Trade Liberalization and Real Exchange Rate Nexus in Nigeria

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Abstract

Over the years, the perturbation of the RER has been grossly attributed to the liberalization of trade between Nigeria and the rest of the World. Nigeria exports are mainly unprocessed products dominated by crude oil, while the country imports finished products with very high foreign exchange. This has deprived the country of the supposed benefits that come with the depreciation of a national currency like naira. The main objective has been to examine the nexus between the RER and trade liberalization in Nigeria between 1996 to 2021. Cointegration and ECM framework were used. The unit root test by both the ADF and PP revealed that the variables are I(1). The Johansen cointegration test suggests a long run equilibrium relationship among the variables. The parsimonious ECM results revealed that trade liberalization has a positive and significant impact on the RER. This provides an indication that the incremental trade liberalization policies has been a major factor that led to the depreciation of the RER. The low production base of the Nigerian economy has been responsible for little benefits from trade liberalization. The TOT has positive and significant impact on the RER. The GEX has a positive and significant impact on the RER. The statistical significance of the ECM which has a negative sign indicates that about 13 percent of the errors are corrected at each period. To stabilize the RER, exports of processed commodities to boost exports earnings is recommended amongst others.

Keywords: RER, OPEN, terms of trade, cointegration **JEL Code:** O42

1. Introduction

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Exchange rate depicts the cost of a nation's currency e.g. the naira in relation to one or more other currencies, e.g. the dollar, Euro etc. The nominal exchange rate is the units of domestic currency that can purchase a unit of a particular foreign currency. The Real Exchange Rate (RER) between two countries depicts the nominal exchange rate multiplied by the ratio of prices between the two nations, e.g. Nigeria and United States. When more than one trading partners are involved, we then have the Nominal Effective Exchange Rate (NEER) which relates a country's currency to a basket of other currencies and the Real Effective Exchange Rate (REER) which is the weighted average of a country's currency in relation to a basket of collection of currencies. Through enhancing the level of the competitiveness of an economy, the RER facilitates the nature and scope of trade balance (Bahmani & Oskoee, 2001). The RER is significant for trade since it is outward-oriented as regards macroeconomic policies (Achu, 2018). Also, inter-temporal trading is enhanced by the association between the RER and the openness of trade in addition to its impact on the national income (Hacker & Hateni, 2004).

However, unfavourable trade liberalization policies may cause the depreciation of the RER in a country with low productive capacity and this may also cause inflation (Shaoo, 2009). With increasing focus on export-led growth and liberal trade which reduces tariff and non-tariff restrictions to trade, the interaction between trade liberalization and the RER has become more prominent in getting a positive trade balance and generating the desired level of economic growth (Sujan, 2018). Sujan, (2018) noted that other than inflation rate and interest rate, the RER is one of the major determinants of the level of economic progress of many nations. A country's exchange rate has significant and visible impact on the real or productive sector of the economy. In addition, other monetary indicators such interest rate, inflation rate, etc can also be influenced by the RER. As noted by Wesseh and Niu (2012), the growth of international trade through trade liberalization has links with a stable RER. RER reacts to unstable trade liberalization policies and the ensuing perturbation alters the nature of prices as well as incentives in trade which affects the entire economy. Africa and Nigeria specifically are susceptible to unfavourable trade liberalization policies and RER perturbations (Charles, 2020). However, countries in Asia are less prone to such perturbations. One of the designs adopted to reduce such perturbations in the RER is when traders hedge themselves in the forward market. Thus, for both imports and exports, the predictability of the RER is important. A major reason responsible for increase in the RER of a country is the appreciation of the nominal exchange rate at a time when the exchange rate of other countries depreciates or a higher inflation rate in the domestic economy when compared to its foreign trading partners. One of the solutions as noted by Charles (2020) is to formulate policies aimed at reducing domestic inflation rate, devaluation of the domestic currency as well as incentives or compensations for relative higher costs. Following the Keynesian approach, the RER assists in the distribution of global spending. Over the years, particularly since the collapse of the Breton Wood Institutions, the RER became a major focus in economic as well as policy discussions, mainly in the developing economies (Charles, 2020).

