

IMPACT OF RISING NATIONAL BUDGET EXPENDITURE SIZE ON ECONOMIC DEVELOPMENT IN NIGERIA (1999 – 2022)

JOSEPH OGWU ELOM¹ Ph.D., CNA

Accountancy Department, Faculty of Management Sciences,

Ebonyi State University, Abakaliki

Joseph.elom@ebsu.edu.ng or joemaxelom@gmail.com

+2348064494775 or +2348155157321

PROF. IFEOMA MARY OKWO² FCNA

Accountancy Department, Faculty of Management Sciences,

Enugu State University of Science Technology, Agbani

mary.okwo@esut.edu.ng

08110100752

ABSTRACT

The study examined the impact of the rising national budget expenditure size on economic development in Nigeria: 1999 - 2022. Specifically, the study examined the impact of rising recurrent expenditure, rising capital expenditure and rising total budget expenditure sizes on economic development in Nigeria. The ex-post facto research design was adopted in the study where secondary data were sourced from Central Bank of Nigeria Statistical Bulletin, Office of the Accountant General of the Federation and the Budget Office of the Federation. The data were analyzed using the general multiple regression involving ordinary least square (OLS) model with error correlation model using inflation, exchange and interest rates as control variables, while statistical tests such as F- statistic and Durbin–Watson were carried out to test the overall significance of the regression equation and presence or otherwise of autocorrelation respectively among the explanatory variables. The results of the analysis revealed that the total budget expenditure, capital and recurrent expenditure sizes have no significant and positive impact on economic development in Nigeria. The insignificant impact suggests that the constant rise in total budget expenditures by the Federal government has been inefficient and not contributing significantly to economic development in Nigeria. Thus, the study recommended that budget planning, implementation and monitoring should be embarked upon by the government to ensure that items that would boost the economic development of the Nigeria are properly covered and utilized especially in the capital budget.

Key Words: Economic Development, Expenditure Size, National Budget, Capital Expenditure, Recurrent Expenditure.

1.0

INTRODUCTION.

Every national budget expenditure has a size which is determined by the focus of government and availability of funds. The national budget expenditure size is the total amount of funds budgeted for expenses/appropriation in a particular financial year (Adedeji et al, 2018). It is comprised of the total estimated expenditure size of the government relating to its development as well as non-developmental programs during the fiscal year. The size of the national budget expenditures may rise or fall depending on the focus of the government. It is categorized majorly into capital, recurrent and total budget expenditures.

The recurrent budget expenditure size determines the allocation of funds to finance the recurring government expenditures such as, expenditures related to personnel, overhead, civil administration etc, while the capital budget expenditure size on the other hand are the aspect of the overall national budget that determine the allocation of funds to capital projects and critical infrastructure (Faleti & Myrick, 2012). For budget purposes, every government establishes a cut-off point to distinguish capital and recurrent expenditures. However, there are times both are considered together for efficient planning and budgeting purposes especially in situations where investment proposals need to be appraised in terms of both capital and operating costs. In such situations, it becomes accepted that government recurrent and capital expenditures are considered together and both expenses together can produce results (Olaoye et al, 2017).

The size of the national budget expenditure has been on the increase since 1999, with recurrent expenditure taking the lead. The 1999 budget witnessed a 2% reduction from 1998 budget, after which there was an increase of 84% on 2000 budget from 1999 budget. 1998 witnessed a tremendous increase in capital expenditure size which surpassed that of recurrent expenditure, but this was short-lived, as subsequent years had recurrent expenditure more than capital size (CBN Statistical Bulletin 2022). According to Oziengbo (2013), the margin between recurrent and capital expenditure size became very wide beginning from year 2000, just after the country returned to democratic system of government on May 29, 1999, an indication that the country's democratic government has tended to favour recurrent spending more than capital.

Subsequently, the expenditure size has continued to increase, with more of it in favour of recurrent size. However, 2015 budget had a decline of about 17% from 2014 budget, this may be attributed to transition of government as 2015 was election year. The increase continued afterwards in favour of recurrent budget, although 2020 and 2021 budgets showed a level of increment in the capital size. This is still below recurrent

size (Budget office, 2022). The implication is that unemployment rate soars because less percentage of the total budget expenditure size is spent on capital project which creates job in an economy.

The primary goal of the national budget expenditure is to facilitate economic development. Economic development is the sustained increase inhuman development index and measures of the distribution of income and wealth as well as increase in the indicators of quality of life, ranging from life expectancy, human development index, standard of living among others. It is fundamental transformation of an economy which includes altering the industrial structure, the educational and occupational characteristics of the population, and indeed the entire social and institutional fabric.

