

Fiscal Deficit on Capital Project and Economic Growth in Nigeria: The Nexus

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Abstract: The study investigated the nexus between fiscal deficit, capital project and economic growth in Nigeria with the main objective of determining the impact of fiscal (budget) deficit on capital projects/expenditure and GDP in Nigeria. The study was guided by Keynesian, Neoclassical, and Ricardian theories of budget deficit. This study made use of ex-post facto research design; Secondary data were collected from Central Bank of Nigeria (CBN) statistical bulletin of various years for the period 1981-2020. The presence of unit root was checked by using Augmented Dickey-Fuller (ADF). The Johansen Co- integration technique was used to determine the long run equilibrium relationships among the variables. Thereafter, the ordinary least square regression analysis was used to determine the magnitude and direction of the independent variables on the dependent variable(s). The study revealed that fiscal or budget deficit has negative impact on capital expenditure or project and economic growth in Nigeria. It was recommended that Government at all levels should reduce the volume of recurrent expenditure as it consumes almost 80% of the country's revenue and Government and its MDA should stop multiplication of projects in the budgets as it is the major reason for fiscal deficit in Nigeria.

Keywords: Budget, Capital Project, Deficit, Economic Growth, Expenditure.

Introduction

Over the years, the government has been charged with the responsibility of making available, the resources of the state for basic necessities that are germane. These basic necessities are capital intensive, and as such, the private firms are not financially tuned enough to handle such projects. Based on this, it is expected that the generated revenue of the government is sufficient enough to foot its bills. In a situation where the generated revenue is not enough in footing its bills, the government must resolve to three basic means of financing, which includes borrowing, taxation and monetization. These are the three basic ways through which the government of a country could help in supplementing or boosting its revenue. Each of these means has a long and short run effect on the economy. In this context, however,

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budget deficit occurs when the generated revenue of the government is less than its total expenditure over a budget period.

The capital budget (project) is the aspect of the overall national budget that determines the allocation of funds to finance capital projects and critical infrastructure, such as the construction of roads, bridges, hospitals, schools, prisons, public administrative buildings, highways, dams, and irrigation systems; the purchase of machinery and equipment; and the supply of water, electricity, and transport, health, and educational facilities. The capital budget, unlike the recurrent budget, is used to fund capital expenditures, such as the construction of durable assets. By contrast, the recurrent budget determines the allocation of funds to finance recurring governmental expenditures, such as expenditures related to personnel, overhead, civil administration, defense, health, education, and government machinery maintenance. For a public budget to effectively perform its role, it should be well designed, effectively and efficiently implemented, and adequately monitored, and ultimately, its performance should be monitored and evaluated (Faleti & Myrick 2012)

Prior to the Nigerian independent era, (Monogbe, Dornubari, & Emah, 2015) revenue from agriculture and coal were the major sources of income through which the nation was financed and the first phase of the capital project executed in the country was through the funds generated from these sources. Towards the early 70s, Akinmulegun (2013) as cited in Momodu and Monogbe (2017) stated that many economic policies of the government, including the well-celebrated structural adjustment program (SAP) of 1986 were implemented with the help of the budget deficit. Not only this, the financing of the so-called “oil subsidy,” the perennial insecurity problems, as well as other engagements of the government, such as the 2011, 2015, and 2019 general elections were financed courtesy the budget deficit. The budget deficit in the Nigerian context experiences increment on a yearly basis based sequel to some structural factors and certain economic characteristics of the country, which are not changeable in the short run. These structural factors as stated by (Monogbe, Dornubari, & Emah, 2015) include mismanagement, misappropriation of borrowed funds, and mismatch of internal and external debt. These have added the budget problem of the country.

The released budget proposal for the year 2022 has a deficit of about N6.25tn, and is expected to be financed by new borrowings, privatization proceeds and drawdown on loans secured for specific projects. recurrent expenditure of N6.83tn is the largest expense item, with 60% relating to personnel costs at N4.11tn, The capital expenditure budget of N4.89tn represents an increase of 18% compared to 2021, and about 30% of total 2022 expenditure and Debt service expenditure is estimated at N3.61tn, representing about 35.6% of the projected revenue for the year. Going by all of these, put together, can one emphatically say that there will be any implementation of capital project within the period which will spur economic growth and development in Nigeria given the huge debt burden the country is presently in? With the growing rate of budget deficit in Nigeria from N1.954tr in 2018, N1.920tr in 2019, N2.175tr in 2020, N5.2tr in 2021 and about N6.25tn in 2022, what is the economic implication of this rise of fiscal deficit on capital project and economic growth in Nigeria?

