delta INFLB_t$	-0.010977	0.0311902	-0.3519	0.72823	
$\Delta INFLB_{t-1}$	0.014604	0.0350559	0.4166	0.68099	
$\Delta INFLB_{t-2}$	-0.024995	0.0401074	-0.6232	0.53955	
$\Delta INFLB_{t-3}$	-0.027856	0.0395197	-0.7049	0.48828	
ECM_{t-1}	-0.063075	0.133567	-0.4722	0.64141	
R-squared	0.404157	Adjusted R-squared	0.120476		
F(13, 22)	1.368790	P-value(F)	0.249752		
Schwarz criterion	-11.30871	Hannan-Quinn	-25.74031		
Rho	-0.018219	Durbin-Watson	1.995893		

Note: Model 2: OLS, using observations 1980-2020 (T=40), Dependent variable: $\Delta Lrggdp_t$
***, **, *Indicates critical values; 1%, 5%, and 10% respectively.

The ECM for the short run model 2 confirms further that no long run relationship exists among the time series variables, which was earlier shown by the coefficients of the F-statistics when compared with the Peseran table (k=4 for intercept and no trend) which was negative and insignificant. By implication, the result shows that in the short run, deficit financing from external borrowing and interacted with real interest rate have positive and significant effect on economic growth proxied by growth in gross domestic product.

However, the weak R-squared at 40.4 percent, suggests that in the short run, major changes in aggregate deficit financing are accounted for by other factors such as high debt burden, debt serving, money supply and high level of inflation which largely do not promote economic growth. Other variables that affect economic growth are all captured in the random error term.

Moreover, as suggested by Pesaran *et al.* (2001), we estimated the stability of resultant coefficients of the error correction model by a graphical method using the Cumulative Sum (CUSUM) and the Cumulative Sum of Square (CUSUMSQ) of the Recursive Residual which shows that the coefficient is stable over the sample period.

Figure-2. CUSUM and CUSUMQ Test for Equation Two ECM Equation
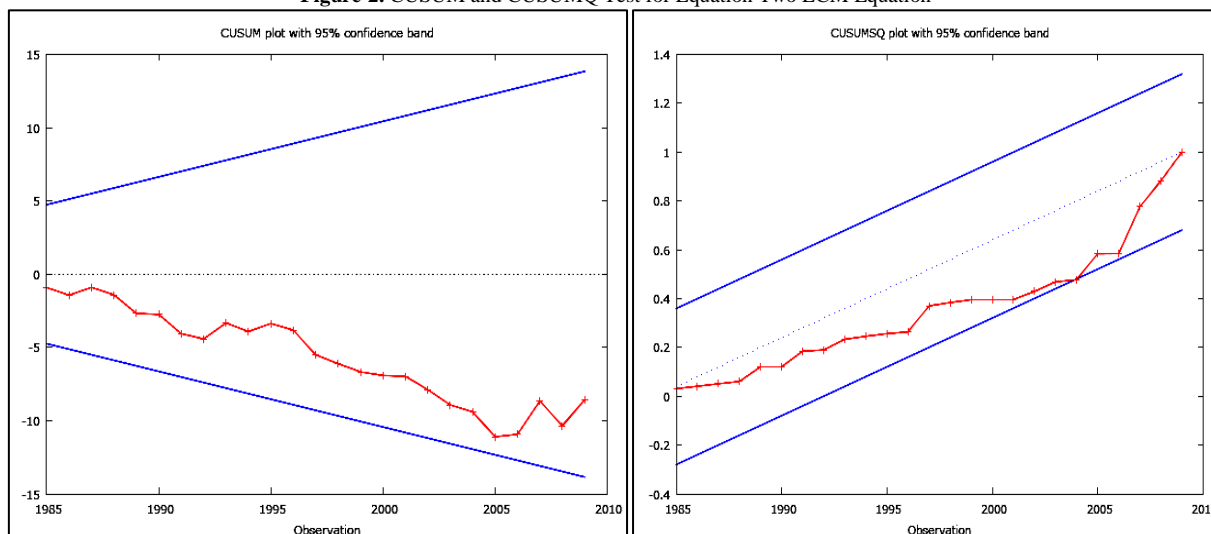
5.6. Equation Three: Deficit Financing Through Domestic Borrowing (Domestic Financing) and GDP

The coefficient of the ARDL estimation shows that there exists co-integrating long-run relationship among the time series variables. This is confirmed by the F-statistics (F_{Dfgdp}^{Agg} ($LXftgdp^{Agg}$ | Losfgdp, Lmsgdp, RINTR, INFLB)≈53.1334 for ARDL (3, 2, 0, 0, 1)), which is above the upper critical bound (5.06) at 1% level of significance. As suggested by Peseran et al (2001), this is clear indication that there exists co-integrating long run relationship among the variables.

