
EXCHANGE RATE VOLATILITY AND IMPORT VOLUME: X-RAYING NIGERIA'S ECONOMIC DEPENDENCE

AGBAEZE, Clifford Chinasa

Department of Banking and Finance

Michael Okpara University of Agriculture, Umudike

cliffagbaeze@gmail.com

ALAMBA, Samuel Chukwuma

Department of Business Administration

Michael Okpara University of Agriculture, Umudike

alamba.chukwuuma@mouau.edu.ng

EJELONU, Henry Onyebuchi

Department of Economics

Michael Okpara University of Agriculture, Umudike

onyebuchihenry.ejelonu@gmail.com

ABSTRACT

The study examined exchange rate volatility and import volume by X-raying Nigeria's economic dependence between 1981 and 2020. The study used autoregressive distributive lag model (ARDL) in analyzing ordinary time series data on non-oil import, trade openness, inflation rate and exchange rate volatility. The findings showed that non-oil imports and trade openness endogenously contribute to Nigeria's import volume more than official exchange rate volatility. The study concluded that, in the face of other internal and external macroeconomic shocks, official exchange rate Volatility (EXRVT) has a minimal economic influence on the amount of imports in Nigeria. The study thus recommends that, government should stimulate import liberalization by lowering tariff rates, gradually remove non-tariff barriers, and prohibit some items to ensure that import volume of consumables decreases, while diversifying the economic base of the Nation to engender increased export volume.

Keywords; Import volume, non-oil import, official exchange rate, trade openness, money supply, inflationary trend

INTRODUCTION

The subject of exchange rate volatility has undergone extensive experimental investigation since the Bretton Woods fixed exchange rate regime collapsed in the early 1970s. A statistical measure of an exchange rate's propensity to significantly increase or decrease over a brief period of time is called exchange rate volatility. It is essential for comprehending how the foreign exchange market moves. Changes in exchange rates (nominal/real) lead to uncertainty in macroeconomic policymaking, investment decisions, and global trade flows (Cote, 2019).

Additionally, exchange rate policy serves to minimize cost of banking services and improves the efficiency of monetary policy in managing inflation and attaining economic growth. Nigeria's economy has historically been characterized by many types of economic crimes such as money laundering, unlawful financial activity, out-of-control inflation, and leakages in the total stock of money issued. To be a 21st-century economic leader, Nigeria must manage an economy that is less reliant on cash and more fluid in terms of payment methods and processes (Alamba & Ejelonu, 2022).

Salako (2019) claims that despite government and monetary authority efforts to stabilize Nigeria's exchange rate, the desired results have not been achieved. Majority of Nigeria's imports are non-oil products, primarily capital goods and raw materials. Non-oil imports averaged 0.02 billion between 1986 and 1990. As a result of rising demand to support the

government's industrialization programme, it steadily increased to 0.53 billion, 1.41 billion, and 3.792.14 billion over the course of 1996–2000, 2001–2005, and 2006–2010, respectively. Between 2011 and 2014, non-oil imports averaged 6,751.28 billion and reached a peak of 8,613.94 billion. Due to the CBN's policies to control demand, significant inflationary pressure, and the Naira's depreciation, which increased the cost of imports, it decreased to \$6,643.09 billion in 2016 (CBN, 2017).

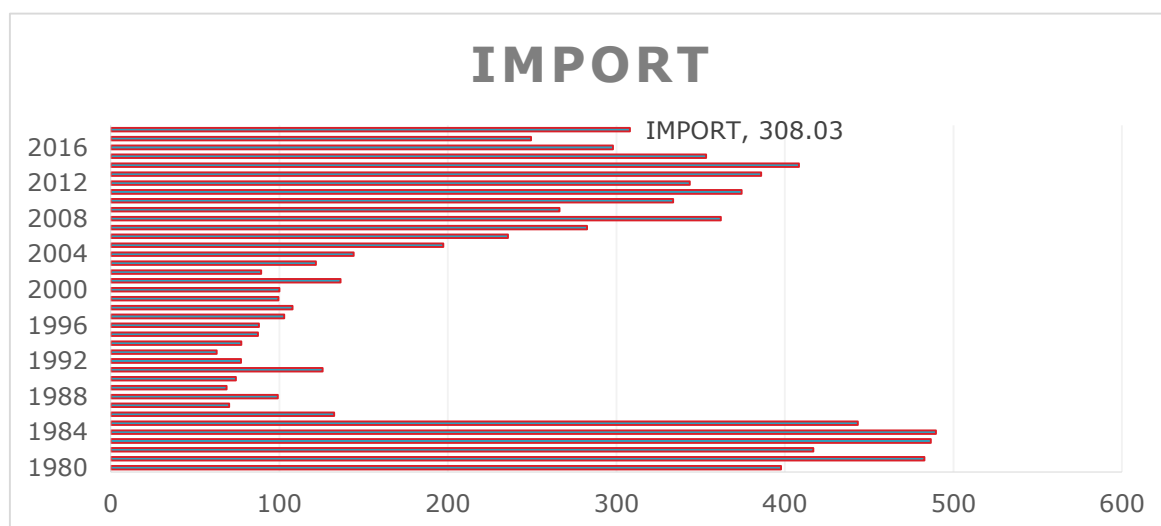


Fig. 1: Trend Movement of import volume in Nigeria 1981-2018
Source: Researcher's Compilation from World Development Indicators (2023).

