

Assessing the Impact of Exchange Rate Volatility on the Nigerian Non-Oil Export Performance

Kazeem O., Isah¹ and Ibrahim D., Raheem²

Abstract

Nigeria like other countries with abundant natural resources most especially oil often than not face a lot of challenges in attempt to balance its oil and non-oil export trade dichotomy. The fluctuations, frequencies and instability of the exchange rate movements since the beginning of the floating exchange rate regime have raised a concern about the impact of such movements on foreign trade flows. On this basis, the paper utilized ARDL econometric approach to examine the impact of exchange rate volatility on non-oil export performance in Nigeria covering the period 1980 to 2013. The main conclusion from the theoretical point of view suggests that, Nigeria as an exporter is highly risk-averse. This follows from the evidence of long run positive relationship that exist between the Nigerian non-oil export and exchange rate volatility as evidently reported in the long run estimate of the study.

Keyword: Exchange Rate; Export; Volatility; ARDL; Nigeria

1. Introduction

The importance of the export sector of an economy in enhancing economic growth and development has long been established within the ranks of policymakers and academic. This serves as the basic source of foreign exchange earnings for developing, emerging and even developed countries in the world. However, while the developed countries' exports composition include capital and final goods, developing countries' main exports consist of mining-industry goods especially natural resources. Following the argument of export-led growth hypothesis, export is viewed as the "engine of economic growth" because of its employment generation capacity, profit creation, induces greater productivity, which leads to rise in accumulation of international reserves allowing a country to balance their finances.

Thus, a major determinant of sustainable flow of export trade earnings is real exchange rate. Exchange rate is a macroeconomic variable that is highly susceptible to volatility and whose fluctuation affects the performance of the remaining macroeconomic variables within an economy (Hashim and Zarma, 1996; Pilbeam, 2006). The volatility, precariousness and unsteadiness of the exchange rate movements speak volume about the attainment of a favorable balance of trade and balance of payment position of a country. More so, volatile exchange rates make international trade and investment decisions more difficult because it increases the associated exchange rate risks.

The conceptual basis for the link between the real exchange rate and non-oil export is found in Dutch Disease concept³. According to this concept, the appreciation of a country's real exchange rate caused by the sharp rise in export of a booming resource sector draws capital and labour away from a country's manufacturing and agricultural sectors, which can leads to a

¹ Centre for Econometric and Allied Research, University of Ibadan, Nigeria, Email: kzamboja@yahoo.com

² Centre for Econometric and Allied Research, University of Ibadan, Nigeria.

³ The Economist Magazine in Netherland coined the phenomenon of Dutch disease in the late 1950. This was the period that the Netherlands discovered gas in large quantity, which led to reallocation of factors of production (labour) from the agricultural and manufacturing sectors to the gas sector. The effect of this labour movement led to the appreciation of the country's exchange rate. (See Corden and Nearly, 1984).

decline in exports of agricultural and manufactured goods and inflate the price of non-tradable goods (Corden, 1982 and Corden and Nearly, 1984). Thus, if the overall export of oil rich countries is divided into oil and non-oil exports, the appreciation of real exchange rate, which is specific for these countries, negatively affects non-oil exports while export revenues of oil sector mainly depends on oil price in the world markets, and are susceptible to external shocks (Hasanov and Samadova, 2011).

The above situation is true for Nigeria, an oil dependent nation. The Nigeria's current economic situation, particularly the mono-economy nature of the country, coupled with the need to diversify the economy from the continual dependence on oil to non-oil based, and the variability in real exchange rate, thus, makes international trade highly unpredictable form part of the motivation for this study. Accordingly, there is a need to critically examine the effect of real exchange rate and its volatility on the country's non-oil exports with a view to deriving implications for policy direction.