International financial institutions and some other agencies continuously favoured the option of devaluation to correct overvaluation of currencies (Bird, 1998). Overvaluation brings about a disincentive to the creation of tradables as well as

nontradables. Another negative consequence of overvaluation in Nigeria is that it breeds parallel foreign exchange market also locally called black market for illegal foreign exchange operators and this constitutes a drain of foreign exchange from the financial sector. This was done by many developing countries, particularly during the SAP era as a condition for obtaining financial support. This made many developing nations to adopt the adjustable peg exchange rate (Oriavwote & Ukawe, 2018).

Trade facilitates mutual international benefits among countries and sub-regions. Countries around the World have keyed into the idea of trade liberalization since the early part of the 1980s (Xiangminng, 2003). This has resulted in tremendous liberalization of those countries to the rest of the World through trade and financial support by international financial institutions. The liberalization of the Nigerian economy to trade has increased following the introduction of the Structural Adjustment Programme (SAP) in 1986 (Achu, 2018). The exchange rate of the Nigerian Naira viz-a-viz other major currencies were liberalized during this period. This so-called liberalization of trade brought about economic progress to many countries of the World (Achu, 2018). The case was however different in Nigeria and many other African countries, this is because Nigeria's major export is crude oil. We open up our market to all other commodities and exports mainly crude oil in its unrefined form and many other unprocessed agricultural commodities. We import refined petroleum products and many other processed commodities from even smaller African countries like Niger Republic. This has eroded the supposed benefits from trade liberalization and the ensuing depreciation of the RER. The supposed benefit of trade liberalization has thus been elusive to the Nigerian economy. The consequences have been high inflation rate of over 15 percent, high unemployment of 33.30 percent in the last quarter of 2020 from the initial figure of 27.10 percent in the last quarter of 2020 (NBS, 2021), increasing level of poverty, loss of valuable foreign exchange earnings, unstable RER etc. The RER misalignment or maintaining the RER at an incorrect status could be a major cause of the above welfare problems. An incorrect RER gives a wrong signal to the global market and cause misallocation of scarce human and natural resources (Ngozi et al 2016). This also manifests itself as in the form of loss of international competitiveness, particularly of the tradable good sector (Willet, 1986). The deterioration of the trade balance in Nigeria has hindered both the exchange rate and macroeconomic stability. This is because the trade balance affects both the current account balance and hence the entire BOP (Lyndon & Ikechukwu, 2019).

Perpetual depreciation of the naira and its continuous fluctuation has led to a decline in the productive base of the Nigerian economy and makes the country's currency less attractive (Lyndon & Ikechukwu, 2019). This makes it imperative for a study to examine the impact of trade liberalization on the RER in Nigeria. The main objective is thus to investigate the nexus between trade liberalization and the RER. Policies to stabilize the RER assist nations to strengthen financial transactions which are helpful in improving the welfare of the citizens. Also, this study adopts the RER as a broader measure of competitiveness and it gives insight to the behaviour of trade and income. This is important since little empirical evidence (Gantam & Dabos, 2018, Grephas, 2014, Bahmani-Oskoee, 2001) are available on trade liberalization and RER changes. In addition, studies are not finalized about the specific factors that influence the RER.

Other than this introductory part, the second segment dealt with the theoretical underpinnings and this was followed by the empirical review and closely followed by the methodology and then the results and findings. The conclusion and recommendations concluded the research.