Objectives of the study.

The broad objective of the study is to examine the impact budget deficit on capital project and economic growth in Nigeria, Basically, the other objectives are:

- To evaluate the relationship between fiscal (budget) deficit, interest rate and inflation on capital projects/expenditure in Nigeria.
- To determine the impact of fiscal (budget) deficit, interest rate and inflation on economic growth of Nigeria.

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Hypotheses of the Study

- Fiscal (Budget) deficit, interest rate and inflation do not significantly impact on capital project in Nigeria.
- Fiscal (Budget) deficit, interest rate and inflation do not relate positively and significantly on economic growth in Nigeria.

Conceptual Definitions

A budget is a subset of a broader economic policy, which details how the government influences the economy and performs three overarching roles: Allocative, Stabilization and Distribution functions. The absence of such coordinated and clear macroeconomic policy framework raises the level of uncertainty on the direction of the economy and as such limits the movement of capital and investments in productive sectors (Mark & Johnson, in Tanko & Bello, 2016). A budget is an estimation of anticipated revenue and expenditure over a specified future period of time usually one year. From an economic perspective, a national budget is a fiscal policy; it contains the package of several blueprints of the government that aims to achieve certain specific goals. According to Musa (2016), the nature of a national budget at a particular regime is for stabilization. The economy of every nation fluctuates from time to time and certain abnormalities emerge also from time to time; a national budget therefore should be timely or provide the right policy response based on the performance of an economy. A budget can be balanced, deficit or surplus.

Fiscal (Budget) deficit is an expansionary fiscal policy where government expenditure for the year exceeds anticipated revenue (Mack, 2007). The application of budget deficit in an economy requires tax reduction and increase of government spending. Since government expenditure must exceed the projected revenue, the gap in between has to be borrowed by the government either within the economy or from foreign countries/international financial institutions.

Budget surplus is known as contractionary fiscal policy. It is a budget where government expenditure is less than the anticipated revenue (Philips, 2000). Its application requires tax increase and reduction in government expenditure which provides savings for the economy. Unlike budget deficit, budget surplus is applied mainly where there is anticipated inflation and overproduction or supply in an economy which is likely to result in price reduction of goods and services. According to Mack (2007), from the law of supply, when price of goods and services reduces, producers tend to reduce production as well as supply and otherwise. The implication is that when production is reducing in an economy, it is translated into loss of employment, rise in prices of goods and services and other related problems.

A balanced budget means that revenue is expected to equal expenditure. When government plans to spend exactly what is budgeted, there would be neither savings nor borrowing by the government. In real world situation, this type of budget is only theoretical except in private companies or individuals. Traditionally; adjustments are made from time to time to budgets, based on the goals of the budgeting in an economy. According to Philips (2000), in some cases and in most economies, budget makers are happy to operate at a deficit, while in other cases, operating at a deficit is seen as financially irresponsible. This is because when a nation plans to design or implement budget deficit, it provides arbitrage opportunities for stealing public funds by failure to implement promised projects.

The national budget is basically divided into recurrent and capital budget. Recurrent expenditure consists mainly of expenditure on wages, salaries and supplements, purchases of goods and services and consumption of fixed capital (depreciation), while capital budget is a fragment of the national budget which shows the proportion of the national revenue allocated for the purpose of carrying out project with

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useful life of more than a year. The capital budget unlike the recurrent budget is initiated to provide funds to finance capital projects or assets.

Economic growth is the increase in the amount of goods and services produced by the economy overtime. It represents an increase in the capacity of an economy to produce goods and services, compared from one period of time to another. Economic growth refers only to the quantity of goods and services produced with a specific period of time. Economic growth measures growth in monetary terms and looks at no other aspect of development (Illyas & Siddiqi, 2010). Economic growth can be either positive or negative. Negative growth can be referred to as shrinking of the economy. Negative growth is associated with economic recession and economic depression.