To determine the precise change in the nation's import volume, fig. 1 show that, from 1970 to 2018, change in macroeconomic factors in Nigeria's economy caused a consistent variation in the value of imports. It is proof that a number of macroeconomic variables, including interest rates, exchange rates, and inflation, have been extremely volatile, leading to an unstationary trend in the nation's import values (Alamba & Ejelonu, 2022).

The continuous devaluation of the naira, on the other hand, is a big impediment to importation. Economists link this unfavorable economic occurrence to an economic resource curse. Others believe that the discovery of oil and gas caused the country to become import dependent. As a result, there is a requirement to justify the explicit consequence of currency fluctuations on import quantities in Nigeria. This study thus investigates the influence of exchange volatility on import volume in Nigeria.

LITERATURE REVIEW

Theoretical Framework

This study is anchored on the theoretical postulations of purchasing power parity (PPP) which measures economic variables in different countries so that irrelevant exchange rate variations do not distort comparisons. The idea originated with the School of Salamanca in the 16th century, and was developed in its modern form by Gustav Cassel in 1916, in *The Present Situation of Foreign Trade*. While Gustav Cassel's use of PPP concept has been traditionally interpreted as his attempt to formulate a positive theory of exchange rate determination, the policy and theoretical context in which Cassel wrote about exchange rates suggests different interpretation. In the years immediately preceding the end of WWI and following it economists and politicians were involved in discussions on possible ways of restoring the gold standard, which would automatically restore the system of fixed exchange rates among participating

nations. The stability of exchange rates was widely believed to be crucial for restoring the international trade and for its further stable and balanced growth (Cassel, 1918).

In neoclassical economic theory, the purchasing power parity theory assumes that the exchange rate between two currencies actually observed in the foreign exchange market is the one that is used in the purchasing power parity comparisons, so that the same amount of goods could actually be purchased in either currency with the same beginning amount of funds. Depending on the particular theory, purchasing power parity is assumed to hold either in the long run or, more strongly, in the short run. Theories that invoke purchasing power parity assume that in some circumstances a fall in either currency's purchasing power (a rise in its price level) would lead to a proportional decrease in that currency's valuation on the foreign exchange market (Krugman & Obstfeld, 2009).

Concept of Exchange Rate Volatility

Exchange rate is the rate at which one country's currency is exchanged for the currency of another country (Mordi, 2006; Dornbusch, 2004) or the price at which exchange between two countries take place (Mankiw, 1997). Exchange rate also indicates the strength of a currency, compared to another country's currency (Oloyede, 2012). It is the quantity of one currency that is needed to purchase a unit of another country's currency, as dictated by forces in a free market.

Exchange rate volatility thus, refers to fluctuations in exchange rate, which often results in persistent depreciation of the home currency. Exchange rate volatility exposes economic agent to greater exchange rate risk. Exchange rate fluctuations may be anticipated or unanticipated. Unanticipated fluctuation has more significant effect as it determines aggregate demand through exports, imports and demand for domestic currency, and determines aggregate supply through cost of imported intermediate goods (Kandil & Mirzaie, 2008). In other words, an unanticipated exchange rate fluctuation boosts demand of exports and reduces imports level as it raises the price of importable goods and services.

Currency rate management in Nigeria dates back to 1960, when the country gained formal independence, despite the fact that the Central Bank of Nigeria (CBN) and the Federal Ministry of Finance (FMF) had been established two years before (Ogiogio, 2013). Exchange rate management in Nigeria is often discussed in two parts: the pre-Structural Adjustment period 1960-1985 and post-Structural Adjustment period 1986-today.

Exchange rate between two countries' currencies is associated with cross border movement of capital. Change in the exchange rate, depreciation or appreciation of a currency, have significant effect on trade flows and profound implications for overall economic growth (Shehu & Youtang, 2012). Domestic currency depreciation leads to improvement in exports, and engenders positive trade balance.

Increase or decrease in real exchange rate indicates strength and weakness of currency in relation to foreign currency and it is a standard for illustrating the competitiveness of domestic industries in the world market (Razazadehkarsalari et al., 2011). When there is deviation of this rate over a period of time from the benchmark, then there is exchange rate volatility. It also indicates that misalignment of exchange rate has occurred where there is multiplicity of markets parallel with the official market. Currency instability and volatility could only exist during flexible exchange rate regime where cross-country exchange rate is determined by the forces of demand and supply.

National monetary authorities regulate currency in fixed and floating exchange rate systems, as well as under alternative regimes as dually managed, because no currency may float.

Exchange rate variability reduce purchasing power and impact investments in imports of essential inputs negatively (Onyeizugbe & Umeagugesi, 2014).

As the apex monetary policy maker, the CBN manages foreign exchange rate volatility. In keeping with this mandate, the CBN ran a dual currency rate in 1996, with the official rate at 22/US \$ and the AFEM rate at 82.5/US \$1. This intervention programme actually commenced in 1995, and was maintained in 1996 to further stabilize the Naira. To improve the stability of Naira, the CBN maintained a ban of the use of bills of collection and open accounts for import financing: the requirement that all imports into the nation be accompanied by correctly completed forms and import duty reports (IDRS). The dual exchange rate system was maintained in 1997, with the official exchange rate at 21.997/US \$1 and the AFEM rate at 85/US \$1. In 1998, the naira exchange rate in the AFEM and parallel markets was 84.4/US \$1 and 88.1/US \$1, respectively.

