

Fiscal Policy and the Performance of Manufacturing Sector: 1986-2019

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Abstract

The paper studied fiscal policy and the performance of manufacturing sector in Nigeria from 1986-2019. The special objectives were federal government expenditure and its recurrent expenditure within the time frame. The study was anchored on revenue maximization model. Ex-post facto research method was adopted. The finding of the research indicates that federal government capital expenditure has positive and significant role on manufacturing output. We conclude that corruption should be reduce and unaccounted government funds while we recommend that government should improve on its capital expenses for economic development.

Keywords: *Capital expenditure, Recurrent expenditure and Manufacturing output.*

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I. Introduction

The duty of fiscal policy in enhancing Nigeria manufacturing sector performs optionally cannot be over emphasized; this is because the sector remains the engine room of the country, helping in the conversion of raw materials into finished consumer goods.

Adebayo (2011), states that manufacturing industries are involved in manufacturing and processing of items thereby creating additional value to standard of living in the nation.

Fiscal policy is the use of government's expenditure and revenue programmes to change the economy in such a way as to produce desirable effect on such macro-economic variables as full employment, general price level and economic growth. Fiscal policy is seen as a direct government policy which involves manipulation of parameters that will directly affect government expenditure (Ogboghro, 2013).

Mbelede (2012), states that manufacturing industry is a key variable in enhancing growth, since this industry help in conversion of raw material into finished goods. Besides, manufacturing companies create employment opportunities which help to increase agricultural output that in the long run to diversification of the economy.

The history of manufacturing in Nigeria can be map out to pre-colonial times when small scale. Manufacturing of goods was practice in rural communities. The manufacturing sector believed to be a main instrument of increasing growth, improve changes and self-sufficiency. Though the high cost conditions in Nigeria occasioned by poor and inadequate infrastructural support services and other policy induced costs pose a serious threat, not only for output growth in the manufacturing sector but also for competitiveness. Bogunijoko (2004) argued that the continued harassment of firms by some state and local governments over unauthorized multiple levies and charges in spite of the clear position of the law, is a significant deviation from the characteristics requirement for a better business environment that the real sector needs to perform its role as the engine of growth.

Fiscal policy uses tax and expenditure to affect the economy for the aim of stability and growth while public expenditure basically used for allocation, stabilization and distribution. Tax policy helps to promote objectives such as redistribution, industrialization, promotion of employment and resources allocation (Anyanwu, 1997).

Nigerian economy is a developing one where neither monetary nor fiscal policies alone are sufficient to achieve desired economic objectives. This is due to the existence of weak economic structures in the various units of the economy. For example, underdeveloped money and capital markets and the existence of rural and informal industrial sector. Nigeria, right from its independence has been generally regarded as a nation in a

hurry to develop. Government has in this regard played significant roles, which ranged from its policy of impact substitution to export promotion (Ogboghro, 2013).

The broad aim is to examine fiscal policy and performance of manufacturing sector, the specific aims are as follows; (1) To ascertain the impact of federal government capital expenditure on the growth of the manufacturing sector, (2) To examine the impact of federal government recurrent expenditure on the growth of manufacturing sector.

Research Questions Posed to be answered is as followed; (1) How does federal government capital expenditure influence manufacturing sector performance? (2) Does federal government recurrent expenditure relate with manufacturing sector performance? While Research Hypotheses are **H₀₁**: Federal government capital expenditure has no significant relationship with manufacturing sector performance. **H₀₂**: Federal government recurrent expenditure has no significant relationship with manufacturing sector performance.

II. Review Of Related Literature

Conceptual Framework

Fiscal Policy

This has been conventionally seen as the use of government's receipt and expenditure programmes to regulate the economy in such a way as to enhance desirable outcome on such macro-economic variables as full employment and economic increase. Ogboghro (2013) see fiscal policy as a direct policy of government which involve manipulation of parameters that will directly affect government income and expenditure.

Gbosi (2016) defined Fiscal Policy as the use of the powers of taxation, public expenditure and other financial programmes embodied in annual budgets by government to achieve earmarked national goal. In a null shell, if the policy is well use, it serve as economic stabilization instrument which involves step taken to control and regulate the cost, volume, availability as well as direction of money in a nation to achieve specified macroeconomic policy purpose and to counter act unexpected trends in the economy of Nigeria.

Manufacturing Sector Output

Manufacturing sector could be seen as industries which are directly engage in the manufacturing and processing of products, Adebayo(2011). The sectors have accounted for significant share in the Gross Domestic Product of all developed nations and significantly improve the GDP of developing economies, Dickson (2017).

Loto, (2012) states that manufacturing industries are avenue through which increase productivity can help to reduce importation and increase exportation, thereby creating and increasing foreign exchange earning capacity of our nation. Mbelede (2012), believed that manufacturing firm add positive value to the country total earning by processing raw materials into finished products of consumption of the masses and possibly export.

