

EXCHANGE RATE AND MANUFACTURING SECTOR OUTPUT IN NIGERIA

Chioma Chidinma, George-Anokwuru¹, Obayori, Joseph Bidemi² and Orijji, Chimekwa Esther³

¹Department of Economics, Faculty of Social Sciences, University of Port Harcourt, PMB 5323 Port Harcourt, Nigeria

²Department of Economics, Faculty of Social Sciences Nnamdi Azikiwe University, Awka Nigeria

³Department of Agriculture and Applied Economics, Faculty of Agriculture, Rivers State University of Port Harcourt, Nigeria

ABSTRACT

The study empirically investigated the impact of exchange rate on manufacturing sector output in Nigeria. Annual time series covering the period between 1980 and 2016 was collected for the study. The variables that were employed to explore the relationship between exchange rate and manufacturing sub-sector output are; manufacturing production output, exchange rate, manufacturing export and interest rate. The method utilized was the Error Correction Mechanism (ECM). Meanwhile, a unit root test of stationarity and co-integration test for long-run equilibrium relationship preceded the ECM. The result of the ADF unit root test and Johansen co-integration test indicated that all the variables were stationary and indeed co-integrated. From the parsimonious error correction mechanism result, the following conclusions were drawn; the R² is 61%, meaning that dynamic model is a good fit. Exchange rate and interest rate were negatively related with manufacturing sub-sector output in Nigeria. While manufacturing export has a positive relationship with manufacturing sector output. The result showed that decrease in manufacturing sector output is a reflection of unstable exchange rate and high interest rate. Based on these findings, the study recommend that government should formulate and implement monetary policy that aim at reducing the rate of interest to the manufacturing sub-sector and favourable exchange rate policy in order to attain a viable manufacturing sub-sector.

KEYWORDS: Exchange Rate, Manufacturing, Interest Rate, Export, Policy and Output

I INTRODUCTION

The structure of an economy refers to the totality of the complex relationship existing between the resources of the economy and the resultant outputs of the resources. These resources are explored by the various units or sectors of the economy. Such units include the manufacturing and the financial sectors. The manufacturing sub-sector is an indispensable unit of the economy in terms of resource utilization. The manufacturing sector is the engine of economic growth and development as it diversifies the economy and makes it more broad based. Also, efficient financial intermediation and resources mobilization are key to the economic development of any country and this role is the responsibility of the financial sector of an economy. The sector provides funds as capital input in other sectors of the economy particularly the manufacturing sub sector.

According to Fakiyesi (2005), the manufacturing sector plays a catalytic role in a modern economy and has numerous benefits that are critical for economic transformation. In a developed economy, the

manufacturing sector is a leading sector in many respects. It serve as a source of increasing productivity in relation to import substitution and export expansion, creating foreign exchange earning capacity, increase employment opportunity and stimulate the development of speculation at a quicker rate than whatever other segment of the economy, and more extensive and more efficient linkage among different sectors. But the Nigerian economy is under-industrialized and its capacity utilization is also low. The manufacturing sector has become progressively dependent on the foreign sector for import of non-labour input to the extent that inability to import as a result of exchange rate variability can impact negatively on manufacturing production (Okigbo, 1993). Similarly, Oyejide and Ogun (1985) theorized that the collapse of the Bretton woods System encouraged fluctuation in the exchange rate globally of which Nigeria is not left out.

According to Opaluwa, Umeh and Abu (2010), it was observed, however, that as from the 1980s manufacturing firms in Nigeria experienced relative stagnation. This is due to their inability to cope with the challenges posted by the harsh operating environment in Nigeria; which include the exchange rate management problems and infrastructural decay. Thus, the ineffectiveness in the management of the exchange rate has contributed greatly to the low output and capacity utilization in the manufacturing sector in Nigeria.

Meanwhile, over the years, the federal government of Nigeria has been making frantic effort through the apex bank and monetary management to stem the tide of exchange rate fluctuation. In spite of different endeavors by the administration of Nigeria to keep up a steady exchange rate, the naira has keep on depreciating from N0.61 in 1981 to N 2.02 in 1986, N 7.901 in 1990, all against the one US dollar. The strategy of guided or oversaw deregulation pegged the naira at N21.886 in 1994, N86.322 in 1999 and N 135.50 in 2004. Thereafter, the exchange rate appreciated to N132.15 in 2005 and later N 118.57 in 2008. Towards the end of the year, the naira depreciated to N150.0124 in 2009 and current in 2nd August, 2013 the exchange rate of one US dollar to naira is N160.14756 (CBN, 2014). But in October 2016, the exchange rate of one US dollar to naira in the parallel market is around N 500.00 (CBN, 2017).

