International Journal of Business and Management Review (IJBMR)

Vol.1, No.3, pp. 35-55, September 2013

Published by European Centre for Research Training and Development UK (www.ea-journals.org)

IMPACT OF FISCAL POLICY ON THE MANUFACTURING SECTOR OUTPUT IN NIGERIA: AN ERROR CORRECTION ANALYSIS

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ABSTRACT: *There has been a growing concern on the role of fiscal policy on the output and input of manufacturing industry in Nigeria, despite the fact that the government had embarked on several policies aimed at improving the growth of Nigerian economy through the contribution of manufacturing industry to the economy and capacity utilization of the sector. The aim of this study is to examine the impact of fiscal policy on the manufacturing sector output in Nigeria. Empirical evidence from the developed and developing economies has shown that fiscal and monetary policies have the capacity to influence the entire economy if it is well managed. An ex-post facto design (quantitative research design) was used to carry out this study. The results of the study indicate that government expenditure significantly affect manufacturing sector output based on the magnitude and the level of significance of the coefficient and p-value and there is a long-run relationship between fiscal policy and manufacturing sector output. The implication of this finding is that if government did not increase public expenditure and its implementation, Nigerian manufacturing sector output will not generate a corresponding increase in the growth of Nigerian economy. It is the recommendation of researcher that the expansionary fiscal policies should be encouraged as they play vital role for the growth of the manufacturing sector output in Nigeria; that fiscal policy should be given more priority attention towards the manufacturing sector by increasing the level of budget implementation, which will enhance aggregate spending in the economy; and consistent government implementation will contribute to the increase performance of manufacturing sector.*

KEYWORDS: Manufacturing sector, government expenditure, government tax revenue, output, capacity utilization, error correction model, co-integration**.**

INTRODUCTION

Background of the Study

Recently, government policies began to show more concern on the management and improvement of the economy. Government over the years have embarked on various macroeconomic policy options to grow the economy in terms of growth and development and the policy option employed is that of fiscal policy (Peter and Simeon, 2011). Fiscal policy is the use of government revenue collection (taxation) and expenditure (spending) to influence the economy. The two main instruments of fiscal policy are government taxation and government expenditure. It can also be seen as government spending policies that influence macroeconomic conditions. These policies affect tax rates, interest rates and government spending, in an effort to control the economy.

The role of fiscal policy on the output and capacity utilization of manufacturing industry in Nigeria has been a growing concern, despite the fact that the government had embarked on several policies aimed at improving the growth of the Nigerian economy through the contribution of manufacturing industry to the economy and capacity utilization of the sector (Adebayo, 2010; Peter and Simeon, 2011 and Loto, 2012). Libanio (2006) through the use of Kaldor's first law defined manufacturing sector as the engine of growth of the economy.

Manufacturing sector refers to those industries which are involved in the manufacturing and processing of items and indulge or give free rein in either the creation of new commodities or in value addition (Adebayo, 2010). To Dickson (2010), manufacturing sector accounts for a significant share of the industrial sector in developed countries. The final products can either serve as finished goods for sale to customers or as intermediate goods used in the production process. Loto, (2012) refers to manufacturing sector as an avenue for increasing productivity in relation to import replacement and export expansion, creating foreign exchange earning capacity, raising employment and per capita income which causes unrepeatable consumption pattern. Mbelede (2012) opined that manufacturing sector is involved in the process of adding value to raw materials by turning them into products.

Thus, manufacturing industries is the key variable in an economy and motivates conversion of raw material into finished goods. In the work of Charles (2012), manufacturing industries creates employment which helps to boost agriculture and diversify the economy on the process of helping the nation to increase its foreign exchange earnings.

Manufacturing industries came into being with the occurrence of technological and socio-economic transformations in the Western countries in the 18th-19th centuries. This period was widely known as industrial revolution. It all began in Britain and replaced the labour intensive textile production with mechanization and use of fuels. Manufacturing sector are categorized into engineering sector, construction sector, electronics sector, chemical sector, energy sector, textile sector, food and beverage sector, metal-working sector, plastic sector, transport and telecommunication sector (CBN, 2012).

In recent times, some manufacturing industries in Nigeria have been characterized by declining productivity rate, by extension employment generation, which is caused largely by inadequate electricity supply, smuggling of foreign products into the country, trade liberalisation, globalisation, high exchange rate, and low government expenditure. Therefore, the slow performance of manufacturing sector in Nigeria is mainly due to massive importation of finished goods, inadequate financial support and other exogenous variables which has resulted in the reduction in capacity utilization and output of the manufacturing sector of the economy (Tomola, Adebisi and Olawale, 2012). Looking at the manufacturing sector share in the GDP in recent years (1990-2010), it has not been relatively stable. In 1990, it was about 5.5% while it dropped to 2.22% in 2010. Also at the same period, the overall manufacturing capacity utilization grew from 40.3% in 1990 to 58.92% in 2010 (CBN, 2011) (See Appendix I). This may be attributed to the increase in government expenditure in recent times.

Furthermore, in Nigeria, the level of growth in manufacturing sector has been affected negatively because of high interest rate on lending and this high lending rate is responsible

for high cost of production in the country's manufacturing sector (Adebiyi, 2001; Adebiyi and Babatope, 2004; Rasheed, 2010). Okafor (2012) further observed that the level of Nigerian manufacturing industries' performance will continue to decline because of low implementation of government budget and difficulties in assessing raw materials.
These changes in the manufacturing share of the GDP and capacity utilization shows that firms that are efficient can contribute to job creation, technology promotion and as well ensure equitable distribution of economic opportunities and the macroeconomic stability of the country.

Based on the nature and importance of the relationship between fiscal policy and manufacturing sector, the study becomes necessary in Nigeria, where output and capacity utilization of manufacturing sector have suffered rapid fluctuations in recent years. Since government desires to increase total spending in the economy with fiscal policy which can either increase its spending or reduce taxes in maintaining manufacturing sector stability, it is therefore the researcher's interest to investigate the impact of fiscal policy on the manufacturing sector of Nigerian economy. Thus, this is the focus of this seminar paper.