Nigeria's foreign exchange administration transitioned from the independent foreign exchange market to the inter-bank foreign exchange market in 1999. The CBN interfered in the foreign exchange market 43 times last year, compared to 51 times in 1998. The IFEM rate averaged 92.3/US \$1 for the year, whereas the bureau-de-change rate (BDC) averaged 92.26/US \$1, lowering the parallel market premium to 3.2 percent. In 2000, the naira's exchange rate fell in all divisions of the foreign currency market. At the IFEM, the naira fell by 6.5 percent on average to 101.65 per US dollar. During the first nine months of the year, the rate remained generally constant, but it then declined against the US dollar. The parallel market witnessed a higher amount of depreciation, falling by 10.7 percent (Alamba & Ejelonu, 2022).

During the first half of 2003, the naira had a steady exchange rate, which was upset in the fourth quarter by market exuberance and speculative activity. As a result, the naira declined by 6.5 percent at the Dutch auction system (DAS), which was implemented to replace IFEM, resulting in an average exchange rate of 129.36/US \$1. In the parallel market, the naira fell from 137.79 to 141.99 per US dollar. The premium between the DAS rate and the parallel rate fell from 14.8% in 2002 to 9.8% in 2003. In 2004 and 2005, the naira maintained a reasonably steady exchange rate to the US dollar. The CBN (2005) ascribed this to a mixture of the CBN's non-accommodative monetary policy stance, the federal government's cautious budgetary policy, and a rise in foreign exchange. As a result, the DAS market's end-of-year exchange rate increased by 3.1 percent in nominal terms.

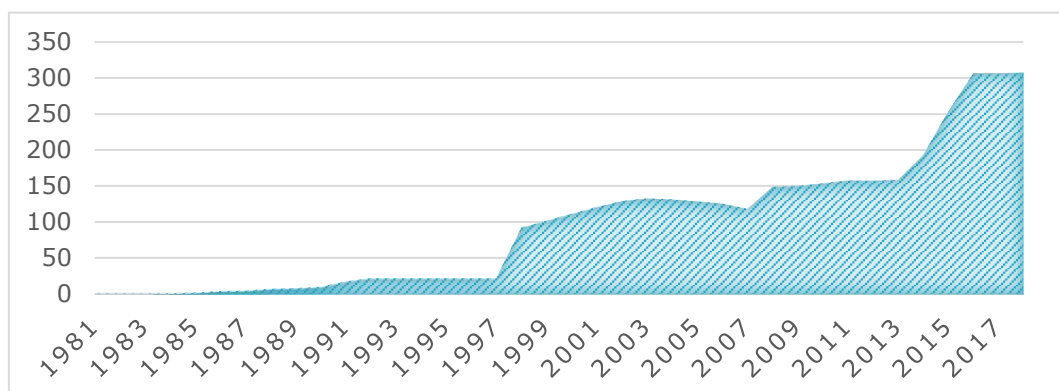


Fig. 2: Trend movement of official exchange rate in Nigeria 1981-2018'

Source: Researchers' compilation from world development indicators (2023).

The visual depiction of the inherent volatility in the country's exchange rate from 1981 to 2017 gives us pertinent information on the volatility of the exchange rate in the economy during this

time, which could be explained by the economy's dependence on imports, a lack of domestic production, and inefficient exchange rate management during the investigation period.

The graph shows a horizontal trend from 1981 to 1991, which was the era of the country's structural adjustment programme, as exchange rate management in the economy was strict through the adoption of exchange rate pegging, when the naira was pegged against the US dollar during this period, resulting in the naira's relative stability. From 1991 until 2017. The country had an increasing trend in exchange movement, which might be attributed to political concerns, mono-product economic activities, and government reliance on oil revenue (Ejelonu & Okafor, 2022).

Concept of Import Volume

Nigeria's import composition has remained constant throughout time, with non-oil imports dominating total imports. Due to government attempts to increase capacity utilization and ongoing infrastructure renovations in the nation, the ratio of capital goods and raw materials in non-oil imports remained dominant. Nigeria's dependence on imported oil has increased recently as a result of the country's declining refining capacity. For instance, the proportion of non-oil imports increased from 19.4% between 2007 and 2011 to 23.8 percent between 2012 and 2015. It made up 25.4% of all imports in 2016 (Okafor et al., 2022).

As was already said, non-oil components, especially capital goods and raw materials, make up the majority of Nigeria's imports. Non-oil imports had an average value of 0.02 billion between 1986 and 1990. As a result of rising demand to support Nigeria's Industrialization program, it steadily increased to 0.53 billion, 1.41 billion, and 3.792.14 billion over the three-decade period from 1996 to 2000, 2001 to 2005, and 2006 to 2010. From 2011 to 2014 and 2015, respectively, non-oil imports averaged 6,751.28 billion and reached an all-time high of 8,613.94 billion. Due to measures instituted by the Central Bank of Nigeria to restrict demand, considerable inflationary pressure, and the Naira's depreciation, which increased the cost of imports, it decreased to \$6,643.09 billion in 2016 (Ejelonu et al., 2022).

