INTERNATIONAL JOUNAL OF: FINANCIAL RES. AND MANAGEMENT SCIENCE

TIMBOU-AFRICA ACADEMIC PUBLICATIONS
INTERNATIONAL JOURNAL, AUGUST, 2022 EDITIONS
VOL. 10 NO. 7 ISSN: 2773-1040

THE IMPACT OF EXCHANGE RATE STABILITY ON EXPORT PERFORMANCE IN NIGERIA

ADAMU SALEH

Dept. of General Studies, Federal Polytechnic, Bauchi

ABSTRACT

This study sought to investigate the relationship between exchange rate stability and export performance in Nigeria. Using time series data which spanned from 1980-2017. The main objective of the study was to examine the long-run relationship between exchange rate stability on export performance in Nigeria. This relationship was examined using ARDL approach to co-integration. The ARDL bounds testing approach reveals that the variable were strongly co-integrated. The study found that almost all the explanatory variables were

Introduction

The speedy nature of globalization in the contemporary times has made all countries of the world to live interdependently on one another. Thus, no country of the world is entirely an island of itself without having anything to do with other countries. In this case, globalization of trade has increasingly rendered the world borderless. This scenario has widened the consumption choice bundles of consumers in various countries because more goods and services are available to them as a result of international trade. In this view, trade, unarguably is one of the vital sources of growth and development. The state of demand for Nigeria's exportable products in the international market in particular is an injection into the economy as financial resources are received into the domestic economy; hence it is responsible for increasing the level of external reserve of the country (Bede, 2016).

The Nigerian economy ambitiously aspires to become one of the twenty largest economies in the world by 2020 and the 12th largest economy by 2050 (CBN, 2009). One of the surest ways to achieve the afore-stated goal is to pursue vigorously rapid and sustainable economic growth and development via well managed exchange rate policy. In recognition of this role, Rodrick (2007) argues that poorly managed exchange rates can be disastrous for economic growth.

The exchange rate thus, serves as an international price for determining the competitiveness of a country. Similarly, Takaendesa (2006) explains that exchange rate plays a crucial role in guiding the broad allocation of production and spending in the domestic economy between foreign and domestic goods. Exchange rate is among the most important prices in an open economy. It influences the flow of

significant in determining the export performance except GDPP. The study therefore concluded that Stern foreign exchange control policies should be put in place in order to help in appropriate determination of the value of the exchange rate. This will in the long run help to strengthen the value of the Naira and that the economy high dependence on import needs to be discouraged by the impositions of stern tariffs. This will helped in restoring the domestic industries and increased the productive capacity of the economy, the balance of payment and a favorable exchange for the country.

Keywords: *Exchange rate, economic growth, currency, export performance.*

goods, services, and capital in a country, and exerts strong pressure on the balance of payments, inflation and other macroeconomic variables.

Objectives of the Study

The objective of this study is to assess the impact of exchange rate on gross domestic product (GDP) and hence how this effect the growth and development of the Nigerian economy identifying the impacts of the unstable exchange rate of the naira on these major macro-economic variables would however, depend on the conditions prevailing in the economy at a given time. Specifically, the study seeks to:

i. Examine the long-run relationship between exchange rate and economic growth in Nigeria.
ii. Estimate the impact of exchange rate on export performance in Nigeria.
iii. To suggest ways of improving exchange rate and export performance in Nigeria.

LITERATURE REVIEW

Conceptual Review

Exchange rate is the price of one country's currency in relation to another country, which is a key variable for healthy economic management in every nation (Oloyede, 2002; Fapetu and Oloyede, 2014 cited in Stephen, 2017). Exchange rate is the price of the currency of one country expressed in terms of the currency of another. For example, the Nigeria Naira has exchange rate against the U.S. dollar and many other currencies. It may be expressed as nominal exchange rate or real exchange rate (Okorontah & Odoemena, 2016). e.g. Naira in relation to dollar (N/S), while the real exchange rate is a real concept that measures the relative price or value of different countries products.