However, very little achievement was made in stabilizing the rate of exchange. As a consequence, the problem of exchange rate variations persisted throughout the study period. Given the arguments above, the main objective of the study is to examine the impact of exchange rate on the manufacturing sector output in Nigeria. In like manner, other exigent variables such as the link between manufacturing export; interest rate and manufacturing sector output was examined. The rest parts of the paper examined theoretical framework, empirical literature, methodology, results and discussion, conclusion and recommendations.

II THEORETICAL FRAMEWORK

The theoretical basis of the study is the PPP theory. This is because, it dealt with the problem of export and exchange rate which are important explanatory variables used in the study to determine manufacturing sector output in Nigeria. Thus, the Purchasing Power Parity (PPP) just expresses that

a unit of any given cash ought to have the capacity to purchase a similar amount of merchandise in all nations. Numerous market analysts trust that the PPP depicts the powers that decide trade rates over the long haul. Appropriately, the ostensible swapping scale between the coinages of two nations must mirror the diverse costs level in those nations. PPP, which forms a strong building block of the theory of exchange rate determination, maintains that there exists a proportional relationship between the exchange rate of the currencies of two countries and their relative inflation rates.

The theory is based on the law of one price, which explains that, in the absence of trade barriers and transportation costs, spatial commodity arbitrage ensures that the price of any good is equalized across different countries. The PPP theory can be formulated in two forms: in absolute forms. The absolute form of PPP asserts that the equilibrium exchange rate equalizes the general purchasing power of a given income in terms of relative price levels. It thus, relates the level of exchange rate to relative prices levels. The relative form argues that changes in exchange rate measured from a base period reflect changes in relative price levels.

The relevant of the PPP theory to this study is that the theory advocate the equilibrium exchange rate of the ratio of domestic to foreign price level, which is determine by the relationship between the country import and export. Thus, the domestic currency must be strong in relation to the foreign currency for favourable trade which in turn serves as a necessity to achieving a target rate of growth.

III. EMPIRICAL LITERATURE

Several scholars have investigated the nexus between exchange rate and the manufacturing sector. Also, empirical evidence in favour of a systematic direct or indirect effect of exchange rate stability on trade and growth in developing economies has remained mixes. Meanwhile, the following empirical works were examined.

Eme and Johnson (2012) researched the impact of exchange measure on real return in Nigeria for the period 1986–2010. The outcome uncovered that there is no proof of a solid direct relationship between changes in exchange scale and yield development. Relatively, Nigeria financial development has been specifically influenced by money related factors. David, Umeh and Ameh (2010) also examined the effect of exchange rate fluctuations on Nigerian manufacturing industry. They employed multiple regression econometric tools which uncovered a negative relationship between unpredictable rate of exchange and manufacturing sector performance.

Asher (2012) also investigated the effect of exchange rate volatility on macroeconomic performance in Nigeria from 1980 – 2010. They discovered that exchange rate is positive related to Gross Domestic Product. Similarly, Owolabi and Adegbite (2012) analyzed the impacts of foreign trade administrations on industrial development in Nigeria from 1985 to 2005. This review discovered out that exchange rate has significant effects on the economics growth with the adjusted R2 of 69%.

Akinlo and Lawal (2015) inspected the effect of exchange rate on modern industry in Nigeria over the period 1986-2010. The outcomes of the review by utilizing the Vector Error Correction Model (VECM), affirms the presence of long run relationship between modern industries, exchange rate, cash supply and price level. In addition, exchange scale deterioration had no discernible effect on modern industry in the short run however had positive effect over the long haul. Jongbo (2014) studied the impact of real exchange rate fluctuation on industrial output in Nigeria. The outcomes demonstrated that real conversion rate assume a critical part in deciding the industrial output. In addition, accessibility of foreign trade increase through disagreeable export drive from both oil and non-oil items will contribute massively to increment in industrial output. The review additionally uncovers that the capacity utilization is low the instances of which may not be too far from, somewhat epileptic power supply, lack of adequate and appropriate technology.