In Nigeria, the debate on national budget expenditure and economic development has always centered on the size, the disparity between recurrent and capital expenditure sizes and continuing deficiencies in the level of economic development is still an unsettled issue. Hence, questions have been raised about the growing size of Nigeria's budget expenditure size vis-à-vis her economic development. Over the years, Nigerian total budget expenditure has been on the rise, yet the level of development seemed not to match the size of her annual expenditure. Adewole and Osabuohien (2021) asserted that the very high rates of unemployment, illiteracy rate, poverty rate, low human development index among others do not match the ever-growing budget expenditure size of the government. It also shows that a large percentage of Nigeria's population do no benefit from the rising budget expenditure size of her governments (Oziengbe, 2013). Expectedly the essence of national budgeting is to solve the aforementioned challenges militating against economic development. It therefore, raises some concerns when government's expenditures remain on the rise while the economic development challenges persist. It is such concern that provides need for this study. The study therefore sought to establish the impact of the rising national budget expenditure size on the development of Nigerian economy and specifically examined capital expenditure, recurrent expenditure and total expenditure sizes on human development index as proxy for economic development. The following hypotheses derived from the objectives were tested

Ho₁: Recurrent expenditure size has no significant impact on economic development in Nigeria.

Ho₂: Capital expenditure size has no significant impact on economic development in Nigeria.

Ho₃: Total expenditure size has no significant impact on economic development in Nigeria

2.0 REVIEW OF RELATED LITERATURE

2.1 Conceptual review

2.1.1 National Budget Expenditure Size

National budget expenditure size is the size of expenditure forecast by a government of its spending for a specific period of time (Afonso, 2023). It is the size of spending plans of government within a financial year period. It is simply the size of financial expenditure plans for a defined period, normally a year. The Nigeria national budget expenditures have been rising in size since 1999 on an increasing pattern. A technical review shows that from 2011 to 2015, the budget was just a little above N4trillion while from 2016 to 2023, the size increased from 6 trillion to 23 trillion Naira and still counting. According to Johnstar (2023), between 2003 to 2023, the national budget expenditure size has increased by trillions of naira but still the effect is not tangibly felt economically and we align review with his assertion.

2.1.2 Capital Expenditure Size:

Olaoye et al, (2017) defined capital expenditure size as a fragment of the national budget which shows the proportion of the national expenditures allocated for the purpose of carrying out project with useful life of more than a year. It is the size of budgeted expenses on capital projects like roads, airports, health, education, electricity generation, etc. Capital expenses are usually aimed at increasing the assets of a state and they give rise to recurrent expenditure.

2.1.3 Recurrent Expenditure Size

Recurrent expenditure size are all payments other than for capital assets, including on goods and services, (wages and salaries, employer contributions), interest payments, and transfers. Recurrent expenditure size are those incurred every year to maintain the running and operations of Government; wages and Salaries (CBN, 2019). Recurrent expenditure, otherwise described as consumption expenditures, comprise wage payments, purchase of goods and services, interest payments on loans, transfers among others.

2.1.4 Economic Development

Economic development can be broadly viewed as the structural transformation of an economy through the introduction of more mechanized and updated technology to enhance labor productivity, employment, income, and the population's standard of living (Afonso, 2023). It is the process of improving economic welfare in an economy. Various measurements of economic development have emerged as a result of the ambiguity of specific definitions of economic development, such as structural changes in GDP, per capita income, full employment, improvement in human status, physical quality of life index, human development index, poverty index, and sustainable development (Panth, 2020).

In this study, economic development is represented with HDI. Human Development Index was first released by United Nations (UN) as part of her report in 1990. According to the report, HDI is a measuring tool that ranks countries levels of economic development based on three criteria: health index, education index and standard of living index. Therefore, the social and economic dimension of a country are based on health of the people, their level of education attainment and their standard of living (UNDP, 1990). Every year, united nation development programme (UNDP) ranks countries based on the HDI report released in their annual report. Thus, human development index is one of the best tool to keep track of the level of the development of a country, as it combines all major economic and social variables that are responsible for economic development of any nation.

2.2 Theoretical Framework.

This study is anchored on Musgrave Theory of Public Expenditure Development. This theory was propounded by Musgrave in 1988 as he found changes in the income elasticity of demand for public services in three ranges. He posits that at low levels of per capita income, demand for public services tends to be very low. This is so because according to him such income is devoted to satisfying primary needs and that when human development index starts to rise above these levels of low income, the demand for services supplied by the public sector such as health, education and standard of living start to rise, thereby forcing government to increase expenditure on them. He observed that at the high levels of per capita income, typical of developed economies, the rate of public sector development tends to fall as the more basic wants are being satisfied.

This theory is relevant to the study because it offers useful explanations on the essence of increase in expenditure (budget) as it affects economic development. It explained increase in budget size as a factor of increase in government activities towards industrialization and improvement of the standard of living of the populace; which is evidence of economic development. Thus, the increase in budget expenditure size is expected to bring about economic development. All these attributes of the theory make it useful for this study.

