EXCHANGE RATE MANAGEMENT AND PERFORMANCE OF NIGERIAN MANUFACTURING FIRMS

Ezenwakwelu Charity A, University of Nigeria
Okolie Patrick I, University of Nigeria
Attah Emmanuel Y, Kogi State Polytechnic
Lawal Kehinde O, Kogi State Polytechnic
Akoh Ojonugwa, Kogi State Polytechnic

ABSTRACT

This study examined the effects of exchange rate management on performance of Nigerian Manufacturing Firms. The specific objectives sought to assess the effect of exchange rate fluctuations on productivity of the manufacturing firms; ascertain the effect of flexible exchange rate on performance of the manufacturing firms; and determine the effect of bureau de change (BDC) on performance of the manufacturing firms. A balanced panel of annual observations from ten large-scale manufacturing firms listed on the Nigerian Stock Exchange, collected between the periods of 2015–2017. The cross-sectional data set on productivity and performance indicators were obtained from the companies' annual reports while the data set for exchange rate fluctuations and Bureau de change were sourced directly from Central Bank of Nigeria. The results from the multiple regression test revealed that exchange rate fluctuations had significant negative effect on productivity of the manufacturing firms; flexible exchange rate had not significantly enhanced performance of the manufacturing firms; and bureau de change had not significantly enhanced performance of the manufacturing firms. Nigerian manufacturing sector depends heavily on import of inputs and capital goods which are paid for in foreign exchange and which rate of exchange is unstable. Under fixed exchange rate regime, performance of fiscal policy is effective and ineffective under flexible exchange rate regime. The manufacturing firms did not have sufficient foreign exchange required to procure inputs and capital goods because of the high exchange rates provided by the bureau de change.

Keywords: Exchange Rate, Flexible Rate, Fixed Rate, Managed Float, Fluctuation, Bureau De Change.

INTRODUCTION

Exchange rate is a means through which a country determines its level of economic performance. Foreign exchange rate provides access to a country's economic stability. Exchange rate fluctuates daily by the changes in market forces of demand and supply of currencies from one nation to another. Therefore exchange rate is constantly monitored and examined when one has a need to send or receive money from overseas (www.comparetemit.com). Exchange rate refers to the rate to which a currency exchanges for another currency. It is the price of a currency for another currency. Exchange rate is determined by the interaction of demand and supply of foreign exchange. Thus, if demand for a currency rises with the supply being constant, the

exchange rate of the currency will appreciate. But if the demand for the currency falls with the supply remaining constant, the exchange rate will depreciate (Ezenwakwelu, 2017). An exchange rate as a price relationship between a country's currency and another is one of the most important prices in an open economy that controls the flow of goods, services and capital in a country and which exerts strong pressure on the balance of payments, inflation and other macroeconomic variables. Thus, to safeguard competitiveness, macroeconomic stability and economic growth, the choice and management of an exchange rate regime is essential (Fahrettin, 2000 cited by Mohammed, 2016). Exchange rates of most countries' currencies are fixed in relation to other currencies. Thus, countries keep some reserves of other currencies which enable them to intervene at the foreign exchange market. If demand for US dollar rises against the Nigerian currency (naira), the central bank of Nigeria will therefore, supply the dollar which is in higher demand and withdraw the supply of naira which demand has dropped. As a result of this, naira exchange rate depreciates and dollar exchange rate appreciates. The rise and fall of real exchange rate reveals strength and weakness of a currency in relation to foreign currency and it is a means for illustrating the competitiveness of domestic industries in the global market (Razazadehkarsalari et al., 2011). Appreciation of exchange rate reveals increased imports and reduced exports while depreciation of exchange rate reveals increased export, reduced import and a shift from foreign goods to domestic goods (Aliyu, 2011). However, exchange rate reforms were expected to realize macroeconomic stability and sustainable development in Nigeria. But the country fails to meet the expectation because the different regimes of exchange rate have been with instability and uncertainties. A number of economic maladies with the exchange rate reforms are low level of savings and investment, high rate of inflation, high level of unemployment and poverty (Bakare, 2011). Nigeria's economy has been characterized by low capacity utilization, high debt burden and inflation, high level of income inequality and unemployment, poverty, etc (Uniamikogbo & Ewanehi, 1998).