The fact that real exchange rate and its volatility plays a significant role in the export trade performance of an economy and in addition to the unimpressive and progressively-steady decline of non-oil export amongst rising oil revenue makes it important to examine the dynamics of real exchange rate volatility and non-oil export. There have been, however, relatively fewer studies questioning the impact of exchange rate on the Nigerian non-oil export performance. Previous studies have focused majorly on the impact of price variation and exchange rate volatility on oil revenue and economic growth. For instance, Englama et al (2010) investigated the linkages between oil prices and exchange rate volatility in Nigeria. For Dada and Oyeranti (2012) and Danmola (2013), their analyses were centered on the impact of exchange rate on macroeconomic aggregates in Nigeria. Other studies like Raheem and Busari (2013), Ifeacho, Omoniyi and Olufemi (2014) examined the effect of Non-oil export on the economic development of Nigeria. Chukigwe and Abili (2008) worked an econometric analysis of the impact of monetary and fiscal policies on non-oil exports in Nigeria, while Nwosa and Ogunlowore (2013) examined whether oil revenue has enhanced non-oil export in Nigeria.

Notwithstanding, the limited Nigerian specific studies on exchange rate and non-oil export trade, understanding the relationship among exchange rate, its volatility and export trade has attracts reasonable attentions from researchers and academics in other parts of the world. This relationship has been explained through several economic canals exploring the framework of the international trade theories. In the context of this study however, we expand the determinant of Nigerian non-oil export performance to include foreign income given its theoretical importance and performance measures of the economy. This however, remains the one of the innovations of this present.

Following this introductory section, the remaining sections of the paper are divided into four. Section 2 reviews the existing literature. Section 3 describes the data and the econometric methodology. Section 4 presents the results and discussion. Section 5 concludes this paper with some policy implications.

2. Literature Review

The empirical literature on the exchange rate volatility and trade is hinged on two main theoretical schools of thought, which are traditional and risk-portfolio theories: the former argues that exchange rate volatility and export trade are negatively related, while the latter maintains that the result of an increase in the exchange rate volatility depends on the convexity of the utility function, which in turn depends on the level of risk aversion.

For many reasons and different purposes, researchers and scholars from both developed and developing nations have studied and analyzed empirically, the impact of exchange rate and exchange rate volatility on export trade performance. While the results of

such studies appear to be differed in respect to the area of the linkages that a researcher considered important, an important fact that seems to be consistent and remained common in the literature is that, exchange rate and exchange rate volatility have significant effects on export trade generally, but predominantly on non-oil exports. Specifically, Rose (2000) test for the effects of exchange rate volatility on trade performance and reveals that there is negative relationship between exchange rate volatility and trade, though the said relationship is weak.

Bernardina (2004) investigates the dynamics of real exchange rate, real non-oil GDP and the world income on Russian non-oil export, he found a robust and negative long run co-integration relationship between the real exchange rate and non-oil exports. Also, Kazerooni and Feshari (2010) study the linkages between non-oil exports and the real exchange rate volatility for Iran and reveal that among the explanatory variables, the real exchange rate and its volatility have positive and negative, respectively, impact on the non-oil exports of Iran. Using Ethiopia export of oilseeds, Mehare and Edriss (2012), reports that export oilseeds have negative but insignificant relationship with exchange rate variability. On the effects of exchange rate volatility on French beans exports from Kenya, Mwangi et al. (2014) also indicates negative, but a significant short and long run effect of exchange rate volatility on French beans exports.

Although the interaction between non-oil export and exchange rate volatility has received little attention in Nigeria, the empirical results from some of these Nigerian specific studies are equally inconclusive. Ogun (2004) shows that, irrespective of the misalignment-generating framework adopted, both real exchange rate misalignment and volatility adversely affect the country's non-oil export growth. Similarly, Ibikunle and Akhanolu (2011), indicates an inverse relationship between aggregate trade and exchange rate volatility in Nigeria. For Ettah et al. (2011), exchange rate fluctuations and agricultural credits positively affect Cocoa exports in Nigeria. In attempt to examine risk-portfolio theory, Dickson and Andrew (2013) investigates the effects of exchange rate volatility on trade variations in Nigeria and argue that the results from both theoretically and empirically basis are inclusive.