2. Theoretical Underpinnings

2.2.1 Elasticity Perspective / Bikkerdike-Robinson-Meltzer Model (BRM)

The BRM model relates consumption and production to changes in the RER in consonance with the substitution effect. It is a partial equilibrium analysis (two goods and two countries) in a perfectly competitive market. In the BRM, the RER is measured by the terms of trade while foreign and local prices were assumed to be fixed or exogenously determined outside the model (Shao, 2009). The devaluation of currency is hoped to boost the home country's exports and reduce imports (Jha, 2003). Thus, the home country can take advantage of this to expand exports. This will only be beneficial if the country is a net exporter. Countries with low production base, particularly for tradables will likely not benefit from this.

2.2.2 Dornbusch Sticky Prices Model (DSPM)

The DSPM was introduced by Dornbusch in 1976 as a segment of the monetary theory. The DSPM states that in the presence of growing monetary shocks, exchange rate overshoots in the short run but reverts to its long run equilibrium. The model explains increasing level of perturbation in the exchange rate as it is in Nigeria. A small open economy with flexible exchange rate policy was assumed by the model with prices which are assumed sticky in the short run in the goods market as well as rational expectations. Equilibrium occurs first in the financial markets

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since the prices in the goods markets are sticky. When the prices of goods and services gradually respond to the new equilibrium, the exchange rate changes further.

3. Empirical Review

Charles (2020) examined exchange rate misalignment and bilateral trade. The study focused on trade between Kenya and Europe. Using data between 2000 and 2016, the study found that RER was influenced by economic fundamentals and as regards misalignment, the RER was overvalued to as high as 5.9 percent. Lyndon and Ikechukwu (2019) studied the link between the volatility of exchange rate, trade balance and Nigeria's economic growth between the periods of 2000 to 2017. Using the Ordinary Least Squares (OLS), the result revealed that exchange rate has a significant impact on trade balance but a positive and insignificant impact on economic growth. Gantman and Dabos (2018) investigated the link between openness and the REER. Using a sample of 101 countries between the period of 1960 to 2011 and the panel cointegration framework, the findings revealed that the depreciation of the REER was caused by increment in openness. Between 1981 and 2014, Achu (2018) studied the links among trade openness, imports, exports and exchange rate in Nigeria using the OLS technique. The findings revealed that RER has positive and significant impact on exports and imports. Ngozi et al (2016) assessed RER misalignment in Nigeria. Data covering 1990-2014 and the Autoregressive Distributed Lag (ARDL) model were used. The terms of trade and trade openness were statistically significant in explaining the changes in the RER. Grephas (2014) studied RER and trade balance in Kenya between the 1963 to 2013 period using the Vector Error Correction framework. Findings revealed that RER had significant effect on the trade balance. Xiangming (2003) examined the liberalization of trade and changes in the RER. 45 countries were used and the panel regression framework revealed that the RER depreciates following increased openness to trade. Ceaser (2004) investigates trade openness and RER volatility in Chile, using the General Methods of Moments (GMM), the study found that trade liberalization has significant impact on RER perturbation

Ayodele (2006) studied the impact of trade liberalization on the RER between 1960 and 2000, using the Johansen cointegration framework. The paper found that decisive trade liberalization policy between 1986 and 1987 led to about 13 percent depreciation of the RER.

In summary, the results from the reviewed literature are not uniform. The studies are also not final, eg Charles (2020) used RER as the dependent variable, Gantman

and Dabos (2018) used the REER as the dependent variable, others used the nominal exchange rate. The studies reviewed ignored the role of government expenditure and productivity as tools that facilitate trade liberalization to provide the desired impact on the RER. This is because productivity improvement could lead to deriving the supposed benefit from trade liberalization also, when government spendings are channeled to the productive sector, a favourable outcome from trade liberalization will be the outcome. This study thus filled this gap by including government expenditure and productivity as separate independent variables since they are major economic fundamentals. Also, most of the works are not of Nigerian origin. This makes the research even more important.

