

An Empirical Investigation of Deficit Financing and Economic Growth in Nigeria

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Abstract

The study empirically investigates deficit financing and economic growth in Nigeria and explored the Vector Error Correction Model (VECM) to achieve its objective using annual data from 1981 to 2021. This technique is important not only for providing useful information on the long run equilibrium relationship of the variables but also for the purposes of forecasting analysis. It was supported by descriptive statistics, unit root and co-integration tests. The descriptive statistics revealed that the degree of variability of the variables was good, an indication that the data points were spread out over a large range of value while the unit root test indicated that the variables were stationary at first difference. Co-integration showed that there was a long run relationship between deficit financing and economic growth in Nigeria. VECM results indicated that domestic debt and foreign exchange reserves have positive and significant impact on economic growth in Nigeria while external debt and deficit budget have negative and insignificant relationship with economic growth. The study recommended that government should ensure that budget deficit is kept under proper control and ensures that it is expended on capital projects to enhance economic growth in Nigeria while external borrowings should be kept within a certain threshold to avoid debt overhang which could be deleterious to the growth of the Nigerian economy.

Keywords: Deficit Financing, Economic Growth, Nigeria and VECM.

Introduction

Government, whether military or civilian, believes that one way of solving social problem is by increasing government spending. Government as an agent of the people requires revenue to provide education, employment, adequate health services, infrastructures and good roads, but in the process of discharging these huge responsibilities, the revenue or expenditure requirement may sometimes outstrip its availability, hence, the recourse to deficit financing so as to fill the gap between expenditure needs and revenue availability (Monogbe, Dornubari & Emah, 2015).

Fiscal policy simply refers to actions taken by government with a view to controlling government expenditure and income in order to achieve some predetermined macroeconomic objectives. These objectives include, but are not limited to reduction in unemployment level, price stability, rapid economic development, and a healthy balance of payments position (Abdurrauf, 2015). In developing countries, fiscal policy is regarded

as a tool for moving economies to the path of sustained economic growth and development. The fiscal system is generally viewed as one with a package of instruments for translating development policy objectives into practice. One of such packages of instruments is fiscal deficits. Furthermore, it involves the use of government spending, taxation, and borrowing to influence the pattern of economic activities and also the level and growth of aggregate demand, output, and employment. Fiscal policy entails government's management of the economy through the manipulation of its income and spending to achieve certain desired macroeconomic goals amongst which is economic growth (Medee & Nembee, 2011).

Due to a huge financing gap in many developing nations, governments use fiscal deficit to facilitate growth and development. However, deficit financing deepens the economic woes of these economies, leaving them in a vicious cycle of deficits. In Nigeria, for instance, fiscal deficits cause country's bad performance and ranking both in global growth and development indicators. Thus, the use of fiscal deficit to enhance economic performance has proved to be futile and also has left bad economic consequences (Okoye, Omarkhanlen, Okorie, Okoh & Ahmed, 2019).

However, deficit financing remains a veritable tool for the promotion of economic growth and development for countries all over the world, especially emerging economies like Nigeria. Obviously, deficit financing has helped to correct fiscal deficit in Nigeria over the years. Indeed, deficit financing if efficiently used by borrowing country will result to increase in domestic earnings which will result to economic growth (Monogbe & Okah, 2018).

Okoro (2013) stated that deficit is for government to finance projects either through internal borrowing, external borrowing or implementation of monetary instrument to increase the flow of fund in the economy. However, there is a repel effect on the economic performance of any country whom the state of its economic activities are financed through the prolonged debt from foreign countries because it frustrates sole investors due to financing which arises largely because of the need to expand the economy since they cannot fund their capital projects without assistance from either their citizens or external forces. Such situation usually ignites the need for the high interest rate.

Deficit financing can be seen as the practice of seeking to stimulate a nation's economy by increasing government expenditures beyond revenue sources (Onwioduokit & Inam, 2018; CBN, 2013). Budget deficit is a phenomenon that emanated due to the imbalance in the budget of a country; the imbalance could either be a surplus or a deficit. This phenomenon seems to have come to stay in many economies of the world, in which Nigeria is not an exception. The culture, however, became seemingly entrenched overtime from 1970, the country run into fiscal deficits and sustained public sector spending boom.

The fiscal deficits of 1970 were justified on the grounds that it was largely for war reconstruction and was backed with huge wealth from oil. This resulted in extravagant spending on the part of the Nigerian government, mismanagement of the oil boom of the early 1970s led to the return of deficit financing in 1980. From 1982 to 1983, there was a persistent decline in crude oil export earnings which resulted in fiscal deficits which were financed through heavy borrowing after reducing the nation's foreign exchange reserves (Nwanna & Umeh, 2019).

Nwanna and Umeh (2019) noted that, the need for adequate public expenditure program and management has therefore become paramount, particularly at this period when the country is in excess exploration and on and when various arms of government and the private sector are experiencing several financial constraints. This made the federal government to seek for foreign assistance.

The growth and persistence of fiscal deficits in both the industrialized and developing countries has brought the issue of fiscal deficits into sharp focus. Over the last decade, the growth impact of fiscal deficits has generated large volume of both theoretical and empirical literature. Despite the lofty place of fiscal policy in the management of the economy, the Nigerian economy is yet to come on the path of sound growth and development. The behaviour of fiscal deficits in Nigeria has followed unsteady pattern, assessing the significance of the policy deficits. The actualization of sustainable economic growth is more imperative such that the country is working towards achieving the sustainable development goals.

Deficit financing and economic growth is one of the most recalling issues facing the Nigerian economy in recent time. This is because, despite the several fiscal measures introduced by the government in curbing excessive deficit, the growth of the Nigerian economy still remains at bay with citizens suffering from high level of unemployment; insecurity and poverty remain widespread both in the urban and the rural areas. Despite relentless efforts by scholars to come with a solution on the ills of deficit financing, most submissions by scholars seem to be a mirage and do not give a true picture of the present situations in the Nigerian economy. While some researchers believe that deficit financing has a significant effect on the Nigerian economy, others believe that there is no significant effect on the economy. A major reason for the conflicting results may be due to various estimation techniques and variables that have been used by these different scholars. This development has therefore triggered a number of empirical studies on the nexus between such deficit financing and economic growth in Nigeria.