LITERATURE REVIEW

Effect of Exchange Rate Fluctuations on Productivity

Exchange rate fluctuations refer to up and down swing in exchange rates typically due to market forces of demand and supply of currencies. Exchange rates change whenever the value of any one of the two currencies changes. A currency at any point in time appreciates whenever demand for it is greater than the supply. It also becomes less valuable at the point when demand is less than available supply. Fluctuations in exchange rates are caused by monetary flows regarding changes in interest rate, inflation, budget and trade deficit or surpluses. Exchange rate relates to balance of payments. Debit entries in both capital and current accounts of the balance of payments possibly raise the demand for foreign exchange. Similarly, credit entries in the capital and current accounts of the balance of payments increase the supply of foreign exchange. Thus, domestic currency appreciates whenever credit transactions exceed debit transactions. Also, domestic currency depreciates whenever debit balance exceeds credit balance. Increases in interest rates provide higher rates to lenders which attract more foreign exchange, thereby, causes a rise in exchange rates and appreciation of the domestic currency (www.comparetemit.com). Appreciation of a domestic currency stresses export of goods and services and makes import cheaper. Whereas, fall in interest rates reduces the supply of foreign currencies and the domestic currency depreciate in value, likewise, the exchange rate falls. Additionally, domestic goods and services become expensive than imported goods and services

during inflation, thereby, the country's import rises and depletes its external reserve and also cause the domestic currency to depreciate. Conversely, low inflation makes domestic goods and services cheaper, increases exports and reduces imports. The country would realize and save foreign exchange, and the currency therefore, would appreciate (CBN Research Dept, 2016). Odusola & Akinlo (2003) posit that exchange rate depreciation in the medium and long term, exercised an expansionary impact on output while in the short run, exchange rate depreciation does not expand output. Kandil (2004) conducted a study on the effects of exchange rate fluctuations on real output growth and price inflation. A sample of twenty-two developing countries was used. Theoretical rational expectation model was used in the analysis and movements in the exchange rate were decomposed into anticipated and unanticipated components. The study concluded that exchange rate depreciation, both anticipated and unanticipated, lowers real output growth and increases price inflation which reveals that currency depreciation has a negative effect on economic performance of developing countries. David & Ameh (2010) examine the effect of exchange rate fluctuations on the Nigerian manufacturing sector for a twenty (20) year period (1986–2005). The study concluded that fluctuations in exchange rate adversely affected output of the manufacturing sector. Nigerian manufacturing firms depend heavily on import of inputs and capital goods which are paid for in foreign exchange and which rate of exchange is unstable. Previous researchers established that fluctuations in exchange rate negatively influence productivity. Thus, this hypothesis is supported by the earlier discussions.

> **H₁:**   *Exchange rate fluctuations have negative effect on productivity.*

Effect of Flexible Exchange Rate on Performance of Manufacturing Firms

Flexible (Floating) Exchange Rate Regime describes an exchange rate regime where the international value of one currency, at a time, is determined by the interaction of market forces of demand and supply of foreign exchange. This system allows continuous adjustment of exchange rate to the changes in the demand and supply of foreign exchange. Rogoffs & Reinhartl (2004) posit that developing countries are relatively better in the choice of flexible exchange rate regimes. Managed Floating System refers to central bank direct or indirect intervention on the exchange rate movements to stabilize the long- term trend in the exchange rate without having a specific exchange rate target. The intervention in the floating system reveals government fear that exchange rate over appreciation or depreciation could threaten trade competitiveness and therefore intervene to correct balance of payments disequilibrium, control domestic inflation, accumulate international reserves and correct parallel market distortions, etc. However fixed exchange rate refers to a system whereby a country fixes the value of its currency against a single currency or other measure of value such as special drawing rights (SDR), gold or a basket of other currencies. Fixed exchange rate regime ensures the credibility of monetary authorities when the country fixed the value of its currency to a hard- money country or low-inflation countries (Velasco, 2000). This system reduces the exchange rate risks, interest rates, and also boosts sound financial system.