An exchange rate system can also be fixed or allowed to fluctuate. A fixed exchange rate is a system in which a country's exchange rate remains constant or stays within some small margin of fluctuation around a constant par value. On the other hand, the floating exchange rate (which is our concern in this study) is an exchange rate system with no government or central bank action to keep it stable (Black 2003 cited in Okorontah & Odoemena, 2016).

Exchange Rate Regime in Nigeria

In Nigeria, exchange rate management has undergone significant changes over the past five decades. In the 1960s, Nigeria operated a fixed dollar in addition to restrictions on imports through strict administrative controls on foreign exchange. In 1978, the Nigerian monetary authorities pegged the naira to a basket of 12 currencies of her exchange rate regime fixed at par with the British pound and later the American major trading partners. The sharp fall in international oil price and consequent decline in foreign exchange receipts in the early 1980s were such that the economy could not meet its international financial commitments, and to mitigate the challenges, the stabilization act of 1982 was implemented which led to accelerated depreciation of the naira. Failure of the Stabilization Act to address the economic problems (unpaid trade bills and accumulation of payment arrears consequent on the sharp fall in oil price) led to the adoption of the Structural Adjustment Programme (SAP) in 1986, aimed amongst others at the realization of a viable and realistic exchange rate, through a flexible arrangement. The adoption of the flexible exchange rate regime produced a significant volatility and uncertainty in the exchange rate of the naira against US dollar (Owuru & Farayibi, 2016).

Export Performance in Nigeria

Exportation of goods and services is required by any economy to enhance its revenue and usher in economic growth and development. It is therefore crucial for economic progress and this has informed the idea of export-led growth (Owuru & Farayibi, 2016). The performance of export is seen as catalysts for overall development and increases the earnings of the country thereby creating an avenue for growth by raising the national income of the country. One of the major macroeconomic objectives of an economy is to attain full employment and export stands as a driver to its achievement because higher demand for exports will require more production which will in turn lead to creation of more employment opportunities in the country. Export commodities in Nigeria can be classified into oil and non-oil exports. Prior to independence, agriculture was the major component of exports and contributed immensely to Nigerian export earnings. But the advent of crude oil production especially; the oil boom of 1970s brought with it attendant fundamental changes in the Nigerian economy such that attention was diverted only to the oil sector while the agricultural sector was neglected (Owuru&Farayibi, 2016).

Empirical Literature

Increase in output production and export lead economy is by no doubt a catalyst to the growth of the Country. Trade enhances economic growth through job creation, investments in new machinery and equipment. According to Wondemu and Potts (2015), the debate on the direction of causality between exports and economic growth is contested. However, there is a consensus that exports is of paramount importance to the growth of the country, more especial developing economies. There are two theoretical frameworks discussed in the paper that explains the interaction between exchange rate and exports. The first framework postulate that a deprecation of domestic currency will have expansionary effect on trade. This is because a depreciated currency makes home exports relatively cheaper to foreign buyers, resulting in foreign buyers switching

expenditure from their own goods and services to the cheaper imports (Appleyard, Field and Cobb, 2010:

Theoretical Framework of the study

The Mint Parity Theory

The earliest theory of foreign exchange has been the mint parity theory. This theory was applicable for those countries which had the same metallic standard (gold or silver). Under the gold standard, countries had their standard currency unit either of gold or it was freely convertible into gold of a given purity.

The value of currency unit under gold standard was defined in terms of weight of gold of a specified purity contained in it. The central bank of the country was always willing to buy and sell gold up to an unlimited extent at the given price. The price at which the standard currency unit of the country was convertible into gold was called as the mint price.

According to the mint parity theory, a country is said to be on the gold standard if the following conditions are satisfied:

(a) The standard monetary unit is defined in terms of gold, i.e., either it is made of gold of given purity and weight, or it is convertible into gold at fixed rate.

(b) The government buys and sells gold in unlimited quantity at officially fixed price,

(c) There are no restrictions on the export and import of gold.