Theories on Budget Deficit and Economic Growth

There are three major theories concerning the macroeconomic effect of budget deficit, which are; The Keynesian, Neoclassical and Ricardian theories.

The Keynesian theory of budget deficit was propounded by a British economist, John Maynard Keynes. The theory states that there is a positive relationship between budget deficits and macroeconomic variables. The Keynesians stated that increasing budget deficit will lead to an increase in aggregate demand and improved investor’s confidence on the economy’s potential, thereby fostering investments and aggregatesavings which results to economic growth in the long run. The Keynesians posit that budget deficits results to a rise in domestic production, which makes investors optimistic about the future course of the economy resulting in them to invest more. This is known as the "crowding in" effect. The traditional Keynesian view differs from the standard neoclassical paradigm in two fundamental ways. First, it permits the possibility that some economic resources are unemployed. Second, it presupposes the existence of a large number of liquidity-constrained individuals. This second assumption guarantees that aggregate consumption is very sensitive to changes in disposable income. Eisner (in Gbenga & Ikponmwosa, 2019) asserted that an increase in the level of aggregate demand will improve the level of profitability of private investments which will bring about a rise in the level of investment at any given interest rate, hence deficits may stimulate aggregate savings and investment, even though they raise interest rates. He concluded that "evidence is thus that deficits have not crowded-out investment. There has rather been crowding-in".

However, Keynesian paradigm, with respect to high government expenditure, was challenged empirically, when it could not explain the world economic recession in 1970s and the boom in 1980s while Phillips (in Gbenga & Ikponmwosa, 2019) also pointed that though budget deficit can lead to increased economic activity and low level of unemployment, there is an unintended consequence in the form of a higher level of inflation in the economy.

The Neoclassical theory postulated that budget deficit has an inverse relationship on macroeconomic variables. They stated that budget deficit leads to a rise in interest rates, which discourages the issue of private bonds, private investments and therefore results to a rise in the level of inflation, and adversely affecting the level of economic growth due to crowding out of resources. They further stated that budget deficit will leave a huge tax burden on future generation because borrowed funds will need to be repaid. The neoclassical theory has three main assumptions, which are that, the consumption of individuals is determined as the solution to an inter-temporal optimization problem, where both borrowing and lending are permitted at the market rate of interest. Secondly, individuals have finite lifespan such that, each consumer belongs to a generation, and the lifespan of successive generations overlap. Thirdly, market clearing is generally assumed in all periods.

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However, the neoclassical paradigm does not tie down the effects of temporary deficits, and evidence that bears on the effects of temporary deficits is not useful for testing this paradigm. The fundamental lessons of the neoclassical framework have to do with the effects of permanent deficits.

The Ricardian Equivalence theory was postulated by David Ricardo but was later completed by Barro (1989). The theory posits that budget deficit has no effect on the economy. They stated that an increase in budget deficits will be repaid either now or in future because a cut in taxes today must be matched by future increase in taxes thereby leaving real rate of interest, private investment, exchange rate and domestic production unaffected (Pesaran, Shin, & Smith, 1999; Pesaran, Shin, & Smith, 2001). The theory is based on two assumptions, which are the assumption of rational expectations and household taxation which states that as budget deficit increases through borrowing, and as taxes reduce, the government will not increase future taxes to repay the interests and debts. Also, they believe that people found out by experience that increase in government bond as a result of decrease in taxes offers temporary revenue for the individual at the present time and as the debt of government continues to rise, people will save more so as to provide higher tax paying in the future.

Therefore, increased public saving offers more credit to families and economic enterprises. As a result, increased loan demand by government would be compromised by higher saving; therefore, interest rate remains unchanged, and the decrease in taxes may not lead to permanent revenue, households save temporary income with no change in order to pay the future tax liabilities, in term of savings, caused by current tax cuts.

The Ricardian equivalence theory was criticized by Feldstein (1976) as he stated that Barro ignored economic and population growth in his study stating that the creation of public debt depresses savings in a growing economy.