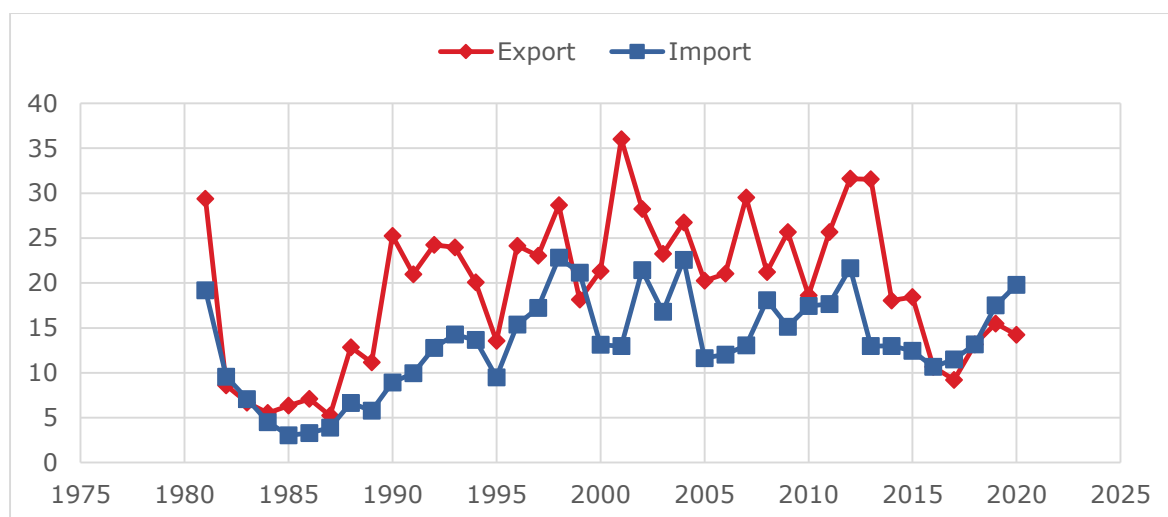


Fig. 2: Import and export variations in Nigeria

Source: Researchers' Compilation from World Development Indicators (2023).

A closer look at the relationship between export and import performance in the Nigerian economy from 1981 through 2020, indicates a close correlation between the productivity capacity of the economy towards export oriented goods and services and import volume consideration. The graphical trend elucidates further that, the Nigerian economy performance from early 1980s were more export oriented than import domiciled, given the graphical

position favoring export to import tendencies in the country. This economic scenario was orchestrated by the economic dependence on agricultural outcome, which was basically the mainstay of the economy during this period, until early 1985, when the trend between export and import came closer and since then the performance of export oriented goods and services in the country in contrast to import has been varying at close range (Alamba & Ejelonu, 2022).

Empirical Review

Studies have reported varying economic implications of exchange rate volatility on import and export performance in Nigeria. Arise (2018) applied the Johansen's co-integration procedure and ECM to detect a negative effect of real exchange rate volatility on export. Quarterly data spanning from 1973 to 1996 on thirteen Less Developed Countries (LDCs) were used in the analysis. The result revealed that an increase in REER resulted in a significant negative effect on export demand in each of the thirteen (13) countries in both short and long-run.

Dickson and Ukavwe (2019) applied the error correction and GARCH model to investigate the impact of exchange rate fluctuations on trade volatility in Nigeria, using annual time series data from 1970 to 2010. The study found that exchange rate volatility does not significantly explain volatility in import, but was found to be statistically significant and positive in accounting for volatility in export. In Chen (2012), the role of real exchange rate on economic growth was assessed. Using data from 28 Chinese provinces for the period 1992–2008, the study found conditional convergence among 8 coastal provinces and also among inland provinces. The results confirm the positive effect of real exchange rate appreciation on economic growth.

Kogid et al. (2019) investigated effects of exchange rates on economic growth in Malaysia, using time series data spanning 1971 to 2009. The results of ARDL bounds test suggest that long-run cointegration exists between nominal and real exchange rates and economic growth with a significant positive coefficient recorded for real exchange rate. In addition, the results of ECM-based ARDL also reveal that both exchange rates have a similar causal effect towards economic growth.

Aman et al. (2019) explored the relationship between exchange rate and economic growth in Pakistan from 1976–201, using simultaneous equation model. The study found that exchange rate has a positive association with economic growth through export promotion incentives, enlarged volume of investment, enhanced FDI inflow and promotion of import substitute industry.

Mukherjee and Pozo (2017) studied impact of exchange rate volatility on volume of bilateral trade using a Gravity model from a sample of 200 countries; and found a negative relationship although at a very high level of volatility, the effect diminishes and eventually becomes statistically indistinguishable from zero. Joseph (2019) and Aliyu (2016) used the GARCH model on annual time series data of trade flows in Nigeria from the year 1970 to 2009; and reported that a negative and statistically insignificant transmission existed between exchange rate volatility and aggregate trade.

In lieu of the foregoing reports on the interface between exchange rate volatility and various indicators of economic activities, we hypothesize that:

H₀: Exchange rate volatility has no significant influence on import volume in Nigeria.

METHODOLOGY

Linear relationship between variables is modelled using the ARDL (autoregressive distributed lag) technique of empirical estimation, where k can be any positive integer between 1 and 200. (Egbulonu, 2005). Due to the retrospective nature of the study, secondary data were used.