Given the inconclusiveness of evidences from the existing empirical studies on the impact of exchange rate volatility on non-oil export trade performance, this study therefore, favors the risk portfolio school of thought which suggest that the direction of the effect of exchange rate volatility on export sector performance depends on the level of risk aversion contrary to the traditional view that posit an outright negative relationship between exchange rate volatility and export trade. This study therefore predict positive relationship for exchange rate and Nigerian non-oil export while relationship between exchange rate volatility and non-oil export could be positive or negative depending on the country's level of risk aversion.

For instance, a positive relationship between exchange rate volatility and Nigerian non-oil export would mean that Nigeria is highly risk averse, while a negative relationship would mean that the country is a less risk averse. Prominent among the early studies that have validated the risk portfolio theory is De Grauwe (1988). The author examines the decision of a competitive supplier to trade in domestic or foreign market and finds that exchange rate volatility will either encourage or depress trade according to the degree of the firm's risk aversion.

3. Methodological Framework and Data

This section is trifurcated into three sub-sections. In the first subsection, an estimable model upon which policy implications could be derived is specified. This is immediately followed by providing estimation procedures and outline. Specifically, we conducted unit root and co-integration tests in the second sub-section. Data sources and descriptions are presented in the last sub-section.

3.1 Model Specification

While allowing for additional determinant of non-oil export trade performance such as foreign income, trade openness and terms of trade as evident in literature, the conventional export supply model adopted for the Nigerian non-oil export function following the work of Kazerooni and Feshari (2010) is thereby specified as thus:

$$NEXP = f(EXR, EXVOL, WY, TOT_t, TOP) \quad (1)$$

Where NEXP is non-oil export, EXR is real exchange rate, EXVOL exchange rate volatility, WY is foreign income, TOT is term of trade and TOP denotes terms of trade.

According to Kazerooni and Feshari (2010), the export function as shown in the above equation implies that exports of a country depend on exchange rate as well as the relative price level of home country with respect to that of foreign country. A combination of these two variables denotes real exchange rate indicates the competitiveness of the home country in comparison with the foreign country. When there is a higher real exchange rate (defined as the number of units of Naira that is equivalent to one unit of Dollar), the exports of a home country would expectedly become more competitive and thus lead to more exports. However, the impact of *EXVOL* could be negative or positive as we discussed in theoretical framework of the study. Consequently, one would expect that increase in real income of trading partners result in a greater volume of exports to those partners. Also, both trade openness and terms of trade are expected to influence export performance positively.

The econometric model/specification motivated by the above functional relationship in equation (1) can be represented via logarithm linear transformation as:

$$LNEXP_t = \beta_1 + \beta_2 LEXR_t + \beta_3 LEXVOL_t + \beta_4 WY_t + \beta_5 LTOT_t + \beta_6 LTOP_t + \varepsilon_t \quad (2)$$

Equation (2) is thus saying that total non-oil exports in Nigeria is explained by the right hand side variables, which were log of real exchange rate, exchange rate volatility, foreign income, terms-of-trade and trade openness. As discussed above, the expected sign of coefficients are $\beta_2 > 0, \beta_3 < \text{or} > 0, \beta_4 > 0, \beta_5 > 0$ and $\beta_6 > 0$.

3.2 Estimation Techniques and Procedure

Since we intend to examine the long and the short run dynamics nature of exchange rate, its volatility and export trade relationship, the appropriate technique to be used is the error correction modeling and cointegration analysis. To perform this task, our estimation procedure is structured into three phases. The first phase would involve some pre-tests such as unit root and cointegration tests. The second procedure is concerned with the model estimation while the final phase involves some diagnostic tests to ascertain the robustness of the model used for our estimation.