However, many of such studies have investigated fiscal policy and economic growth nexus and came with three strands: positive, negative and non-linear relationship. For example, Akinmulegun (2014) reported negative result while others revealed that deficit financing has positive impact on economic growth (Okah, Chukwu & Ananwude, 2019; Solawon & Adekunle, 2018; Adesuyi & Falowo, 2014). Nwanna and Umeh (2019) found that deficit financing has no significant effect on economic growth. Most of these empirical studies on the relationship between deficit financing and economic growth have been within the Nigerian economy and other countries, which have been largely cross sectional in nature (Onwioduokit & Inam, 2018; Hussain & Haque, 2017).

This paper extends the current literature between deficit financing and economic growth in a number of significant ways. Firstly, this study uses the Vector Error Correction Model (VECM) because of its high predictive power to analyze the impact of the variables unlike previous studies like Okah, Chukwu and Ananwude (2019); Momodu and Monogbe (2017) employed Vector Autoregressive Model (VAR); Nwanna and Umeh (2019) used Ordinary Least Squares (OLS) and Cointegration methods while Solawon and Adekunle (2018); Bazza, Binta and Alhaji (2018) explored Autoregressive Distributed Lag (ARDL)

technique. Secondly, this study extends its scope beyond those of earlier studies by extending the period from 1981 to 2021.

From the foregoing, the question is, can we say that the huge quantum of loan borrowed by the federal government to ensure economic growth in Nigeria has stimulated Nigerian economic growth from 1981 till date? Better still, to what extent has deficit financing affected economic growth in Nigeria? The major objective of this study, therefore, is to investigate the impact of deficit financing on economic growth in Nigeria. The scope of the study is from 1981 to 2021 using annual time series data. The period was chosen because it accommodates the different periods of budget deficits that the Nigerian economy has experienced. Secondary data were sourced from Central Bank of Nigeria and World Bank Development Index.

The paper is structured into five sections. Following the introductory section is section two which dwells on the literature review. Section three is devoted to the research methodology while section four consists of empirical results and discussion. Section five is the conclusion and policy recommendations.

Conceptual Clarification

Deficit Financing

The issue of deficit financing has been in focus among scholars because whenever there is budget deficit in any country, what comes to the mind of experts in finance is the remedy for financing such budget deficit so as to obliterate the negative effects on the economy. As such, they may resort to deficit financing.

Deficit finance is an economic state in which government spending is more than her earnings and hence ventures into borrowing either from domestic or external source in order to finance her obligations while the repayment of such fund is to be made at an agreed period of time with some conditions while deficit financing can be seen as the practice of seeking to stimulate a nation's economy by increasing government expenditures beyond revenue sources (Monogbe, 2016; CBN, 2013). This means that deficit financing can be defined to mean financing undertaken by a corporation or government to make up for a shortfall in revenue. Government or corporation may undertake deficit financing in order to provide an economic stimulus.

Adesuyi and Falowo (2013) defined deficit financing as the net increase in the amount of money in circulation where such an increase results from a conscious governmental policy designed to encourage economic activities which would otherwise not have taken place. Effectively employed, deficit financing could be a very powerful tool of capital formation to most developing countries. In the same vein, Bhatia (2015) seen deficit financing as some or all of those debt obligations as far as data are available and for the purpose for which the government needs them. It is imperative for government to incur debt to oil the wheels of economic development and carry out the day to day administrative functions. Nzotta (2014) defined deficit financing as a planned excess expenditure over income, dictated by government policy or creating fund to finance deficit by borrowing whether from internal or external sources, which must be repaid with interest within a specific period of time. Deficit financing is defined in finance as government spending in excess of

revenues which is financed by borrowing. CBN (2013) defined deficit financing as a practice in which government spends more than it receives as revenue and the difference being made up by borrowing more money into the economy than it takes out by taxation with the expectation that increased business activities will bring enough additional revenue to cover the shortfall. Deficit financing, however, may also result from government inefficiency, reflecting widespread tax evasion or wasteful spending rather than the operation of a planned countercyclical policy.

Nwanna and Umeh (2019) described deficit financing as the conscious attempt made by the federal government to correct budget deficit through either internal or external sources, or a combination of both. He added that, it may as well involve a direct addition to gross national expenditure through budget deficits whether the deficits are on the revenue or capital account. The essence of such a policy lies in the government spending in excess of revenue it receives in the form of taxes, earning of the state enterprises, loans from the public deposits and funds and then miscellaneous sources with a view to ascertain the deficit or surplus.

Based on the inability of the government revenue to take care of its debt necessitates increases in debt servicing cost. This gap must be funded. It is this funding gap that is called deficit financing. Three options are available to the government at any point in time to finance this gap. They are, increase in taxes, borrowing and realization of government assets. In Nigeria, funding through taxation is always very difficult considering the low tax compliance. The other option is realization of government assets. This option is also not very feasible considering the lack of assets to realize. Apart from this challenge, the government when it has assets to realize has to get the right and willing investors that will want to buy the assets. But this option does not at all increase the indebtedness of the government. Most times, the only option available to the government is to borrow to cover the gap which can be done through internal or external borrowing. It is important to note that deficit financing in any economy has its implication. This can either be positive or negative as argued by various schools of thoughts.

Theoretical Review

Theoretically, when government initiates a project and her retained revenue is not sufficiently enough in sponsoring the project, there are three major ways of financing such project and there are taxes, borrowing and monetization. Meanwhile, the most popular method of deficit financing is by borrowing which is usually done through the open market operation by issuing of government bonds. For the purpose of this study, the theoretical frameworks that were considered relevant are as follow:

Keynesian Economic Theory: John Maynard Keynes (1936) stated that public expenditures can contribute positively to economic growth by increasing government consumption through increase in employment, profitability and investment. In other words, the federal government can reverse economic downturns by borrowing money from the private sector and returning the money to private sector through various spending. This theory believes that active government intervention in the market place through deficit financing was the only method for ensuring growth and stability by ensuring efficiency in resources allocation, regulation of markets, stabilization of the economy and harmonization

of social conflicts. Keynes stated that in the short run, economic growth through economic stability is strongly influenced by total spending in the economy. This theory regards the economy as being inherently unstable and required active government intervention through spending to achieve economic stability.