Empirical Literature

The following literature are reviewed for the study:

Nwikina, Meekor, Cookey and Gbarato (2021) studied deficit financing and economic development: the Nigeria’s experience. The study examined the effectiveness of deficit financing as a veritable instrument to enhance economic development in Nigeria. While human development index was used to measure economic development, budget deficit and government expenditure were used to proxy deficit financing. Data were sourced from Central Bank of Nigeria Statistical Bulletin for the period 1986 to 2019. Employing The Autoregressive Distributive Lag and Granger Causality Test techniques, the results revealed that budget deficit and government expenditure exert positive but marginal influence on economic development in Nigeria. Also, the study showed a unidirectional causality, indicating that deficit financing through government expenditure promotes economic development in Nigeria. Although, the study supported the Keynesian theory with a positive influence, deficit financing value in Nigeria is not substantive enough to drive the needed century-development desired in the economy.

Musa (2021) theoretically reviewed the impact of fiscal deficits on economic growth in Nigeria. The study 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 is 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.

Umeh, Ochuba and Ihezue (2021) investigated the impact of government budget deficits on public health sector output in Nigeria. The study examined the impact of government budget deficits on the public

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health sector output in Nigeria over a period of 1980 to 2018. The study sought to investigate how government budget deficits affect the public health sector output in Nigeria, ascertain the impact of external borrowing on the public health sector output in Nigeria and evaluate the impact of domestic borrowing budget deficits financing on the public health sector output in Nigeria. The methods of data analysis range from Augmented Dickey-Fuller (ADF) unit root test, Johansen co- integration test and finally error correction method. The study found that government budget deficits have positive insignificant impact on public health sector output in Nigeria ($t - \text{statistics } (0.5663) < t_{0.05} (1.684)$); external borrowing of financing budget deficits has negative insignificant impact on Health sector output in Nigeria ($t - \text{statistics } (-1.2746) < t_{0.05} (1.684)$) and domestic borrowing of financing budget deficits has positive significant impact on Health sector output in Nigeria ($t - \text{statistics } (2.1711) > t_{0.05} (1.684)$).

The study concluded that the budget deficits of government have positive insignificant impact on Health sector output in Nigeria because more budget allocations are put in health recurrent government expenditure than health capital expenditure whereas health capital expenditure is the engine of growth in health sector output.

Adebowale (2021) studied asymmetric relationship between budget deficit and economic growth in Nigeria. The study examined asymmetry in the nexus between budget deficit and economic growth in Nigeria from 1981 to 2018 using a nonlinear ARDL model advanced by Shin et al. (2014). The findings suggested the presence of asymmetries in the nexus between the indicated variables in the short and long run. The findings further showed that budget deficit affect economic growth both in the short and long run negatively.

William (2021) study analyzed the relationship between fiscal deficits and the economic performance of Zimbabwe for the period 1980–2018. A descriptive approach was used to analyze developments in the Zimbabwean economy over the study period. The study also provided a descriptive analysis of the impact of external shocks, structural breaks and policy shifts on the Zimbabwean economy and their influence on the relationship between fiscal deficits, inflation and economic growth. The analysis indicated that there could be a two-way relationship between fiscal deficits and real GDP growth, with one possibly causing the other. High fiscal deficits, largely financed through borrowing from the central bank, resulted in high money supply growth, leading to high inflation and a negative impact on economic performance. Conversely, low economic growth resulted in low fiscal revenue inflows, against high government expenditure, leading to high fiscal deficits. External shocks such as droughts and the decline in international commodity prices of Zimbabwe’s export products negatively impacted on fiscal revenue inflows and economic performance. Developments in the country’s political economy also had an influence on its economic performance.

Chukwu, Otiwu, and Okere (2020) studied impact of budget deficit on Nigeria’s macroeconomic variables: covering the period 1980-2012. The study was informed by the need to solve the problem of ever-increasing huge budget deficit in the face of weak economic growth and macroeconomic performance. Employing the two stage least square, data analyses were carried out to cover the unit root, granger causality and co integration tests to produce five statistically significant models viz-a viz the budget deficit and economic growth model, the budget deficit and real interest rate effect model, the budget deficit and inflation rate effect model, the budget deficit and investment effect model, and the budget deficit and real exchange rate effect model. It was found that budget deficits have significant negative relationship with gross domestic product growth rate, real private investment, inflation rate, real exchange rate and positive significant relationship with real interest rates. Thus, the study concluded on the basis of these findings that budget deficit financing has not engendered the required growth in the Nigerian economy and therefore should be reduced.