In the first phase, the two unit root tests conducted are Augmented Dickey-Fuller (ADF) Test and Ng-Perron Test. In an attempt to examine the existence of a long run relationship among the variables of interest, the study employs the Pesaran et al. (2001) Autoregressive distributed lag (ARDL) test for cointegration

3.2.1 Model Estimation

Once the selected long-run ARDL model is established, the study then proceed to estimate the short-run dynamic nature of the *ECM* variables within the framework of the error correction representation of the ARDL model as shown below:

$$\Delta LNEXP = \alpha_1 + \sum_{i=1}^k \alpha_{2i} \Delta LNEXP_{t-i} + \sum_{i=1}^k \alpha_{3i} \Delta LEXR_{t-i} + \sum_{i=1}^k \alpha_{4i} \Delta LEXVOL_{t-i} + \sum_{i=1}^k \alpha_{5i} \Delta LWY_{t-i} + \sum_{i=1}^k \alpha_{6i} \Delta LTOT_{t-i} + \sum_{i=1}^k \alpha_{7i} \Delta LTOP_{t-i} + \lambda ECM_{t-1} + \varepsilon_t \quad (3)$$

Where λ is the speed of adjustment parameter and the error correction term (ECM) is the OLS residuals series from the long-run cointegrating regression. The ECM coefficient is expected to be significant with a negative sign (this is necessary for it to perform the role of error correction).

3.3 Data Source, Description and Measurement

In the context of this study, variables are selected based on their theoretical importance and justification, their performance measures of the economy, and also their uses and findings in the previous empirical literature. Data used in the study are annual figures covering the period 1980-2013 and the variables are sourced from Central Bank of Nigeria (CBN) Statistical Bulletin for various years and World Data Indicator (WDI). While data on Nigerian non-oil export is readily available on the CBN statistical bulletin, the foreign income data sourced from WDI is proxy by World GDP in constant term minus Nigerian GDP in constant term. Data on real exchange rate, exchange rate volatility, terms of trade and trade openness are obtained via the following measures. Real Exchange Rate is calculated as:

$$EXR = ERN * \frac{CPI_{US}}{CPI_{NIG}}$$

where ERN , CPI_{US} and CPI_{NIG} represent nominal exchange rate of the US dollar in terms of the Nigerian Currency, US consumer price index and Nigerian consumer price index respectively.

Indeed, there have been considerable research efforts towards measuring exchange rate volatility ranging from moving standard deviation to conditional variance of a GARCH model. In this study however, we follow the GARCH framework to measure exchange rate volatility. The GARCH models introduced by Bollerslev (1986) have been the most commonly used time series models in the recent literature for studying volatility. Kazerooni and Feshari (2010), Zakaria (2013) and Olufayo and Babafemi (2014) are only few among numerous studies that has used the GARCH framework in their study to measure exchange rate volatility. According to Zakaria (2013), the main advantage of this approach is its ability to capture both volatility clustering and unconditional return distribution with heavy tails. Precisely, the GARCH model for exchange rates in this study can be presented as follow:

$$y_t = \lambda_0 + \sum_{i=1}^k \lambda_i y_{t-i} + \varepsilon_t \quad \varepsilon_t \sim N(0, \sigma_t^2) \quad (4)$$

$$\sigma_t^2 = \varphi + \sum_{i=1}^q \alpha_i \varepsilon_{t-i}^2 + \sum_{j=1}^p \beta_j \sigma_{t-j}^2 \quad (5)$$

Equation (4), the conditional mean equation, is an autoregressive process (AR) of order k , $AR(k)$. In the estimation process, the optimal lag length (k) is determined on the basis of minimum SIC (Schwarz's Bayesian Information Criterion). Parameter λ_0 is the constant; k is the lag length; and ε_t is the heteroskedastic error term with its conditional variance (σ_t^2). Equation (5) is the conditional variance equation specified as the GARCH(p,q) model where

p is the number of ARCH terms, and q is the number of GARCH terms. Several literature have shown that a simple GARCH(1,1) model is parsimonious and generally gives significant results, and therefore, this paper will use AR(k)-GARCH(1,1) models to estimate the predicted volatility of the exchange rates studied. More so, the Terms-of-trade variable used in the study is computed as the ratio of export price index (PX) to import price index (PM) while trade openness is measured as the sum of total trade (i.e. the sum of total imports and exports) divided by gross domestic product.

4 Results Discussion

Even though the bound test approach to cointegration does not require the pre-testing of variables for unit roots, it is however, important to perform this test in order to verify and ascertain that none of the variables considered in the study is integrated of an order higher than one. The aim is to make sure that the result is free from any form spurious regression.