Studies that rely on secondary data, and performed after the fact are called ex-post facto studies (Anyanwu, 2000). As a result, the model constructed for this investigation follows the guidelines established by Okolo et al. (2018). To determine the effect that fluctuations in the value of the naira have on Nigeria's manufacturing sector, experts considered import volumes, trade openness, exchange rate volatility, non-oil imports, and inflation rates. The researcher modified the selected model by including import volume in the regression line as a dependent variable. Thus:

$$VIMP(Y) = F(MS, TRAOP, INFLR, EXCHR).....I$$

To empirically analyse and capture the study's objectives and to address the research questions posed, the ARDL model specification was used because it is preferable when dealing with variables that are integrated in different orders, I(0), I(1), or a combination of the two, and is robust when the underlying v has a single long run relationship (bounds test).

There are two steps to the ARDL bounds testing technique. The Bounds test, which compares the F-statistic value to the I(0) and I(1) bounds, is used to test for a long-run relationship, followed by short-run parameter estimation using the dynamic Unrestricted Error Correction Model (UECM) by a simple linear transformation. The UECM blends the short-run dynamics with long-run equilibrium without compromising long-run information. As a result, the ARDL-UECM specification for equation II is as follows:

$$\Delta IMPVD_t = \alpha_0 + \sum_{i=1}^n \phi_1 \Delta IMPVD_{t-i} + \sum_{j=1}^n \phi_1 \Delta EXRV_{t-j} + \sum_{k=1}^n \phi_1 \Delta TOP_GDP_{t-k} + \sum_{l=1}^n \phi_1 \Delta NOIMP_{t-l} + \sum_{m=1}^n \phi_1 \Delta INFLR_{t-m} + \beta_1 IMPVD_{t-1} + \beta_2 EXRV_{t-1} + \beta_3 TOP_GDP_{t-1} + \beta_4 NOIMP_{t-1} + \beta_5 INFLR_{t-1}II$$

Definition of proxy: IMPVD(Y) = Import Volume Index as a proxy for Volume of Imports, TOP_GDP = Trade openness, INFLR = Inflation rate, NOIMP = Non-Oil Import, EXRVt = Exchange Rate Volatility, C₀ = Constant Variable or Intercept, Φ= Short Run Dynamic Coefficients of the Model's Convergence to Equilibrium, Δ = Short Run Dynamic Coefficients. € = Error Term

DATA ANALYSIS AND INTERPRETATION OF RESULTS

Autoregressive Conditional Heteroscedasticity (ARCH) estimate for Official Exchange Rate Volatility

Derivation of Official Exchange Rate Volatility

Dependent Variable: OEXCR				
Method: ML ARCH - Normal distribution (BFGS / Marquardt steps)				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	6.238395	1.027515	6.071343	0.0000
OEXCR(-1)	1.032559	0.008118	127.1978	0.0000
Variance Equation				
C	0.165080	0.809083	0.204034	0.8383
RESID(-1)^2	4.636466	1.425199	3.253207	0.0011

Source: Computed by the Researcher from Eviews 11 software output (2023).

Based on the decision rule that the ARCH effect is present when b1 0 and statistically significant, we conclude that the official exchange rate in Nigeria exhibits the ARCH effect because our RESID(-1) has a positive coefficient of 4.636466 and is statistically significant at the 5% level of significance. We generated the Volatility in Official Exchange Rate for the

period 1981-2020 by extracting the GARCH variance series from the time series for official exchange rate.

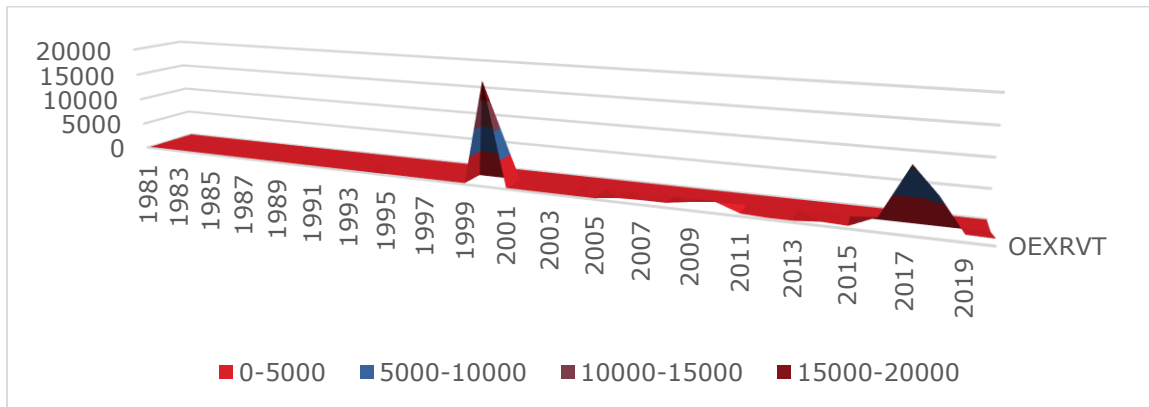


Fig. 3: Movement of official exchange rate volatility.
Source: Researcher’s Compilation (2023).