Null hypothesis: the regression parameters are zero for the variables
Lrgdp (-1), Lmsgdp (-1), RINTR (-1), INFlb(-1), LOsfgdpt^{Agg} (-1)
Asymptotic test statistic:
Wald chi-square(5)=250.636, with p-value=4.01479e-052
F-form: F(5, 25)= 53.1334, with p-value=3.12434e-012
Source: Authors analysis.

Given the above result, we move on to estimate the long and short run coefficients of the variables.

Table-6. Result of OLS Regression on Model 3

Observations 1980-2020 (T=40)
Dependent Variable: ΔLrggdp$_t$)

	Coefficient	Std. Error	t-ratio	p-value	Significance
Const	-4.15019	0.975841	-4.2529	0.00015	***
Lrgdp	0.438068	0.121898	3.5937	0.00099	***
Ldsfgdp	-0.206602	0.293522	-0.7039	0.48617	
INFlb	0.156302	0.067094	2.3296	0.02572	**
RINTR	-0.002477	0.006671	-0.3714	0.71257	
R-squared	0.456022		Adjusted R-squared	0.420111	
Schwarz criterion	75.71716		Durbin-Watson	1.720635	

Note: ***, **, *Indicates critical values; 1%, 5%, and 10% respectively.

The resultant coefficient for OLS regression in Model 3 confirms that domestic source of deficit financing had a negative and significant effect on real growth of gross domestic product. Moreover, the result also shows that the growth in deficit financing through the domestic sources has led to increase in inflation level and negatively affected real interest rate. This means that an increase in deficit financing through domestic sources will have a simultaneous expansionary and inflationary effect on the economy. Moreover, increase in deficit financing has negative effect on real interest rate suggesting crowding out effect. On the basis of these results, we can conclude that deficit financing through the domestic sources had a contractionary effect on economic growth and at the same time is inflationary against Keynesian postulations.

Table-7. Result of OLS Regression for ECM-Short Run Model 3

|	Coefficient	Std. Error	t-ratio	p-value	Significance
Const	0.035969	0.066959	5.371820	0.0000	
ΔLdsfdpgdp$_{t-1}$	-0.000415	0.000133	-3.120963	0.0002	
ΔLdsdpgdp$_{t-2}$	0.099591	0.025852	3.852383	0.0191	
ΔLdsdpgdp$_{t-3}$	0.058242	0.024382	2.388755	0.0002	
ΔLrgdp$_t$	0.015510	0.019052	8.141271	0.0000	***
ΔLrgdp$_{t-1}$	0.014543	0.008442	1.722736	0.0855	
ΔLrgdp$_{t-2}$	-0.054671	0.029076	-1.880321	0.0623	
ΔLmsgdp$_t$	0.011543	0.008442	1.722736	0.0003	
ΔRINTR$_t$	-0.060582	0.023755	-2.550270	0.0123	
ΔINFlb$_t$	-0.108353	0.0507604	-2.1346	0.0000	**
ΔINFlb$_{t-1}$	-0.143215	0.043424	-3.298055	0.0014	
ECM$_{t-1}$	0.442654	0.088991	4.974147	0.0009	***
R-squared	0.870237	Adjusted R-squared	0.850755		
Schwarz criterion	21.22004	Durbin's h	13.10002		

Note: Using observations 1980-2020 (T=40), Dependent variable: ΔLrggdp$_t$

The resultant coefficient of the ARDL (-0.054671) shows that the speed of adjustment from a disturbance back to equilibrium is slow. The ARDL result also shows that the error correction model when lagged is negative and significant in the short run. The implication is that a large amount of disequilibria (44%) from a disturbance are adjusted into the long run equilibrium in the current period. As suggested by Perasan et al (1997), we can use the result to conclude that even though there exists a long run relationship among the time series variables, the lagged and current estimates of deficit financing through domestic borrowing had no positive effect on economic growth proxied by growth in gross domestic product.