Table 1: Unit Root and Stationarity Tests

	Augment Dicky-Fuller (ADF)			Ng-Perron (NP)		
	Level	First Difference	I(d)	Level	First Difference	I(d)
<i>LNEXP</i>	-3.6633 ^{**b}		I(0)	-2.3210 ^b	-2.7194 ^{*a}	I(1)
<i>LEXR</i>	-2.1585 ^a	-4.7072 ^{*a}	I(1)	-1.8007 ^b	-2.7582 ^{*a}	I(1)
<i>LEXVOL</i>	-1.9797 ^a	-5.4281 ^{*a}	I(1)	-1.7703 ^{***a}		I(0)
<i>LWY</i>	-1.8067 ^a	-3.2396 ^{*a}	I(1)	-2.9374 ^{**b}		I(0)
<i>LTOT</i>	-4.8397 ^{**b}		I(0)	-3.1256 ^{*b}		I(0)
<i>LTOP</i>	-1.7725 ^b	-6.4112 ^{*a}	I(1)	-1.6378 ^b	-2.7326 ^{*a}	I(1)

Note: ^a Indicates a model with constant but without deterministic trend; ^b is the model with constant and deterministic trend as exogenous lags are selected based on Schwarz info criteria. *, **, *** imply that the series is stationary at 1%, 5% and 10% respectively.

Table 2: Bound Tests for the Existence of Cointegration

Dependent Variable	F-statistic	Conclusion	Critical Value		
				Lower Bound	Upper Bound
<i>LNEXP</i>	3.8135	Cointegration			
<i>LEXR</i>	0.9894	No Cointegration	1%	3.15	4.43
<i>LEXVOL</i>	3.6298	Cointegration	5%	2.45	3.61
<i>LTOP</i>	3.9563	Cointegration	10%	2.12	3.23
<i>LTOT</i>	2.7705	No Cointegration			
<i>LWY</i>	6.09764	Cointegration			

Note: Asymptotic critical value bound are obtained from table CI (iii) case II: unrestricted intercept and no trend for $k = 6$ (Pesaran et al. 2001)

The unit test results as represented in table 1 above reveals the stationarity property of the variables under consideration to be mixture of I(1) and I(0) thus making the use of ARDL estimation technique appropriate in the context of this study. Having determined the stationarity status of the series, the next step is to test for the existence of a long-run cointegration among the dependent variable and the independent variables.

In table 2 above, the results of the bounds co-integration test when non-oil export is the dependent variable indicate that the null hypothesis of no cointegration against its alternative is easily rejected at the 5% significance level. The computed F-statistic of 3.81 is greater than the upper critical bound value of 3.61, thus indicating the existence of a steady-state long-run relationship among the variables.

Following the establishment of long run relationship among non-oil export and its explanatory variables, the study proceeds to estimate the long-run coefficients using OLS regression technique on equation (2). The appropriate lag length for each variable on the ARDL is selected by AIC and SC criteria. Therefore, we estimated an ARDL (1, 0, 0, 0, 1, 0) long-run model. The results are presented in table (3) below where the empirical results on long-run estimate shows that the estimated coefficients are all of the anticipated signs thus validating the theoretical apriority of the study.

Table 3: Estimates of the Long Run Coefficients of ARDL

Variable	Coefficient	Standard Error	T-statistic	Diagnostic Tests Serial Correlation = 2.257 (0.127) Heterescedasticity = 1.235 (0.275) Normality (JB) = 1.611 (0.447)
<i>Const.</i>	-66.1065*	19.5605	-3.3795	
<i>LEXR</i>	0.0212	0.1430	0.1484	
<i>LEXVOL</i>	5.0136***	2.6260	1.9092	
<i>LTOP</i>	0.3426**	0.1397	2.4519	
<i>LTOT</i>	0.2915	0.2549	1.1434	
<i>LWY</i>	5.0961*	1.4322	3.5583	

Note: *, ** and *** denotes 1, 5 and 10 percent level of significance respectively.

