EXCHANGE RATE ON THE PERFORMANCE OF THE MANUFACTURING SECTOR IN NIGERIA

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ABSTRACT
The study examined exchange rate on the performance of the manufacturing sector in Nigeria. The specific objectives were to; examine the impact of exchange rate and money supply on the performance of the manufacturing sector in Nigeria. Secondary data was extracted from Central Statistical Bulletin, 2021. Ordinary least square of multiple regression technique was employed to examine the impact of independent on dependent variables. Based on the results, the findings revealed that exchange rate had negative and significant impact on performance of manufacturing sector, while money supply had a positive and significant effect on the performance of the manufacturing sector. The study recommended thatthere is need for local sourcing of raw materials and input through agriculture and technological policy. By so doing, it will lead to expansion of export base which would attract more foreign exchange into the country. Also, the monetary authority should introduce direct policies of regulating price stability in the economy via regulating money supply in order to decelerate the rising inflationary trend in the economy.
Keywords: Exchange rate, money supply, manufacturing sector

1.0 INTRODUCTION

Countries are differently endowed with natural resources and human capital. Some of these countries have adequate level of resources, while others lack resources necessarily to ensure economic growth and high standard of living for their citizens. Also countries must engage in some form of trade co-operation across her national frontiers, in order to have access to resources required for sustainable economic growth and development.Foreign exchange is the means of payment for international transaction (Udoka, 2004). It is made up of convertible currency that is acceptable for the settlement of international trade and other external obligations.

Exchange rates are the rates between the currency units of two countries, it means the number of the units of one national currency that is needed to buy one unit of the other national currency. Consequently, they play a dominate role in the determination of the volume and direction of international trade. It is not only the process at which different national currency units are exchanged, they are also the converters or translators of the prices of goods and services stated in the domestic currencies into the currencies of other countries(Adeniyi, 2012).

Exchange rate fluctuation is regarded as changes in prices, rate and value. It is expressed in terms of units of currency of another. It represents the number of units of the currency of one country that can be exchanged for another. Exchange rate is therefore punctually an extrinsically sensitive price changes in that it occurs rapidly and continuously(Ahmad, 2010).The likelihood of exchange rate fluctuation refers to the different level of changes in exchange rate prevalent in the foreign exchange market. These changes can be attributed to the forces of demand and supply of foreign exchange in the market. In Nigeria, one of the problems facing manufacturing sector is the inability to rise and join the list of industrialized nations, in spite of its huge resources. The likelihood of exchange rate fluctuation as it affects manufacturing sector is one that is enough to develop an economy(Aliyu,2008).

The failure of Nigeria to realize this goal has subjected the Nigerian manufacturing sector to the challenge of fluctuating exchange rate. This was not only necessitated by the devaluation of the naira but the weak and narrow productive base of the sector and rising import bills. However, very little achievement was made in stabilizing the exchange rate (Danmola, 2013)

It is evident from the foregoing that the recent global economic crisis has further revealed that Nigeria's economy is excessively exposed to external shocks. Although various factors have been adduced to Nigeria's poor economic performance. The major problem has been the economy's continued excessive reliance on the fortunes of the ever unstable oil market for foreign exchange thereby causing frequent volatility in the foreign exchange market(Azeez, Kolopo, &Ajayi, 2012). The fact that crude oil is an exhaustible asset makes it unreliable for sustainable development of the Nigerian economy.The continued minimal performance of the Nigerian manufacturing sector and the vulnerability of the external sector thus dictate the urgent need for a reappraisal of the thrust and contents of the development policies and commitments to their implementation.

This study intends to investigate whether exchange rate and money supply have any effect on the performance of Nigerian manufacturing sector. The specific objectives of the study are to:

1. Examine the impact of exchange rate on the performance of the manufacturing sector
2. Investigate the impact of money supply on the performance of the manufacturing sector.

2.0 LITERATURE REVIEW

The exchange rate of a currency is the price of that currency in terms of another. It is a very important price, which links the domestic price with international price. It generally represents the number of units of domestic currency that exchanges for one unit of foreign currency. The way the exchange rate is quoted is a matter of convention(Dada, &Oyeranti, 2012). In a free market economy, the exchange rate is determined by the inter play of supply and demand for that currency. In some cases, the exchange rate is administratively administered. Just as the price of any commodity is determined by the interplay of demand and supply, the exchange rate is primarily determined by the supply and demand of foreign currencies (Sangosanya&Atanda, 2012).