Ehinomen and Oladipo (2012) examined the impact of exchange rate management on the growth of the manufacturing sector in Nigeria. The study covered the periods of 1986-2010 with the use of time-series data. Ordinary Least Square (OLS) multiple regression analysis was employed. The empirical result of this study shows that devaluation which was the basis for SAP policy in 1986, and which commanded the period under survey has no noteworthy association with the manufacturing productivity. It was also found that appreciation in Nigeria exchange rate had a substantial correlation with domestic output. This will in turn promote growth in the sector. It was additionally discovered from the assessed regression line that there is a positive relationship between the manufacturing gross domestic product and inflation.

Ogunleye (2008) examined the impact of exchange rate deregulation on industrial performance in Nigeria between 1975-2008. He employed the co-integration technique and Choose breakpoint test as analytical tools. Two measures of industrial performance; industrial productivity growth rate and the ratio of industrial production to GDP were used. He discovered that in a long run, the relationship exists between each of these measures on one hand and exchange rate, interest rate and terms of trade on the other. Specifically, exchange rate deregulation was found to have significant positive impact on industrial performance. Also, in order to determine the short term dynamics around the equilibrium relationship, the study estimates an error correlation model (ECM) on industrial productivity growth rate and contribution of industrial productivity growth rate in Nigeria.

Akinlo and Adejumo (2014) investigated the impact of exchange rate volatility on non-oil exports in Nigeria and found that exchange rate volatility has positive and significant effects on non-oil exports in the long run while the short run impact of the exchange rate volatility is statistically insignificant. The policy implication is that the exchange rate volatility is only effective in the long run but not in the short run in the Nigerian economy.

Imoughele and Ismila (2015) examined the impact of exchange rate on non-oil export. Time series data obtained from CBN for a period of 27 years that is 1986 to 2013 was used. Augmented Dickey-Fuller (ADF) test was used for the unit root test and Johansen's co-integration test was also

conducted to establish short and long run relationships between non-oil exports and independent variables. The outcome demonstrates three co-coordinating conditions which set up the presence of long run relationship among the factors. The OLS measurable procedure was utilized to survey the determinants of non-oil trade in Nigeria. The outcomes demonstrate that effective exchange rate, cash supply, credit to the private segment and monetary execution significantly affect the development of non-oil export in the Nigerian economy and valuation for conversion scale has negative impact on non-oil trade which is steady.

Ajayi (2012) in an investigation of the crumple of Nigeria's manufacturing share on monetary development. He utilized cross-sectional research outline and discovered that the fundamental driver of fall in the Nigerian assembling division is low usage of Nigerian spending plan particularly in region of framework. This implies low usage of financial approach influences the level of development in Nigerian manufacturing area. Tomola, Adebisi and Olawale (2012) employed co-integration and vector error correction model (VECM) techniques to decide the connection between bank loaning, monetary development and manufacturing area in Nigeria. The finding of the review uncovered that manufacturing limit usage and bank loaning rates altogether influence producing yield in Nigeria. This implies the development of manufacturing yield has not been sufficient to produce sizeable development in the economy.

Justification of the Study and Gap

The manufacturing sector plays a catalytic role in a modern economy and has numerous benefits that are critical for economic transformation. In a developed economy, the manufacturing sector is a leading sector in many respects. It serve as a source of increasing productivity in relation to import substitution and export expansion, creating foreign exchange earning capacity, increase employment opportunity.

Furthermore, empirical works of eminent scholars in this area of study have been carefully examined too. Specifically, the works of Imoughele and Ismila (2015); Akinlo and Lawal (2015); Akinlo and Adejumo (2014); and Adewuyi (2006) are commendable.

Against this background, the study aim to provide an empirical insight on the impact of exchange rate on the manufacturing sector in Nigeria by using ECM technique to analyze annual data spanning from 1980 to 2016. Also, the present study adopted exchange rate, manufacturing export and interest rate to explain the output of the manufacturing sector in Nigeria. Thus, the study is different from others in that it examines the impact of export of manufacturing products on manufacturing sector output. Unlike other empirical studies that examined the link between aggregate export of Nigeria and on manufacturing sector output.

IV. METHODOLOGY

The study utilized times series data relating to the variables under study. The research study considered a time secondary data from 1980-2016. The data were sourced from the yearly reports and briefs of the Central Bank of Nigeria. Also, the econometrics of unit root, co-integration and error correction mechanism was used for the analysis.