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Gbenga and Ikponmwosa, (2019) studied budget deficit and economic growth in sub-Saharan Africa: A PMG approach. The study empirically investigated the long run and short run relationship between budget deficit and economic growth in sub-Saharan Africa countries from 1991 to 2018 using Panel data for twenty (20) sub-Saharan Africa Countries. The estimation technique employed in the study was the Pooled Mean Group (PMG) estimation method and the regression results revealed that in the long run, budget deficit has a negative and significant relationship with economic growth whereas in the short run, it has a positive and significant relationship with economic growth. The study concluded that government should reduce the overall recurrent expenditure as it will help to mitigate the problem of budget deficit that leads to debt accumulation in sub-Saharan Africa countries and increase expenditure on developmental projects.

Adesina and Olatise (2019) studied the effect of government deficit budgeting and financing strategies on economic growth in Nigeria. The study investigated the effect of deficit budgeting and financing strategies on economic growth in Nigeria for a period of thirty (30) years, 1987-2016. Specifically, it examined the trends and effect of deficit budgeting, external financing and domestic financing of budget deficit and its implication on economic growth in Nigeria. Secondary method of data collection was used in the study. Data collected from the Central Bank of Nigeria Statistical Bulletin (CBN) 2016 were analyzed using descriptive statistics to determine the mean and standard deviation of the variables and Vector error correction regression analysis model for the estimation of the data. The effect of deficit budgeting on economic growth in Nigeria was positive and significant while external financing and domestic financing exerted significant negative effect on economic growth in Nigeria in the period of the study.

Momodu and Monogbe (2017) studied budget deficit and economic performance in Nigeria. The study examined the lag effect of previous year's budget deficit on performance of the Nigerian economy in the contemporary year using VAR estimation between the periods 1981 to 2015. From the foregoing statistical output, findings established that Budget deficit significantly stimulate economic performance. The output of the granger causality test showed that budget deficit statistically granger cause economic performance and viz versa while the result of the multiple regression of the ordinary least square report a significant but negative relationship to economic performance. The negative response of budget deficit to economic performance could be attributed to moral hazard, mismanagement of fund and financial indiscipline which prevent the country from enjoying the sustainable level of expected growth overtime.

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 support the Keynesian postulation of significant relationship between budget deficit and economic performance.

Edame and Okoi (2015) studied fiscal deficits and economic growth in Nigeria: A Chow Test approach. The study examined the relative impact of fiscal deficits (FSD) on economic growth in Nigeria during the military and democratic regimes. The study employed Chow endogenous break test, unit root and co integration tests. The results derived from the Chow tests analysis reveal that there is a difference between the growth- impact of FSD in the two regimes. In particular, the study found that FSDs had a significant growth-impact during the military regime, while it has not had a significant impact on economic growth during the democratic regime. On the other hand, the study's results indicated that the interest rate did not have a significant growth-impact during both regimes, while the gross fixed capital formation had a significant growth impact during both regimes.

Methodology

This study made use of ex-post facto research design. According to Onwumere (2009), ex-post facto design is a type of design involving activities or events that have already taken place. The data is already in existence as no attempt can be made to: control, distort or manipulate the variables. In order to estimate the empirical effect of fiscal deficit on capital project and economic growth in Nigeria, secondary data were collected from Central Bank of Nigeria’s (CBN) statistical bulletin of various years for the period 1981-2020. Descriptive statistics were employed to determine the mean, standard deviation, minimum, and maximum value of the study variables. Gross domestic product (GDP) budget deficit (BDF), capital expenditure (CE), Interest rate (INTR) and Inflation rate (INFR) are the variables used in the study. The presence of unit root was checked by using Augmented Dickey-Fuller (ADF). The Johansen Co-integration technique was used to determine the long run equilibrium relationships among the variables. Thereafter, the ordinary least square regression analysis was used to determine the magnitude and direction of the independent variables on the dependent variable(s).

Model Specification

The specification of the models for this study is based on the objective of the study. The model measured the impact of fiscal deficit on capital project and economic growth in Nigeria.