Exchange rate regimes in Nigeria have started with a fixed regime in the 1960s to a pegged regime between the 1970s and the mid-1980s and finally, to flexible (floating) regime in 1986, A managed floating exchange rate regime, has been the most predominant of the floating system in Nigeria since the SAP, but, without any strong commitment to defending any particular parity (Obadan, 2008). Ahmed, Rehman & Ahmed (2015) did a study on the impact of

exchange rate depreciation on economic and business growth in Pakistan. The objective was to assess the effect of exchange rate depreciation on economic growth in fixed and floating exchange rate regimes. They employed the co-integration test followed by the error correction model (ECM). Finding revealed that exchange rate depreciation negatively affects economic growth in floating rate regime. The study recommended that the present scenario of flexible exchange rate doesn't allow the corresponding authorities to set desirable exchange rates. However, the government must reinforce the real sector in order to ensure a stable exchange rate and hence macroeconomic stability. Karass (2012) established that under fixed exchange rate regime performance of fiscal policy is effective and ineffective under flexible exchange rate regime. The reason is that under flexible exchange rate regime government expenditure crowds out private investment. And thus, this hypothesis is supported by the earlier discussions.

H₂: *Flexible exchange rate has not significantly enhanced performance of the manufacturing firms.*

Effect of Bureau De Change (BDC) on Performance of Manufacturing Firms

The Central Bank of Nigeria (CBN) defines Bureau De Change (BDC) as a retail foreign exchange dealer carrying on the business of Personal Travel Allowance (PTA), Business Travel Allowance (BTA), school fees, and medical fees and also to carry out inward and outward transfer. So, a BDC is a licensed outfit. According to the Association of Bureau De Change Operators of Nigeria (ABCON), the primary role of BDCs globally, is to ensure foreign exchange availability to the retail sector of the foreign exchange market in terms of supply, to close the gap between the official and the parallel market exchange rates. The operators expressed that they have even gone beyond ensuring rate convergence and providing liquidity, to the achievement of the major policy of the CBN, which is exchange rate stability. The Nigerian government in 1989, approved the establishment of bureaux de change in order to enlarge the scope of the official market for foreign exchange transactions. This is to be operated by private entrepreneurs. Specific Objectives of Bureaux de Change was to: accord small dealers in foreign exchange legal recognition; provide small buyers free access to foreign exchange in a convenient and informal manner; promote efficiency in macro-economic management by providing sufficient statistical coverage of foreign exchange flows; and enhance fiscal efficiency, [CBN 1989:12]. The CBN introduces the Wholesale Dutch Auction System (WDAS) on February 20, 2006, in order to further liberalize the market, narrow the arbitrage premium between the official interbank and bureau de change segments of the markets and achieve convergence. This was made to strengthen the gains of the retail Dutch Auction System as well as expand the foreign exchange market so as to develop a realistic exchange rate of the naira. The authorized dealers were allowed in this arrangement, to deal in foreign exchange on their own accounts for onward sale to their customers. These exchange rate regimes have had some implication for economic performance Akpan & Atan (2011). This hypothesis is supported by the earlier discussion.

H₃: *Bureau de change had not significantly enhanced performance of the manufacturing firms.*

THEORETICAL REVIEW

The Purchasing Power Parity (PPP): The Purchasing Power Parity (PPP) demonstrates the relationship between prices and exchange rate. The use of the Purchasing Power Parity as a

theory of exchange rate determination was revealed in the works of Cassel (1918). Cassel recommended the Purchasing Power Parity as a means of managing pre–world war I exchange rate parities for countries determined to have gold standard system after the war.

The Monetary Model of Exchange Rate : This approach postulates that nominal demand for money is stable in the long run and related positively to the level of nominal national income but is inversely related to interest rate. The domestic credit and international reserves constitute the monetary base of an economy which is created by the monetary authorities. Each country's central bank maintains a fixed exchange rate system by buying and selling currency in the foreign exchange market. With the reserves of genuine foreign currency held by the central bank, in a situation of depreciation of a country's currency, as a result of abnormal low demand for the currency, the central will sell foreign exchange and buy the domestic currency available. This attracts value to the domestic currency and thus, the domestic currency appreciates.

Previous Works

Mori et al. (2012) examined the effects of exchange rates on economic growth in Malaysia. Time Series data that span from 1971-2009 were used. The results revealed that long-run co-integration exists between both nominal and real exchange. The conclusion states that both nominal and real exchange rate have a similar casual effect towards economic growth. The study recommended that a systematic exchange rate through monetary policy should be developed to enhance the stability and sustainable economic growth in Malaysia.

Akinola & Lawal (2012) investigated the effect of exchange rate on industrial production in Nigeria 1986-2010. The objectives of the study were to assess the extent of the relationship between industrial production index and exchange rate, money supply and inflation, and to ascertain how exchange rate depreciation affects industrial production. The finding revealed that there was a long run relationship between industrial production index and exchange rate, money supply and inflation rate. Exchange rate depreciation had no effect on industrial production in the short run but had positive effect in the long run.