Neoclassical School of Thought: The neoclassical economist proposed a negative relationship between fiscal deficits and economic development. The theory exerts that increase in government spending stimulate aggregate demand and hence bring about high level of competition between government and private investors in demanding for loan leading to higher interest rates and further discourages the issue of private bonds, private investments and private spending, increases inflation level, and cause a similar increase in the current account deficits and finally slows the development rate of the economy through resources crowding out. The Neoclassical school considered individuals planning their consumption over their entire cycle. By shifting taxes to future generations, fiscal deficits increase current consumption. By assuming full employment of resources, the neoclassical school argued that increased consumption implies a decrease in savings. Higher interest rate in turn results to a decline private investment, domestic production and an increase in the aggregate price level. When the government sector expands, the private sector will contract because of the increase in prices on these resources due to an excess demand by the government, hence this leads to a fall in investment and consumption by the private sector. Thus, the government sector's expansion crowds out the private sector.

Empirical Review: The impact of the fiscal deficit on economic growth is one of the most debated issues among economists and policy makers in both developing and developed countries in the recent decades. This section will review some empirical studies which focused on fiscal deficit issue and its effect on economic growth.

Musa (2021) examined theoretically the impact of fiscal deficits on economic growth in Nigeria. He adopted a descriptive method to show the trend of fiscal elements in Nigeria with the aim of determining the relationship between the variables specified. The study concluded that fiscal operation was ineffective in providing the needed macroeconomic environment for sustainable growth. The study further suggested that powerful pro-stability stakeholders strong enough to challenge government fiscal recklessness will need to emerge for sustainable and progressive development to be attained at all levels.

Okoye, Omankhanlen, Okorie, Okoh and Ahmed (2019) opined that the use of fiscal deficit to enhance economic performance has proved to be futile and also has left bad economic consequences. Based on the econometric method of Autoregressive Distributed Lag, the study examined how selected macroeconomic indicators influence fiscal deficits in the budgetary policy of Nigeria. The study showed a significant positive effect of inflation, oil revenue, and lagged exchange rate on fiscal deficits. There was also evidence that external debt and current exchange rate decrease the level of fiscal deficits. Government policy should target low level of inflation and exchange rate appreciation as well as the productive investment of oil revenues and economic diversification as the panacea for persistent use of fiscal deficits.

Okah, Chukwu and Ananwude (2019) examined the effect of deficit financing on economic growth of Nigeria from 1987 to 2017. Vector Autoregressive estimates was used in

estimating the model. The analysis performed revealed that deficit financing has positive but insignificant effect on Nigerian's economic growth. Based on the findings, they recommended that government should strive to diversify its revenue base and also demonstrate a high level of transparency in both its monetary and fiscal operations among others. Similarly, Nwanna and Umeh (2019) ascertained the effect of deficit financing on Nigeria's economic growth. Augmented Dickey Fuller (ADF) unit root test, Johanson Co-integration test and normality test were employed for the analysis. The research findings revealed that deficit financing through external debt borrowing had a significant negative effect on Nigeria's economic growth. Also, domestic debt has a positive significant effect on Nigeria's economic growth, while debt service had no significant effect on Nigeria's economic growth. The study therefore, recommended that government should set up monitoring teams that will make sure that the budget is well and carefully implemented and as well as loan borrowed in order to reduce corruption, linkages and wastages, the team will do this by holding everyone accountable for every kobo of government money spent.

Onwioduokit and Inam (2018) investigated the relationship between budget deficits and economic growth in Liberia. The study employed Classical Ordinary Least Squares Technique (OLS) and Co-integration test using Engle-Granger Two-Step procedure (EGTS); and a parsimonious Error Correction Model. It was evident from the analysis that there was a long run relationship between budget deficit and economic growth in Liberia. There also existed a positive and significant relationship between budget deficit and economic growth in Liberia.

Solawon and Adekunle (2018) did a study on the short run and long-run effect of deficit financing on economic growth of Nigeria. A test for unit root and co-integration using the Augmented Dickey Fuller (ADF) and Bound Test were used to test for Stationarity and long run relationship among variables (budget deficit, money supply and external debt). The Auto Regressive Distributed Lag (ARDL) was employed to examine the relationships among the variables used. The result revealed that all the explanatory variables have positive effect on economic growth with budget deficit being insignificant. It was further revealed that the Nigerian government has been experiencing fiscal deficit in the recent years which resulted from insufficient government revenue to finance government rising expenditure. They recommended that, government budget deficit should be centered on capital expenditure rather than recurrent expenditure to ensure investment in infrastructural facilities that could improve economic growth while external debt should be closely monitored in order to ensure that external borrowings are not beyond the expected threshold.

Nwakobi, Echekoba and Ananwude (2018) determined the effect of fiscal deficit on selected macroeconomic variables in Nigeria by specifically evaluating the effect of fiscal deficit on gross domestic product, money supply and inflation. The study employed various econometric techniques such as unit root test, Johansen co-integration, granger causality test in which variations in gross domestic product, money supply and inflation were regressed on fiscal deficit and exchange rate. The result of the analysis revealed that fiscal deficit has no significant effect on gross domestic product, money supply and inflation in Nigeria. The finding also showed that there was a positive insignificant relationship between fiscal deficit and gross domestic product. This was in line with the Keynesian

postulation of the existence of positive relationship between fiscal deficit and macroeconomic variables.

Bazza, Binta and Alhaji (2018) evaluated the impact of deficit financing on economic growth in Nigeria using the ARDL technique. The result from the ARDL regression estimate showed that government deficit finance over the years had significantly impacted on the output growth of Nigeria. Ali, Mandara and Ibrahim (2018) examined the impact of deficit financing on economic growth in Nigeria and was analyzed through the application of Augmented Dickey Fuller to ascertain the stationarity properties of the time series variables and ARDL technique was employed for the regression analysis. The results from the unit root test revealed mixed degree of integration of the variables and the result from the ARDL regression estimate showed that government deficit finance over the years had significantly impacted on the output growth of Nigeria. The variables used in the study were jointly found significant in affecting the output growth of the economy. The study therefore recommended that deficit financing should be increased effectively, and that government should ensure an efficient use of expenditure and fiscal discipline as well as maintenance of macroeconomic stability so that Nigerian economy can develop.

Tung (2018) investigated the effect of fiscal deficit on economic growth in Vietnam. The study applied the Error Correction model on a quarterly data. The empirical results strongly indicated there was a co-integration relationship between fiscal deficit and economic growth in Vietnam, in which fiscal deficit had harmful effects on economic growth in both short and long run. In particular, the correlation analysis has confirmed that fiscal deficit can hurt not only the gross output but also private investments, foreign direct investments, and net exports. The results provided evidence for policy makers, and not only in Vietnam but also in other emerging countries which are in need of urgent solutions so that to reduce the fiscal deficit rate and have more sustainable growth in the future.