Unit Root Test

The unit root test encompasses testing the order of integration of the individual series in a model. Augmented Dickey-Fuller unit root test was used. The general form of ADF is estimated as;

$$\Delta EXR_t = \alpha_0 + \alpha_1 EXR_{t-1} + \sum \alpha_n \Delta EXR_t + \delta_t + U_t \quad (i)$$

Where: EXR is a time series, t is a linear time trend, Δ is the first difference operator, α₀ is a intercept, n is the optimum number of lags in the independent variables and U is error term.

Co-integration Test

The basic argument of Johansen’s procedure is that the rank of matrix of variables can be used to determine whether or not the two variables are co-integrated. A lack of co-integration suggests that such variables have no long-run relationship. Johansen (1998) general form of co-integration is given

$$\text{by } \text{ManP}_t = \mu + \Delta_1 \text{ManP}_{t-1} + \dots + \Delta_p \text{ManP}_{t-p} + U_t \quad (ii)$$

Where: ManP_t is an nx1 vector of variables that are integrated of order commonly denoted (1) and U_t is an nx1 vector of innovations.

Error Correction Model

If co-integration had been ascertain in a model, the next phase requires the structuring of the Error Correction Mechanism (ECM) to model dynamic relationship. The purpose of the ECM is to indicate the speed of adjustment from the short-run equilibrium to the long-run equilibrium state. The greater the co-efficient of the parameter, the higher the speed of adjustment of the model from the short-run to the long-run.

The equation for the ECM was formulated as follow:

$$\text{ManP}_t = \alpha_0 + \sum \alpha_{1t} EXR_{t-1} + \sum \alpha_{2t} MXP_{t-1} + \sum \alpha_{3t} MINT_{t-1} + \delta_1 \text{ECM}_{t-1} + U_{1-t} \quad (iii)$$

Where: ManP is Manufacturing Sector Output, EXR is Exchange Rate, MXP is Manufacturing Export, MINT is Interest Rate, U is error term, α’s parameter, and δ₁ coefficient of ECM.

A Priori Expectations: It is expected, theoretically that α₁ < 0, α₂ > 0; α₃ < 0

V. RESULTS

Unit Root Test for Stationarity (Augmented Dickey Fuller)

The ADF test was used to investigate stationarity of the variables.

Table 1 Unit Root Test for Stationarity (Augmented Dickey Fuller)

| Variables | ADF Test | Critical Values | | | Order of integration |
|-----------|-----------|-----------------|-----------|-----------|----------------------|
| | | 1% | 5% | 10% | |
| ManP | -5.113252 | -3.653730 | -2.957110 | -2.617434 | Order one |
| EXR | -5.455726 | -3.646342 | -2.954021 | -2.615817 | Order One |
| MXP | -5.207182 | -3.646342 | -2.954021 | -2.615817 | Order One |
| MINT | -4.917156 | -3.653730 | -2.957110 | -2.617434 | Order one |

The ADF equation where the ADF test is greater than the critical value is presented thus;

$$-5.113252(\text{ManP}) = -5.455726(\text{EXR}) - 5.207182(\text{MXP}) - 4.917156(\text{MINT}) + \delta t$$

The unit root test of stationarity result presented in Table 1 showed that all the variables were stationary given the level of stationarity at 1%, 5% and 10% levels. Although none of the variables was stationary at order zero. In line with Granger and New bold (1974), the non-stationary variables were differenced once to attain stationarity. Therefore ManP (Manufacturing sector output), EXR (exchange rate), manufacturing export (MXP) and interest rate (MINT) became stationary at order one. This is because the ADF value of each of the variables was greater than the critical values at 1%, 5% and 10%.

Table 2 Johansen Co-integration Test Result

| Eigen value | Trace Statistics | 5% critical value | Prob. ** | Hypothesis of CE(s) |
|-------------|------------------|-------------------|----------|---------------------|
| 0.867688 | 121.7847 | 47.85613 | 0.0000 | None * |
| 0.729422 | 61.10693 | 29.79707 | 0.0000 | At most 1 * |
| 0.517903 | 21.89112 | 15.49471 | 0.0047 | At most 2 * |
| 9.37E-05 | 0.002811 | 3.841466 | 0.9551 | At most 3 |

The Johansen Co-integrating equation for the first equation is presented thus;

$$121.7847 = 0.867688 + 47.85613 + \dots U_t$$

The Johansen co-integration test results as reported in Table 2 showed that there are three co-integrating equations at 5% level of significance. This is because the Trace Statistic is greater than critical values at 5%. These reasons for the existence of co-integrating equation is not far from the existence of the unit root test at order one. Therefore, there exists a long-run relationship among the variables. Given that there are three co-integrating equations, the requirement for fitting in an error correction model is satisfied.

