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An Overview of Government Expenditure and the Manufacturing Sector Output in Nigeria

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ABSTRACT: This paper studied the impact of government expenditure on the manufacturing sector output in Nigerian within a period spanning 1981 to 2021. Ordinary Least Squared (OLS) method of data analysis was used because of its Best Linear Unbiased Estimators (BLUE) properties. The data for the variables used was sourced from Central Bank of Nigeria Statistical Bulletin. The variables used were government recurrent expenditure, government current expenditure and manufacturing sector output. The unit root test, co-integration method, and error correction mechanism were all adopted in course of the study. The analysis was conducted using the E-View software. The study revealed that, the manufacturing sector is significantly impacted by capital expenditures. Similarly, the output of the industry is significantly impacted by recurring expenditure. Emanating from the empirical investigation, the study recommends that adequate budgeting provision should be allocated to Government spending and thus be channelled to capital projects tailored towards better execution of spending guideline.

Keywords: Recurrent expenditure, current expenditure and manufacturing sector output

INTRODUCTION

Majority of economies around the world depend on government intervention to carry out basic functions such as distribution, stabilization, allocation, and regulation—especially in cases where the market fails to operate prudently (Adeyemi, & Akode, (2022). Key macroeconomic goals like economic growth and development, full employment, price stability, and poverty

reduction are specifically pursued by the government (Usman, Hakeem, Abdulhakee, & Yakubu, (2022). Government expenditures is significant to the overall economy in a number of ways. Normally, it is employed in the production of diverse public goods and services as well as the construction and renovation of various kinds of infrastructure, the advantages of which are felt over time. (Chingbu, Ugwu, and Njoku, 2014).

Spending by the government is important to ensure that a country allocates and uses its financial resources to achieve strong economic performance (World Bank, 2015). As a result, in any economy, the connection among government disbursement and production growth merits careful examination. Whether or not government spending accelerates an economy's rate of output growth is a crucial subject.

The manufacturing sector is essentially recognized as the global profitable growth and expansion path (Dore, 2022). The manufacturing sector has the ability to accelerate national transformation. The term "manufacturing sector" describes a collection of businesses engaged in the production and processing of goods, as well as the addition of value or the development of new commodities (Adebayo, 2011). Dickson (2010) states that a sizable portion of the trade sector in developing nations is made up of the manufacturing sector. The finished product might be utilized as intermediate items in the production process or as finished goods to be sold to customers. Consequently, the manufacturing sector is vital to an economy and drives the transformation of raw resources into final items. According to Charles (2012), the manufacturing sector generates jobs, which in turn supports agriculture, diversifies the economy, and aids in the country's increase in foreign exchange profits.

These activities enhances the toward the back and advance linkages within the value chain and between socially and geographically diverse sectors of the economy; they reduce income disparities; they develop a pool of skilled and semi-skilled labour for future industrial growth; they offer an excellent breeding ground for managerial and entrepreneurial talent; and they generate foreign exchange for the economy (Imoughele and Ismaila, 2014).

In addition to providing strong economy base, it also acts as an industry that replaces imports, offers a ready market for intermediary goods, and makes a substantial tax revenue contribution to the government (Nwankwo and Nwankwo (2023).

Spending by the government is important in order to ensure that, a nation sets aside money for budgetary purposes and uses it efficiently to produce a strong economy. Government expenditure has increased over time more quickly than revenue, which has resulted in ongoing, unsustainable budget deficits. Furthermore, there has been a trend of fluctuation in sectoral production in contrast to the upward trend in government spending. This situation defies expectations and theory, which holds that government outlay improves sectoral production performance.

In an effort to boost economic growth through investments in the manufacturing sector, the Nigerian federal government has elevated capital expenditures over time. As seen by the industry's outputs throughout time, Nigeria's manufacturing sector is not improving in proportionate to the massive capital expenditures spent (Adeboye, 2010; Peter and Simon, 2011 and Loto, 2015). The manufacturing sector's output has been gradually declining as a result of Nigerians' severe need for imported goods and services. It is against this background that this study seeks to examine the effects of government expenditure on the manufacturing sector output in Nigeria.