The higher the demand for foreign exchange, the higher the foreign exchange rate and this will result in the fall of the value of the domestic currency. The demand for foreign currency is represented by receipt from the import of goods and services.Receipts largely represent the supply of foreign currency from exports of goods and services which reflect the demand by foreigners for Nigeria's goods and services. Supply could be augmented through loans and transfers from abroad(Effiom, Ubi&Okon, 2011).

The supply of foreign currency is thus a function of that part of domestic output, which is exported, the quality of that output, its price as well as the level of income and liquidity among others. Real exchange rate is said to be a very important relative price in the economy. This is because changes in the real exchange rate influence foreign trade flows, balance of payments, the level and structure of production and consumption, employment, the allocation of resources in the economy and domestic prices.Precisely, a fixed exchange rate regime involves pegging of the exchange rate of the domestic currency to a reference currency. By implication, there is a tendency that monetary discretion may be lost. The fixed exchange rate regime has become increasingly hard to defend in a globalized financial market as the recent Argentine experience demonstrates.For the floating exchange rate regime, it entails the laissez faire method (that is, forces of demand and supply) be used to determine exchange rate. A floating exchange rate regime does not only serve as a "shock absorber" for external shocks, it also allows monetary policymakers to have a full discretion in the manipulation of monetary aggregates(Avellan,2004). The greatest benefit of the floating regime is monetary policy independence is defined in terms of country's ability to control its monetary aggregates and influence its domestic interest.

Conceptual framework

Money supply

Money is a temporary abode of purchasing power". The basic argument is that, since there seems to be an imperfect synchronization between income receipts and expenditure streams over time, then money must not only function as a medium of exchange, but also as a temporary store of purchasing power. By implication, the total money stock must not be restricted to M1 as expressed in equation (1) above. But must include any other asset that commands liquidity akin, or near to currency. These other assets have been described as quasi or near monies. Thus, they included in the money supply basket, the fixed interest-bearing time deposits of deposit money banks.

Growth of manufacturing sector

The nature and magnitude of the crisis in the Nigerian manufacturing sector would be better appreciated with an analysis of the structure of

the Nigerian manufacturing sector. The Nigerian manufacturing sector was characterized by high geographical concentration, high production costs, low value-added, serious capacity under-utilization; high import content of industrial output and low level of foreign investment in manufacturing (Ayeni, 2012 &Asher, 2012).

However, since the late 1960.s the Nigerian economy has been based mainly on the petroleum industry. The initial introduction of the import substitution strategy to work relatively well, with the share of manufacturing to GDP increasing from 2 per cent in 1957 to 7 per cent in 1967. With the series of windfall from the crude oil sales during the commodity boom of the 1970s, successive governments, both at the federal and state levels, dabbled into economic activities aside from, their basic social responsibilities. Similarly, private sector investment in manufacturing grew too, taking advantage of an array of government incentives available such as the pioneer status, Approved Users Scheme and Indigenization Decree. While this implied rapid expansion of the industrial sector, subsequent returns on investment projects were typically much below expectations. This is because the oil price boom led to stagnation of the manufacturing and agricultural sector(Ehinomen&Oladipo, 2012).

As a result of production and exports of cash crops like palm oil, peanuts and cotton declined rapidly. There was an economic rent-seeking on a large scale, while government schemes designed to curtail imports combined with the windfall revenues generated massive rents that were available for a select few. Comparing Nigeria to other nations. Ahmad (2010) says the experience of Indonesia is an example of a country that clearly understood the role of the manufacturing sector as an engine of growth. He explained that the similarity between Nigeria and Indonesia has not reflected in the structure of their manufacturing sector. Both countries are agrarian in nature and experienced oil boom at the same time in 1972, but the percentage growth in manufacturing is on the increase in Indonesia while it has been declining in the case of Nigeria(Enekwe, Ordu, &Nwoha, 2013).