Odusola & Akinola (2001) conducted a research on output, inflation and exchange rate in Nigeria. The objectives were to assess the relationship between exchange rate depreciation and output, and to ascertain the effect of inflation on output. The result revealed that an inverse relationship exist between exchange rate depreciation and output. Inflation had a negative effect on output. The conclusion stated that prices, parallel exchange rate and lending rate were sources of fluctuations in the official foreign exchange rate.

Akpan (2008) examined foreign exchange market and economic growth in an emerging petroleum-based economy from 1970-2003 in Nigeria. Findings revealed that positive relationship exists between exchange rate and economic growth.

Obansa & Akinlo (2013) investigated the relationship between exchange rate and economic growth in Nigeria between the years 1070-2010. The result revealed that exchange rate had a positive relationship with economic growth. They postulate that liberalization of exchange rate was good to the Nigerian economy as it enhances economic growth.

Azeez et al. (2012) examined the effect of exchange rate volatility on macroeconomic performance in Nigeria from 1986-2010. The objective was to ascertain the relationship between exchange rate and gross domestic product. Finding revealed that exchange rate is positively related to gross domestic product (GDP).

Oladipo (2012) conducted a study on the impact of exchange rate management on the growth of the manufacturing sector in Nigeria. The specific objectives were to ascertain the

extent to which depreciation of exchange rate correlate with manufacturing sector's productivity; assess the extent of the relationship between exchange rate appreciation and domestic output. Ordinary Least Square (OLS) multiple regression analysis was employed to analyse time-series data which spanned from 1986 to 2010. Findings revealed that exchange rate depreciation which dominated the period under review had no significant relationship with the manufacturing sector's productivity. And that exchange rate appreciation had a significant relationship with domestic output in Nigeria. The study recommended that government should reduce the cost of production in the manufacturing sector that heavily depends on foreign inputs by directing its exchange rate management policy towards exchange rate appreciation and there should be total ban on importation of consumer and intermediate goods that can be locally produced.

Adeniran et al. (2014) carried out research on the impact of exchange rate on Nigeria economic growth from 1986 to 2013. The objective was to ascertain the effect of exchange rate on Nigeria's economic growth. Regression analysis, the ordinary least square (OLS) was used to analyze the data. Finding revealed that exchange rate had positive and insignificant effect on Nigeria's economic growth the study recommended that government should encourage the export promotion strategies so as to maintain favorable balance of trade. And that government should provide conductive environment, adequate security, effective fiscal and monetary policies, as well as infrastructural facilities so that foreign investors will be attracted to invest in Nigeria.

METHODOLOGY

Data Set

A balanced panel of annual observations from ten large-scale manufacturing companies listed on the Nigerian Stock Exchange, collected between the period of 2015-2017 (three years) was used in this study. The companies selected for the study were: Nigerian Breweries, PZ Cussons Nigeria Plc, Nestle Nigeria Plc, Cadbury Nigeria Plc, Guinness Nigeria Plc, Cap Plc, Cutix Nigeria Plc, Meyer Plc, Dangote Cement and Unilever Nigeria Plc. The cross-sectional data set on productivity, and performance indicators were obtained from the companies' annual reports while the data set for exchange rate fluctuation and BDC were sourced directly from Central Bank of Nigeria (CBN).

Method

The variables used in the study to proxy for firm productivity and performance using single factor measure (SFM) were rate of return on equity (ROE) and rate of return on assets (RRA) respectively. On the other hand, the variables used to proxy for macroeconomic factors using multifactor measures (MFM) were exchange rate fluctuation, inflation rate, interest rate, trade flow and external debt. These measures produce excellent metrics of assessing firm's performance over a number of years and of comparing several companies. Multiple linear regression was used to test hypotheses one, two and three. The technique measures the effect of two or more variables (independent variable or regressor) on another variable (the dependent variable or the regress and).