2.3 Empirical Review.

Udo et al, (2022) studied the relationship between government spending and economic growth, and continuous growth in government spending. This study employed modified and extended aggregate production model to examine the effects of government expenditure at its' aggregate level on economic growth in Nigeria for the period (1981-2018) using bound test (ARDL) approach. The co-integration result indicates the existence of long-run relationship between total government expenditure (TGE) and economic

growth in Nigeria. ARDL results showed that total government expenditure (TGE) impacted positively on economic growth in Nigeria in line with Keynesian theory. The granger causality test result indicates the existence of uni-directional causal relationship from GDP to TGE for the observed period, in line with Wagner's theory. It recommended that there should be proper utilization of public fund in the provision of security and critical infrastructure especially electricity supply and road infrastructure which are precursors to effective economic performance.

Chandana et al, (2021) investigated the impact of Nigerian government expenditure (disaggregated into capital and recurrent) on economic growth using time series data for the period 1970-2019. The paper employs Autoregressive Distributed Lag (ARDL) model. To ensure robustness of results, the study accounts for structural breaks in the unit root test and the co-integration analysis. The key findings of the study are that capital expenditure has positive and significant impact on economic growth both in the short run and long run while recurrent expenditure does not have significant impact on economic growth both in the short run and long run. The study recommends that government should increase the share of the capital expenditure especially on meaningful projects that have direct bearing on the citizen's welfare. Government should also improve the spending patterns of recurrent expenditure through careful reallocation of resources toward productive activities that would enhance human development in the country.

Edeme and Nkalu (2017) worked on Budgeting for development: Lessons from 2013 capital budget implementation in Nigeria using the descriptive approach. Their findings suggested that the level of capital budget implementation is insufficient to foster the desired development and the poor performance is attributable to inadequacy in the budget implementation plans, non-release or late release of budgeted funds and lack of budget performance monitoring. According to them, funding gaps existed for 87.5% of the projects both in terms of budgetary allocations and actual amount released.

Olaoye (2016) in his empirical analysis of the Nexus between budget implementation and economic development in Nigeria, used econometric model to discover that in the long run, there is a positive relationship between public Capital expenditure and gross domestic product, while public recurrent expenditure showed a negative relationship with gross domestic product in the long run, but positive relationship in the short-run.

3.0 METHODOLOGY

3.1 Research Design

Ex-post facto research design was adopted in carrying out this study. The justification for using this design is that the study utilized already existing quantitative data on past events for which the relevant variables cannot be manipulated. Quantitative data on research variables were generated on annual basis from secondary sources, namely CBN Statistical Bulletin, Office of the Accountant General of the Federation and the Budget Office.

3.2 Model Specification and Variable Descriptions

This study adopted the general multiple regression involving ordinary least square (OLS) model. The choice of multiple linear regression model (MLRM) is because the regression model involves more than a single independent variable (Onwumere, 2005). We specified the model to capture the objectives of the study as the base line equation to be; $ED = f(RES, CES, TES) \dots(1)$

However, to make the MLRM robust and to moderate and neutralize the influence of explanatory variables on explained variable (economic development) represented with HDI, we introduced control variables; inflation rate (INFR), exchange rate (EXR) and interest rate (INTR). Using the baseline regression model, the robust model was thus expressed as:

$$HDI_{it} = \beta_0 + \beta_1 RES_{it} + \beta_2 CES_{it} + \beta_3 TES_{it} + \beta_4 INFR_{it} + \beta_5 EXR_{it} + \beta_6 INTR_{it} + \mu_{it} + \varepsilon_{it} \dots (2)$$

Where; β_0 is the constant term, μ is the panel specific error and ε is the error term, while it is the coefficients which measure the impact of each variable over the period. $\beta_1 - \beta_6 =$ Coefficients of Estimates., $\mu =$ Stochastic or Error Term.

HDI = Human Development Index: measured as released by the UNDP in 2022.

RES = Recurrent Expenditure Size: This is measured as the fraction of the total budget appropriated for recurrent expenditures within the concerned period

CES = Capital Expenditure Size: This is measured as the fraction of the total budget appropriated for capital expenditures.

TBS = Total Expenditure Size: This is measured as the total expenditure budgeted for the years (Capital Expenditure plus recurrent expenditure) under consideration.

The Control variables include:

INFR = Inflation Rate: This is measured as the annual inflation rate in the country and is proxied as one of the determinants of economic development.

EXR = Exchange Rate: This is the annual exchange rate of naira to dollar as is proxied as one of the determinants of economic development.

INTR = Interest Rates: This is the weighted average deposit and lending rates of Commercial Banks in Nigeria in percentage.