Theoretical Framework

It was Keynes who proposed this hypothesis in 1936. According to him, there exist mixed economy that both strengthened both the sectors of the economy. During recessions, Keynes placed greater emphasis on the aggregate demand for products as the engine of the economy. He established that government measures combat deflation and unemployment while fostering macro demand. The theory preclude that,, change in government spending and tax collection have an effect on aggregate demand and financial activity levels, all of which are important for attaining the macroeconomic goals of price stability, economic growth, and full employment. Emanating from the outlined statement of problem, the study tends to examine an overview of Government outflow and the industrialized sector output in Nigeria. Keynes suggested that the best ways to alter aggregate demand are to increase government spending and lower tax rates, and to decrease spending and raise taxes once the economy begins to boom.

Keynesians argued that this tactic should be applied during periods of weak economic activity as a crucial tool for establishing a robust budgetary system and achieving full employment. Fundamentally, a bigger economy in the middle of the impact that would follow would pay for the subsequent

deficits. In any event, the companies can utilize excess expenditure to control the rate of financial development and to maintain cost parity during periods of high inflation. Keynesian theory states that reducing spending from the economy will reduce levels of aggregate demand and get the economy, henceforth balancing out costs. However, this theory has it's setback since it fails to take into cognizance the inflation problem and also understate the influence of money on real variables in the economy.

Empirical Review

Nwankwo and Nwankwo (2023) investigated how Anambra State's manufacturing companies performed in relation to government spending. The studies on the impact of government spending on manufacturing enterprises was reviewed in this study. The distribution of surveys provided the data, which was analyzed using the ANOVA approach. 348 surveys were distributed; 348 were filled out and returned, but only 323 were used for the analysis. Data was gathered using a methodical questionnaire. As per the survey, commercial bank loans have no discernible effect on the performance of manufacturing enterprises in Nigeria. Government loans has little effect on how well Nigerian manufacturing companies function. Interest rates significantly impact the operational efficiency of industrial enterprises in Nigeria. Small business owners should fortify its intervention programs in order to address the difficulties encountered by manufacturing companies..

Ozuzu and Araniyar (2021) explored the government expenditure on Nigeria's industrial sector growth. Regression analysis was the data analysis technique employed. The study indicated that, government capital expenditure, taxes, and the monetary policy rate have a relative positive and considerable impact on the industrial sector. However, real interest rate has a negative and negligible impact on the industry's growth. Hence, from the available data, government policy plays major role towards the growth of the Nigeria industrial sector.

Regression analysis was the data analysis method employed. It was recorded that taxes, monetary policy rates, and government capital expenditures all had a positive and significant effect on the industrial sector .Meanwhile, the real interest rate has a negligible and adverse effect on the expansion of the industrial sector. The study suggest based on the findings, that government policy has a tremendous impact on the growth of Nigeria's industrial sector.

Amon, (2020) did a study on the connection between Kenyan government spending and the performance of a few chosen sectors outputs. It centered on the variables—government expenditure, public debt servicing, inflation, interest rates, private investment, terms of trade, and currency rates—that affect each sector's production performance.. Employing the ARDL model, the paper examined yearly time series data covering 1980 to 2016 to evaluate the influence of government expenditure on certain sect oral outputs in Kenya. The stationarity of the data was assessed using the unit root test, and the nature of the short- or long-term link between the variables affecting the output performance of the real sector was ascertained using the Johansen Co-integration test. The research findings showed a positive association between government spending and agricultural performance. The study also revealed a favorable relationship between government expenditure and manufacturing output performance.,

Ngobeni and Chiedza (2022) studied the relationship between the significance of agricultural production with population, food import value, consumer price index, yearly average rainfall, and government expenditure in agriculture as considerable factors. The study focuses more on government expenses in agriculture from 1983 to 2019. The variables showed a long-term relationship, as stated by the results of the Johansen co-integration test. The results of the Granger causality test indicate that government spending on agriculture does not Granger cause the value of agricultural products. However, it was denoted using vector autoregressive (VAR) model analysis that population, average annual rainfall, and government expenditure on agriculture would all eventually raise the assessment of agricultural output. This is due to the fact that other variables in the model link the two variables. Meanwhile, rising consumer price index and the cost of imported food negatively affect the value of agricultural produce. The findings of this study have consequences for policy about higher government expenditure.