4. Methodology

The study draws from the work of Gantam and Dabos (2018), which assessed the impact of openness on the Real Effective Exchange Rate (REER). They used the REER as the dependent variable, while the independent variables used are terms of trade, trade balance, openness and productivity. Our study however used the RER instead of the REER as the dependent variable, retained openness, terms of trade and productivity. Trade balance was dropped from our model and instead government expenditure which is one of the economic fundamentals with special relevance to Nigeria was added since it has a key role to play in determining the behaviour of the RER (Oriavwote & Omojimite, 2012). Also, while their study is a panel study that focused on a group of countries, this study is a time series study that focused on Nigeria. It covered the period between 1996 and 2021 which captures some major international trade and exchange rate policies.

Specification of the Model

 $RER = bo + b_1 GEX = b_2 TOT + b_3 OPEN + b4 PRO$

b1, b2, b3, b4>0

Where:

RER = Real Exchange Rate which is the nominal exchange rate multiplied by the ratio of prices between the two nations. Source

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GEX = Total components of government expenditure.

TOT = Terms of trade which is the ratio of the prices of exports to imports prices OPEN = Trade liberalization, which stand as the ratio of exports plus imports to GDP

PRO = Productivity, represented by the ratio of gross fixed capital formation to GDP

RER appreciates more in countries experiencing rapid economic growth. Increase in productivity is expected more common in countries with rapid economic growth.

A reduction in TOT leads to a decline in real income and hence a decline in demand and relative price of non tradeables. Government spending is mostly made up of nontradables. An upward trend in government expenditure will cause an increase in demand for nontradables. This is substitution effect (SE). Nevertheless, improvement in government expenditures has to be financed by higher taxes which lead to a reduction in income and a reduction in the demand for tradables (Edward, 1969). Capital inflows imply the demand for non-tradable goods in the recipient countries and results in appreciation of the RER.

However, the tests commenced with an examination of the descriptive features of the variables and this will be followed by the unit root test. The Augmented Dickey Fuller (ADF) and the Phillip Perron (PP) were both used for this purpose. This was followed by the Johansen cointegration test to determine whether the variables have a long run equilibrium relationship. The Error Correction Mechanism (ECM) closely followed the cointegration test. For this analysis, both the overparameterized and the parsimonious ECM were estimated. The various diagnostic checks were also carried out. The cointegration and Error Correction Model were used for the analysis. The Johansen cointegration framework was adopted to test for the existence or not of a long run equilibrium relationship among the variables. The maximum likely process developed by Johansen and Juselius (1990) and Johansen (1991). The point of commencement is a Vector Autoregression of order P stated as

$$y_t = \mu + \Delta_1 y_{t-1} + \dots + \Delta_{\rho} y_{t-\rho} + \varepsilon_t$$

where y_t is an nx1 vector of I(1) variables t is an nx1 vector showing innovations we can rewrite this as

$$\Delta_{yt} = \mu + \bar{\mathfrak{h}}_{yt-1} + \sum_{i=1}^{\rho-1} \tau_i \Delta y_{t-1} + \varepsilon_t \qquad 3$$

Where
$$\Pi = \sum_{i=1}^{\rho} \operatorname{Ai} - 1 \text{ and } \tau_i = -\sum_{j=i+1}^{\rho} \operatorname{Aj} \qquad 4$$

To determine the number of cointegrating vectors, the trace statistics and the maximum eigen test were developed.

The Error Correction Model (ECM)

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This is becomes important if cointegration is confirmed, it requires the construction of an Error Correction Mechanism to specify the model of a dynamic relationship. The main purpose for this is to analyze the speed of adjustment from the short run dynamic equilibrium to the long run state of equilibrium. The ECM coefficient is negative on apriori basis and does not exceed unity since adjustment is never complete.