3.3 Analytical Technique

The data gathered were estimated using the multiple regression involving Ordinary Least Square (OLS) model with Error correlation Model. Furthermore, statistical tests such as F- statistic and Durbin – Watson tests were also conducted to test the overall significance of the regression equation and the presence or otherwise of autocorrelation respectively among the explanatory variables at 5% level of significance, while some diagnostic tests were conducted on the regression model in order to test the reliability and validity of the historical panel data with aid of E-view 10.0. The validity and reliability of the model were based on the outcome of the assumption/diagnostic tests conducted. In all, the null hypothesis was rejected once the probability value of the associated t-statistic of a coefficient (β) is significant at 5% level of significance or otherwise accepted.

4.0 RESULTS AND DISCUSSION

4.1 Descriptive Test

Descriptive test was used to examine the characteristics of the dependent and independent variables. The descriptive result is presented in table 1.

Table 1: Descriptive Statistics

| Variable | Observation | Mean | Std. Deviation | Minimum | Maximum |
|------------------------|-------------|----------|----------------|---------|----------|
| Recurrent Expend. Size | 23 | 1206.276 | 1090.784 | 26.000 | 3513.000 |
| Capital Expend. Size | 23 | 723.552 | 757.318 | 9.000 | 2873.000 |
| Total Budget Size | 23 | 1929.828 | 1814.632 | 36.000 | 6386.000 |
| Human Develop Index | 23 | 2.057 | 4.153 | -6.122 | 12.313 |
| Interest Rate | 23 | 18.848 | 3.314 | 13.543 | 29.800 |
| Exchange Rate | 23 | 115.446 | 83.159 | 8.040 | 306.420 |
| Inflation | 23 | 16.799 | 13.581 | 5.420 | 57.200 |

Source: Author's Computation 2023 using E-view (version 10)

Table 1 above shows the descriptive statistical analysis between the dependent and independent variables. The descriptive results above show that the average recurrent expenditure size (RES) for the period 1993-2022 was N1, 206 billion with a high standard deviation of 1,090.78 indicating the high level fluctuations

in the budgeted recurrent size over the period. The Capital expenditure Size (CES) had a mean of N723.55 billion for the same period with a relatively high standard deviation of 757(though lower than that of RES which was 1,090.78). The high standard deviation also depicts high level of fluctuations within the period. The budgeted total expenditure size is a reflection of the CES and RES having a mean and standard deviation of N1,929 billion and 1824.63 respectively. The economic development proxied as Human development index (PCI) has a mean of 2.059 and a relatively low standard deviation of 4.15 indicating relative stability. Also showing a relative low standard deviations are Interest rate, and inflation with standard deviations of 3.3 and 13.6 respectively. The exchange rate exhibited a mean of 115 and a standard deviation of 83. The table also showed that the minimum and maximum budgeted recurrent size within the period were N26 billion and N3,513 billion while that of capital expenditure size were N9billion and N2,873billion. This revealed that recurrent expenditure size has consistently exceeded that of budgeted capital expenditure size.

4.2 Correlation Test

Correlation test was used to ascertain the strength and magnitude of the relationship between the dependent and independent variables. The result of the correlation test is presented in table 2.

Table 2: Correlation Matrix

| Correlation | TES | CES | RES | INF | EXR | INT | HDI |
|-------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
| TES | 1.000000 | | | | | | |
| CES | 0.996780 | 1.000000 | | | | | |
| RES | 0.989099 | 0.974411 | 1.000000 | | | | |
| INF | -0.472990 | -0.451036 | -0.509236 | 1.000000 | | | |
| EXR | 0.882899 | 0.880720 | 0.871461 | -0.359623 | 1.000000 | | |
| INT | -0.607078 | -0.592154 | -0.618139 | 0.356867 | -0.425397 | 1.000000 | |
| HDI | 0.837755 | 0.849733 | 0.806079 | -0.356129 | 0.823805 | -0.455940 | 1.000000 |

Source: Author's Computation 2022 E-view (version 10)

The correlation test result in the table 2 above indicates that recurrent expenditure size (RES) has positive correlation with human development index (HDI), capital expenditure size (CES), total expenditure size (TES) as well as exchange rate (EXR) since their R^2 are 0.806079, 0.974411, 0.989099, and 0.871461 respectively. In the same way, capital expenditure size, total expenditure size, as well as exchange rate have positive correlation with human development index. These are evident from their respective R^2 which

were 0.849733, 0.837755, and 0.823805. However, Inflation and Interest rate are negatively correlated to human development index as their r^2 are -0.356129 and -0.455940. Capital expenditure size is also negatively correlated with inflation and Interest rate (-0.451036 and -0.592154), while positively correlated with exchange rate (0.880720). This signifies that increase in recurrent expenditure size, capital budget size, total expenditure size, and exchange rate would lead to increase inhuman development index, whereas increase in inflation and interest rate would lead to decrease in human development index.