Objective one:

Impact of fiscal (budget) deficit, interest rate and inflation on capital projects/expenditure in Nigeria.

$$CP = f(FD, INTR, INFR) \dots\dots\dots(i)$$

$$CP = \beta_0 + \beta_1FD + \beta_2intr + \beta_3infr + \mu \dots\dots\dots(ii)$$

Objective two

Impact of fiscal (budget) deficit, interest rate and inflation on economic growth of Nigeria.

$$GDP = f(FD, INTR, INFR) \dots\dots\dots(iii)$$

$$GDP = \beta_0 + \beta_1FD + \beta_2INTR + \beta_3INFR + \mu \dots\dots\dots(iv)$$

Where *CP* is capital project proxied by capital expenditure, *FD* is fiscal (budget) deficit, *INTR* is interest rate, *INFR* is inflation rate, and *GDP* is gross domestic product

Presentation of Results and Data Analysis

Table 4.1: Descriptive Statistics

	CP	FD	GDP	INFR	INTR
Mean	551.13	-775.82	35577.85	19.46	17.56
Median	315.20	-510.10	24477.91	12.93	16.90
Maximum	2289.00	32.05	71387.83	76.76	31.65
Minimum	4.10	-6598.12	13779.26	0.22	8.92
Skewness	1.34	-2.47	0.61	1.74	0.31
Kurtosis	4.39	8.67	1.77	5.11	3.77
Jarque-Bera	15.13	4.15	5.01	27.68	1.65
Probability	0.00	0.10	0.08	0.00	0.44

Source: *Researcher’s Computation 2022.*

The results on table 4.1 indicated the descriptive statistics of the study. Within the period under study, the mean of capital expenditure was N551.13B, maximum expenditure was N2289.00B and the minimum capital expenditure was N4.10B. For fiscal deficit (budget deficit), the mean was N-775.82B, highest fiscal surplus was N32.05B and the highest fiscal deficit was N6598.12B. GDP has the mean N35577.85B, the maximum was N71387.83N and the minimum was N13779.26B. In Inflation and interest rates, the means were 19.46% and 17.56% respectively. The maximum were 76.76% and 31.65%, while the minimum were 0.22% and 8.92% respectively. Fiscal deficit, GDP and interest rate were normally distributed while in capital expenditure (project) and inflation rate were not normally distributed.

Table 2-Unit-Root Test Result by Augmented Dickey Fuller Method

<i>Variables</i>	<i>P(value) 1%,5% &10%</i>	<i>Order of Integration</i>
CP	0.0001	<i>I(1)</i>
FD	0.0000	<i>I(2)</i>
GDP	0.0000	<i>I(2)</i>
INFR	0.0246	<i>I(0)</i>
INTR	0.0000	<i>I(2)</i>

The results of the stationarity tests; (table 2) showed that FD, GDP and INTR were stationary at second difference (*I(2)*) using one, five and ten percent significant levels, CP was stationary at first difference (*I(1)*) and *INFR* was stationary at initial difference (*I(0)*).

Table -3-Johansen Cointegration Result for CP, FD, INTR & INFR

Hypothesized	Trace	0.05	
No. of CE(s)	Statistic	Critical Value	Prob.**
None *	59.11631	47.85613	0.0031
At most 1 *	34.03696	29.79707	0.0153
At most 2	12.45652	15.49471	0.1363
At most 3 *	5.640526	3.841466	0.0175

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level

Results in table -3- showed that, there exist three (3) co-integrating equations at 5% levels of significance. This is because the probability value is less than 5% (0.05). This shows that there is long run relationship among the variables.

Table -4-Johansen Cointegration Result for GDP, FD, INTR & INFR

Hypothesized	Trace	0.05	
No. of CE(s)	Statistic	Critical Value	Prob.**
None*	47.88774	47.85613	0.0405
At most 1	23.99413	29.79707	0.2007
At most 2	7.654070	15.49471	0.5031
At most 3	1.863617	3.841466	0.1722

Trace test indicates 1 cointegration at the 0.05 level

Results in table 4 shows that there exists one (1) co-integrating equation at 5% level of significance. This is because the probability value is less than 5% (0.05). This showed that there is long run relationship among the variables.