In the long-run regression analysis, the export functions of Nigerian non-oil export trade shows that the level of foreign income (*LWY*) and trade openness (*LTOP*) are two important factors that influence Nigerian non-oil export performance in the long-run. For instance, foreign income explained 5 per cent variation in the Nigerian non-oil export trade activities, while the level of trade openness account for 0.3 per cent of the Nigerian non-oil performance in the long-run. Expectedly therefore, the long-run influence of foreign income and trade openness on Nigerian non-oil export between the period of study are found to be positive and significant at 1 per cent and 5 per cent level of significant respectively.

However, the long-run regression result with respect to the effect of exchange rate on non-oil export indicate that both are positively related as suggest by theory, but the former has no significant influence on the latter. With regard to the exchange rate volatility, one would have expected the impact of exchange rate volatility on Nigerian non-oil exports to be negative in the long-run as is the case within the African context where forward exchange markets are non-existent. The long-run regression results however, indicate there is positive relationship between exchange rate volatility and Nigerian non-oil export.

Although it doesn't seems that exchange rate volatility has any clear-cut effect on the Nigerian non-oil export given the fact that, the long-run evidence is weakly based at 10 per cent level of significance. By implication however, Nigeria as an exporter appears to be a risk averse, thus explain why an increase in exchange rate volatility predicts rise in the non-oil export performance of the country. This also implies that income effect in Nigeria outweighs the substitution effect and this as suggested by the portfolio risk theory adopted in this study. The plausibility of this finding therefore hinge on the fact that weak naira, for instance, could, all things being equal, make Nigeria's non-oil exports highly competitive, although at the same time, this could have serious supply side implications by way of increase in the cost of production at industry and firm levels. Omojimite and Akpokodge (2010) and Ettah et al. (2011) are some of the existing studies that have established similar positive relationship between exchange rate volatility and export trade in their respective study.

Table 4: The Error Correction Representation of ARDL Model

Variable	Coefficient	Standard Error	T-statistic	Goodness of Fit and Diagnostic Checking R-square = 0.637 Adjusted R-square = 0.527 F-statistic = 5.778 (0.000) Durbin's Watson = 1.96 Akaike criterion = 0.686 Schwarz criterion = 1.056
<i>Const.</i>	0.0567	0.0942	0.6012	
$\Delta LNEXP_{t-1}$	0.1082	0.1482	0.7304	
$\Delta LEXR_t$	-0.2437	0.1563	-1.5593	
$\Delta LEXVOL_t$	2.8483	2.9876	0.9534	
$\Delta LTOP_t$	0.6309*	0.1550	4.0716	
$\Delta LTOT_{t-1}$	0.2428	0.1895	1.2816	
ΔLWY_{t-1}	1.6344	2.8545	0.5726	
ECM_{t-1}	-0.6886*	0.2262	-3.0447	

Note: *,** and *** denotes 1, 5 and 10 percent level of significance respectively.

The *ECM* results for the short-run situation of the analysis indicate that the error correction estimates (*ECM*) is properly signed and significant at 1 per cent. Furthermore, the result reveals that about 69 per cent of the disequilibrium caused by previous years' shock converged back to long-run equilibrium in the current year. More so, it means that non-oil exports in Nigeria has an automatic adjustment mechanism and thus respond to deviations from equilibrium in a balancing manner. While the Kazerooni and Feshari (2010) reveals evidence of positive relationship between exchange rate and the Iranian non-oil exports, which by implications favour exchange rate devaluation as an effective policy for promoting non-oil exports in Iran. The negative evidence reveal by our findings instead suggests that exchange rate devaluation may not be a catalyst for promoting the flow of non-oil export trade in Nigeria specifically in the short-run. Even when we find the country's non-oil export to be responding positively to exchange rate volatility, the relationship is again found to be insignificant in the short-run. To this end, relevance of exchange rate devaluation as a policy tools for aiding export trade performance of developing nations like Nigeria may not necessarily be felt in the short-run, but in the long-run.