Momodu and Monogbe (2017) evaluated the influence of budget deficit on economic performance in Nigeria using time series data. Findings established that budget deficit significantly stimulate economic performance. The output of the VAR estimate established that the lag value of federal government budget deficit has contributed to performance of the economy in the current year although the contributive quadrant is not been felt to a reasonable extent. These empirical findings supported the Keynesian postulation of significant relationship between budget deficit and economic performance.

Hussain and Haque (2017) studied fiscal deficit and its impact on Economic Growth: Evidence from Bangladesh. The findings from the VECM for BBS data revealed that there was a positive and significant relationship between fiscal deficit (FD) and gross domestic product growth rate (GDPGR), supporting the Keynesian theory, while findings from the VECM for World Bank data indicated that the impact of FD on GDPGR was mild but negative and significant. This contradicted the Keynesian theory but was in accord with Neo-classical theory which asserted that fiscal deficits lead to a drop in the GDP. Nevertheless, the government must strive to keep deficit under control, not to hamper growth, and expenditure ought to be set so as to avoid massive deficits.

This research relies on the neoclassical economist who proposes a negative relationship between fiscal deficits and economic development. The theory exerted that increase in

government spending stimulate aggregate demand and hence bring about high level of competition between government and private investors in demanding for loan leading to higher interest rates and further discourages the issue of private bonds, private investments and private spending, increases inflation level, and cause a similar increase in the current account deficits and finally slows the development rate of the economy through resources crowding out.

Methodology

To fully underscore the relationship between deficit financing and growth of the economy as set out in the literature, this study makes use of Vector Error Correction Model (VECM) technique. The VECM estimation is important not only for providing useful information on the long run equilibrium relationship of the variables but also for the purposes of forecasting analysis. For series which are non-stationary, integrated in the same order, and lead to co-integrating relationship, a Vector Error Correction Model (VECM) is estimated.

To arrive at the VECM, we re-parameterize the basic VAR(p). The VECM model takes the form:

$$\Delta Y_t = \Pi Y_{t-1} + A_1 \Delta Y_{t-2} + \dots + A_{p-1} \Delta Y_{t-p+1} + \mu_t \dots \dots \dots (1)$$

Where: $\Pi = -(I_k - A_1 - \dots - A_p)$ that is $\Pi = \sum_{i=1}^p A_i - I_k$, for $i = 1, \dots, p - 1$, and

$$A_i = -(A_{i+1} + \dots + A_p)$$
 that is $A_i = -\sum_{j=i+1}^p A_j$ for $i = 1, \dots, p - 1$.

The Π is interpreted as a long run coefficient matrix, since in equilibrium, all the Y_{t-i} is to be zero, and setting the error terms, μ_t to their expected value of zero leaves $\Pi Y_{t-p} = 0$. The assumption that all variables can be at most $I(1)$ implies that the term ΠY_{t-1} is the only one which includes $I(1)$ variables. This is to say ΠY_{t-1} must also be $I(0)$. Thus, it contains the co-integrating relations. The ΠY_{t-1} is sometimes referred to as the long run or long-term part. $A_i (i = 1, \dots, p - 1)$ often refers to as short run parameter matrices. Thus, the VECM equation which re-parameterizes the basic VAR(p) can be rewritten as:

$$\Delta Y_t = \alpha \beta' Y_{t-1} + A_1 \Delta Y_{t-2} + \dots + A_{p-1} \Delta Y_{t-p+1} + \mu_t \dots \dots \dots (2)$$

The parameter matrices α and β in equation (2) have dimensions $K \times r$ and r . They specify the long run part of the model with β containing the co-integrating relations (interpreted as the distinct co-integrating vectors) whereby $\beta' Y_t$ form a linear stationary process. The α 's are the error correction coefficients (or loading factors or coefficients) which indicates the speed of adjustment toward long run equilibrium. The VECM representation which includes deterministic terms and stochastic exogenous variables is represented in the form:

$$\Delta Y_t = \Pi Y_{t-1} + A_1 \Delta Y_{t-2} + \dots + A_{p-1} \Delta Y_{t-p+1} + CD_t + BZ_t + \mu_t \dots \dots \dots (3)$$

The VECM representing the empirical counterpart of equation (3) is in model specification.

Model Specification

In view of the synthesis above and particularly following empirical variables in the study, a simple model of Vector Error Correction (VEC) framework is hypothesized to capture the dynamics of the relationship between deficit financing and economic growth whilst avoiding the pitfalls of endogeneity and integration of the variables. The endogenous variables as defined under the VAR model except that they enter the model in their first differences are: $\alpha, \beta, \delta, \gamma, \lambda, \psi$ and ϕ are coefficients for variables GDP, DDT, EDT, BTM, FER and ECM respectively. The μ_t 's are the error terms. The relevant variables in the empirical estimation are: Gross domestic product (GDP) - proxy for economic growth, Domestic debt (DDT), External debt (EDT), Budget deficit (BTM), and Foreign exchange reserves (FER). The specification of the Vector Error Correction Model (VECM) is specified below.

$$\begin{aligned} \Delta GDP_t = & \alpha_1 + \sum_{i=1}^m \beta_{1,i} \Delta DDT_{t-1} + \sum_{i=1}^n \delta_{1,i} \Delta EDT_{t-1} + \sum_{i=1}^k \gamma_{1,i} \Delta BTM_{t-1} + \sum_{i=1}^j \lambda_{1,i} \Delta FER_{t-1} \\ & + \sum_{i=1}^h \psi_{1,i} \Delta GDP_{t-1} + \sum_{i=1}^q \phi_{1,i} ECM_{t-1} + \mu_{1,i} \dots \dots \dots (1) \end{aligned}$$

$$\begin{aligned} \Delta DDT_t = & \alpha_2 + \sum_{i=1}^m \beta_{2,i} \Delta DDT_{t-1} + \sum_{i=1}^n \delta_{2,i} \Delta EDT_{t-1} + \sum_{i=1}^k \gamma_{2,i} \Delta BTM_{t-1} + \sum_{i=1}^j \lambda_{2,i} \Delta FER_{t-1} \\ & + \sum_{i=1}^h \psi_{2,i} \Delta GDP_{t-1} + \sum_{i=1}^q \phi_{2,i} ECM_{t-1} + \mu_{2,i} \dots \dots \dots (2) \end{aligned}$$