We thus represent our model specified earlier in an ECM form:

 $\sum_{t=1}^{n}$ $\beta_{1t}\Delta \text{InGEX}_{t-1} + \sum_{t=1}^{n}$ $\beta_{2t}\Delta \text{InTOT}_{t-1} + \sum_{t=1}^{n}$ $\Delta InRER_t =$ $\alpha_0 +$ $\beta_{3t} \Delta \text{InOPEN}_{t-1} + \sum_{t=1}^{n} \beta_{t-1}$ $\beta_{4t}\Delta InPRO_{t-1} + \lambda E_{ct-1} + \epsilon_t$ Where Δ is the first difference operator while λ is the error correction coefficient. However, the tests commenced with an examination of the descriptive features of the variables and this will be followed by the unit root test. The Augmented Dickey Fuller (ADF) and the Phillip Perron (PP) were both used for this purpose. This was followed by the Johansen cointegration test to determine whether the variables have a long run equilibrium relationship. The Error Correction Mechanism (ECM) closely followed the cointegration test. For this analysis, both the overparameterized and the parsimonious ECM were estimated. The various diagnostic checks were also carried out.

	LRER	LGEX	LTOT	OPEN	PRO
Mean	0.729974	9.866933	2.496011	0.416538	2.730385
Median	-0.295418	9.487083	2.339327	0.405000	2.625000
Maximum	3.093363	12.39974	3.586016	0.880000	9.010000
Minimum	-0.604404	8.933836	1.791759	0.160000	0.160000
Std. Dev.	1.462843	0.919581	0.559386	0.159272	2.264052

5. **Results and Findings**

Table1: Descriptive Statistics Results

Source: Author's computation using Eviews 9

The mean for RER is 0.73 which is higher than the median value of 0.30 implying the RER has the potentials of depreciating over the study period. The highest value for RER is 3.09, while the lowest value is -0.60. The standard deviation of 1.46 did not indicate significant variability. The average value and the median for GEX are 9.87 and 9.49 implying an increase in GEX over time. The maximum value for GEX is 12.40, while the minimum value is 8.93. The standard deviation of 0.92 only indicates a marginal variability. TOT presents a mean and median of 2.50 and 2.34 respectively. This implies that the TOT improved over the study period. The highest and lowest values for TOT are 3.59 and 1.79 respectively. The standard deviation of TOT of 0.56 did not show significant variability. The average value for trade liberalization is 0.42 and the mean is 0.41 indicating that the country

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adopted more trade liberalization polices during this period. The highest value trade liberalization is 0.88 and the lowest value is 0.16. Trade liberalization has the lowest variability with a standard deviation of 0.16. The mean and median for PRO are 2.73 and 2.63 showed increased potentials of improving the level of productivity over the study period in Nigeria. The highest value for PRO is 9.01 while the lowest value is 0.16. PRO has the highest variability with a standard deviation of 2.26

The result of the correlation analysis is shown in the table below:

Table 2: Results of Correlation Analysis

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	LRER	LGEX	LTOT	OPEN	PRO
LRER	1				
LGEX	0.38736459909	1			
LTOT	0.052071815760	.01215603572	1		
OPEN	0.475045246560	.633371435610	.20800834723	1	
PRO	0.385981206350	.313921345600	.481866434970	.01216135906	1
Source:	Author's computa	tion using Eviev	ws 9		

RER and GEX have a weak positive correlation with a coefficient of 0.39 indicating that the GEX don't have a major impact on the RER. The TOT has a weak positive correlation with RER with a coefficient of 0.05 implying that the TOT doesn't have a strong impact on the RER. The correlation coefficient between trade liberalization and RER is 0.47 which is a weak and positive correlation. It shows that the changes in trade liberalization did not seriously influence the RER.

The PRO has a weak, but positive correlation with the RER with a correlation coefficient of 0.01 implying that the PRO do not have a major impact on the RER. Overall, the result of the correlation analysis has not shown any evidence of multicolinearity among the variables.