4.3 The Unit Root Test

The use of time series of data for estimating the parameters of economic relationship among variables is predicated upon some assumptions that such a data series is stationary. In this context, testing for stationarity or otherwise of the employed data sets becomes of essence in the analysis. The Augmented Dickey-Fuller (ADF) was employed to test for the existence of unit roots in the data using trend and intercept. The test results are presented below:

Table 3: ADF Unit Root Result

| Test | Variables | At Levels | | First Differences | | Order | Remark |
|------|------------|--------------|-----------|-------------------|------------|-------|------------|
| | | T- statistic | Critical | T- statistic | Critical | | |
| | <u>HDI</u> | -2.102070 | -3.580623 | -5.946555 | -3.599025* | 1(2) | Stationary |
| | TES | -0.737947 | -3.580623 | -4.239944 | -3.587527 | 1(1) | Stationary |
| | CES | -1.595456 | -3.580623 | -4.416701 | -3.587527 | 1(1) | Stationary |
| | RES | -1.922085 | -3.580623 | -5.871763 | -3.587527 | 1(1) | Stationary |
| | INT | -5.700702 | -3.580623 | -9.953891 | -3.587527 | 1(0) | Stationary |
| | EXR | -1.061421 | -3.580623 | -3.871753 | -3.587527 | 1(1) | Stationary |
| | INF | -2.974577 | -3.580623 | -5.115954 | -3.587527 | 1(1) | Stationary |

Source: Researcher's compilation from E-view (version 9.0), 2023

The above table showed that the index of Economic Development (HDI) is stationary at second difference 1(2) while interest rate is stationary at level 1(0). Others which include: Total expenditure size, capital expenditure size, recurrent expenditure size, exchange rate and inflation rate are stationary at first difference 1(1).

Nevertheless, all the variables considered became stationary after the first and second differences. That the variables are not stationary at levels or at the same order justified the choice of Vector Error Correction Model (VECM) as the major estimation technique.

4.4 Co-Integration Test.

It has been argued that although the individual series may not be stationary, a linear combination of the series will produce a co-integrated series. The linear combination of series integrated of the same order are said to be co-integrated. The level of their integrations indicate the number of times the series have to be differenced before their stationary are induced. For this purpose, the Johansen co-integration test was adopted. The model with lag 1 was chosen with the linear deterministic test assumption and the result summary is shown in table 4 below:

Table 4: Johansen Co-Integration Test

| Unrestricted Co-integration Rank Test (Trace) | | | | |
|--|--------------------|------------------|-----------------------|----------------|
| Hypothesized | Eigen value | Trace | 0.05 | Prob.** |
| No. of CE(s) | | Statistic | Critical Value | |
| None * | 0.990927 | 287.4126 | 125.6154 | 0.0000 |
| At most 1 * | 0.891432 | 160.4464 | 95.75366 | 0.0000 |
| At most 2 * | 0.716584 | 100.4963 | 69.81889 | 0.0000 |
| At most 3 * | 0.643751 | 66.45365 | 47.85613 | 0.0004 |
| At most 4 * | 0.612743 | 38.58624 | 29.79707 | 0.0038 |
| At most 5 | 0.363622 | 12.97224 | 15.49471 | 0.1158 |
| At most 6 | 0.028089 | 0.769253 | 3.841466 | 0.3804 |

Source: Researcher`s compilation from E-view (version 10)

Co-integration is said to exist if the values of computed Eigen values are significantly different from zero or if the trace statistics is greater than the critical value at 5 percent level of significance. The result of the co-integration in table 4 above indicates seven co-integrated equations. Condition to satisfy long-run relationship states that the trace statistics or Maximum Eigen value must be greater than the critical value at 5 percent level of significance in five of the hypothesized equations. Similarly, the computed Eigen value is significantly different from zero in five of the hypothesized equations. Hence, the researcher denotes that five of the hypothesized equations satisfy this condition. There is therefore a long-run relationship between the variables used for the analysis in Nigeria within the period under study; 1999-2022.

4.5 Test of Hypothesis

Test of hypotheses involved the use of statistics to determine the probability that a given statement is true or not. In testing the first, second and third hypotheses, the probability values and the level/direction of the coefficient formed the basis for decision making on the statistical significance of the results obtained for each of the research hypotheses.

4.4.1 Hypothesis One

Restatement of the Null Research Hypothesis

H_{01} : Recurrent expenditure size has no significant impact on economic development in Nigeria.

The result obtained in table 5 below formed the basis for the test of hypothesis one.