Table 3 Parsimonious Error Correction Mechanism Result

| Variables | Coefficient | T-Statistics | T-Table | Probability |
|--------------------------|----------------|---------------|------------|---------------|
| C | 0.050662 | 3.015473 | 2.04 | 0.0058 |
| DLOG(MANP(-1)) | 0.236077 | 1.835277 | 2.04 | 0.0784 |
| DLOG(MANP(-2)) | -0.302753 | -5.622196 | 2.04 | 0.0000 |
| DLOG(EXR) | -0.054615 | -1.272250 | 2.04 | 0.2150 |
| DLOG(MXP) | 0.018681 | 0.587724 | 2.04 | 0.5620 |
| DLOG(MINT) | -0.025642 | -0.576511 | 2.04 | 0.5694 |
| ECM(-1) | -0.875100 | -4.29528 | 2.04 | 0.0075 |
| R ² =0.611108 | DW-Stat= 2.004 | F-Stat=6.5475 | F-tab=3.60 | F-prob=0.0003 |

The parsimonious ECM equation is presented thus;

$$\text{ManP}_t = 0.050662 + 0.54615(\text{EXR}) + 0.0186681(\text{MXP}) - 0.8751(\text{MINT}) - 0.8751(\text{ECM})$$

The results of the parsimonious Error Correction Model (ECM) in Table 3 indicated that the R² is 61%, meaning that dynamic model is a good fit. Thus, the variation in the dependent variable account for 61 percent of the total variation of the independent variables. Therefore, the explanatory power of the estimated model is 61 percent. Also, the significant of the overall model denoted by f-statistic value at 6.547 buttressed the good fit of the R². This implies that the overall regression result is significant. The Durbin Watson (DW) value of 2.004, which is approximately 2.0, suggested serial autocorrelation problem does not affect the model. Meaning that the successive values of the error term are serially not dependent or correlated.

Moreover, the coefficient of the error correction term appears with the right sign (negative) and statistically significant at 5 percent level. This shows that about 87.5 percent disequilibria in the manufacturing sector output in the previous year were corrected for in the current year. Therefore, the ECM rightly corrected the deviations in the short run to long-run equilibrium relationship between manufacturing sector output and the explanatory variables (exchange rate, manufacturing export and interest rate).

Furthermore, the coefficient of exchange rate (EXR) is negatively related with manufacturing sector output but statistically not significant at 5% level. Meaning that a percentage increase in exchange rate will decrease the manufacturing sector output by 0.054615 percent. But the t-statistic at 1.272

with the probability of 0.215 is not statistically significant at 5 percent level. The implication of this result is that exchange rate (EXR) does not impact on manufacturing sector output. Therefore, the study accepts the null hypothesis which says “there is no significant relationship between exchange rate and manufacturing sector output in Nigeria.

Also, the coefficient of manufacturing export (MXP) is positively related with manufacturing sector output but statistically not significant at 5 percent level. Meaning that a percentage increase in manufacturing export will boost manufacturing sector output by 0.018681%. Meanwhile, manufacturing export does not impact significantly on manufacturing sector output. Therefore, the study accepts the null hypothesis which says that there is no significant relationship between manufacturing export and manufacturing sector output in Nigeria.

Moreover, the coefficient of interest rate (MINT) is negatively related with manufacturing sector output but statistically not significant with manufacturing sector output. Meaning that a percentage increase in interest rate in the manufacturing sector will decrease manufacturing sector output. Specifically, a 1% increase in interest rate will decrease the manufacturing sector output by - 0.025642%. Since the interest rate does not impact on manufacturing sector output. Therefore, the study accepts the null hypothesis and concludes that there is no significant relationship between interest rate and manufacturing sector output in Nigeria.