Moreover, we observe that the OLS model is very significant, and fitted the data reasonably well. For instance, the coefficient of determination shows the model is fit with a reliability and explanatory power of 87.02% and a high

adjusted R^2 of 0.850755.

As suggested by Pesaran *et al.* (2001), we estimated the stability of resultant coefficients of the error correction model by a graphical method using the Cumulative Sum (CUSUM) and the Cumulative Sum of Square (CUSUMSQ) of the Recursive Residual which shows that the coefficient is stable over the sample period.

Figure-3. CUSUM and CUSUMQ Test for Equation Three ECM Equation
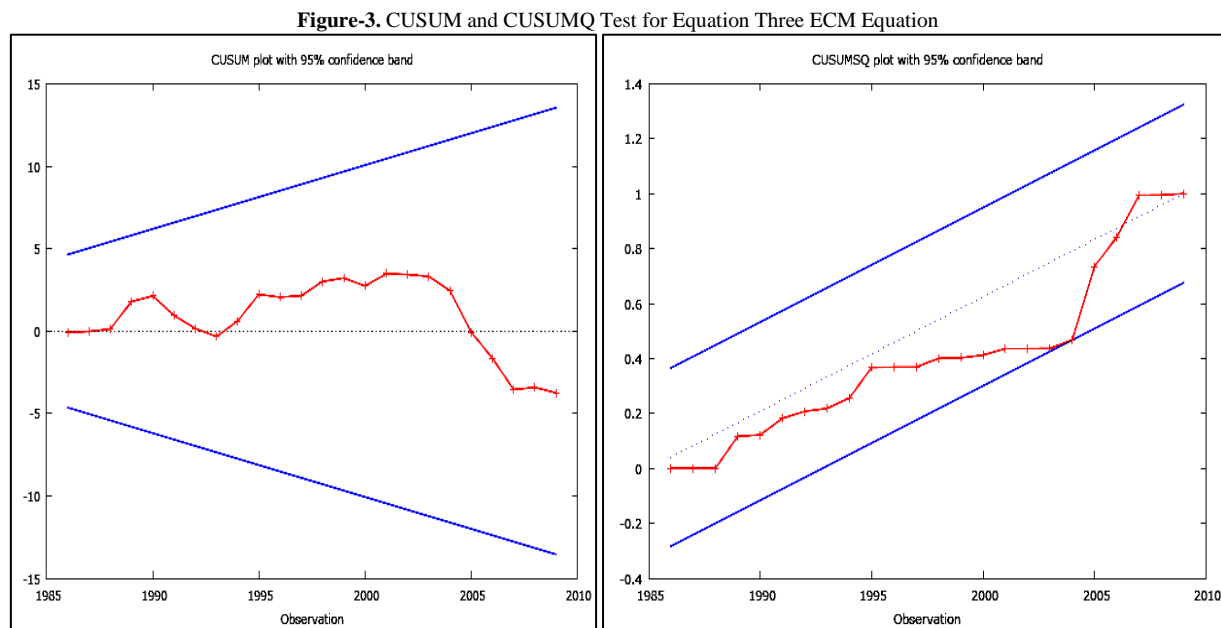
However, although the CUSUMSQ shows that there was a skirmish between the periods 2000 to 2005, the trajectory did not break the lower bound negative line but was tangential along its border before returning to perfect stability, thus confirming our earlier assertion on the stability of the coefficient over the sample period.

5.7. Equation Four: Deficit Financing and Inflation

The resultant coefficient for the ARDL is above the upper critical bound (5.06%) at 1% level of significance, which confirms the existence of co-integrating long-run relationship among the time series variables. This was also confirmed by the calculated F-statistics (F_{Dfgdp}^{Agg} ($Lxftgdp^{Agg}$ | $Losfgdp$, $Lmsgdp$, R_{INTR}, INF_{LB})$\approx$8.38 for ARDL (3, 1, 0, 0, 1), which is also higher than the upper critical bound limit.

Null hypothesis: the regression parameters are zero for the variables
Lrgdp(-1), Lmsgdp (-1), RINTR(-1), INFlb (-1), Lrdpgdp(-1)
Asymptotic test statistic:
Wald chi-square(5)=30.9871, with p-value=9.42228e-006
F-form: F(5, 3)=8.38041, with p-value=0.0820801
Source: Authors analysis.

Given the above result, we move on to estimate the long and short run coefficients of the variables.