	ADF			PP		
Variables	Level	1st	Order of	Level	1 st	Order of
		difference	integration		difference	Integration
LRER	0.6523	4.0023*	I(1)	1.2955	5.0238*	I(1)
LGEX	1.8703	6.9273*	I(1)	0.2984	3.8408*	I(1)
LTOT	0.4467	3.9297*	I(1)	2.0182	8.1124*	I(1)
OPEN	0.5927	3.9942*	I(1)	0.4182	4.0127*	I(1)

The result of the ADF and PP unit root tests are shown in the table below: **Table3:** ADF and PP Unit Root Test Results with Trend and Intercepts

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PRO	1.1162	5.0726*	I(1)	0.3342	5.2207*	I(1)
NB: * indicates stationary at the 1 percent level. 1 percent critical Value 3.7642						

Source: Author's computation using Eviews 9

The result of both the ADF and PP unit root test indicates that the variables were not level or originally stationary. Stationary status was however achieved after differencing the variables once, the variables are thus of the I(1) category. All the variables were stationary at the 1 percent level.

Hypothesized	Trace	0.05	
No. of CE(s)	Statistic	Critical Value	Prob.**
None *	71.02405	69.81889	0.0400
At most 1	44.01326	47.85613	0.1097
At most 2	25.56545	29.79707	0.1422
At most 3	12.09274	15.49471	0.1525
At most 4	0.456151	3.841466	0.4994
Hypothesized	Max-Eigen	0.05	
No. of CE(s)	Statistic	Critical Value	Prob.**
None	37.01079	33.87687	0.0328
At most 1	18.44780	27.58434	0.4583
At most 2	13.47272	21.13162	0.4097
At most 3	11.63659	14.26460	0.1251
At most 4	0.456151	3.841466	0.4994

Table 4: Johansen cointegration test Result

Source: Author's computation using Eviews 9

The result of the Johansen cointegration test indicates one cointegrating equation in both the trace statistics and the Max-Eigen statistics. This result indicates the existence of a long run equilibrium relationship among the variables, and this makes room for the estimation of both the parsimonious and the overparameterized ECM.

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Variable	Coefficient	Std. Error	t-Statistic	Prob.		
LGEX(-2)	8.935130	2.037547	4.385239	0.0005		
LTOT	5.637773	1.490724	3.781903	0.0011		
LTOT(-1)	2.595396	0.611105	4.247057	0.0007		

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Table5: Parsimonious ECM. Modeling LRER

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LTOT(-2)	0.147276	0.499485	0.294855	0.7721
OPEN	2.475777	0.238428	10.38374	0.0000
PRO	0.930181	0.255568	3.639664	0.0024
PRO(-1)	0.112326	0.055309	2.030879	0.0604
ECM(-1)	-0.134635	0.061959	-2.172967	0.0414
С	0.237189	0.169795	1.396916	0.1770

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 $R^2 = 0.86$, AIC = -1.13, SC= -1.59, DW= 2.22 Source: Author's computation using Eviews 9

The coefficient of determination indicates that 86 percent of the total changes in the RER have been explained by the GEX, TOT, OPEN and PRO. This is good since the variation explained outside the model is just about 14 percent. The result further indicates that the GEX, TOT, OPEN and PRO have positive impact on the RER. An increase in the GEX (-2), TOT, TOT (-1), TOT(-2), OPEN, PRO and PRO(-1) by 1 unit each depreciated the RER by 8.94, 5.63, 2.60, 0.15, 2.48, 0.93, and 0.11 units respectively.

The result indicates that government expenditure lagged by two periods with a probability of 0.0005 is statistical significant in explaining the changes in the RER, suggesting that government spending is a significant determinant of the RER. The TOT(-1) and TOT(-2) with probabilities of 0.0011 and 0.0007 are statistically significant in explaining the changes in the RER, Ngozi et al. (2016) had similar findings. They found that terms of trade had significant impact on the REER. However, contrary to their findings, TOT had a negative impact on REER. Trade liberalization with probability of 0.0000 is statistically significant in explaining the changes in the RER. An indication that trade liberalization is a major determinant of changes in the RER. Similar findings were obtained by Gantman and Dabos (2018) who found that the depreciation of the REER was caused by increased trade liberalization. Also, Ngozi et al. (2016) had similar findings. They found that trade liberalization had a significant impact on the REER. Avodele (2006) also had similar findings. He found that trade liberalization policy between 1986 and 1987 led to a 13 percent depreciation of the RER. In addition, Xiangming (2003) obtained similar findings for trade liberalization. He found that trade liberalization depreciated the RER. Also PRO (-1) with a probability of 0.0414 is statistically significant in explaining the changes in the RER. This result also suggests that productivity is a major determinant of the RER.