VI. CONCLUSION AND RECOMMENDATIONS

In this study, we set out to empirically investigate the impact of exchange rate on manufacturing sector output in covering the period of 1980 to 2016. Some variables were employed to explore the relationship between exchange rate and manufacturing sector output. These variables are; exchange rate, manufacturing production output, manufacturing export and interest rate. The main technique of analysis is the ECM method. From the parsimonious ECM result, several interesting conclusions are drawn. First, manufacturing export was positively related with manufacturing sector output in Nigeria. While exchange rate and interest rate have negative relationship with manufacturing sector output. This collaborates with other earlier studies on manufacturing sector performance. Also, the study shows that the abysmal performance of the manufacturing sector output over the study period is a reflection of both high exchange and interest rates to the sector the discourage increase in production. Based on these findings, the following suggestions could be used by policy makers and researchers with a view of making the Nigerian manufacturing sector a viable one; Government should formulate and implement monetary policy that aim at reducing the rate of interest to the manufacturing sector. This will avail manufacturers an opportunity to have access to loan that will help them to increase their productive output. Thus, viable domestic manufacturing sub-sectors will be attained. Exchange rate policy in Nigeria should provide necessary concessions for manufacturing products and their related inputs and machinery in order to boost the productivity and competitiveness of the sector. Government should encourage export of domestic manufactured products. This will improve the output of the Nigerian economy

REFERENCES

- Ajayi, O. D. (2011). The Collapse of Nigeria's Manufacturing Sector. The Voice News Magazine. Retrieved online at www.thevoicenewsmagazine.com on 15/06/2012
- Akinlo, A.E. & Adejumo, V.A. (2014). Exchange Rate Volatility and Non-oil Exports in Nigeria: 1986-2008. *Worldwide Business and Management*, 9 (2), 70-79.
- Akinlo, O.O. & Lawal, Q. A. (2015). Impact of Exchange Rate on Industrial Production in Nigeria 1986-2010. *International Business and Management* 10(1), 104-110
- Asher, O. J (2012). The Impact of Exchange Rate Fluctuation on the Nigeria Economic Growth (1980 – 2010). Unpublished B.sc Thesis of Caritas University Emene, Enugu State, Nigeria.
- CBN (2014). Annual Report and Statement of Accounts.
- Central Bank of Nigeria (2017). Brief on the Determination of the Optimum Exchange Rate Band under the IFEM. External Sector Division of the Research Department.
- David, U. & Ameh, A. (2010). The Effect of Exchange Rate Fluctuations on Nigeria Manufacturing Sector. *African Journal of Business Management* 4(14), 2994-2998.
- Ehinomen, C. & Oladipo, T.I, (2012). Exchange Rate Management and the Manufacturing Sector Performance in the Nigerian Economy. *IOSR Journal of Humanities and Social Science (JHSS)* ISSN: 2279-0837, ISBN: 2279-0845 5(5)
- Eme, O.A. & Johnson, A.A (2012). Effect of Exchange Rate Movements on Economic Growth in Nigeria. *CBN Journal of Applied Statistics*. 2(2), 1-28.
- Fakiyesi O. & Akan, O. (2005). *Issues in Money, Finance and Economic Management*. Lagos: University Press
- Imoughele, L.E. & Ismaila, M. (2015). The Impact of Exchange Rate on Nigeria Non-Oil Exports. *International Journal of Academic Research in Accounting, Finance and Management*, 5(1), 30-42
- Johansen, S. (1998). *Statistical Analysis and Co-integrating Vectors*. *Journal of Economic Dynamics and Control*, 12(2-3), 231-254.
- Jongbo, Olajide Clement (2014). Impact of Real Exchange Rate Fluctuation on Industrial Output in Nigeria, *Journal of Policy and Development Studies*, 9(1), 268-278
- Ogunleye, E. K. (2008). Exchange Rate Volatility and Foreign Direct Investment Inflows in Selected Sub-Sahara African Countries, 1970-2005. Ph.D. Dissertation. University of Ibadan.
- Okigbo, P.M. (1993). *Essays in Public Philosophy of Development, Lectures on the Structural Adjustment Programme*, Vol.4, Enugu, Fourth Edition.
- Opaluwa, D; Umeh, J.C & Abu, A.A (2012). The Effect of Exchange rate Fluctuations on the Nigerian Manufacturing Sector. *African Journal of Business Management* 4(14), 2994 – 98.
- Owolabi, A.U & Adegbite, T.A (2012). The Effect of Foreign Exchange Regimes on Industrial Growth in Nigeria. *Global Advanced Research Journal of Economic, Accounting and Finance* 1(1), 1 – 8.
- Oyejide, T.A. & Ogun, O. (1985). *Structural Adjustment Programme and Exchange Rate Policy in Macroeconomic Policy Issues in an Open Developing Economy: A Case Study of Nigeria*. NCEMA Publications, Ibadan.

Tomola, M. O., Adedisi, T. E. &Olawale, F. K. (2012). Bank Lending, Economic Growth and the execution of the Manufacturing Sector in Nigeria. *European Scientific Journal*, 8(3), 19-34.