Statement of the Problem

Upon several government policies on the stability of Nigerian economy through manufacturing industry, there have been a lot of challenges facing the growth of Nigerian manufacturing industry as identified by researchers. These challenges include: corruption and ineffective economic policies (Gbosi, 2007); inappropriate and ineffective policies (Anyanwu, 2007); lack of integration of macroeconomic plans and the absence of harmonization and coordination of fiscal policy (Onoh, 2007); gross mismanagement/misappropriations of public funds (Okemini and Uranta, 2008); and lack of economic potential for rapid economic growth and development (Ogbole, 2010). Despite the emphasis placed on fiscal policy in the management of the economy, the manufacturing sector inclusive, Nigerian economy is yet to come on the path of sound growth and development because of low output in the manufacturing sector to the economy (GDP).

This study is specifically interested in examining the level of significant fiscal policy has on manufacturing sector output in Nigeria due to its low contribution to the growth of the economy. Most studies on fiscal policy dwelt on the determinants, its impact on economic growth, its impact on capital formation, its impact on capital stock, deficit and macroeconomics variables, while studies on manufacturing sector focuses on its productivity, bank lending, economic growth, global economic downturn, monetary policy, banking sector reform, and its performance. However, in Nigeria, both variables have valuable significant effect on economic growth and stabilization, but study about their relationship has research gap, as there seems to be little or no attention on the impact of fiscal policy on manufacturing sector in Nigeria. This study seeks to fill this research gap.

Objectives of the Study

The broad objective of the study is to ascertain the impact of fiscal policy measures on manufacturing sector output in Nigeria. The study has the following specific objectives:

1. To determine the impact of government expenditure on manufacturing sector output in Nigeria.
2. To ascertain the effect of tax revenue on manufacturing sector output in Nigeria.

1.4 Significance of the Study

The study will contribute immensely in aiding the government, policy makers, economic planners, researchers and the academia generally. This will provide an insight and understanding to the government on how to be prudent in spending public funds that would bring about economic growth and development. It is also of immense help in providing an insight and knowledge to the general public, policy makers, economic planners, and manufacturing sector regulatory authorities on the impact of fiscal policy on the manufacturing sector in Nigeria.

To the academia, the findings of the study will contribute to the available literature on the current scenario of manufacturing sector in Nigeria and its level of contribution to the GDP. Based on our empirical findings and analysis, the result of the study will be of immense benefit to researchers who will rely on their contributions to existing knowledge for further research.

The findings of this research will assist monetary authorities in assessing the performance of the fiscal policy in Nigeria particularly in terms of their impact on the output of manufacturing sector. This work is also of immense benefit to the policy makers and economic planners in terms of using its findings in formulating and implementing appropriate policy measures towards accelerating economic growth through the manufacturing sector.

REVIEW OF RELATED LITERATURE

Empirical Review

Conventionally, fiscal policy implementation in every country is used to measure sustainable economic activities which manufacturing sector cannot be left out. Omitogun and Ayinla (2007) attempt to establish whether there is a link between fiscal policy and economic growth in Nigeria using the Solow growth model estimated with the use of ordinary least square (OLS) method. It was found that fiscal policy has not been effective in the area of promoting sustainable economic growth in Nigeria. This finding did not believe with Keynesian theory which is anchored on the need for an active policy to sustain economic growth. This is a research gap on the factors capable of hampering the effectiveness of fiscal policy.

Dickson (2007) critically examine the recent trends and patterns in Nigeria's industrial development using descriptive study. The study indicates that the level of manufacturing industry in Nigeria is concentrated in the southern part of the country and that the spatial pattern could change if industrialists adopt the strategy of industrial linkage. This finding did not support any school of thought as it suggests that policy on privatisation of industry in Nigeria should be enhanced. Ajayi (2008) in a study of the collapse of Nigeria's manufacturing sector on economic growth. He used cross-sectional research design and found out that the main cause of collapse in the Nigerian manufacturing sector is low implementation of Nigerian budget especially in area of infrastructure. This means that low implementation of fiscal policy affects the level of growth in Nigerian manufacturing sector.

Rasheed (2010) investigated the productivity in the Nigerian manufacturing sub-sector using co-integration and an error correction model. The study indicates the presence of

a long-run equilibrium relationship index for manufacturing production, determinants of productivity, economic growth, interest rate spread, bank credit to the manufacturing sub-sector, inflation rates, foreign direct investment, exchange rate and quantity of graduate employment. This finding has research gap on the area of factors that affect manufacturing sector in Nigeria.

Rina, Tony and Lukytawati (2010) examined the impact of fiscal and monetary policy on industry and growth of economy in Indonesian using the computable general equilibrium (CGE) model. It was found that fiscal and monetary policy have a positive impact on Indonesian macroeconomic performance in terms of change in GDP, investment, consumption and capital rate of return. This finding has research gap on the model used. This is because computable general equilibrium model is not a good model for correlation.

Ogbole, Sonny and Isaac (2011) focussed on the comparative analysis of the impact of fiscal policy on economic activities in Nigeria during regulation and deregulation, using the econometric methods of co-integration and error correction model. The study indicates that there is a difference in the effectiveness of fiscal policy in stimulating economic growth during and after regulation period. They recommend that government fiscal policy should refocus and redirect government expenditure towards production of goods and services so as to enhance GDP growth. This study fails to determine the contribution of fiscal policy on the economy during and after regulation.

Sangosanya (2011) used panel regression analysis model and gibrat's law of proportionate effect in investigating firm's growth dynamics in Nigerian manufacturing industry. The study observed that the manufacturing firms finance mix, utilization of assets to generate more sales, abundance of funds reserve and government policies are significant determinants of manufacturing industry growth in Nigeria. The gap in this study is that the authors did not identify those environmental factors that affect the manufacturing sector and the implementation of fiscal policy.