Table-8. Result of OLS Regression for Long Run Model 4

Observations 1980-2020 (T=40)
Dependent Variable: $INFgdpd_t$

	Coefficient	Std. Error	t-ratio	p-value	Significance
Const	36.99812	4.962733	7.4552	<0.00001	***
Lrgdp	2.678890	0.440381	6.0831	0.00004	***
Ldfgdp	0.284336	0.356415	0.7978	0.43934	
RINTR	-0.003558	0.008217	-0.4331	0.67204	
Lmsgdp	-0.406256	0.265682	-1.5291	0.15020	
R-squared	0.780122	Adjusted R-squared	0.762257		
Schwarz criterion	31.26380	Durbin-Watson	1.357474		

Note: ***, **, *Indicates critical values; 1%, 5%, and 10% respectively.

The resultant coefficient for OLS regression for long run model 4 shows that growth in aggregate deficit financing impacted positively and significantly on inflation level. For instance, a unit rise in deficit financing will, ceteris paribus, induces an increase of 2.68% in the inflation level, suggesting that deficit financing is inflationary within the period under review. The implication is that deficit financing is inflationary for the sample period. This is in line with expectation.

Table-9. The result of OLS Regression for ECM Short Run Model 4

	Coefficient	Std. Error	t-ratio	p-value	Significance
Const	-1.103212	0.382802	-2.88199	0.06343	*
ΔLrdpgdp$_{t-1}$	1.544255	0.827486	1.86622	0.15885	
ΔLrdpgdp$_{t-2}$	2.094634	1.054711	1.98601	0.14123	
ΔLrdpgdp$_{t-3}$	0.566683	0.422177	1.34234	0.27204	
ΔLrgdp	9.255150	5.874555	1.57555	0.21323	
ΔLrgdp$_{t-1}$	7.324321	5.318214	1.37724	0.26221	
ΔLmsgdp$_t$	3.990242	2.306717	1.72989	0.18210	
ΔRINTr$_t$	-0.014765	0.011663	-1.26599	0.29492	
ΔINFLB$_t$	1.344029	1.051825	1.27000	0.29363	
ΔINFLB$_{t-1}$	1.349155	0.631637	2.13606	0.12232	
ECM$_{t-1}$	1.497133	0.670381	2.23337	0.11166	
R-squared	0.593212	Adjusted R-squared	0.570172		
Schwarz criterion	14.396911	Durbin-Watson	1.962152		

Note: Model 4: OLS, using observations 1980-2020 (T=40), Dependent variable: ΔLINFgdpd$_{tt-1}$

The coefficient of the ARDL shows that the lagged error correction term (ECM$_{t-1}$) has positive and insignificant effect on the dependent variable. Moreover, the resultant F-statistics shows that there exists a long run relationship among the co-integrating time series variables. The estimated coefficients for the lagged and current period were significant in the long run but insignificant in the short run. The implication is that deficit financing is inflationary within the sample period. Moreover, the result cannot be spurious, given that the Durbin Watson value is satisfied at 1.96, which is greater than the R-squared and fits well at approximately 60 percent.

As suggested by Pesaran *et al.* (2001), we estimated the stability of resultant coefficients of the error correction model by a graphical method using the Cumulative Sum (CUSUM) and the Cumulative Sum of Square (CUSUMSQ) of the Recursive Residual which shows that the coefficient is stable over the sample period.