The Multiple Regression Model Takes the Form of:

$Y=\alpha+B_iX_i+B_2X_2+.......B_nX_n +e$

Where   X=is the independent variable

                       Y=is the dependent variable

α=is the intercept/constant

βs=are the gradients which are perimeters to be estimated

e=is the stochastic error

Model Specification for Hypothesis 1

$(ROE\_prod) = B_0+B_1ERF+B_2 Ln (INFrate)+B_3Ln (INTrate)+B_4Ln (TRAflow)+B_5Ln (EXTdebt)+e$

Where,

(ROE_prod)=Return on Equity (ie Net Assets–Liabilities)
EXF=Exchange Rate Fluctuation
INFrate=Inflation Rate
INTrate=Interest Rate
Ln (TRAflow)=Log of Trade Flow
Ln (EXTdebt)=Log of External Debt
e = stochastic error

Model Specification for Hypothesis 2

$(RRA\_perf) =B_0+B_1FER+B_2 Ln (INFrate)+B_3Ln (INTrate)+B_4Ln (TRAflow)+B_5Ln (EXTdebt)+e$

Where,

(RRA_perf) =Rate of Return on Assets (i.eNet profit/Total assets)
FER =Flexible Exchange Rate
INFrate =Inflation Rate
INTrate =Interest Rate
Ln (TRAflow) =Log of Trade Flow
Ln (EXTdebt) =Log of External Debt
e =stochastic error

Model Specification for Hypothesis 3

$(RRA\_perf) =B_0+B_1BDC+B_2 Ln (INFrate)+B_3Ln (INTrate)+B_4Ln (TRAflow)+B_5Ln (EXTdebt)+e$
Where,

(RRA_perf) =Rate of Return on Assets
BDC =Bureau de Change
INFrate =Inflation Rate
INTrate =Interest Rate
Ln(TRAflow) =Log of Trade Flow
Ln (EXTdebt) =Log of External Debt
e =stochastic error

RESULTS

H_1:   *Exchange rate fluctuations have negative effect on productivity of the manufacturing firms.*

Table 1A
MODEL SUMMARY[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	0.893[a]	0.797	0.774	0.42099	0.797	34.126	3	26	0.000	1.689
a. Predictors: (Constant), ERF, External debt, Trade flow, Interest rate, Inflation rate										
b. Dependent Variable: Productivity										

The R^2 value for this model is 0.797, which means that exchange rate fluctuation accounts for 79.7% of the variation (changes) in productivity of manufacturing firms.

Table 1B
ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	18.145	3	6.048	34.126	0.000[b]
	Residual	4.608	26	0.177		
	Total	22.753	29			
a. Dependent Variable: Productivity						
b. Predictors: (Constant), ERF, Inflation rate, External debt, Trade flow, Interest rate						

The model is significant and significantly improved the ability to predict the outcome variable at 0.000

Table 1C
EXCHANGE RATE FLUCTUATION AND PRODUCTIVITY OF MANUFACTURING FIRMS:CO-EFFICIENTS[a]

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	6.959	12.259		0.568	0.575					
Interest rate	-0.005	0.108	-0.004	0.045	0.964	-0.037	0.009	0.004	0.977	1.024
ERF	-0.470	3.586	-0.022	-0.437	0.030	0.045	-0.112	-0.039	0.963	1.005
Inflation rate	-0.599	6.117	-0.091	-0.752	0.000	0.675	-0.308	-0.085	0.949	1.018
Trade flow	0.857	0.085	0.895	10.109	0.000	0.892	0.893	0.892	0.994	1.006
External debt	0.633	1.201	0.047	0.528	0.602	0.008	0.103	0.047	0.976	1.025
a. Dependent Variable: Productivity										

The multiple linear regression result in Tables 1A-C reveals that exchange rate fluctuations have negative effect on productivity of the manufacturing firms (R^2 =0.797, β = -

0.022, p=0.030<0.05). The regression model that was obtained from the result of the analysis is as follows: ROE prod=$6.959 - 0.005X_1 - 0.470X_2 - 0.599X_3 + 0857X_4 + 0.633X_5$. The regression model shows that a one unit change in the exchange rate fluctuation leads to a decrease of -0.470 in the return on equity of manufacturing firms listed in Nigerian Stock Exchange. This interpretation is true only if the effects of other predictors are held constant. Thus, the null hypothesis which states that exchange rate fluctuations have negative effect on productivity of the manufacturing firms is hereby accepted and the alternate hypothesis rejected.