Peter and Simeon (2011) adopted vector auto regression (VAR) and error correction mechanism techniques to ascertain impact of fiscal policy variables on Nigerian economic growth between 1970 and 2009. The study revealed that there is a long-run relationship between fiscal policy variables and economic growth in Nigeria. Nevertheless, the research fails to consider other variables, such as interest rate, exchange rate, in defining fiscal policy and its influence on economic growth.

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.

Charles (2012) investigated the performance of monetary policy on manufacturing sector in Nigeria, using econometrics test procedures. The result indicates that money supply positively affect manufacturing index performance while company lending rate, income tax

rate, inflation rate and exchange rate negatively affect the performance of manufacturing sector. This means that monetary policy is vital for the growth of the manufacturing sector in Nigeria which in turn would lead to economic growth. The gap in this study is that the authors did not identify those factors that measures manufacturing sector performance like capacity utilization (output) and manufacturing share in GDP (input).

Loto (2012) examined the relationship between global economic meltdown and the manufacturing sector performance in the Nigerian economy using descriptive analysis and pooled data. The result indicates that the global economic meltdown has insignificant effect on the manufacturing sector of the Nigerian economy. These empirical findings support previous literature on economic growth but it failed to use t-test or statistics in testing pre and post global economic meltdown which is research gap.

Tomola, Adebisi and Olawale (2012) employed co-integration and vector error correction model (VECM) techniques to determine the link between bank lending, economic growth and manufacturing sector in Nigeria. The finding of the study revealed that manufacturing capacity utilization and bank lending rates significantly affect manufacturing output in Nigeria. This means that the growth of manufacturing output has not been enough to generate sizeable growth in the economy. The study has research gap in terms of not identifying relationship between manufacturing sector performance and economic growth in Nigeria.

Theoretical Framework

Different opinions have continued to emerge on how fiscal policy can affect growth in the economy through manufacturing sector. The origin of these controversies has been traced to the theoretical exposition of three schools of thought as enumerated by Tchokote (2001) in Omitogun and Ayinla (2007). The three schools of thought are Classical school of thought, Keynesian school of thought and Neo-classical school of thought. Classical school of thought believes that debt issued by the public has no effect on the private sector savings.

This means that fiscal deficit financed by debt crowds-out private sector investment and as well lowering the level of economic growth and development. Keynesian school of thought opined that there is positive relationship between deficit financing and investment. This means that fiscal policy is a tool used to overcome fluctuation in the economy. Neoclassical school of thought challenged the position of Keynesian school of thought on the ground that the manner in which fiscal deficits are financed is capable of influencing the level of consumption, investment and economic growth.

Building on the above premise on the relationship between fiscal policy and manufacturing sector in Nigeria, two theoretical frameworks for fiscal policy and manufacturing sector especially in developed and developing countries are discussed. These theories include:

- The savers-spenders theory of fiscal policy; and
- Managerial theory of firm.

The Savers-Spenders Theory

Savers-Spenders theory of fiscal policy was developed by Mankiw (2000) and used by Matsen, Sveen and Torvik (2008). This theory was developed because of inconsistence of Barro-Ramsey (1974) theory of infinitely-lived families and Diamond-Samuelson (1965)

theory of overlapping generation respectively. Savers-Spenders theory is the new theory developed to explain the behavioural of fiscal policy in the economy. The theory is based on some prepositions (Mankiw, 2000). The first proposition is on temporary tax changes having large effects on the demand for goods and services. This proposition states that the higher take-home pay that spenders received will be offset by higher tax payments, or by lower tax refunds. The implication is that consumers should realize that their lifetime resources were unchanged and therefore, should save the extra take-home pay to meet the upward tax liability.

The second proposition is on government debt in relation to crowd out capital in the long-run. This proposition states that extra consumption reduces investment, which in turn raises marginal product of capital and as well decrease the level of economic growth. It is also of the opinion that higher interest rate margin, induces savers to save more. The implication of this proposition is that extra consumption and higher interest rate margin affect the growth of manufacturing sector which in turn reduce economic growth in Nigeria. The third proposition states that government debt increases steady-state inequality. This means that a higher level of debt means a higher level of taxation to pay interest on debt. The tax will fall on both the savers and the spenders but the interest will only fall on savers. The implication of this is that a higher level of debt rises the income and consumption of the savers and lowers the abet income and consumption of the spenders.

Managerial Theory of Firms

Managerial theory of firm was developed by Bumole in the year 1967 in his book called business behaviour, value and growth and as well used by Sangosanya (2011). This theory is based on the complex nature of the modern manufacturing sector. The theory states that the reason why managers are hired is for revenue maximization and not for profit maximization. This theory believes that for the economy to grow faster through industrialization, the country needs to increase its public expenditure so as to facilitate the developmental processes of their economies. The theory emphasizes that a firm's decisions whether to grow or not depends on the level of fiscal policy because the firm grow through government expenditure on industrialization. This is the theories of which this research is based.

Conceptual Review

Peter and Simeon (2011) define fiscal policy as the process of government management of the economy through the manipulation of its income and expenditure and to achieve certain desired macroeconomic objectives. Central Bank of Nigeria (2011) defined fiscal policy as the use of government expenditure and revenue collection through tax and amount of government spending to influence the economy. Samuelson and Nordhaus (2002) defined fiscal policy as a government's program with respect to the purchase of goods and services and spending on the transfer of payments, and as well the amount and type of taxes.

In finance, fiscal policy is the use of government revenue collection (taxation) and expenditure (spending) to influence the economy. The two main instruments of fiscal policy are government taxation and expenditure. Changes in the level and composition of taxation and government spending can affect aggregate demand and the level of economic activity; the pattern of resource allocation; and the distribution of income (David, 2005; Mark and

Asmaa, 2009; Chirag, 2010). This implies that Fiscal policy refers to use of the government budget to influence economic activities.