Table -5- Regression Estimation (CP as dependent variable)

$$CP = 357.251 - 0.1999FD + 1.5256INTR - 1.7129INFR$$

(0.4648) (0.0000) (0.9521) (0.7767)

R- square: 0.8838

Adjusted -R square: 0.8667

F (stat) prob: 0.0000DW: 1.68

The results in table 5 revealed that 88.38% variation in fiscal deficit, interest rate and inflation, to a large extent, was explained in capital expenditure or project in Nigeria. This was endorsed by the adjusted R square of 86.67%. The f(stat) probability test revealed that at least one of the independent variables significantly affect the dependent variable. The DW stat of 1.68 approximately „2“ indicated the absence of serial auto correlation.

From the results above, FD has a negative and significant impact on capital project or expenditure. A unit increase in fiscal deficit, will decrease capital expenditure by 0.1999 units and it is significant. Interest rate and inflation rate have positive and negative impact on capital expenditure or project and none is significant. A unit increase in interest rate and inflation rate will increase and decrease capital expenditure by 1.5256 units and 1.7129 units respectively but not significant.

Table -6- Regression Estimation (GDP as dependent variable)

$$GDP = 36241.10 - 2.3045FD + 13.2624INTR - 14.7105INFR$$

(0.0045) (0.0036) (0.9745) (0.9230)

R- square: 0.9340

Adjusted -R square: 0.9128

F (stat) prob: 0.0000DW: 2.12

The results in table 6 revealed that fiscal deficit, interest rate and inflation to a large extent, explained about 893.40% systematic variation in GDP or project in Nigeria. This was endorsed by the adjusted R square of 91.28%. The f(stat) probability revealed that at least one of the independent variables significantly affect the dependent variable. The DW stat of 2.12 approximately “2” indicated the absence of serial auto correlation.

From the results in table 6 above, FD has a negative and significant impact on Nigerian GDP. A unit increase in fiscal deficit will decrease Nigerian GDP by 2.3045 units and it is significant. Interest rate and inflation rate have positive and negative impact on Nigerian GDP and none is significant. A unit increase in interest rate and inflation rate will increase and decrease capital expenditure by 13.2624 units and 14.7105 units respectively and insignificantly.

Discussion and Conclusion

This study has been able to establish the nexus between fiscal (budget) deficit, capital project and economic growth In Nigeria. From the results, it was revealed that fiscal or budget deficit has negative impact on capital expenditure or project and economic growth. This is in contrast to the findings of Nwikina, Meekor, Cookey and Gbarato (2021), who found that deficit financing through government expenditure promotes economic development in Nigeria; Umeh, Ochuba and Ihezue (2021) and found that government budget deficits has positive insignificant impact on public health sector output in Nigeria. This study supported the studies of Musa (2021) and concluded that fiscal operation is ineffective in

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providing the needed macroeconomic environment for sustainable growth; Adebowale (2021) found that budget deficit affect economic growth both in the short and long run negatively.

This is in agreement with Neo-classical who postulated that budget deficit has an inverse relationship on macroeconomic variables (crowding out effect) unlike the Keynesians who believe that budget deficits result to a rise in domestic production, which makes investors optimistic about the future course of the economy resulting in them investing more. This is known as the "crowding in" effect, thus increasing economic growth. This means that budget deficit has positive impact on economic growth. The study however concluded that economic policy makers and government should minimize fiscal deficit by preparing the budget based on the empirical revenue and where they borrow, the fund should be used on capital projects that can repay itself and stop pocketing the fund.

Recommendations

Based on the results, the researcher recommended the following:

1. Government at all levels should reduce the volume of recurrent expenditure as it consumes almost 80% of the country revenue.
2. Government and its MDA should stop multiplication of projects in the budgets as it is the major reason for fiscal deficit in Nigeria.