Table 5: Vector Error Correction Regression Estimates on Recurrent Expenditure Size and Economic Development Proxied as Human Development Index.

| Variable | Coefficient | Std. Error | T-Statistic | P-value |
|-------------------------|---------------|---------------------|---------------------|-----------------------|
| ECT(-1) | -0.303737 | 0.019384 | -3.192783 | 0.0491 |
| Human development index | 0.753826 | 0.240602 | 3.133078 | 0.0052 |
| Recurrent expend. Size | 0.009929 | 0.016172 | 0.613959 | 0.5462 |
| Inflation Rate | -0.000424 | 0.000534 | -0.794706 | 0.4361 |
| Exchange Rate | 0.000337 | 0.000368 | 0.918217 | 0.3694 |
| Interest Rate | -0.002025 | 0.002197 | -0.921493 | 0.3678 |
| C | -0.001025 | 0.010233 | -0.100143 | 0.9212 |
| Reliability Test | | | | |
| <i>R-Squared</i> | <i>Adj-R2</i> | <i>F-statistics</i> | <i>Prob(F-stat)</i> | <i>Durbin- Watson</i> |
| 0.52 | 0.50 | 1.91 | 0.88 | 2.11 |

Source: Researcher's compilation from E-view (version 10.0), 2023

The VECM result used to test for the hypothesis indicates that there is a positive relationship (coefficient 0.009929) but an insignificant impact between size of recurrent expenditure size and economic development in Nigeria as shown by their joint coefficients at 5% significance level given that the p value of 0.5462 is greater than 0.05. We accept the null hypothesis and reject the alternative hypothesis. In other words, the size of recurrent expenditure size has no significant impact on economic development in Nigeria within the period under review.

The result of the test of hypothesis one (1) showed that the size of recurrent expenditure size has insignificant impact on economic development in Nigeria within the period under review, though with positive short run

relationship. This is evident from the test result in table 5 above which showed a positive coefficient of 0.009929 and P-value of 0.5462. This means that a unit increase in recurrent expenditure size (which are budgetary provisions on salaries, wages and administrative cost) would lead to 0.00992 increase in human development index in the short run. However, the short run positive impact is statistically insignificant. Thus, an increase in recurrent expenditure size do not contribute to economic development. This insignificant impact runs contrary to a prior expectation and suggests that the constant increase in recurrent expenditure size by the Federal government has been inefficient, and has had depressing effect on the Nigerian economy. The control variables such as inflation rate and interest rate should be seen as a contributing factor to reduce human development index as a unit increase in inflation and interest rate will subject recurrent expenditure size to be less effective in impacting human development index and thus, economic development.

It was revealed from table five above that the R^2 is 0.52. This is high and indicates that the dependent variable is well explained by the independent variables. This also means that the model is highly relevant for the explanation of the variable. The remaining 48% can be linked to noise, disturbance or error term which are captured by other variables not present in the model. The above result is consistent with the finding of Abdulrauf (2015), Olaoye (2016) and Nnamdi, (2018).

4.5.2 Test of Hypothesis Two

Restatement of the null Research Hypothesis

Ho₂: Capital expenditure size has no significant impact on economic development in Nigeria.

The result obtained in table 6 below formed the basis for the test of hypothesis two.

Table 6: Vector Error Correction Regression Estimates on Capital Expenditure Size and Economic Development.

| Variable | Coefficient | Std. Error | T-Statistic | P-value |
|-------------------------|-------------|------------|-------------|---------|
| ECT(-1) | | | - | |
| | -0.021182 | 0.034527 | 3.613503 | 0.0065 |
| Human development index | 0.715269 | 0.197733 | 3.617349 | 0.0017 |
| Capital Expend. Size | | | - | |
| | -0.008494 | 0.029127 | 0.291627 | 0.7736 |
| Inflation Rate | | | - | |
| | -0.000390 | 0.000548 | 0.710930 | 0.4853 |
| Exchange Rate | 0.000348 | 0.000365 | 0.952381 | 0.3523 |

| | | | | |
|------------------|---------------|---------------------|---------------------|-----------------------|
| Interest Rate | | | - | |
| | -0.001959 | 0.001829 | 1.071273 | 0.2968 |
| C | 0.003061 | 0.009615 | 0.318380 | 0.7535 |
| Reliability Test | | | | |
| <i>R-Squared</i> | <i>Adj-R2</i> | <i>F-statistics</i> | <i>Prob(F-stat)</i> | <i>Durbin- Watson</i> |
| 0.52 | 0.50 | 1.91 | 0.88 | 1.98 |

Source: Researcher's compilation from E-view (version 10.0), 2023

From the results of the VECM analysis presented in table 4 above, the coefficient of Capital expenditure Size (CES) is -0.008494 while its P-value is 0.7736. The coefficient of capital expenditure size is negative and insignificant in measuring economic development as confirmed by its P-value of 0.7736. Since 5% (0.05) level of significance is less than the P-value of 0.7736, we accept the null hypothesis and accordingly reject the alternate hypothesis at 5% level of significance with conclusion that capital expenditure size has no significant impact on economic development in Nigeria.