H_2: *Flexible exchange rate has not significantly enhanced performance of manufacturing firms.*

<table>
<tr><td colspan="11">Table 2A
MODEL SUMMARY[b]</td></tr>
<tr><td rowspan="2">Model</td><td rowspan="2">R</td><td rowspan="2">R Square</td><td rowspan="2">Adjusted R Square</td><td rowspan="2">Std. Error of the Estimate</td><td colspan="5">Change Statistics</td><td rowspan="2">Durbin-Watson</td></tr>
<tr><td>R Square Change</td><td>F Change</td><td>df1</td><td>df2</td><td>Sig. F Change</td></tr>
<tr><td>1</td><td>0.700[a]</td><td>0.699</td><td>0.629</td><td>0.13066</td><td>0.160</td><td>1.649</td><td>3</td><td>26</td><td>0.0202</td><td>1.624</td></tr>
<tr><td colspan="11">a. Predictors: (Constant), External debt, Trade flow, Interest rate</td></tr>
<tr><td colspan="11">b. Dependent Variable: Performance</td></tr>
</table>

The R^2 value for this model is 0.669, which means that flexible exchange rate accounts for 69.9% of the variation (changes) in performance of manufacturing firms.

<table>
<tr><td colspan="6">Table 2B
ANOVA[a]</td></tr>
<tr><td colspan="2">Model</td><td>Sum of Squares</td><td>Df</td><td>Mean Square</td><td>F</td><td>Sig.</td></tr>
<tr><td rowspan="3">1</td><td>Regression</td><td>0.084</td><td>3</td><td>0.028</td><td>1.649</td><td>0.024[b]</td></tr>
<tr><td>Residual</td><td>0.444</td><td>26</td><td>0.017</td><td></td><td></td></tr>
<tr><td>Total</td><td>0.528</td><td>29</td><td></td><td></td><td></td></tr>
<tr><td colspan="7">a. Dependent Variable: Performance</td></tr>
<tr><td colspan="7">b. Predictors: (Constant), ERF, External debt, Trade flow, Inflation rate, Interest rate</td></tr>
</table>

The model is significant and significantly improved the ability to predict the outcome variable at 0.024

<table>
<tr><td colspan="12">Table 2C
FLEXIBLE EXCHANGE RATE AND PERFORMANCE OF MANUFACTURING FIRMS:
COEFFICIENTS[a]</td></tr>
<tr><td colspan="3">Unstandardized Coefficients</td><td>Standardized Coefficients</td><td>T</td><td>Sig.</td><td colspan="3">Correlations</td><td colspan="2">Collinearity Statistics</td></tr>
<tr><td>Model</td><td>B</td><td>Std. Error</td><td>Beta</td><td></td><td></td><td>Zero-order</td><td>Partial</td><td>Part</td><td>Tolerance</td><td>VIF</td></tr>
<tr><td>(Constant)</td><td>4.206</td><td>3.805</td><td></td><td>1.105</td><td>0.279</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Interest rate</td><td>-0.050</td><td>0.033</td><td>-0.275</td><td>-1.511</td><td>0.043</td><td>-0.236</td><td>-0.284</td><td>-0.272</td><td>0.977</td><td>1.024</td></tr>
<tr><td>ERF</td><td>0.009</td><td>0.026</td><td>0.003</td><td>0.545</td><td>0.129</td><td>0.712</td><td>0.812</td><td>0.056</td><td>0.921</td><td>1.032</td></tr>
<tr><td>Inflation rate</td><td>-0.458</td><td>0.026</td><td>-0.114</td><td>-0.682</td><td>0.033</td><td>-0.323</td><td>-0.282</td><td>-0.102</td><td>0.906</td><td>1.059</td></tr>
<tr><td>Trade flow</td><td>0.802</td><td>0.026</td><td>0.270</td><td>8.124</td><td>0.046</td><td>0.191</td><td>0.282</td><td>0.270</td><td>0.994</td><td>1.274</td></tr>
<tr><td>External debt</td><td>0.335</td><td>0.373</td><td>0.141</td><td>0.899</td><td>0.377</td><td>0.040</td><td>0.174</td><td>0.617</td><td>0.976</td><td>1.099</td></tr>
<tr><td colspan="12">a. Dependent Variable: Productivity</td></tr>
</table>

The result in Tables 2A-C shows that flexible exchange rate has not significantly enhanced performance of the manufacturing firms (R^2=0.699, β=0.009, p=0.129>0.05). The

regression model that was obtained from the result of the analysis is as follows: RRA perf= $4.206–0.050X_1+0.009X_2–0.458X_3+0.802X_4+0.335X_5$. The regression model revealed that a one unit change in flexible exchange rate leads to an increase of 0.009 in the rate of return on assets of the manufacturing firms listed in NSE. Thus, the alternate hypothesis which states that flexible exchange rate significantly enhanced performance of manufacturing firms is hereby rejected and the null hypothesis which states that flexible exchange rate has not significantly enhanced performance of the manufacturing firms is accepted.