References

1. Adebowale, M.O. (2021). Asymmetric relationship between budget deficit and economic growth in Nigeria. *Chiang Mai University Journal of Economics* 25(2)76-85.
2. Adesina, O. D. & Olatise, F. A. (2019). Effect of government deficit budgeting and financing strategies on economic growth in Nigeria. *Journal of Economics & Finance*, 4(3) 48-63
3. Barro, R.J. (1989) The Ricardian approach to budget deficits. *Journal of Economic Perspectives*. 3(2):37–54.
4. Central Bank of Nigeria. (Various Issues). *Statistical bulletin and annual publications*, Abuja, CBN.
5. Chukwu, L.C., Otiwu, K., & Okere, P.A. (2020). Impact of budget deficit on Nigeria’s macroeconomic variables: 1980-2012. *International Journal of Science and Management Studies* 3(4) 135-150
6. Edame, G.E., & Okoi, O.B. (2015). Fiscal deficits and economic growth in Nigeria: A chow test approach. *International Journal of Economics and Financial Issues*. 5(3):748–752.
7. Faleti, K. O. & Myrick, D. (2012). The Nigerian budgeting process: A framework for increasing employment performance. *Mediterranean Journal of Social Sciences*, 3 (12), 193-213.
8. Feldstein M.(1976) Perceived wealth in bonds and social security: *A comment*. *Journal of Political Economy*. 84(2):331-336.
9. Gbenga, O. A. & Ikponmwosa, O. E. (2019). Budget deficit and economic growth in sub- saharan Africa: A PMG approach. *Asian Journal of Economics, Business and Accounting* 13(3): 1-10.
10. Ilyas, M., & Siddiqi, M.W. (2010). The impact of revenue gap on economic growth: A case study of Pakistan. *International Journal of Human and Social Sciences*, 5(11) 131-142
11. Mack, A. (2007). The need for expansionary fiscal policy in 2007 for Nigeria. *Journal of Science and management*. 4(3)210-221.

146	ISSN 2576-5973 (online), Published by “Global Research Network LLC” under Volume: 5 Issue: 8 in Aug-2022 https://www.grnjournals.us/index.php/AJEBM
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12. Mark, G. & Johnson, F. (2014). Macroeconomic policy framework: The practice in Nigeria: Unpublished research document
13. Momodu, A. A., & Monogbe, T. G. (2017). Budget deficit and economic performance in Nigeria: Saudi journal for business and management studies. *Saudi Journal of Business and Management Studies* 2(3): 312-321.
14. Monogbe, T.G., Dornubari, I.G. & Emah, D.S. (2015). Deficit Finance and the Nigeria Economic performance. *International Journal of Advanced Academic Research for Social Sciences and Education*, 1(3) 131-142.
15. Musa, A. (2016). A reviewed of macroeconomic challenges in Nigeria 2010-2015. *Journal of science and humanities*. 7(1) 332-341.
16. Musa, B.K.(2021). Theoretical review of the impact of fiscal deficits on economic growth in Nigeria. *European Scientific Journal, ESJ*, 17(1), 310-334.
17. Nwikina, C.G., Meekor, J.J., Coockey, S.C.M., & Gbarato, L.M. (2021). Deficit financing and economic development: the Nigeria's experience. *International Journal of Advanced Academic Research*, 7(6)45-57.
18. Ogujiuba, K.K., & Ehigiamusoe, K. (2014). Capital budget implementation in Nigeria: Evidence from the 2012 capital budget. *Vizja Press & IT, Warsaw*, 8(3) 299-314, Onwumere, J.U.J (2009), *Business and Economic Research Methods*. Enugu: Vougasen Limited
19. Pesaran, M.H., Shin, Y., & Smith, R.P. (1999) Pooled mean group estimation of dynamic heterogeneous panels. *Journal of the American Statistical Association*. 94 (446):621–634
20. Pesaran, M.H., Shin, Y., & Smith, R.P (2001) Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics*. 16(3):289–326.
21. Philips (2000). *Macroeconomics and Policies*. Best Newsletter Online: Budget surplus/Budget Deficit/Balance budget/macroeconomic policies
22. Tanko, S., & Bello, U. (2016). Determinants of budget performance in Nigeria: The Nigeria's budget of change, challenges and potential implications on the Nigerian Economy. *International Journal of Novel Research in Humanity and Social Sciences* 3(3) 126-138).
23. Umeh, C.A., Ochuba, C.D., & Ihezue, G.R. (2021). Impact of government budget deficits on public health sector output in Nigeria. *World Journal of Advanced Research and Reviews*, 11(02), 350–364.
24. William, K (2021). *Understanding the dynamics of the budget deficit and economic performance in Zimbabwe*. AERC Working Paper TR001, African Economic Research Consortium, Nairobi