The result of the test of hypothesis two (2) showed that the capital expenditure size has no significant impact on economic development in Nigeria within the period under review with negative short run relationship. The test result in table 6 above revealed a negative coefficient of -0.008494 and P-value of 0.7736. The implication is that a unit increase in capital expenditure size would lead to 0.008494 decrease inhuman development index in the short run. However, the short-run negative impact is statistically insignificant. Thus, an increase in capital expenditure size does not contribute to economic development in the short-run. The insignificant impact runs contrary to *a priori* expectation and suggests that the constant increase in capital expenditure size by the Federal government has been inefficient, and has had depressing effect on the Nigerian economy. This inefficiency according to Ojo (2012) could be attributed to budget indiscipline and financial recklessness.

Table six above also revealed that the R^2 is 0.52. This is high and indicates that the dependent variable is well explained by the independent variables. Thus, the model is highly relevant for the explanation of the variable. The remaining 48% can be attributed to noise, disturbance or error term which are captured by other variables not present in the model. The insignificant impact result is consistent with the finding of Oluwatobi and Ogunrinola (2011), Okpala and Olabisi (2013), Obayori (2016). Contradicting the result is Edame and Ejue (2019), who discovered significant relationship between budgeting and infrastructural development in Nigeria.

4.5.3 Test of Hypothesis Three

Restatement of the null Research Hypothesis

H₀₃: Total expenditure size has no significant impact on economic development in Nigeria

The result obtained in table 7 below formed the basis for the test of hypothesis three.

Table 7: Vector Error Correction Regression Estimates on Total Expenditure and Economic Development.

| Variable | Coefficient | Std. Error | T-Statistic | P-value |
|-------------------------|-------------|------------|-------------|---------|
| ECT(-1) | -0.222968 | 0.032493 | 2.706879 | 0.0078 |
| Human development index | 0.759797 | 0.215302 | 3.528982 | 0.0021 |
| Total Budget Size | -0.003812 | 0.032473 | 0.117393 | 0.9077 |
| Inflation Rate | -0.000424 | 0.000541 | 0.783885 | 0.4423 |
| Exchange Rate | 0.000362 | 0.000365 | 0.992986 | 0.3326 |
| Interest Rate | -0.001600 | 0.001891 | 0.846100 | 0.4075 |
| C | 0.001473 | 0.010601 | 0.138936 | 0.8909 |

Reliability test

| <i>R-Squared</i> | <i>Adj-R2</i> | <i>F-statistics</i> | <i>Prob(F-stat)</i> | <i>Durbin-Watson</i> |
|------------------|---------------|---------------------|---------------------|----------------------|
| 0.54 | 0.50 | 1.91 | 0.88 | 2.03 |

Source: Researcher's compilation from E-view (version 10.0)

Hypothesis three (3) test results showed that the size of total expenditure has no significant impact on economic development in Nigeria within the period under review with negative short-run relationship. The test result in above table 7 indicated a negative coefficient of -0.003812 and P-value of 0.9077. The implication is that a unit increase in total expenditure size would lead to 0.003812 decrease in human development index in the short run. However, the short run negative impact is statistically insignificant. Thus, an increase in total expenditure size does not contribute to economic development in the short run. The insignificant impact runs contrary to *a priori* expectation and suggests that the constant increase in total expenditure size by the Federal government has been inefficient, and not contributed to economic development in Nigeria.

The above table seven also revealed that the R² is 0.54. This is high and indicates that the dependent variable is well explained by the independent variables. Thus, the model is highly relevant for the explanation of the variable. The remaining 46% can be attributed to noise, disturbance or error term which are captured by other variables not present in the model.

The result of insignificant impact collaborates with the findings of Olurankinsa and Oloruntoba (2017) and Oziengbe (2013). However, the following researchers' findings of significant impact on economic development contradicts the findings of this work - Coorays (2009), Oke (2013) and Obayori (2016).