Figure-4. CUSUM and CUSUMQ Test for Equation Four ECM Equation
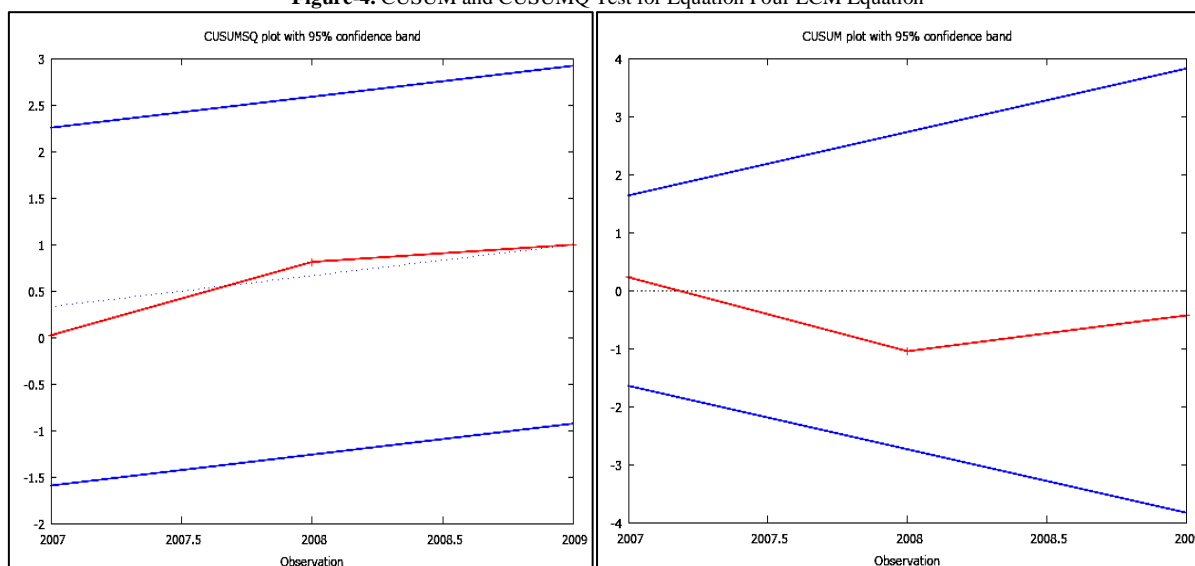
6. Summary, Conclusion and Recommendations
6.1. Summary and Conclusion

The study examined the simultaneous effect of deficit financing both in the aggregate and disaggregated forms on inflation and economic growth using the Vector Error Autoregression approach. The analysis of the data was based on Autoregressive Distributed Lag (ARDL) Model using secondary data from 1980 to 2020. The overall results suggest that deficit financing had positive and significant impact on economic growth when financed through external sources but had deleterious effect when financed through domestic sources. This could be attributed to the crowding out effect of the private sector when deficit financing is funded through the domestic loan market. The study also found that overall deficit financing is inflationary which also resulted to decrease in real interest rates.

These findings support the Keynes and other modern economic development theorists especially the Neo-Keynesians who argue that that government expenditure could boost economic activities through the multiplier effect (Eugen and Skinner, 2012; Keynes, 1936). It should be noted that many countries especially the developing countries have been attracted by the Keynesian idea and have consistently intervened in their economies by way of massive public capital expenditures. The present study has provided another evidence, from a developing country-context, for the Keynesian theory that deficit financing through enhanced government expenditure if properly channeled could boost economic growth.

6.2. Recommendation

Based on the findings of the study, the study recommends as follows:

a. The federal government (FGN) should prune down on excessive deficit financing. Unrestrained deficit financing would always produce undesirable effects like high level of inflation and interest rate which would have deleterious effects on economic growth. This is the case in Nigeria where unrestrained deficit financing over the years have not had much positive impact on the economy. Instead, the economy has been characterised by monetary and fiscal instability, high level of inflation, price volatility and other undesirable macroeconomic uncertainties.

b. Where government must unbalance its annual budgets, it should as much as possible finance the deficit budgets through external sources especially from multilateral sources at concessionary rates. This will prevent government from competing with private agents in the domestic loan market which could led to crowding out effect. The private sector should be encouraged to take the commanding lead in economic activities by not stifling the domestic loan market. The low participation of the private sector in economic activities in Nigeria could account for the low level of economic development in Nigeria.

c. There is need for all tiers of government in Nigeria to embark on aggressive revenue drive and reduce dependence on proceeds from oil. This may entail adopting fiscal adjustment approaches that will improve revenue from taxation and other non-oil sources like agriculture. There is abundance evidence that Nigeria has enormous capacity to generate revenue from non-oil sources to finance her budgets through innovative fiscal adjustment mechanism. The country's current 6 percent of tax to GDP ratio is evidence of huge and unutilised capacity to generate revenue through taxation.

d. More importantly, there is need for all tiers of government in Nigeria to embark on aggressive fiscal retrenchment especially by cutting down in recurrent expenditures and service costs. The current 65 percent of annual budgets on service cost of governance in Nigeria is very high and unsustainable.

e. Moreover, cutting down on cost of governance will reduce the need for borrowing and associated debt service obligations. Currently, Nigeria spends approximately 25 percent of its annual budget on debt servicing. This is a huge cost the country cannot afford given the huge investment gap needed to boost the productive capacity of the economy. There is therefore, the need for government to cut down on expenditures especially recurrent and service components of the annual budgets.

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