The consistent of trade of openness with respect to its positive influence on the Nigerian non-oil export is evidence that, Nigeria, given its economic potential is still a force in the international trade. The insignificant of the Nigerian terms of trade in respect to her non-oil export is equally and indication that Nigeria economy is truly oil dependent structural constraints. The structure of the Nigerian economy is predominantly primary product oriented (agriculture and crude-oil production). The ratio of non-oil exports to total exports has been consistently very minor. This divergence between the oil exports and the non-oil exports in Nigeria is a serious indication of an economy that is totally resource driven (oil) with a low and declining productive capacity. It is against this background that the country's balance of trade has remain insignificant in determining the performance of non-oil export trade activities of the country as reported in both the long and short runs analysis of this study.

5 Conclusion and Policy Recommendations

The study investigates the effects of real exchange rate and exchange rate volatility on the Nigerian non-oil export performance. Given the relevance of real income of the trading partner in determining the export trade performance, the study also considered influence of foreign income on non-oil export performance. The main conclusion from the theoretical point of view suggests that, Nigeria as an exporter is highly averse to risk. This conclusion follows from the evidence of long run positive relationship that exist between the Nigerian non-oil export and exchange rate volatility as evidently reported in the long run estimate of the study. Thus, concern authorities such as Central Bank of Nigeria (CBN) should, therefore not perceive exchange rate volatility as detrimental to export trade progress, rather as a

catalyst of export trade. Hence, whatever policy instrument(s) put in place should be dynamic in such a way that it can be used to maximize the opportunities that an increase in exchange rate volatility could have on the country's non-oil export trade.

Similarly, the insignificance of real exchange rate in explaining the behaviour of non-oil export performance in Nigeria does not imply outright rejection of devaluation or any other monetary policy that promote depreciation of exchange rate. Rather, the policy objective should be the type that aims to achieve at least exchange rate depreciation while exploring other available export trade policy incentives such as structural reforms that may contribute to increasing productivity and the enhancement of international competitiveness. On the basis of the positive influence of real foreign income on the Nigerian non-oil export as empirically suggested in this study, it is therefore recommended that trade relationship between the country and the rest of the world should be maintained and sustained effectively. Also, trade liberalization policy of the country should be carefully pursued in a way that the country's level of trade openness should favour non-oil export trade performance, while diversification of the country's economy from that of oil dependence is necessary to checkmate the adverse effect of the country's trade balance on non-oil export performance.

References

- Bernardina, A. (2004) 'Price and Income Elasticities of Russian Exports', *The European Journal of Comparative Economics*, 1(2), pp. 175-193.
- Bollersler, T. (1986) 'Generalized Autoregressive Conditional Heteroscedasticity', *Journal of Econometrics*, 31, pp. 307-327.
- Chukuigwe, E. C. and Abili, I. D. (2008) 'An econometric analysis of the impact of monetary and fiscal policies on non-oil exports in Nigeria: 1974-2003', *African Economic and Business Review*, 6(2), pp. 59-72.
- Corden, W. M. (1982) 'Booming sector and Dutch Disease Economics: Survey and Consolation', *Oxford Economic*, 36(3), pp. 359-380.
- Corden, W. and Neary, J. (1984) 'Booming Sector and De-industrialisation in a Small Open Economy', *Economic journal*, 92, pp. 825-848.
- Dada, E. A. and Oyeranti, O.A. (2012) 'Exchange Rate and Macroeconomic Aggregates in Nigeria', *Journal of Economics and Sustainable development*, 3(2), pp. 93-101.
- Danmola, R.A. (2013) 'The Impact of Exchange Rate Volatility on the Macroeconomic Variables in Nigeria', *European Scientific Journal*, 9(7), pp. 152-165.
- De Grauwe, P. (1988) 'Exchange Rate Variability and the Slowdown in Growth of International Trade', *IMF Staff Papers*, 35, pp. 63-84.
- Dickson, O. and Andrew, U. (2013) 'Exchange Rate Volatility Effect on Trade Variations in Nigeria', *Mediterranean Journal of Social Sciences*, 4(6), pp. 401-406.
- Englama, A. O. and Ogunleye T. S. (2010) 'Oil Prices and Exchange Rate Volatility in Nigeria: An Empirical Investigation', *CBN Economic and Financial Review*, 48(3), pp. 31-48.
- Etta, B. E., Akpan, O. D. and Etim, R. S. (2011) 'Effect of price and exchange rate Fluctuations on Agricultural exports in Nigeria', *International Journal of Economic Development Research and Investment*, 2(1), pp. 1-10.
- Hasanov, F. and Samadova, I. (2011) 'The Impact of Real Effective Exchange Rate on the Non-oil Export: The Case of Azerbaijan', *MPRA Working Paper*, 29556.
- Hashim, I. A. and Zarma, A. B. (1996) 'The Impact of Parallel Market on the Stability of Exchange Rate: Evidence from Nigeria', *NDIC Quarterly Paper*, 7(2).