Geoff (2012) contended that fiscal policy involves the use of government spending, taxation and borrowing to affect the level and growth of aggregate demand, output and jobs creation. It is the government spending policies that influence macroeconomic conditions. These policies affect tax rates, interest rates and government spending, in an effort to control the economy. Fiscal policy is the means by which a government adjusts its levels of spending in order to monitor and influence a nation's economy.

Various researchers have submitted that fiscal policy goals include the following: increasing employment opportunities; attaining full employment; stabilization of domestic prices; promoting economic growth and development through industrialization; achieving equity in income redistribution; achieving stable exchange rate; and increasing the rate of investment in the country (Anyanwu (2004); Omitogun and Ayinla (2007); Abeng (2009); CBN (2010) and Ogbole, Sonny and Isaac (2011)). Again, Afam (2012) maintained that fiscal policy is the aspect of government policy dealing with the raising of revenue through taxation and other sources and deciding on the level and pattern of expenditure for the aim of influencing economic activities.

Judging from the above definitions, fiscal policy can be seen as the government policy used to achieve full employment, stability of price level, sustainable economic growth and external balance and its instrument is the main instrument used in achieving macroeconomic targets. Nigeria for the past decades has maintained large fiscal policy measures in other to influence economic growth and activities. But the pertinent question is: has fiscal policy instrument stabilized the growth rate of manufacturing sector through its contribution to GDP?

The general aim of the study is to investigate how fiscal policy affect manufacturing sector and to further examine how these policy relate to manufacturing sector output and performance. Also, the effects of fiscal policy on capacity utilization are discussed.

Impact of Fiscal Policy on Manufacturing Sector Output

In recent time, various authors have suggested in the literature that fiscal policy has an important role in the growth of Nigerian economy through manufacturing sector output and that high growth rates are found in the economy where the manufacturing sector share in GDP is increasing. Unfortunately, the impact of fiscal policy using productive government consumption expenditure on manufacturing sector output in Nigeria present indiscriminate result, as shown in the figure 1 below.

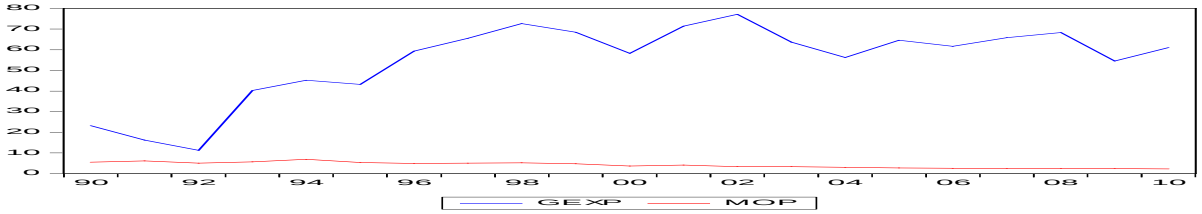


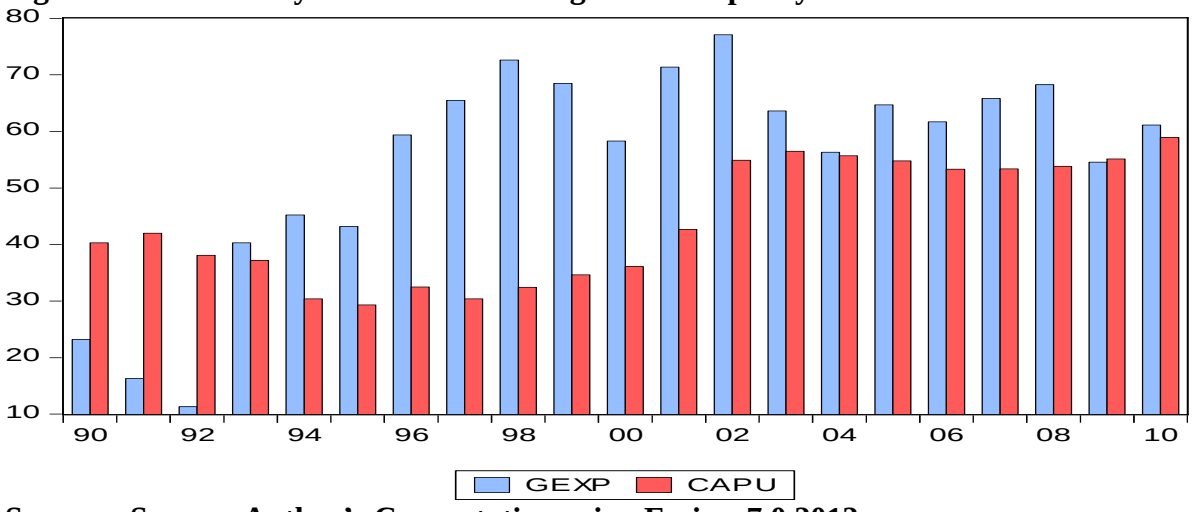
Figure 1: Fiscal Policy and Manufacturing Sector Output
Sources: Source: Author's Computation using E-view 7.0 2012

Figure 1 shows that when fiscal policy was increasing, the manufacturing sector output was either constant or fluctuating. This means that the fiscal policy was not enough to increase growth rate of manufacturing sector output in Nigeria. This may be as a result of inadequate funding of manufacturing sector, either due to instability of Nigerian capital market or the culture of Nigerian deposit money bank not to lend short term investment and the long term fund is not accessible because of high interest rate spread and credit guidelines. As Gerschenkron (1992) in Tomola, Adedisi and Olawale (2012) suggested that there is need for the establishment of specially institution that will be supplying long-term funds for industrial capital. The implication of this is that external finance is very important for the manufacturing sector to contribute a reasonable percentage to the growth of Nigerian economy.