According to Charles (2012), the manufacturing subsector creates employment opportunity which helps to boost agriculture and diversification of our economy, if well managed will improve the country external exchange earnings in the nearest future.

Central Bank of Nigeria (2012) subdivide the manufacturing sector into the following, food and beverage sector, electronics units, energy sub-sector, constructing, textile, engineering, chemical production, metal-working, plastic, telecommunication and transport. Convincingly the various subunits performance affects the total performance of the economy.

Interaction between Fiscal Policy and Manufacturing Output

On the interaction of fiscal policy and Nigeria economic growth (Tanzie and Zeel 2016), states that potential impact of fiscal policy on long-term growth have generated substantial attention. King and Rebelo (2017) argued that fiscal policy can either encourage or retard economic growth since investment in human capital affected taxation and expenditure pattern of government. There are good reasons to behave that for some low income countries fiscal contractions may also be expansionary. For instance, Nigeria deficit budgeting suppose to influence the rate of investment and capital formation thereby increase the capacity of the non-oil sector to involve in effective production.

By contrast, Countries in a "Post – stabilization" phase can exercise more choice one expenditure priorities, including allocating resources to important structure reforms such as the decompression of the civil service pay scale.

Theoretical Model

Revenue Maximization Model

The theoretical framework employed is the William Baumol's Model of 1958 which is realistic under the Managerial Theories of Firms. The model states that managers dominate in the entire decision making process in modern corporate world. It emphasized that modern firms have separate managerial functions away from ownership, and that managers are hired to maximize revenue than profit to ensure future growth of the

firm. The theory holds that for a nation to grow faster through competition and industrialization, it has to increase and exogenously determine its public expenditure to facilitate expansion and development. The theory further emphasized that firm's growth decision is hinged on the level of government fiscal policy.

Empirical Review

Dickson (2017) critically examine the recent trends and patterns in Nigeria's industrial development using descriptive study. The study established that many manufacturing industries in Nigeria are concentrated in the eastern pattern and spatial distribution pattern can change if many industrialists choice the strategy of industrial linkage.

Ogbole, Sonny and Isaac (2011) worked on the cost effectiveness analysis of fiscal policy on economic activities in Nigeria before and after deregulation, using the econometric methods of co-integration and error correction model. The study found that there was a difference in the successfulness of fiscal policy in stimulating economic growth during and after regulation period.

Sikiru and Umaru (2011) studied the causal link between fiscal policy and economic growth in Nigeria, using Engle-Granger approach and error correction models which was estimated to take care of short-run dynamic. The result indicates that productive expenditure positively impacted on economic growth during the period covered. They also fail to confirm the other element in the link whereby fiscal policy should be more strongly associated with output and input measures in the economy.

Arikpo, et al (2017) evaluate the impact of fiscal policy in the Nigeria manufacturing sector using time series analysis 1982-2014, their result indicate that increase in government revenue reduce manufacturing output, also the government should increase it's expenditure on infrastructural development and community services as this will have a multiplier effect on manufacturing activities and enhance economic growth in Nigeria.

Victor and Roman (2017) analysed the effect of fiscal policies upon agriculture and industry in Ukraine, with the SVAR model using quarterly data for the 2001–2016 period. The results indicate a positive effect of government spending on both agricultural production and industrial output, while an increase in the government revenue is of the same expansionary impact for the latter only. Midst of other results, there was a weak negative short-lived spillover from agriculture to industry, with no causality running on the reverse. As agricultural production in Ukraine is associated with a higher level of government spending in the short run, a direction of causality seems to be just the opposite for industrial output.

Rasheed (2010) investigated the productivity in Nigeria manufacturing subsector using co- integration and an error correction model. The study found a long-run equilibrium relationship index for manufacturing production, determinants of productivity, economic growth, interest rate spread, and bank credit to the manufacturing subsector, inflation rates, foreign direct investment, exchange rate and quantity of graduate employment.

III. Methodology

Research Design

The researchers applied the ex-post facto research design, since the events being examined have already taken place providing already established secondary data for the research. The study adopts an econometrics modeling method using E-view 8 for the analysis of collected data.

Model Specification

Economic model is a representation of the basic features of economic phenomena. It is an abstraction of the real world (Fonta, Ichoku and Anumudu, 2013). Based on this, our model is as follows.

$$IMS = f(FGCE, FGRE) \dots \dots \dots (1)$$

Where:

- IMS= Index of manufacturing sector
- FGCE = Federal Government Capital Expenditure
- FGRE = Federal Government Recurrent Expenditure

The mathematical form of the model is given as:

$$IMS = \beta_0 + \beta_2 FGCE + \beta_1 FGRE \dots \dots \dots (2)$$

By linearizing the equation (2) and transforming into logarithm produces:

$$\ln IMS_t = \beta_0 + \beta_2 \ln FGCE_t + \beta_1 \ln FGRE_t + \mu_t \dots \dots \dots (4)$$

Where β_0 is the intercept of the regression equation. β_1 and β_2 are the coefficient of the variables which was estimated in achieving the purpose of the research, equation (4) will be regressed using data from (1986-2019).