From the three findings above, the raising national budget expenditure size has no significant effect on the economic development of Nigeria within the period under review.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

This work examined the impact of rising national budget expenditure size on economic development in Nigeria; 1999 - 2022 and based on the hypotheses tested, the following are the summary of the findings;

- i. The recurrent expenditure size has positive but insignificant impact on economic development in Nigeria within the period under review. This is evident from a positive coefficient of 0.009929 and a P-value of 0.5462 which is greater than 0.05 at 5% level of significance.
- ii. Capital expenditure size has negative and insignificant impact on economic development in Nigeria as confirmed by its coefficient of -0.008494 and its P-value of 0.7736 since 5% (0.05) level of significance is less than the P-value of 0.7736
- iii. Total expenditure size has negative and insignificant impact on economic development as its coefficient is -0.003812 while P-value of 0.9077 is more than 5% (0.05) level of significance

5.2 Conclusion

The study examined impact of national budget expenditure size on the economic development of Nigeria within the period of 23 years (1999 – 2022). The study used descriptive statistics, *ex-post facto* research design where the panel data collected were analyzed using a multiple regression using OLS technique to predict the relationship between the dependent variable and the independent variables while interest rate, inflation rate and exchange rate were used as the control variables to moderate the panel differences within the periods under consideration. The panel data were secondarily sourced from the CBN statistical bulletin, Budget office.

The study therefore concludes that the constant rise in the National budget expenditure size has not impacted positively on the economic development of the country Nigeria.

5.3 Recommendations

Based on the researcher's findings, the following recommendations are made:

- i. Government should ensure that the recurrent expenditure size are properly managed in a manner that it will raise the nation's production capacity.
- ii. The percentage of budget allocation to capital expenditure should be increased so as to enable infrastructural development which would attract investors and thus enhance the economic development in Nigeria by boosting the standard of living and human development index.
- iii. Government should direct its total budget expenditure size towards the productive sectors like education, manufacturing, mining of natural resources among others as they would improve the industrialization of the nation as well improve the standard of living of poor ones in the country.

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APPENDIX 1

Dataset for Regression

| Year | Total Budget Expenditure (N ` Tillion) | Recurrent Expenditure Size (N ` Billion) | Capital Expenditure Size (N ` Billion) | Lending Rate (%) | Exchange Rate (%) | Inflation Rate (%) | HDI |
|------|---|---|---|------------------|-------------------|--------------------|-------|
| 1999 | 154 | 109 | 45 | 20.18 | 21.89 | 18.32 | 0.456 |
| 2000 | 189 | 141 | 48 | 19.74 | 21.89 | 30.38 | 0.439 |
| 2001 | 277 | 161 | 116 | 13.54 | 21.89 | 10.85 | 0.455 |
| 2002 | 368 | 183 | 185 | 18.29 | 21.89 | 7.87 | 0.466 |
| 2003 | 360 | 221 | 139 | 21.32 | 92.69 | 6.84 | 0.450 |
| 2004 | 665 | 353 | 312 | 17.98 | 102.11 | 7.05 | 0.462 |
| 2005 | 1018 | 579 | 439 | 18.29 | 111.94 | 18.9 | 0.469 |
| 2006 | 1188 | 867 | 321 | 24.85 | 120.97 | 13.05 | 0.477 |
| 2007 | 1226 | 984 | 242 | 20.71 | 129.36 | 13.92 | 0.480 |
| 2008 | 1303 | 909 | 394 | 19.18 | 133.50 | 15.39 | 0.484 |
| 2009 | 1802 | 1093 | 709 | 17.95 | 132.15 | 17.86 | 0.484 |

| | | | | | | | |
|------|------|-------|-------|-------|--------|-------|-------|
| 2010 | 1900 | 1343 | 557 | 17.26 | 128.65 | 8.32 | 0.482 |
| 2011 | 1941 | 1057 | 884 | 16.94 | 125.83 | 5.42 | 0.492 |
| 2012 | 2115 | 1328 | 787 | 15.14 | 118.57 | 11.52 | 0.499 |
| 2013 | 3106 | 1825 | 1281 | 18.99 | 148.88 | 12.59 | 0.506 |
| 2014 | 3381 | 2,011 | 1,370 | 17.59 | 150.30 | 13.77 | 0.512 |
| 2015 | 3488 | 2,482 | 1,006 | 16.02 | 153.86 | 10.85 | 0.516 |
| 2016 | 3716 | 2,432 | 1,284 | 16.79 | 157.50 | 12.24 | 0.521 |
| 2017 | 3953 | 2412 | 1541 | 16.72 | 157.31 | 8.51 | 0.526 |
| 2018 | 4022 | 2469 | 1553 | 16.55 | 158.55 | 8.05 | 0.531 |
| 2019 | 3308 | 2,607 | 701 | 16.85 | 193.28 | 9.00 | 0.538 |
| 2020 | 4400 | 2650 | 1750 | 16.87 | 253.50 | 15.62 | 0.535 |
| 2021 | 5352 | 2,991 | 2,361 | 17.78 | 305.80 | 15.91 | 0.535 |
| 2022 | 6386 | 3513 | 2873 | 16.44 | 306.42 | 15.74 | 0.536 |

Source: CBN Statistical Bulletin Report, 2022