Impact of Fiscal Policy on Manufacturing Sector Capacity Utilization

Fiscal policy is the government spending policies that influence macroeconomic conditions. These policies affect tax rates, interest rates and government spending, in an effort to control the economy. While, Capacity utilization refers to the extent to which an enterprise or a nation actually uses its installed productive capacity. Thus, it refers to the relationship between actual output that was produced with the installed equipment and the potential output which could be produced with it, if capacity was fully used. There has been mixed result in impact of fiscal policy on manufacturing sector capacity utilization in Nigeria looking at the percentage from 1990 to 2010. The manufacturing sector capacity utilization rate which was 40.3% in 1990 was reduced to 38.1% in 1992, from 1992, it has been inconsistent till 2002 to 2010 when it increase from 42.7% to 58.92 respectively. While the fiscal policy has been on the increase except for a small decrease of 23.2% to 11.3% which it witnessed from 1990 to 1992 respectively. The relationship between fiscal policy and manufacturing sector capacity utilization in Nigeria presents a mixed result, as depicted in the figure 2 below.]

Figure 1: Fiscal Policy and Manufacturing Sector Capacity Utilization



Sources: Source: Author's Computation using E-view 7.0 2012

Figure 2 shows that there has been fluctuation on the relationship between fiscal policy and manufacturing sector capacity utilization over the years under study expect from 2003 where we observe little impact. This may be because Nigerian manufacturing sector is faced with

the problem of accessibility of funds due to high interest rate. Enebong (2003) stated that the level of Nigerian manufacturing industry performance will continue to decline as it will face problem of accessing raw materials because of competition from the foreign firms.

METHODOLOGY AND DISCUSSION

Strategies for Accomplishing Stated Objectives

Data have been generated from secondary sources (CBN Statistical Bulletin and Academic Journals). The data collected were analyzed and interpreted using relevant statistical formulations. The analysis of the data was based on the objectives. The essence of using statistical formulations is that the previous works reviewed were based on empirical analysis and we cannot ascertain the impacts of fiscal policy on manufacturing sector with hearsay. Objective one and two was tested with the use of error correction model, graph and co-integration test. The results of the analysis were used to assess the impact of fiscal policy on the manufacturing sector in Nigeria as depict in appendix.

The general equation for ECM and Co-integration test is $Y_t = \beta_0 + \beta_1 X_{1t} + \ldots + \beta_n x_{nt} + U_t$ and $\Delta y_t = \beta_1 + \beta_2 \Delta X_{1t} + \ldots + \beta_n \Delta X_{nt} + \delta u_{t-1} + \varepsilon_t$. $\mathbf{Y_t}$ is the dependent variable, β_0 is the intercept term, β_1 is the regression coefficient, $\mathbf{X_t}$ is a set of explanatory variables and $\boldsymbol{\mu_t}$ is the error term. We therefore re-specify the model above to capture the objective of our study.

MOP = F(GEXP, GTR). Where MOP is manufacturing sector output, GEXP is government expenditure and GTR is government tax revenue.

Considering **appendix 2**, there is a long run relationship between dependent variable (MOP) and the independent variables (GEXP and GTR) within the period under review 1990-2010. **Appendix 3** displays a regression result of impact of fiscal policy on the manufacturing sector in Nigeria. As specified above, the results were obtained using the ECM and the Ordinary Least Square (OLS) method of estimation. From the empirical evidence, we can infer that the coefficient of the regression which is the coefficient that depicts the estimated coefficient appears to be good while standard error and the values of t-statistic have been shown.

The results of other important statistical tools revealed that: the coefficient of determination (R^2) as used to measure the success of the regression in predicting the value of the dependent variable within the sample and tests the goodness of fit, which is considered high in this study over 94%; the adjusted R-square, the Durbin-Watson statistic, and the entire regression test is statistically significant including the F-test. All results were obtained empirically and the test was conducted at five percent level of significance.

The result indicates that government tax revenue (GTR) have significant negative impact on manufacturing sector output (MOP) in Nigeria. On the other hand, government expenditure (GEXP) appears to have significant and positive impact on manufacturing sector output (MOP) in Nigeria. The one (1) period lag of MOP was also shown to have significant positive impact on manufacturing sector in Nigeria which was proxied by MOP.

A close examination at the result of the equation reveals that some signs were in line with the opinion expectation in literature review. From the result, GEXP satisfy one condition by

having positive sign while GTR which is negative satisfies another condition. This means that the independent variables are in line with the opinion expectation in the model.

From the result, the difference in beta coefficient of the variables representing the fiscal policy shows the different contributions of the variables to the Nigerian manufacturing sector which is been represented by the manufacturing sector output (MOP). In this result, using the beta coefficient, MOP is a positive of constant 4.416309. This means that when all variables are held constant, there will be a positive variation up to the tune of 4.416309 units in MOP. Similarly, a unit change in GTR when all variables are held constant will lead to a decrease in MOP by 0.278522 units. This is because of its negative impact to the MOP.

However, a unit change in GEXP (0.214867) will produce a positive impact on the growth rate of the Nigerian manufacturing sector. This means that when GEXP is held constant, it will increase MOP by 0.214867 while GTR will reduce MOP by 0.278522.

DISCUSSION OF EMPIRICAL REVIEW

There are several studies that have been undertaken and the notion that fiscal policy affects manufacturing sector and in turn contributes to the growth of the Nigerian economy has little or no research evidence. However, up-to-date only a limited number of researches have been undertaken to explore the impact of fiscal policy on manufacturing sector.

The evidence from the research conducted by Omitogun and Ayinla (2007) in Nigeria attempts to establish whether there is a link between fiscal policy and economic growth in Nigeria using the Solow growth model estimated with the use of ordinary least square method. It was found that fiscal policy has not been effective in the area of promoting sustainable economic growth in Nigeria. This finding did not agree with Keynesian theory of the need for an active policy to sustain economic growth. This finding was based on factors capable of hampering the effectiveness of fiscal policy such as high level of corruption, wasteful spending, policy inconsistencies and lack of adequate policy implementation.