$$\begin{aligned} \Delta EDT_t = & \alpha_3 + \sum_{i=1}^m \beta_{3,i} \Delta DDT_{t-1} + \sum_{i=1}^n \delta_{3,i} \Delta EDT_{t-1} + \sum_{i=1}^k \gamma_{3,i} \Delta BTM_{t-1} + \sum_{i=1}^j \lambda_{3,i} \Delta FER_{t-1} \\ & + \sum_{i=1}^h \psi_{3,i} \Delta GDP_{t-1} + \sum_{i=1}^q \phi_{3,i} ECM_{t-1} + \mu_{3,i} \dots \dots \dots (3) \end{aligned}$$

$$\begin{aligned} \Delta BTM_t = & \alpha_4 + \sum_{i=1}^m \beta_{4,i} \Delta DDT_{t-1} + \sum_{i=1}^n \delta_{4,i} \Delta EDT_{t-1} + \sum_{i=1}^k \gamma_{4,i} \Delta BTM_{t-1} + \sum_{i=1}^j \lambda_{4,i} \Delta FER_{t-1} \\ & + \sum_{i=1}^h \psi_{4,i} \Delta GDP_{t-1} + \sum_{i=1}^q \phi_{4,i} ECM_{t-1} + \mu_{4,i} \dots \dots \dots (4) \end{aligned}$$

$$\Delta FER_t = \alpha_5 + \sum_{i=1}^m \beta_{5,i} \Delta DDT_{t-1} + \sum_{i=1}^n \delta_{5,i} \Delta EDT_{t-1} + \sum_{i=1}^k \gamma_{5,i} \Delta BTM_{t-1} + \sum_{i=1}^j \lambda_{5,i} \Delta FER_{t-1}$$

$$+ \sum_{i=1}^h \psi_5, \Delta GDP_{t-1} + \sum_{i=1}^q \phi_5, ECM_{t-1} + \mu_5, i \dots\dots\dots (5).$$

Result of the Findings

Descriptive Statistics

Table 1: Results of Descriptive Statistics of Variables

	LNGDP	LNDDT	LNEDT	LNBTD	LNFER
Mean	10.3453	6.5862	6.4283	6.0882	2.2243
Median	10.1373	6.9246	6.4751	5.3984	2.0516
Maximum	11.3310	9.6016	9.1030	11.5874	3.9815
Minimum	9.5309	2.4150	0.8329	1.2179	-0.0726
Std. Dev.	0.6056	2.2342	2.0456	2.3420	1.4173
Skewness	0.2529	-0.3329	-0.9471	0.5057	-0.1543
Kurtosis	1.548153	1.886579	3.365131	2.689694	1.4506
Jarque-Bera	4.0380	2.8751	6.3572	1.9119	4.2641
Probability	0.1328	0.2375	0.0416	0.3845	0.1186
Sum	424.1566	270.0347	263.5586	249.6168	91.1968
Sum Sq. Dev.	14.6680	199.6717	167.3721	219.4043	80.3510
Observations	41	41	41	41	41

Source: Authors' Estimation Results, 2021.

From Table 1, the study shows that the mean of the dependent variable, gross domestic product (GDP) is 10.3453. The means of the independent variables, Domestic debt (DDT), External debt (EDT), Budget deficit (BTD), and Foreign exchange reserves (FER) are 6.5862, 6.4283, 6.0882 and 2.2243 respectively. The standard deviation shows that the variables are well spread out. That is, the degree of variability of the variables is good and an indication that the data points are spread out over a large range of value. All the variables were positively skewed to the left with an extension to the right except domestic debt, external debt and foreign exchange reserves with their skewness coefficient of 0.2529, -0.3329, -0.9471, 0.5057, and -0.1543 respectively. Furthermore, the result shows positive kurtosis (Leptokurtic). External debt (EDT) shows the highest peak of 3.3651 while foreign exchange reserves (FER) of 1.4506 shows the flattest. This indicates that the distribution has heavier tails and a sharper peak than the normal distribution. The Jarque-Bera statistic reveals that external debt is normally distributed while the other variables are not. This is evident from the probability which approximates zero.

Table 2: Result of Correlation Matrix of Variables

	LNGDP	LNDDT	LNEDT	LNBTD	LNFER
LNGDP	1.0000				
LNDDT	0.9545	1.0000			
LNEDT	0.7273	0.8614	1.0000		
LNBTD	-0.3900	-0.5677	-0.5185	1.0000	
LNFER	0.9239	0.8864	0.6308	-0.4366	1.0000

Source: Authors' Estimation Results, 2021.

The correlation matrix result presented in table 2 shows the interrelationship among all variables in the model. Individual variable is perfectly correlated with itself and thus has value of one (1). The result also shows a positive and strong correlation between gross domestic product (GDP), domestic debt (DDT), external debt (EDT) and foreign exchange reserves (FER) while budget deficit (BTD) shows a negative and weak correlation with gross domestic product (GDP). This result again shows the perceived importance of these variables to the growth and development of the Nigerian economy.

Unit Root Test Results

Table 3: Augmented Dickey-Fuller (ADF) Test Statistic Results

Variable		ADF TEST STATISTIC	CRITICAL VALUE	ORDER OF INTEGRATION	CONCLUSION
LNGDP	Level	-4.001647 (0.1192)	-4.562882	I(0)	Not Stationary
	First Diff.	-3.902501 (0.0214)**	-3.529758	I(1)	Stationary
LNDDT	Level	-1.222309 (0.8718)	-3.529758	I(0)	Not Stationary
	First Diff.	-4.8230076(0.0020)**	-3.529758	I(1)	Stationary
LNEDT	Level	-2.020872 (0.5720)	-3.529758	I(0)	Not Stationary
	First Diff.	-4.830258 (0.0020)**	-3.529758	I(1)	Stationary
LNBTD	Level	-2.470215 (0.3403)	-3.526609	I(0)	Not Stationary
	First Diff.	-5.467825 (0.0004)**	-3.533083	I(1)	Stationary
LNFER	Level	-2.926205 (0.1658)	-3.529758	I(0)	Not Stationary
	First Diff.	-5.649644 (0.0002)**	-3.533083	I(1)	Stationary

Note: Probabilities are in parentheses. **All the variables are significant at 5% level.

Source: Authors' Estimation Results, 2021.