- Ibikunle. J. A and Akhanolu. A (2011) 'An Empirical Investigation of the Link between Exchange Rate Volatility and Trade in Nigeria', *Journal of Emerging Trends in Economics and Management Sciences*, 2(3). pp. 175-183.
- Ifeacho, C., Omoniyi, B. O. and Olufemi O. B. (2014) 'Effects of Non-Oil Export on the Economic Development of Nigeria', *International Journal of Business and Management Invention*, 3(3), pp. 27-32.
- Kazerooni, A. and Feshari, M. (2010) 'The Impact of the Real Exchange Rate Volatility on Non-oil Exports: The Case of Iran', *Journal of International Economic Studies*, 36(1), pp. 9-18.
- Mehare, A. and Edriss, A.K. (2012) 'Evaluation of Effect of Exchange Rate Variability on Export of Ethiopia's Agricultural Product: Case of Oilseeds', *Journal of Economics and Sustainable Development*, 3(11), pp. 41-52.
- Mwang, S.C, Mbatia, L.E. and Nzuma, J.M (2014) 'Effects of Exchange Rate Volatility on French Beans Exports in Kenya', *Journal of Agricultural Economics, Extension and Rural Development*, 1(1), pp. 001-012.
- Nwosa, P. I. and Ogunlowore, A. J. (2013) 'Has Oil Revenue Enhanced Non-Oil Export in Nigeria? A Co-integration Approach', *Journal of Economics and Development Studies*, 1(3), pp. 41-45.
- Olufayo, M.B. and Babafemi, F. (2014) 'Exchange Rate Volatility and Sectoral Export of Nigeria: Case of Oil and Non-Oil Sectors', *Journal of Economics and Sustainable Development*, 5(10), pp. 66-75.
- Omojimite, B. and Akpokodje, G. (2010) 'The Impact of Exchange Rate Reforms on Trade Performances in Nigeria', *Journal of Social Sciences*, 23(1), pp. 53-63.
- Pesaran, M.H., Shin, Y. and Smith, R. J. (2001) 'Bounds Testing Approaches to the Analysis of Level Relationships', *Journal of Applied Econometrics*, 16, pp. 289-326.
- Pilbeam K. (2006) *International Finance*, New York: Palgrave Macmillan Publishers.
- Raheem, I. D. and Busari, A.A (2013) 'Non-Oil Export and economic Growth Nexus in Nigeria: Does Methodology Matter?', *Journal of Asian Development Studies*, 2(2) pp. 21-34.
- Rose, A. (2000) 'One Money, One Market: Estimating the Effect of Common Currency on Trade', *Journal of Economic Policy*, 30, pp. 7-45.
- Zakaria, Z. (2013) 'The Relationship between Export and Exchange Rate Volatility: Empirical Evidence Based on the Trade between Malaysia and Its Major Trading Partners', *Journal of Emerging Issues in Economics, Finance and Banking (JEIEFB)*, 2(2), pp. 668-684.
- Ogun, O. (2000) 'Real Exchange Rate Behaviour and Non-oil Export Growth in Nigeria', *African Journal of Economic Policy (AJEP)*, 11(1), pp. 69-90.