Dickson (2007) critically examined the recent trends and patterns in Nigeria's industrial development using descriptive study. The study indicates that the level of manufacturing industry in Nigeria is concentrated in the southern and some eastern parts of the country and that the spatial pattern could change if the industrialists adopt the strategy of industrial linkage. This finding did not support any school of thought as it suggests that policy on privatisation of industry in Nigeria should be enhanced.

Ayayi (2008) in a study of the collapse of Nigeria's manufacturing sector on economic growth in Nigeria using cross-sectional research design and found out that the main cause of collapse in Nigeria manufacturing sector is low implementation of Nigerian budget especially in area of infrastructure. This means that low implementation of fiscal policy affects the level of growth in Nigerian manufacturing sector. This finding is of the opinion that high implementation of Nigerian budget is critical for Nigerian manufacturing sector contribution to GDP.

Rasheed (2010) investigated the productivity in the Nigerian manufacturing sub-sector using co-integration and error correction model. The study indicates the presence of a long-run equilibrium relationship index for manufacturing production, determinants of productivity, economic growth, interest rate spread, bank credit to the manufacturing sub-sector, inflation rates, foreign direct investment, exchange rate and quantity of graduate employment. This finding means that a good environment for manufacturing sector in the area of infrastructures and low lending rate will increase the contribution of manufacturing industry to GDP.

Rina, Tony and Lukytawati (2010) examined the impact of fiscal and monetary policy on industry and growth of economy in Indonesia using the computable general equilibrium (CGE) model. It was found that fiscal and monetary policy have a positive impact on Indonesian macroeconomic performance in terms of change in GDP, investment, consumption and capital rate of return. This finding means that Indonesian economic performance is expected to increase through the use of fiscal and monetary policy. This is in line with the finding of Omitogun and Ayinla (2007) that fiscal policy has not been effective in the area of promoting sustainable economic growth in Nigeria due to some peculiarities in our economic environment.

Ogbole, Sonny and Isaac (2011) focussed on the comparative analysis of the impact of fiscal policy on economic activities in Nigeria during regulation and deregulation, using the econometric methods of co-integration and error correction models. The study indicates that there is a difference in the effectiveness of fiscal policy in stimulating economic growth during and after regulation period. This means that during the deregulation period, fiscal policy contributes more to the growth of Nigeria economy. The result may be consonant with a version of fiscal policy contributing to manufacturing sector with a greater percentage only during deregulation.

Sangosanya (2011) used panel regression analysis model and Gibrat's law of proportionate effect in investigating firm's growth dynamics in Nigerian manufacturing industry. The study observed that the manufacturing firms finance mix, utilization of assets to generate more sales, abundance of funds reserve and government policies are significant determinants of manufacturing industry growth in Nigeria. This result means that the manufacturing sector financial performance and long-term sources of fund option determines the growth of manufacturing sector in Nigeria.

Peter and Simeon (2011) adopted vector auto regression (VAR) and error correction mechanism techniques to ascertain impact of fiscal policy variables on Nigerian economy growth between 1970 and 2009. The study revealed that there is a long-run relationship between fiscal policy variables and economic growth in Nigeria. This means that own shock constitutes a significant source of variation in economic growth and inconsistence in macroeconomic policies implementation in the manufacturing sector affects economic growth positively. 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. The use of granger test only show the direction of effect, the study only looks at economic and social community service expenditure of the government. The study did not support the finding of

Ogbole, Sonny and Isaac (2011). They state that there is a difference in the effectiveness of fiscal policy in stimulating economic growth during and after regulation period.

Charles-Anyaogu (2012) investigated the performance of monetary policy on manufacturing sector in Nigeria, using econometrics test procedures. The result indicates that money supply positively affect manufacturing performance index while company lending rate, income tax rate, inflation rate and exchange rate negatively affect the performance of manufacturing sector. This means that monetary policy is vital for the growth of the manufacturing sector in Nigeria which in turn would lead to economic growth. This study was silent on the issue of manufacturing capacity utilization and output.

Loto (2012) examined the relationship between global economic meltdown and the manufacturing sector performance in the Nigerian economy using descriptive analysis and pooled data. The result indicates that the global economic meltdown has insignificant effect on the manufacturing sector of the Nigerian economy. These empirical finding is based on the slow growth of Nigerian economy as a whole during the economic crisis. Tomola, Adebisi and Olawale (2012) employed co-integration and vector error correction model (VECM) techniques to determine the link between bank lending, economic growth and manufacturing sector in Nigeria. The finding of the study revealed that manufacturing capacity utilization and bank lending rates significantly affect manufacturing output in Nigeria. This result implies that manufacturers and banking institutions must work together and increase the manufacturing output which will in turn generate a reasonable increase in the growth of Nigerian economy.

Gap in Literature

Looking at the available literature reviewed, emphasis has been on impact of fiscal policy on the growth of Nigerian economy as a whole while little or no attention has been given to the impact of fiscal policy on the growth of manufacturing sector in Nigeria. This study attempts to close the research gap by examining fiscal policy and its impact on the manufacturing sector in Nigeria. Since the issue of investment in the country which the fiscal policy is meant for cannot be possible without manufacturing sector.

DISCUSSION OF THEORETICAL FRAMEWORK

Looking at the two theories (Savers-Spenders theory of fiscal policy and Managerial theory of firm) as identified in chapter two, we posit that these theories agree that manufacturing sector grows faster with the implementation of fiscal policy, which will help to increase the growth rate of Nigerian manufacturing sector output and in turn increase economic growth. In this situation, the limit on a manufacturing sector growth is determined by the rate of fiscal policy implementation rather than by cost considerations. This is in line with Baxter and King (2003) that a permanent increase in government expenditures can lead to a more than one-to-one increase in manufacturing output.