H_3:   *Bureau de change has not significantly enhanced performance of the manufacturing firms.*

Table 3A MODEL SUMMARY[b]										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	0.582[a]	0.579	0.562	0.13066	0.140	1.584	3	26	0.202	1.624
a. Predictors: (Constant), Inflation rate, BDC, External debt, Trade flow, Interest rate										
b. Dependent Variable: Performance										

The R^2 value for this model is 0.579, which means that Bureau de Change accounts for 57.9% of the variation (changes) in performance of manufacturing firms.

Table 3B ANOVA[a]					
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	0.084	3	0.046	1.426	0.002[b]
	Residual	0.644	26	0.030		
	Total	0.888	29			
a. Dependent Variable: Performance						
b. Predictors: (Constant), Inflation rate, BDC, External debt, Trade flow, Interest rate						

The model is significant and significantly improved the ability to predict the outcome variable at 0.002

Table 3C BUREAU DE CHANGE AND PERFORMANCE OF MANUFACTURING FIRMS: COEFFICIENTSA[a]										
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations			Collinearity Statistics	
Model	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	3.972	5.686		1.552	0.196					
Interest rate	-0.124	2.511	-0.275	-0.821	0.111	-0.302	-0.391	-0.188	0.859	1.125
ERF	-0.011	7.183	-0.092	-2.366	0.312	-0.854	-0.982	-0.229	0.915	1.297
Inflation rate	-0.239	1.679	-0.012	-1.752	0.019	-0.316	-0.452	-0.091	0.727	1.901
Trade flow	0.034	7.330	0.270	1.287	0.026	0.219	0.747	0.216	0.903	1.022
External debt	-0.163	.239	-0.064	-3.691	0.031	-0.177	-0.391	-0.162	0.896	1.368
a. Dependent Variable: Performance										

The result in Tables 3A-C shows that Bureau de change has not significantly enhanced performance of the manufacturing firms (R^2=0.579, β =-0.011, p=0.312>0.05). The regression model that was obtained from the result of the analysis is as follows: RRA_ perf= $3.972–0.124X_1$

$-0.011X_2$ $-0.239X_3+0.034X_4+0.163X_5$. The regression model revealed that a unit change in BDC rate leads to a decrease of -0.011 in the rate of return on assets of manufacturing firms listed in Nigerian Stock Exchange This interpretation is true only if the effects of other predictors are held constant. Thus, the alternate hypothesis which states that Bureau de change has significantly enhanced performance of the manufacturing firms is hereby rejected and the null hypothesis which states that bureau de change has not significantly enhanced performance of the manufacturing firms is accepted.

RESULTS AND DISCUSSION

The study assessed the effect of exchange rate fluctuations on productivity of the manufacturing firms. The result from the multiple regression test revealed that exchange rate fluctuations had negative effect on productivity ($R^2=0.797$, $\beta=-0.022$, $P=0.030<0.05$). Opaluwa, Umeh & Ameh (2010) established that fluctuations in exchange rate adversely affect output of the manufacturing sector. Nigerian manufacturing sector depends heavily on import of inputs and capital goods which are paid for in foreign exchange and which rate of exchange is unstable.

The study also examined the effect of flexible exchange rate on performance of the manufacturing firms. The result from the multiple regression test revealed that flexible exchange rate did not significantly enhance performance of the manufacturing firms ($R^2= 0.699$, $\beta=0.009$, $P=0.129<0-05$). Karras (2012) established that under fixed exchange rate regime, performance of fiscal policy is effective and ineffective under flexible exchange rate regime.

The study also assessed the effect of bureau de change on performance of the manufacturing firms. The result obtained from the multiple regression test revealed that bureau de change had not significantly enhanced performance of the manufacturing firms ($R^2 =0.579$, $\beta =-0.011$, $P=312<0.05$). This could be attributed to persistent rise in the exchange rate within the period of this investigation and at such reduces the quantity of exchange rate for the manufacturing firms.