A careful examination of table 3 reveals that the results of the Augmented Dickey-Fuller (ADF) test at the level series show the existence of unit root for all the variables as it fails to reject the null hypothesis of non-stationary, as the t-statistic results are lower than the critical values. The results show that all variables are not stationary at levels. After first differencing, the ADF tests of unit root indicate that all variables employed are stationary at 5% level and their use would not lead to spurious regression. Therefore, all the series are stationary or integrated of the same order one as expected. Thus, the variables satisfy the unit root property in their first differences. This indicates that the values of their calculated ADF statistics are higher than their critical values at 5% level. It means that the null hypothesis of the presence of non-stationarity in the series is rejected. The evidence suggests that the first differencing is enough for modeling the time series considered in this

study. Therefore, a co-integration relationship can be established to determine the existence of a long run equilibrium relationship between deficit financing and economic growth in Nigeria from 1981 to 2021 using annual time series data.

Co-integration Test Results

Having verified that all empirical variables were stationary and integrated of the same order, the study tests for the existence of long run equilibrium relationship between the variables in the model. A vector of variables integrated of order one is integrated if there exists linear combination of the variables which are stationary.

The result of the multivariate Johansen co-integration test for the model is shown in Tables 4a and b below.

Tables 4a and b: Results of Multivariate Johansen Co-integration Tests

Table 4a: Results of Unrestricted Co-integration Rank Test (**Trace**)

Hypothesized No. of Co-integrating Equations (r)		Eigen value	Trace test statistic K = 2		Prob.**
Ho	HA		(λ trace)	Critical Value (0.05)	
$r \leq 0$	$r > 0$	0.6324	75.2835*	69.8189	0.0171
$r \leq 1$	$r > 1$	0.4175	36.2515	47.8561	0.3838
$r \leq 2$	$r > 2$	0.1725	15.1773	29.7971	0.7685
$r \leq 3$	$r > 3$	0.1354	7.7942	15.4947	0.4877
$r \leq 4$	$r > 4$	0.0529	2.1208	3.8415	0.1453

Note: Trace test indicates 1 co-integrating equation(s) at the 0.05 level

Table 4b: Results of Unrestricted Co-integration Rank Test (**Maximum Eigenvalue**)

Hypothesized No. of Co-integrating Equations (r)		Eigen value	Max-Eigen Statistic K = 2		Prob.**
Ho	HA		(λ Max)	Critical Value (0.05)	
$r = 0$	$r = 1$	0.6324	39.0320*	33.8769	0.0111
$r = 1$	$r = 2$	0.4175	21.0743	27.5843	0.2718
$r = 2$	$r = 3$	0.1725	7.3831	21.1316	0.9373
$r = 3$	$r = 4$	0.1354	5.6734	14.2646	0.6554
$r = 4$	$r = 5$	0.0529	2.1208	3.8415	0.1453

Note: Max-Eigenvalue statistic indicates 1 co-integrating equation(s) at the 0.05 level

*denotes rejection of the hypothesis at the 0.05 (5%) level; r represents number of co-integrating vectors; k represents number of lags in the unrestricted VAR model. **MacKinnon-Haug-Michelis (1999) P-values.

Source: Authors' Estimation Results, 2021.

The results reveal that both the trace statistic and maximum Eigen value statistic confirm the existence of co-integrating equations among the variables of interest. This is because the likelihood ratio is greater than critical values at 5%. It is evident that the trace test indicates one co-integrating equation while maximum Eigen value test reveals one co-

integrating equation in the model, as the null hypothesis of no co-integration is rejected. Since the variables are co-integrated, this satisfies the convergence property. The results of test statistics indicate that there is one co-integrating relationship between deficit financing and economic growth at the five percent (5%) level of significance. These results suggest that there is a unique long run equilibrium relationship among the variables.

Table 5: Vector Error Correction Model (VECM) Results.

Variable	D (GDP)	D (DDT)	D (EDT)	D (BTD)	D (FER)
ECT/ECM	-0.0709 (0.1208) [1.6897]**	-1.3051 (0.4122) [-3.1665]***	-2.1701 (1.5217) [-1.4261]*	14.8585 (3.9766) [3.7365]***	2.2446 (1.3825) [1.6936]**
D(GDP(-1))	0.3433 (0.1817) [1.8893]**	0.2348 (0.6201) [0.3787]	-0.5911 (2.2893) [-0.2582]	-7.6393 (5.9825) [-1.3769]*	0.7771 (2.0799) [0.3736]
D(GDP(-2))	-0.0608 (0.1809) [-0.3360]	1.5435 (0.6174) [2.5002]***	-0.2673 (2.2792) [-0.1173]	3.3200 (5.9561) [0.5574]	-2.3568 (2.0707) [-1.3382]*
D(DDT(-1))	-0.0248 (0.0667) [-0.3714]	-0.1890 (0.2277) [-0.8300]	-0.9890 (0.8405) [-1.1767]	3.0682 (2.1964) [1.3969]*	0.8757 (0.7636) [1.1469]
D(DDT(-2))	0.0584 (0.0626) [0.9343]	-0.0977 (0.2135) [-0.4578]	-0.3112 (0.7880) [-0.3949]	3.3721 (2.0593) [1.6875]**	-0.0519 (0.7160) [-0.0725]
D(EDT(-1))	0.0017 (0.0156) [0.1118]	0.0630 (0.05312) [1.3869]*	0.3189 (0.19610) [1.6959]**	0.3021 (0.51247) [0.5895]	-0.0994 (0.17817) [-0.5578]
D(EDT(-2))	-0.0095 (0.0151) [-0.6282]	0.0518 (0.0515) [1.0067]	0.0203 (0.1901) [0.1069]	0.1144 (0.4967) [0.2304]	-0.2171 (0.1727) [-1.3568]*
D(BTD(-1))	-0.0095 (0.0151) [-0.6282]	0.0518 (0.0515) [1.0067]	0.0203 (0.1901) [0.1069]	0.1144 (0.4967) [0.2304]	-0.2171 (0.1727) [-1.3568]*
D(BTD(-2))	0.00523 (0.0068) [0.7770]	-0.0293 (0.0230) [-1.3723]*	-0.0801 (0.0851) [-0.9417]	0.2523 (0.2223) [1.1350]	0.0521 (0.0773) [0.6739]
D(FER(-1))	0.0071 (0.0166) [0.4283]	0.0431 (0.0568) [0.7596]	-0.2581 (0.2095) [-1.3318]*	1.3906 (0.5475) [2.5399]***	0.0752 (0.1904) [0.3950]
D(FER(-2))	-0.0026 (0.0205) [-0.1245]	-0.0638 (0.0700) [-0.9116]	-0.0830 (0.2585) [-0.3212]	1.5693 (0.6754) [2.4536]***	-0.4063 (0.2348) [-1.7302]**
Constant (C)	0.0302 (0.0196) [1.5410]*	0.1180 (0.0668) [1.7660]**	0.4033 (0.2467) [1.6951]**	-1.2815 (0.6446) [-1.9882]**	0.1140 (0.2241) [0.5089]
Summary of Statistics					
R²	0.2635	0.4699	0.2963	0.6121	0.2988
Adj. R²	-0.0480	0.2456	-0.00134	0.4479	0.0022
S.E. Equation	0.0366	0.1249	0.4610	1.2048	0.4189
F-Statistic	0.8458	2.4952	0.9954	3.7292	1.0073