Gujarati (2009) defined U_t as a random variable that has well defined probabilistic properties. The stochastic error term represents other variables of economic growth not explicitly taken into account by the above models.

Economic A priori Criteria

This shows the theorized relationship between the modeled regressors and regress. The table below shows the a priori expectations for the variables in the model earlier specified.

A’p priori Expectations

Variables	Expected Sign	Obtained Sign	Remarks
FGCE	Positive	Positive	Conform
FGRE	Positive	Negative	Does not conform

Source: Author’s compilation (2020)

From the above table, it is observed that federal government capital expenditures conforms to the economic theories; implying that it is theory consistent. On the contrary, federal government recurrent expenditures are not theory consistent in Nigeria. This is a shocking discovery as direct change in fiscal policy pattern of government is expected to fuel manufacturing output directly. The discovery may be attributed to the perceived multiple taxation by government on manufacturing companies which is expected to grow the revenue of the government but retards manufacturing sector output.

Statistical Criteria (First Order Test)

a. Coefficient of Determination (R²)

The R-squared measures the overall goodness of fit of the entire regression. The value of the R-squared is 0.985387 approximately 99%, indicating that the independent variables resulted to 99% of the changes in the dependent variable whereas the other 1% of the variations are taken care of by the error term.

b. T-Statistics

T-test was to check for individual significance of variables. Statistically, the t-statistics of the variables under study is interpreted based on the following statement of hypotheses.

H₀: The individual parameters are not significant.

H₁: The individual parameters are significant.

Decision Rule:

If t-prob < 0.05 at 5% level of significance, we reject the null hypothesis {H₀} and accept the alternative hypothesis {H₁}, and if otherwise, we accept the null hypothesis {H₀} and reject the alternative hypothesis {H₁}.

Degree of significance = at 5% = 0.05

The t-test is summarized in the table below:

DATA ANALYSIS

Summary of T-test

Variable (t-Statistic)	Prob./ Decision rule	Remark
FGCE (6.458846)	0.0000 < 0.05	Significant
FGRE (-0.883697)	0.3835 > 0.05	Insignificant

Source: Author’s compilation (2020)

As stated in table above, Federal Government Recurrent Expenditures (FGRE), are not significant both at 5% level of significance; this is because their respective t-probs(0.0634 and 0.3835) are greater than the 5% critical value. Furthermore, Federal Government Capital Expenditures is significant at 5% level of significance since its probability value is lesser than the 5% critical value. This submission is in connection with that of Mensah (2017) who admitted that federal government recurrent expenditure does not have significant impact on manufacturing sector output in Nigeria.

F-Statistics

The F-statistics was used to test for simultaneous significance of all the estimated parameters. In other words, it is used to confirm significance of the model.

The hypothesis is stated below as;

H₀: β₁ = β₂ = 0

H₁: β₁ ≠ β₂ ≠ 0

Decision Rule

If the f-probability is less than the 0.05 at 5% level of significance, we reject the null hypothesis {H₀} that the overall estimate is not significant and resolve that the overall estimate is statistically significant; if otherwise, we accept the null hypothesis.

At 5% level of significance, accept the null hypothesis if Prob (F-stat.) > 0.05, otherwise reject the null hypothesis and accept the alternative hypothesis. From our OLS result, the F-statistics is 245.2316 and the

Prob(F-stat.) is $0.000000 < 0.05$. Thus, we reject the null hypothesis and accept the alternative hypothesis that our independent variables are simultaneously significant and the overall regression model is statistically significant.

IV. Summary of Findings

The Authors reviewed fiscal policy and performance of manufacturing sector in Nigeria: 1986 – 2019. The Ordinary Least Squares model employing variables such as manufacturing sector output, government capital expenditures, government recurrent expenditures and government revenue was used to test impact of the subject of our interest. However, before applying the regression analysis, we stated the stationarity of various variables using the Augmented Dickey-Fuller (ADF) unit root test. The entire variables were stationary at first difference except for capital expenditures which was stationary at second difference. In addition, Johansen co-integration test was used to investigate the presence or otherwise of a co-integrating vector in the variables. The trace statistics indicated no co-integrating equation at 5 percent level of significance pointing to the fact that the variables do not have a long run relationship.