CONCLUSION

This study was concluded based on the results of this empirical study which states that exchange rate fluctuations had negative effect on productivity of the manufacturing firms in Nigeria. Thus, exchange rate fluctuations adversely affect output of the manufacturing sector. Nigerian manufacturing sector depends heavily on import of inputs and capital goods which are paid for in foreign exchange and which rate of exchange is unstable. The result from this empirical study also revealed that flexible exchange rate had not significantly enhanced performance of the manufacturing firms. This could be attributed to fiscal policy performance which was ineffective under flexible exchange rate regime. The result from the empirical study also revealed that bureau de change had not significantly enhanced performance of the Nigerian manufacturing firms. The manufacturing firms did not have sufficient foreign exchange required to procure inputs and capital goods because of the high exchange rates provided by the bureau de change. The study recommended that an adequate environment and infrastructural facility need to be kept in place so as to attract foreign investors and thereby improve employment opportunity and enhance the standard of living. Relatively pegged exchange rate should be adopted in developing countries for policy implementation and also to maintain inflation at lower level (Husain et al., 2005).

LIMITATIONS

The study coverage of three years may be insufficient and could be improved in future studies. The ten firms used in this study may not be the maximum number to be used in a study. Future researchers can carry out research on effects of exchange rate appreciation and depreciation on performance of the manufacturing firms in developing economies.

ACKNOWLEDGEMENT

REFERENCES

Ahmed, B., WU, X., Rehman, Z.U., & Ahmed, I. (2015). The impact of exchange rate depreciation on economic and business growth in Pakistan. *European Journal of Business and Management, 7*(32), 135-141.

Akinola, O., & Lawal, Q.A. (2012). Impact of exchange rate on industrial production in Nigeria (1986–2010). *International Business and Management, 10*(1), 104–110.

Akpan, P.L. (2008). Foreign exchange market and economic growth in an Emerging Petroleum-based economy: Evidence from Nigeria (1970–2003). *African Economic and Business Review, 6*(2), 46-58.

Akpan, E.O., & Atan, J.A. (2011) Effects of exchange rate movements on economic growth in Nigeria. *CBN Journal of Applied Statistics, 2*(2), 1-14.

Aliyu, S.R.U. (2011). Impact of oil price shock and exchange rate volatility on economic growth in Nigeria: An empirical investigation. *Research Journal of International Studies, 11*, 103 – 120.

Azeez, B.A., Kolapo, 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.

Bakare, A.S. (2011). The consequences of foreign exchange rate reforms on the performances of private domestic investment in Nigeria. *International Journal of Economics and Management Sciences, 1*(1), 25-31.

David, U., & Ameh, A. (2010). The effect of exchange rate fluctuations on Nigeria manufacturing sector. *African Journal of Business Management, 4*(14), 2994-2998.

Ezenwakwelu, C.A. (2017). International business management. Enugu: Immaculate publications Ltd.

Husain, A.M., Mody, A., & Rogoff, K.S. (2005). Exchange rate regime durability and performance in developing versus advanced economies. *Journal of Monetary Economics, 52*(1), 35-64.

Kandil, M. (2004). Exchange rate fluctuations and economic activity in developing countries: Theory and evidence. *Journal of Economic Development, 29*, 85-108.

Karras, G. (2012). Trade openness and effectiveness of fiscal policy: Some empirical evidence. *International Review of Economics, 59*(3), 303–313.

Mori, K., Asid, R., Lily, J., Mulok, D., & Loganathan, N. (2012). The effects of exchange rate on economic growth in Malaysia. *The IUP Journal of Financial Economics, 10*(1), 1-13.

Obansa, S.A.J., Okoroafor, O.K.D., Aluko, O.O., & Eze, M. (2013). Perceived relationship between exchange rate, interest rate and economic growth in Nigeria: 1970–2010. *American Journal of Humanities and Social Sciences, 1*(3), 116–124.

Odusola, A.F., & Akinola, A.E. (2001). Output, inflation and exchange rate in developing countries: An application to Nigeria. *Journal of Development Economics, 39*(2), 199-222.

Odusola, A.F., & Akinola, A.E. (2003). Assessing the impact of Nigeria's naira depreciation on output and inflation: Policy implication. *Applied Economics, 35*(6), 691-703.

Razazadehkarsalari, A., Haghiri, F., & Behrooznia, A. (2011). The effect of exchange rate fluctuations on real GDP in Iran. *American Journal of Scientific Research, 26*, 6-18.

Uniamikogbo, S.O., & Ewanehi, S. (1998). Agricultural sector's performance in deregulated economy: The case of Nigeria. *Journal of Economic and Management Studies, 3*(2 &3), 1–21.