AIC	-3.5255	-1.0709	1.5414	3.4626	1.3496
Schwarz	-3.0084	-0.5537	2.0585	3.9798	1.8667

Note: Standard Errors are in parenthesis and t-Statistics are in brackets

*/**/** = Significant at 10%, 5% and 1% levels

Source: Authors' Estimation Results, 2021.

The estimated Vector Error Correction Model (VECM) evaluates the short run behaviour and the adjustment to the long run model. Here, the short run dynamics for Nigeria are estimated using the error correction representation of the model that include two lags for each of the first differences for the five variables and the equilibrium error correction terms. Error correction coefficient can be treated as a mechanism, which ties the short run behaviour to its long run value. It simply shows the speed with which the system converges to equilibrium. If it is statistically significant, it shows what proportion of the disequilibrium in dependent variable in one period is corrected in the next period. From table 5, the error correction coefficient (-0.0709) which measures the speed of adjustment towards long run equilibrium has the required negative sign, lies within the accepted region of less than unity and significant at 5% level. The coefficient of Vector Error Correction (VEC) indicates a speed of about 7.1% of the previous period disequilibrium from the long run economic growth. This also implies that the speed with which the variables (DDT, EDT, BTM, and FER) adjust from short-run disequilibrium to changes in economic growth (GDP) in order to attain long run equilibrium is 7.1% within one period. The coefficient also suggests that the speed of adjustment towards equilibrium is quite reasonable and all the variables are significant to the Error Correction Term (ECT).

The error correction estimates of 1.3051 for DDT indicates that 130.51% of the preceding period's disequilibrium is eliminated in the current period, with immediate adjustments captured by the difference terms. The EDT, BTM, and FER indicate 217.01%, 1485.85%, and 224.46% respectively, of the preceding periods' disequilibria that are eliminated in the current period. In the lagged economic growth (GDP), all the variables have positive relationships with GDP except external debt (EDT) and budget deficit (BTM) in lag 1 while in lag 2 all the variables have positive relationships with GDP except external debt and foreign exchange reserves with negative relationships. Furthermore, none of these variables is significant to GDP except BTM which is significant at 10% level in lag 1 while in lag 2, DDT and FER are significant at 1% and 10% levels respectively.

A look at the ECT with particular reference to the explanatory variables, the followings are discernible from the results. The estimated error correction terms (ECT) as regards DDT and EDT are not in conformity with a prior expectation of positive sign while BTM and FER are in tandem with the prior expectations. This further shows that the speed of adjustment to the long run relationship in the equations are 130.51%, 217.01%, 1485.85% and 224.46% respectively.

Considering the impact of deficit financing on economic growth in Nigeria which is the focus of this study, it is evident from table 5 that in row one of GDP_(.1), column 2, and subsequent columns (3-5), that 1% increase in economic growth (GDP) is brought about by 23.48% increase in DDT, 59.11% decrease in EDT, 763.93% decrease in BTM, and 77.71% increase in FER, respectively. Similarly, row two of GDP_(.2), column 2, and subsequent columns (3-5), a 1% increase in economic growth (GDP) is brought about by

154.35% increase in DDT, 26.73% decrease in EDT, 332.00% increase in BTM, and 235.68% decrease in FER in the short run respectively.

In synopsis, the lag value of domestic debt (DDT) is positive and significant to economic growth in Nigeria. This result is in tandem with Nwanna and Umeh (2019) that ascertained the effect of deficit finance on Nigeria's economic growth and also with Monogbe, Dornubari and Emah (2015) that examined how the government managed her deficit through borrowing from external sources, domestic debt or increase in the total money supply and how it affected economic performance in the Nigeria context. Similarly, foreign exchange reserves contributions are positive and significant to economic growth. This means that, an increase in the quantum of foreign exchange reserves will stimulate economic growth in Nigeria.

Furthermore, the VECM estimate establishes that the lag values of external debt (EDT) have negative and insignificant relationship with economic growth and this is in consonance with the results of Nwanna and Umeh (2019) and Monogbe, Dornubari and Emah (2015) which revealed that deficit financing through external debt borrowing has a significant negative effect and a contagious implication on Nigeria's economic growth. Contrary to Onwe (2014) who investigated the implications of deficit financing on economic growth in Nigeria and revealed that external source of deficit financing has significant and positive implications on economic stability. Budget deficit (BTM) has mixed results of positive and negative relationship and insignificant impact on economic growth. The finding that deficit financing has positive and insignificant impact on economic growth in Nigeria is corroborated by the findings of Okah, Chukwu, and Ananwude (2019) and Nwakobi, Echekeba and Ananwude (2018). Contrarily, Ali, Mandara and Ibrahim (2018), Hussain and Haque (2017) and Momodu and Monogbe (2017) results revealed that budget deficit had significantly impacted on output growth and stimulated economic performance in Nigeria.

The F-statistic shows that the overall goodness of fit of the model as well as the functional linear relationship between deficit financing and economic growth is good and statistically significant at 1% level.

Conclusion

The study investigates deficit financing and economic growth in Nigeria and employs the Vector Error Correction Model (VECM) to achieve its objective using annual time series data from 1981 to 2021. This technique is supported by descriptive statistics, unit root and co-integration tests. The descriptive statistics reveals that the degree of variability of the variables is good, an indication that the data points are spread out over a large range of value while the unit root test reveals that the variables are stationary at first difference. Co-integration shows that there is a long run relationship between deficit financing and economic growth in Nigeria. The coefficient of Vector Error Correction (VEC) indicates a speed of about 7.1% of the previous period disequilibrium from the long run economic growth which is an indication that the speed of adjustment towards equilibrium is quite reasonable. It can be concluded that to some extent deficit financing is good for economic growth if the borrowed fund is expended on productive projects that the rate of returns on investments is greater than the cost of funding such projects.