Dynamic Short Run ARDL Error Correction Model and Discussion

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNIMPVD(-1))	-0.169527	0.075528	-2.244568	0.0403
D(LNIMPVD(-2))	-0.367485	0.078590	-4.675960	0.0003
D(LNNOIMP)	0.221303	0.081038	2.730857	0.0155
D(LNNOIMP(-1))	0.395091	0.079039	4.998663	0.0002
D(TOP_GDP)	-0.005616	0.003223	-1.742385	0.1019
D(TOP_GDP(-1))	-0.022687	0.004058	-5.590926	0.0001
D(TOP_GDP(-2))	0.006559	0.002887	2.271876	0.0382
D(INFLR)	-0.001471	0.002081	-0.706864	0.4905
D(INFLR(-1))	-0.009048	0.002602	-3.477707	0.0034
D(INFLR(-2))	0.006439	0.002730	2.358637	0.0323
D(INFLR(-3))	0.004637	0.002000	2.317744	0.0350
D(LNOEXRVT)	0.016119	0.011473	1.404895	0.1804
D(LNOEXRVT(-1))	0.048127	0.012525	3.842446	0.0016
D(LNOEXRVT(-2))	-0.005976	0.011307	-0.528533	0.6049
D(LNOEXRVT(-3))	0.032680	0.010396	3.143458	0.0067
CointEq(-1)	-0.341962	0.033112	-10.327328	0.0000

Source: Researcher’s Compilation from Eviews 11 (2023).

Import Volume Index (LNIMPVD): In the first and second lag periods, the short run coefficients of LNIMPVD are negatively signed and statistically significant, falling by 0.169527 and 0.367485 units, respectively. Non-Oil Import (LNNOIMP): Analysis of the short run coefficient of LNNOIMP demonstrated a favorable relationship with Import Volume Index (LNIMPVD) in the current and first year periods, significantly increasing LNIMPVD by 0.2213 and 0.397485 units, respectively, at the 5% level of significance. Trade Openness (TOP GDP): In the current year, the short run coefficient of TOP GDP exhibited a negative and negligible connection with LNIMPVD. TOP GDP had a negative and significant connection with LNIMPVD in the first year lag, but was shown to favorably contribute to LNIMPVD in the second year and was significant at the 5% level of significance. Official Exchange Rate Volatility (LNOEXRVT): In the current year, the short run coefficient of Official Exchange Rate Volatility (LNOEXRVT) displayed a positive but negligible connection with LNIMPVD. Official Exchange Rate Volatility exhibited a positive and substantial connection with

LNIMPVD in the first year lag, raising LNIMPVD significantly by 0.048127 units on average. Official Exchange Rate had an insignificant negative association with LNIMPVD in the second year but contributed favorably to Import Volume Index in the third year at a 5% level of significance. CointEq(-1):

Negative and statistically significant error correction coefficients are required for any disequilibrium to be addressed, according to the significance and rule of Error Correction Mechanism (ECM). As a result, the coefficient of CointEq(-1) is -0.341962. The aforementioned conclusion indicated that the ECM (-1) value is -0.34 percent, showing that the equilibrium is convergent in the event of system disequilibrium. The negative sign of the coefficient met one criteria, while the fact that its P-value [0.0000] is less than the 5% [0.05] threshold of significance satisfied the second. According to the coefficient, the pace of adjustment between short run dynamics and long run equilibrium is 34%. As a result, ECM will work adequately to rectify any short-run dynamical aberrations from its long-run equilibrium by 34 percent yearly. This suggests that if IMPVD is out of balance, it returns to equilibrium at a rate of roughly 34% every year in Nigeria.

Static Long Run Estimates of Exchange Rate Volatility and Volume of Imports in Nigeria ARDL Long Run Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNNOIMP	0.268558	0.037669	6.787730	0.0000
TOP_GDP	0.042348	0.011423	3.707250	0.0021
INFLR	-0.024262	0.006117	-3.966165	0.0012
LNOEXRVT	0.035149	0.046883	0.749718	0.4650

Source: Researchers' Compilation from Eviews 11 (2023). (See Appendix)

Non-Oil Imports (LNNOIMP): Long-run LNNOIMP coefficient analysis revealed a positive association with IMPVD, boosting LNIMPVD by 0.268558 units at the 5% level of significance. Official Exchange Rate Volatility (LNEXRVT): Long run coefficient of Exchange Volatility analysis revealed a positive link with LNIMPVD but was statistically insignificant at the 5% level of significance. Trade Openness (TOP GDP): The long run coefficient of Trade Openness Percentage of GDP exhibited a positive connection with LNIMPVD and was statistically significant at the 5% level of significance.

DISCUSSION OF FINDINGS

Exchange Rate Volatility and Nigeria's Import Volume

In the current year, official exchange rate Volatility (LNEXRVT) was shown to have a positive but negligible connection with IMPVD. Official exchange rate volatility exhibited a positive and substantial link with LNIMPVD in the first year lag but was inconsequential in the long term. This outcome is unsurprising given Nigeria's adoption of a floating currency regime, which is extremely volatile, as increased Volatility in exchange rates increases the exchange rate risk that financial market players incur. As a result, businesses devote significant resources to forecasting exchange rate fluctuations in order to limit their exposure to exchange rate risk. Floating exchange rates may exacerbate current economic concerns. If the country is already facing economic challenges such as rising inflation or unemployment, as is the case in Nigeria, floating exchange rates may exacerbate the situation. Dickson et al. (2019) supported this conclusion by utilizing yearly time series data from 1970 to 2010 to study the influence of exchange rate changes on trade volatility s in Nigeria using the error correction and GARCH model. The study's findings revealed that while exchange rate Volatility is not significant in

explaining differences in import, it is statistically significant and positive in accounting for changes in export and in consonance with the findings obtained by (Ejelonu & Okafor 2022).