The main reason for this difference he explained was the massive diversification of the economy, while Nigeria had since depended on oil. Likewise, Malaysia is the largest producer of palm oil in the world such that her foreign earnings from palm oil is more than what Nigeria earns from crude oil export (Ahmad 2010), the most striking fact is that the first palm oil seedling which Malaysia now produces was taken away from Nigeria. Malaysia is now one of the industrialized nations in the world with an annual GDP higher than Nigeria's GDP. The comparison between Nigeria and these countries indicate that Nigeria had no genuine reason to be backward in manufacturing. Many scholars have conducted empirical research in order to examine factors that influence the movement of the exchange rate. For instance, Hsing (2006) empirically examined the determinants of short-term real exchange rates for Venezuela.

The author confirmed that government deficit has positive effect on exchange rate, while broad money supply, world interest rate, country risk, and the expected rate of inflation had negative impact on exchange rate. The author suggested that, authorities should avoid fiscal indiscipline in order to prevent the exchange rate from real appreciation since it will check the country's exports from declining. Peterson (2005) investigated the variables that affect exchange rate movements in Sweden, the United Kingdom and Japan against the US dollar for the period 1995 to 2004. The results indicate that interest rate differential is statistically significant in explaining changes in exchange rate in the three countries. In addition, interest rate had negative effect on exchange rate in Sweden and the United Kingdom.

However, the influence of money supply, industrial production, and inflation differential on exchange rate varied between the countries. Odedokun (2017) studied a group of 38 African countries, by examining the impact of macroeconomic policies, devaluation and fundamentals on real exchange rate movement. The author found that public sector fiscal deficits, growth of domestic credit, domestic absorption-GDP ratio, government consumption-GDP ratio, private consumption-GDP ratio, improvement in terms of trade, income per capita and black market exchange rate premium lead to real exchange rate appreciation. On the contrary, devaluation, investment-GDP ratio, consumer-wholesale price ratio in trading-partner countries, and economic growth in industrial countries result in real exchange rate depreciation.

Drine and Rault (2003) analyzed the main determinants of the real exchange rate in the Middle East and North African (MENA) countries. The authors' findings illustrate that output, per capita, government consumption, real interest rate differentials, and the degree of openness of the economy influence the real exchange rate. In Zambia, Beatrice (2001) employed a co-integration technique to investigate the long-run determinants of the real exchange rates for imports and exports, and of the internal real exchange rate. The results showed that real exchange rate for imports is affected by terms of trade, government consumption, and investment share. Moreover, terms of trade, central bank reserves and trade taxes have long-run impact on the real exchange rate for exports. It was also found that terms of trade, investment share, and the rate of growth of real GDP have long-run effect on the internal real exchange rate.

Lastly, foreign aid and openness have short-run influence on the real exchange rate indices. Faulkner and Makrelor (2008) used the single Engel Granger techniques to examine the drivers of the manufacturing equilibrium exchange rate over the period 1995 to 2006 in South Africa. The author's results showed that unit labor cost, productivity, government expenditure, and openness are the main drivers of the manufacturing exchange rate. Many studies have been reviewed on this topic but particularly this study has bridged the gap by introducing money supply as an only control variable and to investigate its effect on the performance of manufacturing sector in Nigeria.

Theoretical framework

Though this study will review the views of other several thoughts in respect of the direction of the effect of exchange rate on manufacturing sector in Nigeria, Hence, his study will be anchored on purchasing power parity

Purchasing power parity

This theory was propounded by Rogoff in 1996. Purchasing power parity constitutes one of the fundamental building blocks in modeling modern theories of exchange rate determination. The origin of purchasing power concept has been traced to the 16th century Salamanca School of Spain. During the nineteenth century, classical economists, like Ricardo, Mill, Goshen and Marshall endorsed and developed more or less qualified Purchasing power parity views. This theory in its modern form, as credited to Gustav Cassel, a Swedish economist, who developed and popularized its empirical version in the 1920s. He opined that the nominal exchange rate should reflect the purchasing power of one currency against another. His proposal was that a purchasing power exchange rate exists between any two countries, and it is measured by the reciprocal of one country's price level against another.

3.0 METHODOLOGY

Research design

Based on the nature of this study, and the variables involved, the research design suitable is the ex-post facto research design.