Recommendations

Based on the findings, the study makes the following recommendations:

- i. Government should ensure that budget deficit is kept under proper control and ensure that it is expended on capital projects that have multiplier effects on the economy such as increase output, income, and employment opportunities to enhance economic growth in Nigeria and as much as possible avoid massive deficits leading to debt financing and the crowding-out effect of private investment.
- ii. External borrowings should be kept within a certain threshold to avoid debt overhang and a close monitoring of external debt to ensure an efficient public expenditure process and fiscal discipline in order to reduce corruption, linkages and wastages, by holding everyone accountable for government money spent.
- iii. Government should maintain an optimum level of domestic debt and ensure that such loans are channeled into the provision of infrastructural facilities that could snowball into economic growth and development which will lead to both domestic and foreign investments.
- iv. Government must strive to increase her foreign exchange reserves to enhance economic growth and development of the Nigerian economy. The quantum of foreign exchange reserves of a country is very key to her development in terms of trade enhancement, foreign investments, boost confidence of foreign countries in such an economy and above all it trickles down on economic growth.
- v. Government should diversify its revenue base for increased revenue and expenditure to reduce deficit financing with its attendant negative impact on economic growth of the Nigerian economy.

References

- Abdurrauf, B.A. (2015). Fiscal Policy and Economic Development in Nigeria. *Journal of Economics and Sustainable Development*, 6(7), 150 – 159.
- Adesuyi, O.O. & Falowo, E. (2013). Impact of Fiscal Deficit Financing on Macroeconomic Growth in Nigeria. *International Journal of Research in Management*, 3(5), 143-152.
- Akinmulegun, S.O. (2014). Deficit Financing and Economic Growth in Nigeria: A Preliminary Investigation. Department of Banking and Finance, Adekunle Ajasin University, P.M.B. 001, Akungba Akoko, Ondo State, Nigeria.
- Ali, M.B., Mandara, B. & Ibrahim, M.A. (2018). Impact of Deficit Financing on Economic Growth in Nigeria. *Global Journal of Management and Business Research: Economics and Commerce*, 18(3), 21-34.

- Bazza, A.M., Binta, M. & Alhaji, I.M. (2018). Impact of Deficit Financing on Economic Growth in Nigeria. *Global Journal of Management and Business Research: B Economics and Commerce*. 18(3), 29-36.
- Bhatia, H.L. (2015). Public Finance. New Delhi: Vikas Publishing House PVT Ltd.
- CBN (2013). *Annual Report and Statement of Accounts*. Abuja: Central Bank of Nigeria.
- Hussain, M.E. & Haque, M. (2017). Fiscal Deficit and its Impact on Economic Growth: Evidence from Bangladesh. *Economies* 5(4), 37.
- Keynes, J.M. (1936). *The General Theory of Employment, Interest and Money*. London and New York: Macmillan.
- Medee, P.N. & Nenbee, S.G. (2011). 'Econometric Analysis of the Impact of Fiscal Policy Variables on Nigeria's Economic Growth 1970-2009.' *International Journal of Economic Development Research and Investment*, 2(1), 171-183.
- Momodu, A.A. & Monogbe, T.G. (2017). Budget defect and economic performance in Nigeria *Saudi Journal of Business and Management Studies*, 2(3), 25-31.
- Monogbe, T.G. and Okah, O.J. (2018). Deficit Financing in the Process of Economic Development in Nigeria. *Saudi Journal of Business and Management Studies*.
- Monogbe, T.G., Dornubari, I.G. & Emah, D.S. (2015). Deficit Finance and the Nigeria Economic Performance: Empirical Investigation. *International journal of academic research*, 1(3), 1-20.
- Monogbe, T.G. (2016). Intergenerational Causality Effect of External Debt on Performance of the Nigeria Economy (revised version): IIARD *International Journal of Banking and Finance Research* ISSN 2406-8634. 2(1) www.iiardonline.org
- Musa K.B. (2021). Theoretical Review of the Impact of Fiscal Deficits on Economic Growth in Nigeria. *European Scientific Journal*, ESJ, 17(1), 310.
- Nwakobi, P.C., Echekoba, F.N. & Ananwude, A.C. (2018). Fiscal Deficit in an Oil Dependent Revenue Country and Selected Macroeconomic Variables: a Time Series Analysis from Nigeria (1981-2015). *European Journal of Economic and Financial Research*, 3(1), 126-167.
- Nwanna, I.O. & Umeh, G.N. (2019). Deficit Financing and Economic Growth: The Nigerian Experience. *International Journal of Economics and Financial Management*, 4(1), 28-49.
- Nzotta, S.M. (2014). *Money, Banking and Finance: Theory and Practice*. Owerri: Hudson Jude Nigeria Publishers, 2014.
- Okah, J.C., Chukwu, K.C. & Ananwude, A.C. (2019). Deficit Financing and Economic Growth in Nigeria: 1987-2017. *Asian Journal of Economics, Business and Accounting*, 12(1), 1-13
- Okoro, A.S. (2013). Deficit Financing and Trade Balance in Nigeria. *International Journal of Accounting Research*, 2(1), 49-54.

- Okoye, L.U., Omarkhanlen, A.E., Okorie, U.E., Okoh, J.I. & Ahmed, A. (2019). Persistence of Fiscal Deficits in Nigeria: Examining the Issues. *Investment Management and Financial Innovations* 16(4), 9.
- Onwe, B.U. (2014). Implication of Deficit Financing on Economic Growth in Nigeria. *European Journal of Accounting, Auditing and Finance Research* 2(10),122-135.
- Onwioduokit, E.A. & Inam, U.S. (2018). Budget Deficit and Economic Growth In Liberia: An Empirical Investigation. *American Journal of Social Sciences and Humanities Research*. 2(6), 8-78.
- Solawon, M.D. & Adekunle, O.E. (2018). Deficit Financing and Economic Growth: An Autoregressive Distributed Lag Approach. *Annals of Accounting, Educational & Social Research* 5(1): 23 – 33
- Tung, L.T. (2018). The Effect of Fiscal Deficit on Economic Growth in an Emerging Economy: Evidence from Vietnam. *Journal of International Studies*, 11(3), 191-203.