Non-Oil Imports and Nigeria's Import Volume

Non-Oil Imports (LNNOIMP) were discovered to have a positive association with the Import Volume Index (LNIMPVD) in the current and first year periods, as well as in the long term, at a 5% level of significance. Importing raw materials and finished items is one method of improving profit margins. Importing items has a lot of advantages, including excellent quality, affordable pricing, and advantages associated to international trade. An importer may have a comparative advantage, resulting in reduced prices (Ejelonu & Okafor, 2022)

Also, because of reduced labor costs, low taxes, and so on, the importer may obtain considerably cheaper items from the overseas market. In terms of quality, the importer can have higher quality commodities and generate high-quality completed items, hence increasing business profit margins. In certain nations, the government assists importers in forging commercial links (Nelson & Winter, 2007). One of the primary reasons that businesses all over the world prefer to import items is to increase their profit margins. High taxes, wage minimums, and material prices in certain nations make it more advantageous to import goods from countries with lower fees, salaries, and material costs. Certain items can cost up to 50% less to cultivate, manufacture, or create in another country. This is especially frequent when importing commodities from places where natural resources are plentiful.

Trade Openness and Nigerian Import Volume

In the current year, trade openness was shown to have a negative and negligible connection with LNIMPVD. In the 1st year lag, TOP_GDP had a negative and significant relationship with LNIMPVD but was found to positively contribute to LNIMPVD in the 2nd year and significant at 5% level of significance and also in the long run. Trade openness is a critical facilitator of economic growth, job creation, and poverty alleviation. Trade opens up new markets for domestic enterprises, boosts productivity, and fosters innovation via competition. It contributes to poverty reduction, stronger wages, geopolitical benefits derived from deeper economic integration, and even on the personal level—increased individual choice and freedom. No contemporary country has prospered successfully without exploiting economic openness to international commerce, investment, and people migration. This is especially relevant for smaller countries as rarely has any country with less than 10 million people reached high income status with less than 50 percent of exports in GDP.

CONCLUSION AND RECOMMENDATIONS

The ARDL model was used in this work to analyze the Role of Exchange Rate Volatility on Import Volume: X-raying Nigeria's Economic Dependence from 1981 to 2020. According to our findings, non-oil imports and trade openness endogenously contribute to Nigeria's import volume more than official exchange rate Volatility. The study's conclusion is that, in the face of other internal and external macroeconomic shocks, official exchange rate volatility has a minimal economic influence on the amount of imports in Nigeria. Nonetheless, in order to attain high and sustained growth, we provide several policy ideas that, if properly implemented, will undoubtedly encourage stronger production growth.

Hence, the study recommends that Nigeria's monetary policy regulators should:

- a) Do all that is economically feasible to increase the value of the Naira on the FOREX market. This should not be confused with dumping billions of dollars into the FOREX market, which only generates a transient economic scenario. To stabilize Nigeria's

economy, efforts should be taken to guarantee exchange rate stability. Furthermore, the government should implement steps to mitigate the impact of volatility s in international commerce caused by variable crude oil prices on Nigeria's economic situation. This may be accomplished by lowering the economy's reliance on crude oil exports by broadening the economy's productive base through non-oil exports.

- b) Maintain existing trade liberalization policy, and supplemented with regulatory systems to ensure zero tolerance for corrupt behaviors (corruption proof). This will remove or at the very least lower the pace at which false, inferior, and sub-standard items, which have no worth in their respective places of manufacture, are swapped for our hard-earned foreign currency. Economic saboteurs should face harsh penalties under such programs.
- c) Stimulate import liberalization by lowering tariffs, gradually remove non-tariff barriers, and outright prohibit some items, ensuring that our imports, following trade liberalization, are focused mostly on intermediate and capital goods. Consumable imports should be reduced to zero, resulting in a proportionate rise in competitive import manufacturing. As a result, a larger proportion of intermediate and capital goods in total imports will result in increased production of marketable products, which may lead to a rise in exports. This, by inference, would boost the country's export level, resulting in economic development.

REFERENCE

- Alamba, C. S., & Ejelonu H. O. (2022). *Assessing the relevance of public spending on poverty alleviation in Nigeria*. Retrieved from <http://www.managementjournal.ksu.com.ng/vol8no3nov2022>
- Alamba, C. S., & Ejelonu H. O. (2022). *Foreign direct investment in Nigeria: Validating the effect of macroeconomic instability*. Retrieved from <http://managementjournal.ksu.com.ng/vol8no3nov2022>
- Aman, Q., Ullah, I., Khan, M. I., & Khan, S. (2019). Linkages between exchange rate and economic growth in Pakistan: An econometric approach. *European Journal of Law and Economics*, 1-8.
- Anyanwu, A. (2000). Exchange rate volatility and export trade in Nigeria: An empirical investigation. *Applied Financial Economics*, 20(13), 1071-1084.
- Arise, A. C., Osang, T., & Slottje, D. J. (2018). Exchange rate volatility and foreign trade: Evidence from Thirteen least developed countries. *Journal of Business and Economic Statistics*, 12(1), 10–17.
- Cote (2019). *Determinants of foreign direct investment*. NBER working paper 16704.
- Egbulonu, H. O. (2005). Exchange rate volatility and non-oil exports in Nigeria: 1986-2008. *International Business and Management*, 9(2), 70-79
- Ejelonu, H. O., & Okafor, S. (2022). *Relevance of cross border trade on activity sector employment in Nigeria*. Retrieved from <http://dx.doi.org/10.2139/ssrn.4211912>
- Ejelonu, H. O., & Okafor, S. (2022). Financial Inclusion and micro, small and medium enterprises (MSMES) development in Nigeria. Retrieved from <http://www.dx.doi.org/10.2139/ssrn.4119384>
- Johansen, S. (1988), Statistical analysis of co-integration vectors. *Journal of Economics Dynamics and Control*, 12, 231-254.