Yerima, Nymphas, Sani, Auta, Amos, & Abwage (2022) assessed the impact of government disbursement on financially viable growth in Nigeria using time series data of 1986-2020. Structural Vector Auto-regression (SVAR) model and the pair-wise causality test were adopted. The research indicates that government spending in health and education had an insignificant impact on economic growth. The outcome also showed negligible relationship between public debt

and economic growth. Therefore, the study makes the following recommendations: the government should reduce the incidence of borrowing, particularly since 92% of its revenue is currently being used to service debt for borrowings that are primarily non-productive; the government should significantly increase its expenditure in education and health to at least match regional and global expenditure benchmarks. Since the debt to GDP ratio is not all-inclusive, borrowing analysis should also take revenue-generating potential into consideration (Ese and Ejieh, 2021).

METHODOLOGY

Data for the survey were sourced from the secondary methods obtained the Central Bank of Nigeria (CBN) statistical Bulletin, and world bank data from 1981-2021.

The econometric model developed for the study is premised on the notion that government expenditure has relationship with sector output. Thus a linear regression model is stated in a functional form as,

MSO= F (RECE, CAPE);

Where,

MSO= Manufacturing government expenditure

RECE= recurrent government expenditure

CAPE= capital government expenditure

The above equation can be restated in a functional form as;

$MSO = \beta_0 + \beta_1 RECE + \beta_2 CAPE + \mu$

Where;

β_0 = Autonomous or Intercept

β_1 = Coefficient of Parameter RECE

β_2 = Coefficient of parameter CAPE

μ = Stochastic variable or error term

The above can restarted in it log form as

$Log\ MSO = C + \beta_1\ RECE + \beta_2 CAPE + \mu$

Where Log = logged values of the variables.

Ordinary Least Square (OLS), was used in this study's data analysis, to determine whether there is a relationship between the variable (E-view). The advantage of OLS over other estimate methods or approaches led to its usage. OLS is an estimating methodology that is recommended due to its desirable features of unbiased consistency, efficiency, sufficiency, and best linear. Charles et-al (2018) also noted the technique's ease of computation.

RESULTS AND DISCUSSION

The actual results and discussion of the findings are presented in this chapter. The analysis was conducted using ordinary least

squares, and the results were tested using various statistical and econometric methodologies. The sequence in which the interest variables are integrated is the first topic we cover.

Unit Root Test

Testing for the unit root is the initial step in the co-integration and error correction model process, and the analysis continues from there. According to Konya (2004), the majority of time series data in macroeconomics have a unit root. Thus, anytime time series data are involved, it is imperative to examine whether the series are steady or not. A unit root indicates that the time series under study is non-stationary, whereas its absence indicates that the stochastic process is stationary. This test would use the enhanced Dickey-Fuller (ADF) test.

Tables 1: Unit Root Result

Variable	ADF	Integration	Significance
LRECE	-8.403534	I (1)	1%
LCAPE	-6.442516	I (2)	1%
LMSO	-4.715982	1 (1)	1%

Source: Researcher computation from E-view 20

Following the result of ADF test above it is observed that none of the variables are stationary at level, however, recurrent expenditure, capital expenditure and manufacturing sector output were integrated at 1st difference, This simply show that all the included variables were stationary and this give way to co-integration test.

Co-integration Analysis

The unit root must be found in order to move forward with the rest of the analysis in co-integration and the Error Correction Model. According to Konya (2004), the majority of macroeconomic time series data have a unit root. When time series data are involved, it is therefore imperative to examine whether or not the series are stationary. When a unit root is present, it suggests that the time series being studied is non-stationary; when one is absent, it indicates that the stochastic process is stationary. In this exam, the augmented Dickey-Fuller (ADF) test was used.