Findings emanating from this study are as following:

1. Federal government capital expenditure has a positive and significant impact on manufacturing sector output. This however implies that any improvement on government capital expenditures would also improve on the growth of the manufacturing sector in Nigeria.
2. Also, federal government recurrent expenditures have a negative and insignificant impact on manufacturing sector performance in Nigeria. This further gives acceptance to the findings of Mensah (2017) that there is inverse nexus between government recurrent expenditures and manufacturing sector performances.

V. Conclusion

This research has focused on fiscal policy and performance of manufacturing sector in Nigeria (1986-2019). The research is revealing, there is call to eliminate corruption and unaccounted government funds which have served as leakages and have continued to drain the gross domestic product account in Nigeria. Conclusively, fiscal policy influences manufacturing growth in Nigeria especially in area of government capital expenditures but has an insignificant impact in Nigeria manufacturing sector performance on the aspect of revenue generation.

VI. Recommendations

In the wake of the above findings, the following recommendations were suggested:

1. Since the federal government capital expenditures is significant in manufacturing sector performance, the federal government should increase spending especially in the real sectors so as to help stimulate economic activities in line with the Keynesian doctrine to enhance growth of the manufacturing sector in particular and economy the economy in general.
2. Also, the government should also ensure that he improve on its capital expenses (especially through building of roads, dams, railways, etc.) to ensure a long term improvement in manufacturing sector performance in Nigeria.

References

- [1]. Adebayo, R. I. (2011). Zakat and Poverty Alleviation: A lesson for the Fiscal Policy Makers in Nigeria. *Journal of Islamic Economics, Banking and Finance*, 7(4): 26-41.
- [2]. Anyanwu, J.C (1997), *Nigeria Public Finance*, Joanne Educational Publishers Ltd, Onitsha, Anambra State.
- [3]. Arikpo, O. F., Ogar, A. and Ojong, C. M. (2017). The Impact of Fiscal Policy on the Performance of the Manufacturing Sector in Nigeria. *Euro-Asian Journal of Economics and Finance*, 5(1): 11-22
- [4]. Bogunijoko, J.O. (2004), *Growth Performance in Nigeria Empirical Evidence in the 20th Century Leading Issue in Macroeconomic Management and Development*. Ibadan: Nigerian Economic Society Daily Graphics Nigeria Limited.
- [5]. Central Bank of Nigeria *Economic and Financial Review* (2012).
- [6]. Charles, A. N. B. (2012). Investigating the Performance of Monetary Policy on manufacturing Sector in Nigeria. *Arabian Journal of Business and Management Review*, 2(1): 12-25.
- [7]. Dickson, D. A. (2017). The recent trends and patterns in Nigeria's industrial development. *Council for the Development of Social Science Research in Africa*.
- [8]. Gbosi, A. N. (2016). The Dynamics of Productivity and Unemployment Nexus: Implications for Employment Generation in Nigeria. *Employment Generation in Nigeria*. Ibadan: The Nigerian Economic Society.
- [9]. Gujarati, D.N and Porter D.C (2009), *Basic Econometrics*, Six Edition, Mc-Graw Hill Incorporated, New York.
- [10]. Loto, M. A. (2012). Global Economic Downturn and the Manufacturing Sector performance in the Nigerian Economy. *Journal of Emerging Trends in Economics and Management Sciences (JETEMS)*, 3(1): 38-45.
- [11]. Mbelede, C. (2012). Cost engineering in the manufacturing sector of the economy of Nigeria. Paper Presented at the 3rd Annual Technical Conference of Institution of Appraisers and Cost Engineering, Abuja, Nigeria.
- [12]. Mensah, C. (2017). Cost Engineering in the manufacturing sector of the economy of Ghana. Paper presented at the 3rd Annual Technical Conference of Institute of Appraisers and Cost Engineering, Accra, Ghana.
- [13]. Ogboghro, V. I. (2013). *Element of banking. Money and other financial institution in Nigeria*. Published by Sanya Olutomide Venture, Mushin, Lagos.

- [14]. Ogbole, F. O., Sonny, N. A. and Isaac, D. E. (2011). Fiscal Policy: Its impact on economic growth in Nigeria 1970-2006. *Journal of Economics and International Finance*, 3(6): 407-417.
- [15]. Rasheed, O. A. (2010). Productivity in the Nigerian Manufacturing Sub-Sector, *European Journal of Economics, Finance and Administrative Sciences*, 6(8),1450-2275.
- [16]. Sikiru, J. B. & Umaru, A. (2011). Fiscal policy and economic growth relationship in Nigeria. *International Journal of Business Social sciences*, 2(17), 244-249.
- [17]. Victor, S. and Roman, K. (2017). Modeling of Fiscal Policy effects on Agriculture and Industry in Ukraine. *Journal of Information System in Management*, 6(2): 131-142.

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