CONCLUSION

The study focuses on the impact of fiscal policy on the manufacturing sector in Nigeria. Manufacturing sector is seen as an engine of growth in the developmental processes of the

economy. The study adopts graph, co-integration and error correction model on a time series data from 1990 to 2010. The study regressed fiscal policy proxied by productive government consumption expenditure and government revenue on manufacturing sector output. The regression result reveals that about 94.10% of the systematic variation in the dependent variable is explained by the two independent variables such as Government Expenditure (GEXP) and Government Revenue (GR). The F-staistic is significant at the 5% level showing that there is a linear relationship between the MOP and the two independent variables. The result revealed that government expenditure have positive and significant effect on manufacturing sector output in Nigeria, while government revenue have negative and significant impact on manufacturing sector output in Nigeria based on the magnitude and the level of significance of the coefficient and p-value. The result also reveals that there is long-run relationship between fiscal policy and manufacturing sector output, as evidenced by the co-integration (Appendix 2).

The researcher concluded that the success of fiscal policy in promoting manufacturing sector depends on the level of public revenue available, the direction of public expenditure and its implementation.

RECOMMENDATIONS

On the basis of the findings of the study, the following recommendations are proffered towards enhancing impact of fiscal policy on manufacturing sector in Nigeria.

1. Expansionary policies on fiscal policy measures should be encouraged as they play vital role for the growth of the manufacturing sector output in Nigeria.
2. There is need to redirect fiscal policy measures towards making Nigeria a producer nation through manufacturing sector which in turn would lead to economic growth and development.
3. Government economic policies should be on diversification of the economy to enhance the performance of manufacturing sector, so as to create more employment opportunities, because it may be a more effective way of reducing the level of unemployment and increasing the growth of the economy.
4. Fiscal policy should be given more priority attention towards the manufacturing sector by increasing the level of budget implementation, which will enhance aggregate spending in the economy.
5. Consistent government implementation will contribute to the increase performance of manufacturing sector.

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APPENDIX 1

YEAR	GTR	GEXP	MOP	CAPU
1990	98,102.40	23.2	5.5	40.3
1991	100,991.60	16.3	6.2	42
1992	190,453.20	11.3	5.07	38.1
1993	192,769.40	40.3	5.7	37.2
1994	201,910.80	45.2	6.99	30.4
1995	459,987.30	43.2	5.45	29.29
1996	523,597.00	59.4	4.92	32.46
1997	582,811.10	65.5	5.14	30.4
1998	463,608.80	72.6	5.22	32.4
1999	949,187.90	68.5	4.73	34.6
2000	1,906,159.70	58.3	3.67	36.1
2001	2,231,600.00	71.4	4.21	42.7
2002	1,731,837.50	77.1	3.43	54.9
2003	2,575,095.90	63.6	3.39	56.5
2004	3,920,500.00	56.3	3.06	55.7
2005	5,547,500.00	64.7	2.83	54.8
2006	5,965,101.90	61.7	2.58	53.3
2007	5,715,600.00	65.8	2.52	53.38
2008	7,866,590.10	68.3	2.41	53.84
2009	4,844,592.34	54.6	2.47	55.14
2010	7,303,671.55	61.1	2.22	58.92

Source: CBN Statistical Bulletin 2010

APPENDIX 2

Sample (adjusted): 1992 2010
Included observations: 19 after adjustments
Trend assumption: Linear deterministic trend
Series: CAPU GEXP GTR MOP
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.910171	90.84356	47.85613	0.0000
At most 1 *	0.795734	45.05636	29.79707	0.0004
At most 2	0.472007	14.87808	11.67532	0.0000
At most 3	0.134445	2.743313	0.86243	0.0005

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.910171	45.78720	27.58434	0.0001
At most 1 *	0.795734	30.17828	21.13162	0.0020
At most 2	0.472007	12.13476	10.43278	0.0100
At most 3	0.134445	2.743313	0.841466	0.0000

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):

CAPU	GEXP	GTR	MOP
0.018662	0.059968	1.12E-06	2.673477
0.048474	-0.037397	4.43E-07	1.432754
-0.274924	-0.078644	2.55E-07	-1.815676
-0.061379	0.018310	-7.05E-07	-0.937769

Unrestricted Adjustment Coefficients (alpha):

D(CAPU)	0.976027	-1.301528	1.579554	0.702283
D(GEXP)	-4.042921	0.950260	2.473057	1.444120
D(GR)	-304585.4	-280670.5	-457323.0	126791.4
D(MOP)	-0.377270	-0.120275	0.089289	-0.100912

1 Cointegrating Equation(s): Log likelihood -387.7813

Normalized cointegrating coefficients (standard error in parentheses)

CAPU	GEXP	GTR	MOP
1.000000	3.213484	6.02E-05	143.2615
	(0.38317)	(6.6E-06)	(13.0445)

Adjustment coefficients (standard error in parentheses)

D(CAPU)	0.018214
	(0.01730)
D(GEXP)	-0.075447
	(0.02892)
D(GTR)	-5684.025

	(4239.15)	
D(MOP)	-0.007040	
	(0.00183)	

2 Cointegrating Equation(s): Log likelihood -372.6922

Normalized cointegrating coefficients (standard error in parentheses)

CAPU	GEXP	GTR	MOP
1.000000	0.000000	1.90E-05	51.57004
		(3.5E-06)	(6.67593)
0.000000	1.000000	1.28E-05	28.53335
		(1.9E-06)	(3.67345)

Adjustment coefficients (standard error in parentheses)

D(CAPU)	-0.044876	0.107204
	(0.04436)	(0.06036)
D(GEXP)	-0.029384	-0.277985
	(0.07932)	(0.10792)
D(GTR)	-19289.33	-7769.228
	(11084.8)	(15082.2)
D(MOP)	-0.012871	-0.018126
	(0.00479)	(0.00651)