Sources of data

The secondary source of data is the most reliable data for this study; and this specific source of the data for the study are the Central Bank of Nigeria statistical Bulletin, Journals, publications, internet and published materialsin order to test the hypothesis, the variables shall be built into a functional relationship.

Model specification

The functional relationship between the variables is expressed as

MGI = f(EXCHR, MS)

MGI = Manufacturing growth index

EXCHR = Exchange rate

MS = Money supply

These variables are for their incorporated into an ordinary leastsquare model. This is expressed as follows;

MGI = b0 +biEXCHR + b2MS+ u

Where;

Dependent variable =MGI
Independent variable =EXCHR, MS

Regression constant = bo

Unknown parameters = $b_1 – b_2$

Stochastic Error Term = μ

Techniques of data analysis

The following statistics will be used for the statistical validation of the relationship between variables of the study. The ordinary least square (OLS) model of multiple regression is adopted to statistically analyze the relationship between dependent variable and independent variables

4.0 RESULTS AND DISCUSSION OF FINDINGS

The regressionresult of exchange rate on the performance of Nigerian manufacturing sector.

Regression result

Dependent Variable: LMGI				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.884465	0.256868	15.12240	0.0000
EXCR	-0.288245	0.109474	-2.632994	0.0149
MS	0.054453	0.014003	3.888763	0.0007
R-squared	0.773229	Mean dependent var		3.779028
Adjusted R-squared	0.714071	S.D. dependent var		0.225880
S.E. of regression	0.120784	Akaike info criterion		-1.188670
Sum squared resid	0.335539	Schwarz criterion		-0.861724
Log likelihood	24.83005	Hannan-Quinn criter.		-1.084077
F-statistic	13.07061	Durbin-Watson stat		1.317841
Prob(F-statistic)	0.000002			

Source: Researcher’s computation from E-views

This is given by the high value of the R-squared of 0.7732 (77.32 per cent) and the adjusted R-squared of 0.7140 (71.40 per cent). Adjusted R-squared of 71 per cent of the systematic variations in the performance of the Nigerian manufacturing sector has been explained by changes in exchange rate fluctuations (EXCR), and real money supply (MS).In the same vein, the high value of F-statistics (13.0706) shows that the overall model is statistically significant. The overall significance of the short-run model implies the joint significance of all explanatory variables in explaining short-run changes in the performance of the Nigerian manufacturing sector. Further examination of the result shows that there is no problem of autocorrelation in the model. This is so because the Durbin-Watson (DW) statistic value of 2.03 falls within the acceptable region of no autocorrelation. From the policy stance, this means that the finding of this study can be applied for policy purposes in the Nigerian economy. The result also revealed that changes in the current period of exchange rate (EXCR) have negative but significant effect on the performance of the Nigerian manufacturing sector in the short-run. A one per cent increase in the current period of exchange rate will result in a negative change in the current value of the performance of the Nigerian manufacturing sector by 0.2882 or 28.82 per cent all things being equal. Similarly, the variations in the current value of real money supply (MS) will lead to a significant and positive effect on the performance of the Nigerian manufacturing sector in the short-run by 0.0544 or 5.44 per cent ceteris paribus. This means that, a unit increase in the current value of real money supply would result in a positive change in the current value of the performance of the Nigerian manufacturing sector in the short-run by 5.44 per cent. The main thrust of this study was to assess the effect of exchange rate on the performance of the Nigerian manufacturing sector. The summary of the findings revealed that, exchange rate (EXCHR)hasa negative and significant effect on the performance of the Nigerian manufacturing sector in the long-run. On the other hand, money supply has a positiveand significant effect on the performance of the Nigerian manufacturing sector.

5.0 CONCLUSION/RECOMMENDATIONS

This study was carried out to assess the effect of exchange rate fluctuations on the performance of the Nigerian manufacturing sector. In addition to the objectives of the study, several hypotheses were tested to assess the exact effect of exchange rate fluctuations on the performance of the Nigerian manufacturing sector.From the results of the analyses and the findings obtained, it is firmly clear that, the chosen variables in this study (exchange rate and money supply) captured in the model all had significant long-run as well as short-run effects on the performance of the Nigerian manufacturing sector. The results of our analyses revealed mixed findings, while some variables exhibited positive effect on the performance of the manufacturing sector. The study recommended thus; In order to address the negative impact of exchange rate in the manufacturing sector, the need for local sourcing of raw materials and input through agriculture and technological policy. By so doing, it will lead to expansion of export base which would attract more foreign exchange into the country. The monetary authority should introduce direct policies of regulating price stability in the economy via regulating money supply in order to decelerate the rising inflationary trend in the economy.