Test Statistics	Fstatistics	Probability value			
White heteroskedasticity	1.5964	0.1185			
Breusch Godfrey Serial correlation LM (BGSC)	0.8812	0.46766			
Jarque-Bera	1.0417	0.3702			

Table6: Diagnostic Checks Results

Source: Author's computation using Eviews 9

The results of the heteroskedastcity test showed that the model is homoscedastic, this implies that the residuals have a constant variance which is also a feature of time series data. The BGSC shows that the residuals are not serially correlated. The Jarque-Bera test indicates that the residuals are normally distributed. The results of the Cumulative Sum of Recursive Residuals (CUSUM) and the Cumulative Sum of Squares of Recursive Residuals (CUSUMQ) are shown in figures 1 and 2 below:

Figure1: CUSUM test result



Figure2: CUSUMQ test Result



Source: Author's computation using Eviews 9

The null hypothesis is that the parameters are stable and the alternative hypothesis is that the parameters are not stable.

The results indicate that the residuals are stable since the CUSUM and the CUSUMQ lines fell in-between the 5 percent lines in both cases. This implies a validation of the null hypothesis that the parameters are stable. This means that the coefficient does not change systematically and suddenly. Since the residuals variances are stable, the model is stable and can also be used for further analysis which in this case is the impulse response. The result of the impulse response is shown in figure 3 below



Figure 3: Cholesky Impulse Response Result

The result of the impulse response indicates the dominance of own shocks. A one period standard deviation shocks to the variables had a positive impact on each of the variables. A one period standard deviation shocks to each of the variables have positive impact on itself. A one period standard deviation shocks to GEX has a negative impact on the RER. A one period standard deviation shocks to TOT has a positive impact on the RER. A one period standard deviation shocks to OPEN has a positive impact on the RER. A one period standard deviation shocks to PRO has a positive impact on the RER. A one period standard deviation shocks to PRO has a negative impact on the RER.

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6. Conclusion and Recommendations

RER policies is pivotal to the economic success of any nation, since it reflects the international prices of goods and services across borders as well as shows the competitive nature of a country. The RER is key to attracting the level of exports and hence an undervalued or overvalued RER is detrimental to the economic survival of countries. Unpredictable RER policies have been behind the poor economic performance of the Nigerian economy (Omojimite & Oriavwote, 2012). The study concluded from our results that the openness of the Nigerian economy to the outside World depreciated the RER, this ought to be good for Nigeria. However, the story is different since Nigeria exports very little finished products and thus could not significantly benefit from the low export price that comes with a depreciated RER. Rather the nation is suffering from the high cost of imported products. This worsened the negative consequences of imported inflation which has further increased the inflation rate in Nigeria to over 17 percent. This is worrisome given that Nigeria spends huge sums of money in importing food, refined petroleum products, manufactured products etc. Since Nigeria exports mostly unprocessed commodities, the impact is far reaching.

It is thus recommended that to stabilize the RER and to benefit more from the liberalization of the Nigerian economy to global trade, the government should put in place policies and facilities to support the export of processed tradable commodities. This will provide the true benefit from the depreciated exchange rate. In addition, the government and monetary authorities should take utmost care as regards further devaluation of the currency. This is because further devaluation without significant improvement in productivity is a futile effort. Further, the government spending should focus more on the real sector of the economy that will increase the productivity base. Mere RER policy gymnastics without corresponding improvement in the production base will not produce the desired result.

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