3 Cointegrating Equation(s): Log likelihood -366.6248

Normalized cointegrating coefficients (standard error in parentheses)

CAPU	GEXP	GTR	MOP
1.000000	0.000000	0.000000	8.774161
			(0.89627)
0.000000	1.000000	0.000000	-0.290843
			(1.70977)
0.000000	0.000000	1.000000	2248017.
			(95585.8)

Adjustment coefficients (standard error in parentheses)

D(CAPU)	-0.479133	-0.017018	9.23E-07
	(0.20513)	(0.07752)	(9.1E-07)
D(GEXP)	-0.709286	-0.472477	-3.49E-06
	(0.38172)	(0.14426)	(1.7E-06)
D(GTR)	106439.5	28196.59	-0.583537
	(48017.6)	(18146.3)	(0.21197)
D(MOP)	-0.037418	-0.025148	-4.55E-07
	(0.02483)	(0.00939)	(1.1E-07)

Source: Author's Computation using E-view 7.0 2012

APPENDIX 3

Dependent Variable: LOG(MOP)
Method: Least Squares
Sample: 1990 2010
Included observations: 21

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.416309	0.196968	22.42148	0.0000
LOG(GTR)	-0.278522	0.018954	-14.69452	0.0000
LOG(GEXP)	0.214867	0.055144	3.896461	0.0011

R-squared	0.941027	Mean dependent var	1.370149
Adjusted R-squared	0.934474	S.D. dependent var	0.358864
S.E. of regression	0.091862	Akaike info criterion	-1.805497
Sum squared resid	0.151895	Schwarz criterion	-1.656279
Log likelihood	21.95772	Hannan-Quinn criter.	-1.773113
F-statistic	143.6116	Durbin-Watson stat	1.853823
Prob(F-statistic)	0.000000		

Source: Source: Author's Computation using E-view 7.0 2012

Dependent Variable: MOP
Method: Least Squares
Sample: 1990 2010
Included observations: 21

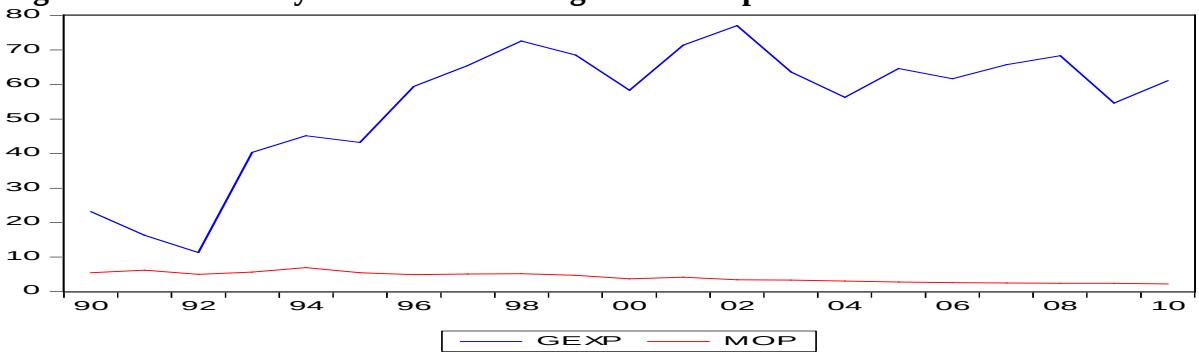
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.071793	0.432749	14.03074	0.0000
GTR	-4.47E-07	5.85E-08	-7.638136	0.0000
GEXP	-0.013872	0.008331	-1.664989	0.1132

R-squared	0.834012	Mean dependent var	4.176667
Adjusted R-squared	0.815569	S.D. dependent var	1.432237
S.E. of regression	0.615081	Akaike info criterion	1.997439
Sum squared resid	6.809848	Schwarz criterion	2.146656
Log likelihood	-17.97311	Hannan-Quinn criter.	2.029823
F-statistic	45.22068	Durbin-Watson stat	1.993518
Prob(F-statistic)	0.000000		

Source: Source: Author's Computation using E-view 7.0 2012

Appendix 4

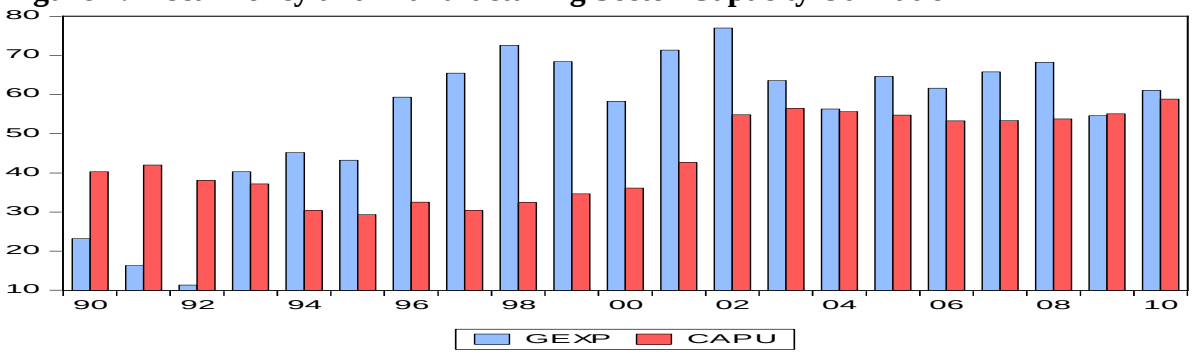
Figure 1: Fiscal Policy and Manufacturing Sector Output



Sources: Source: Author's Computation using E-view 7.0 2012

Appendix 5

Figure 1: Fiscal Policy and Manufacturing Sector Capacity Utilization



Sources: Source: Author's Computation using E-view 7.0 2012