This rate of exchange determined on weight-to-weight basis of the metallic contents of currencies of the two countries was called mint par of exchange or the mint parity.

The Purchasing Power Parity Theory

The purchasing power parity (PPP) is one of the earliest and perhaps most theory of exchange rate between two currencies would be equal to the relative national price level. This theory is associated with Wheatley and Ricardo, yet the credit for developing it in a systematic way has gone to the Swedish economist Gustav Cassel 1920. The theory assumes the absence of the trade barriers and transactions cost and existence of the purchasing power parity (PPP). The purchasing power parity (PPP) doctrine equates the equilibrium exchange rate of the ratio of domestic to foreign price level.

$$E - \frac{pd}{PE}$$

Where,

E = is the nominal exchange rate defined interims of domestic currency per unit of foreign currency. Pd is the foreign price, PE level with perfect efficiency and absence of trade barriers transactions cost and the purchasing power parity. The PPP doctrine would be tantamount to the application of the law of one price if all the countries produced exactly the same tradable goods. It is important to know that the PPP is a major component of the monetary approach.

The purchasing power parity (PPP) states that the equilibrium rate of exchange is determined by the equality of the purchasing power of two inconvertible paper currencies.

METHODOLOGY

Introduction

This section specifies the model, sources of data and method of data analysis used in this study. It also contains the definitions of variables, the hypothesis to be tested and the justification for the choice of the estimation technique. It also aimed to ensure that the estimation of the coefficients of economic relationships is reliable and is useful for prediction, forecast and decision about economic variables.

Data Collection and Data Source

The data used for this study is a secondary data. All the data for the study are obtained from various publications of Central Bank statistical bulletin (2018 version) and World development Indicators (WDI 2018) and it spans the period 1980 to 2018.

Model Specification

Generally, specification of economic model is based on economic theory and on the available data relating to the topic of study Chindo et al. (2018). This study takes its root from the unbalanced growth theory of Hirschman, Streeten, Fleming and Singer (1969). The variables to be used are Export (EXP) as the dependent variable and Unemployment rate and Population as the independent variables.

Mathematical Presentation of the Model

This could be symbolically expressed as:

EXP = F (EXC, GDP, RR, FDI) …… (1)

Where:

EXP = Export

EXC = Exchange Rate

GDPC = Gross Domestic Product per capita (GDP per capita)

RR = Real Interest Rate

FDI = Foreign Direct Investment

ECONOMETRIC PRESENTATION OF THE MODEL

Economic relationship is not assumed to be exact. Other variables apart from the ones stated above exist which can influence the dependent variable but are omitted in the model. These factors omitted in the model are considered by introducing the error term or random variable (disturbance term) in the model to capture all kind of disturbance that might distort the structure of the model.

This can be written as:

$EXP = \beta_0 + \beta_1 EXC + \beta_2 GDPC + \beta_3 RR + \beta_4 FDI + \mu_t$ …… (2)

Where:

β_0 = Constant term

β_1-β_5 = Coefficients of the explanatory variables (Coefficients of the Regression Line)

μ_t = Error term

TIJFRMS
ISSN: 2773-1040

We have further converted equation (2) into natural logarithm to enable efficient estimation and to contribute directly in reducing or solving the problem of heteroscedasticity and autocorrelation (Gujirati, 2004) Logarithmic transformations are also a convenient means of transforming a highly skewed variable into one that is more approximately normal (Kenneth 2011).

The modified version of the model adopted for this study takes the form;

$$lnEXP= \beta_o+\beta_1 lnGDPC_t+\beta_2 lnEXC_t+\beta_3 lnRIR_t+\beta_4 lnFDI_t +\mu \ldots\ldots\ldots\ldots\ldots\ldots (3)$$

Where;

EXP = Export

$lnGDPC_t$ = Natural Logarithm of Real Gross Domestic Product per capita

$lnEXC_t$= Natural Logarithm of Exchange rate

$lnRR_t$ = Natural Logarithm of Real Interest Rate

$lnFDI_t$ = Natural Logarithm of Foreign Direct Investment

β_o= Constant

β_1-β_6 = coefficients of the explanatory variables

μ_t=Error term

METHOD OF DATA ANALYSIS

UNIT ROOT TEST

It is used to determine the order of integration of a variable that is how many times it has to be differenced or not to become stationary. It is to check for the presence of a unit roots in the variable i.e. whether the variable is stationary or not. This test is carried out using the Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) technique of estimation. A series is said to be integrated of order (d) donated by I(d) if it becomes stationary after differencing (d) times and thus contains (d) unit roots (Gujarati,2004).