- Johansen, S. & Juselius, K. (1990). Maximum likelihood estimation and inference on cointegration with application to the demand for money. *Oxford Bulletin of Economics and Statistics*, 52(2), 169-210.
- Kandil, M. (2004). Exchange rate fluctuations and economic activity in developing countries: Theory and evidence. *Journal of Economic Development*.
- Krugman, K., & Obstfeld, O. (2009). Measuring the effects of monetary policy innovations in Nigeria. *African Journal of Accounting, Economics, Finance and Banking Research*, 5, 141-153.
- Okafor, S., Ejelonu, H. O., Onyekwere, C., & Neubacher, N. (2022). *The implications of international remittance inflows on educational outcome in Nigeria*. Retrieved from <http://www.dx.doi.org/10.2139/ssrn.4211895>
- Okpoko, O. (2017). The effect of exchange rate fluctuation on economic activities of Iran. *International Review of Management and Business Research*, 5(2).
- Salako, S. (2019). Determinants of foreign direct investment: A sectoral and institutional approach. IMF working paper WP/10/187.
- Shehu, A. A., & Youtang, Z. (2012). Exchange rate volatility, trade flows and economic growth in a small open economy. *International Review of Business Research*, 8(2), 118–131.

APPENDIX

YEAR	NOIMP	TOP_GDP	IMPVD	OEXCR	INFLR	OEXRVT
1981	13,062.60	18.17173	482.7199	0.617708	20.81282	NA
1982	10,748.20	13.77983	416.9403	0.673461	7.697747	176.1704
1983	9,033.40	10.04497	486.6177	0.72441	23.21233	178.5489
1984	7,143.30	9.380541	489.5706	0.766527	17.82053	178.9299
1985	7,507.90	10.39198	443.208	0.893774	7.435345	179.5344
1986	5,621.80	9.135846	132.4544	1.754523	5.717151	174.7361
1987	16,843.60	19.49534	70.1346	4.016037	11.29032	135.7022
1988	20,400.00	16.94061	99.13212	4.536967	54.51122	75.61509
1989	29,143.00	34.18262	68.5865	7.364735	50.46669	158.7399
1990	42,904.40	30.92474	74.1637	8.038285	7.3644	58.87105
1991	86,393.30	37.0216	125.6569	9.909492	13.00697	156.3848
1992	127,817.50	38.22739	77.14301	17.29843	44.58884	99.50937
1993	129,484.60	33.71975	62.86181	22.0654	57.16525	3.342993
1994	125,788.20	23.05924	77.37598	21.996	57.03171	19.3588
1995	622,397.90	39.52838	87.29461	21.89526	72.8355	229.0566
1996	423,775.40	40.25773	87.88311	21.88443	29.26829	230.9553
1997	707,977.40	51.46101	102.7773	21.88605	8.529874	224.8989
1998	695,634.70	39.27861	107.7741	21.886	9.996378	224.0726
1999	670,346.80	34.45783	99.46964	92.3381	6.618373	224.1839
2000	789,027.60	48.9956	100	101.6973	6.933292	18696.2
2001	1,149,082.10	49.6805	136.3052	111.2313	18.87365	0.225786
2002	1,245,717.18	40.03517	89.25432	120.5782	12.87658	0.16621
2003	1,776,089.40	49.33496	121.7123	129.2224	14.03178	1.38543
2004	1,782,239.90	31.89587	144.1551	132.888	14.99803	10.87826
2005	2,109,513.27	33.05946	197.1938	131.2743	17.86349	213.2983
2006	2,531,431.31	42.56657	235.547	128.6517	8.225222	687.8548
2007	3,342,983.73	39.33693	282.5091	125.8081	5.388008	800.1089
2008	4,813,610.95	40.79684	362.0389	118.5667	11.58108	816.6983
2009	4,901,931.03	36.05871	265.8145	148.88	12.55496	1432.44
2010	7,083,452.71	43.32076	333.4065	150.2975	13.7202	1894.755
2011	8,824,653.57	53.27796	374.1646	153.8625	10.84003	433.558
2012	7,544,556.79	44.53237	343.3755	157.5	12.21778	265.6392
2013	8,100,046.26	31.04886	385.7049	157.3117	8.475827	268.7053
2014	9,229,825.34	30.88519	408.0382	158.5526	8.062486	619.1877
2015	9,970,610.40	21.33265	352.3233	192.4403	9.009387	474.9392
2016	7,970,820.07	20.72252	295.4848	253.492	15.67534	2344.667
2017	11,093,535.13	26.3476	247.1312	305.7901	16.52354	10927.73
2018	13,250,763.69	33.00783	313.9471	306.0837	12.09473	6627.147
2019	23,766,843.00	34.02388	414.817	306.921	11.39679	1172.451
2020	20,656,225.43	25.39979	364.3821	358.8108	13.25	1095.018

Source: World Development Indicators and CBN Statistical Bulletin 2020