Table 2: co-integration result test

Unrestricted Co-Integration Rank Test (Trace)

Hypothesized No of CE(s)	Eigen value	Trace static	0.05 critical value	Prob**
None *	0.523973	41.07843	35.19275	0.0103
At most 1*	0.207303	13.61405	20.26184	0.3168
At most 2*	0.126837	5.018403	9.164546	0.2814

Source: Researcher computation from E-view 20

Trace test indicates 1 co-integrating equ(s) as the 0.05 level* denotes rejection of the hypothesis at the 0.05 level ** mackinnon-Haug-Michelis (1999) P – value

Unrestricted co-integration Rank Test (Maximum Eigen value)

Hypothesized No of CE(s)	Eigen value	Trace static	0.05 critical value	Prob
None *	0.523973	27.46438	22.29962	0.0087
At most 1*	0.207303	8.595648	15.89210	0.4783
At most 2*	0.126837	5.018403	9.164546	0.2814

Source: Researcher computation from E-view 20

At the 0.05 level, the Max-Eigen value test **mackinnon-Haug-michelis (1999) P-values** indicates 1 co-integrating equ(s) at the 0.5 level, indicating rejection of the hypothesis. At the 0.05 level, the Max-Eigen value and the trace test show one co-integrating equation, respectively. This implies that the variables have an equilibrium connection over the long term. Co-integration is a requirement for the error correction mechanism; once co-integration is achieved, the variables have a long-term equilibrium connection, allowing us to proceed to the error correction process.

Presentation of Regression Result

Table 3: Error Correction Model Result

Variable	Coefficient	Std Error	T-statistics	Prob
LCAPE	0.314272	0.080677	3.895440	0.0004
LRECE	0.844310	0.077549	10.88748	0.0000
ECM(-1)	-0.596959	0.131589	-4.536549	0.0001

C	1.430940	0.164527	8.697313	0.0000

R –Square	0.989391
Adjusted R-squared	0.988507
F-Statistics	111.9163
Durbin-Watson stat	2.191385
Prob (F-statistics)	0.000000

The value of the R-square and the adjusted R-square in table 4 show that the explanatory variables are robust in explaining variation in the dependent variables (MSO), given their values as 0.989391and 0.988507 respectively. The F-statistics measures the overall significance of the explanatory parameter. From the result report in table 4 above, our computed value of f-statistics is 111.9163, while its probability is 0.0000, given this value we reject the null hypothesis and accept the alternative hypothesis which state that there is a significant relationship between the variance of estimated regression model.

Capital expenditure has a positive sign and a value of 0.314272 in the table above, it follows that a rise in Capital expenditure will boost manufacturing sector output by 31%, which is consistent with the a priori expectation. Government recurrent expenditure has a positive sign and a value of 0.844310, it follows that an increase in Government recurrent expenditure will result in a 84% increase manufacturing sector output by 84%. The t-test is used to determine each explanatory parameter's statistical significance in the model. Capital expenditure has a t-test of 3.895440 which is statistically significant and suggests significant contribution on manufacturing sector output. Government recurrent expenditure has a T-test value of 10.88748, It is statistically and likely that this has a substantial impact on manufacturing sector output at the 5% level of significance.

CONCLUSION

The study has shown that government expenditure has impact on the manufacturing production in Nigeria. This impact of postivie both in the long and short periods. The findings of Nwankwo and Nwankwo (2023) , Ozuzu and Araniyar (2021), Amon, (2020) Ngobeni and Chiedza (2022), Yerima,

Nymphas, Sani, Auta, Amos, & Abwage (2022) which confirm that large government expenditure has positive and significant impact on economic growth, may be brought about through its influence on manufacturing output in the Nigerian economy, are consistent with the empirical result of a positive relationship between manufacturing output and government capital expenditure. Suffice to note that the outcome shows that ongoing spending significantly increases manufacturing output. Public spending was intelligently directed toward capital components in Nigeria, where it was used to build the groundwork for long-term growth and to create an atmosphere that encouraged private enterprise by providing resources that complemented private capital, such as reliable electricity and well-maintained roads. Accordingly, a research recommends that a higher proportion of government expenditure on capital projects in the annual budget be combined with better implementation.

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