Thus, the ADF unit root test posits a null hypothesis = 0 versus an alternative hypothesis <0, where the ADF statistics was compared with the observed Mackinnon critical values.

Decision Rule

Ho: $\delta = 0$, $\rho = 1$ (presence of unit root, the data is non-stationary)

H_1: $\delta < 0$, $\rho \neq 1$ (the data is stationary and does not need to be differenced)

If the ADF test statistics value is greater than the critical value in absolute terms at 5% level of significance, we reject Ho and accept H1. This means that there is no unit root and the data is stationary.

CO-INTEGRATION TEST

After the test for the order of integration, the next step is to test for co-integration. This test is used to check if long run relationship exists among the variables in the model (Banerjee& Carrion-i-Silvestre, 2015), this will be carried out using the ARDL Bound technique.

i. Decision Rule

Ho: $\alpha_1 = \alpha_2 = \alpha_3 = \alpha_4 = \alpha_5 = 0$ (there is no co-integration among the variables)

H_1: $\alpha_1 \neq \alpha_2 \neq \alpha_3 \neq \alpha_4 \neq \alpha_5 \neq 0$ (there is co-integration among the variables)

The computed F-statistic is then compared with the non-standard critical bounds values as reported in Pesaran et al. (2001). The lower and upper bounds critical values assumes that the

regressors are purely I(0), purely I(1), respectively. If the F-statistic is above the upper critical value, the null hypothesis of no long-run relationship can be rejected and conclude that there is co-integration among the variables of study. Conversely, if the test statistic falls below the lower critical value, the null hypothesis cannot be rejected.

LAG LENGTH FOR THE ARDL MODEL

If a long run relationship exists between the underlying variables, while the hypothesis of no long run relations between the variables in the other equations cannot be rejected, then ARDL approach to cointegration can be applied. The issue of finding the appropriate lag length for each of the underlying variables in the ARDL model is very important because we want to have Gaussian error terms (i.e. standard normal error terms that do not suffer from non-normality, autocorrelation, heteroskedasticity etc.). In order to select the appropriate model of the long run underlying equation, it is necessary to determine the optimum lag length(k) by using proper model order selection criteria such as; the Akaike Information Criterion(AIC), Schwarz Bayesian Criterion (SBC) or Hannan-Quinn Criterion (HQC).

Conclusion

Findings from the study shows clearly that exchange rate was a good determinant of export performance during the study periods, i.e. the rate at which Naira is exchange for dollar has appreciate and has contributed positively to our economy.

In general, it is imperative for effective exchange rate control in the country, the monetary authority and fiscal policy makers must be well-coordinated to prevent unnecessary monetary expansion. Though exchange rate is a determining factor for economic growth in simple economic theory, but it influences the Nigerian economy positively. It is worthy to sustain exchange rate stability as a prerequisite for stable domestic prices. Diversification of the economy from import to export based economy is fundamental for economic growth and hence development.

Recommendation

Based on the conclusion drawn above, the following recommendations are made which in the opinion of the researcher will help the authority to curtail the unfavorable exchange rate fluctuation in the country.

1. Stern foreign exchange control policies should be put in place in order to help in appropriate determination of the value of the exchange rate. This will in the long run help to strengthen the value of the Naira.
2. There is need for the authority to maintain a stable exchange rate. Hence with stable exchange rate, it will help to curtail inflation, maintain a favorable balance of trade, boost export of domestic commodities and above all, maintains steady growth of the economy.