REFERENCES

Adeniyi, J. A. (2012). Employment effect of exchange rate volatility in Nigeria's manufacturing sector. *Journal of Economic Theory*, 6(1), 14-25.

Ahmad, B. (2010). The impact of global economic meltdown on the performance of manufacturing sector in Nigeria. *Social Science Research Network*, 2(1), 43-67

Aliyu, S. U. (2008). *Exchange rate volatility and export trade in Nigeria: An empirical investigation.* Munich:
RePEc. Arch
Asher, O. J. (2012). The impact of exchange rate fluctuation on the Nigeria economic growth (1980 – 2010).
Unpublished B.Sc project department of Economics, Caritas University Emene Enugu.
Avellan, L. (2004). *Parallel exchange rates and economic performance in developing countries Is the medicine*
worse than the disease? Unpublished, University of Maryland.
Ayeni, R. K (2012). An assessment of profit function of manufacturing firms in Nigeria during global economic
depression: a panel model approach. *Ozean Journal of Social Sciences,* 5(2), 41-48
Azeez, B. A., Kolopo, F. T. &Ajayi, L. B. (2012). Effect of exchange rate volatility on macroeconomic
performance in Nigeria. *Interdisciplinary Journal of contemporary Research in Business,* 4(1), 149-155.
Beatrice, K. M. (2001). Long-run and short-run determinants of the real exchange rate in Zambia.*Working*
Papers No 40. Cited at http://www.handels.gu.se/econ/
Dada, E. A. &Oyeranti, O. A. (2012). Exchange rate and macroeconomic aggregates in Nigeria.*Journal of*
Economics and Sustainable development, 3(2), 93-101
Danmola, R. A. (2013). The impact of exchange rate volatility on the macroeconomic variables in Nigeria.
European Scientific Journal, 9(7), 56-79.
Drine, I. &Rault, C. (2003). Long-run determinants of the real exchange rate for MENA countries. *Journal of*
International Advances in Economic Research, 9(1), 121-144.
Effiom, L., Ubi, P. S. &Okon, E. O. (2011). Trade liberalization and human capital in Nigeria: avector autoregressive analysis. *European Journal of Economics, Finance and Administrative Science,* 21(3), 45-70.
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* .5(5), 1-12.
Enekwe, C. I., Ordu, M. M. &Nwoha, C. (2013).Effect of exchange rate fluctuations onmanufacturing sector in Nigeria**.** *European Journal of Business and Management*, 5(22), 67-73
Faulkner, D. &Makrelor, K. (2008). Determinants of the equilibrium exchange rate forSouthAfrica's manufacturing sector and implications for competitiveness. *Being a Draft of a Working Paper of the National Treasury of South Africa. Cited at http://www.treasury.gov.za*
Odedokun, M. O. (2017). An empirical analysis on the determinants of the real exchange rate in African countries. *The Journal of International Trade &Economic Development*, 6(1), 63-82.
Petersson, A. (2005). Identifying the determinants of exchange rate movements: evaluating the real interest differential model. *Cited at http://urn.kb.se/resolve?urn=urn:nbn:se:hj:diva-247*
Sangosanya, A. O. &Atanda, A. A. (2012). Exchange rate variation and fiscalbalance in Nigeria: a time series analysis *MPRA Paper*38008(2), 93-106.
Hsing (2006). Determinants of exchange rate fluctuations for Venezuela: application of an extended Mundell-Fleming model. *Journal of Applied Econometrics and International Development*, 6(1), 321-452.
Udoka, C. O. (2004). *International Finance:* Monograph series, Department of Banking and Finance, University of Calabar.

Udoka, C. O. (2014). Sound Bank Lending Imperatives as a Panacea for bad and Doubtful loans in Nigeria, *Euro-Asian Journal of Economic and Finance*, 2(3) July.