References

Adeniran, J.O, Yusuf S.A and Adeyemi, Olatoke A. (2014). The Impact of Exchange Rate Fluctuation on the Nigerian Economic Growth: *an Empirical Investigation. International Journal of Academic Research in Business and Social Sciences.* 4(8), 2222-6990. http://dx.doi.org/10.6007/IJARBSS/v4-i8/1091.

Adom, Philip Kofi, and William Bekoe. (2012). Conditional dynamic forecast of electrical energy consumption requirements in Ghana by 2020: A comparison of ARDL and PAM. Energy 44: 367–80.

Ajakaiye, O. (2001). Impact of Exchange Rate Depreciation on Sectorial Prices. *NISER Monograph Series*, (1986 – 2000). https://www.researchgate.net/deref/http%3A%2F%2Fsaudijournals.com%2F

Alalade S. Yimka, Adekunle O. A., & Joseph O. Anthony. (2014). Foreign Exchange Rate Regimes and Non-Oil Export Performance in Nigeria. *International Journal of Business and Behavioral Sciences.* 4(01).

Alam, Shaista, and Qazi Masood Ahmad. (2011). Exchange rate volatility and Pakistan's bilateral imports from major sources: An application of ARDL approach. International Journal of Economics and Finance 3: 245–54.

Asekome M. Ovenseri-Ogbomo. Friday O. (2018). An Empirical Investigation of Impact of Exchange Rate Management on the Growth of Nigerian Economy. *International Journal of Economics, Business and Management Research.* 2(01), 2456-7760.

Bagella, Michele, Leonardo Becchetti, and Iftekhar Hasan. (2006). Real effective exchange rate volatility and growth: A framework to measure advantages of flexibility vs. costs of volatility. Journal of Banking 30: 1149–69.

Bahmani-Oskooee, Mohsen, and Scott. W. Hegerty. (2007). Exchange rate volatility and trade flows: A review article. Journal of Economic Studies 34: 211–55.

Bakare A.S. (2011). The Consequences of Foreign Exchange Rate Reforms on the Performances of Private Domestic Investment in Nigeria. *International Journal of Economics and Management Sciences.* 1(01); 25-31.

Baron, David P. 1976a. Flexible exchange rates, forward markets, and the level of trade. The American Economic

Brown, Robert L., James Durbin, and James M. Evans. 1975. Techniques for testing the constancy of regression relationships over time. *Journal of the Royal Statistical Society Series B 37: 149–92.*

Canzoneri, Matthew B., Peter B. Clark, and Thomas C. Glaessner. 1984. The Effects of Exchange Rate Variability on Output and Employment. *In International Finance Discussion Papers 240*. Washington: Board of Governors of the Federal Reserve System.

Central Bank of Nigeria (2015). Guidelines for the Operations of the Autonomous Foreign Exchange Market, Bullion, Vol. 20(1) January/March.

Chowdhury, Abdur R. (1993). Does exchange rate volatility depress trade flows? Evidence from error-correction models. The Review of Economics Statistics 75: 700–6.

Clark, Peter B. (1973). Uncertainty, exchange risk, and the level of international trade. Economic Inquiry 11: 302–13.

De Grauwe, Paul. (1988). Exchange rate variability and the slowdown in growth of international trade. IMF Economic Review 35: 63–84.

De Vita, Glauco, and Andrew Abbott. 2004. The impact of exchange rate volatility on UK exports to EU countries. Scottish Journal of Political Economy 51: 62–81.

Deaton, Angus, and John Muellbauer. 1980. Economics and Consumer Behavior. Cambridge: Cambridge University Press.Journal of Asian Economics 10: 465–74.

Dickey, D. A., & Fuller, W. A. (1981). Likelihood ratio statistics for autoregressive time series with a unit root. Econometrica, 49, 1057-1072. https://www.jstor.org/stable/1912517?seq.

Dullien, Sebastian. 2005. China's Changing Competitive Position: Lessons from a Unit-Labor-Cost-Based REER.