International Journal of Humanities and Social Science Research
ISSN: 2455-2070; Impact Factor: RJIF 5.22
Received: 26-12-2020; Accepted: 25-01-2021; Published: 16-02-2021
www.socialsciencejournal.in
Volume 7; Issue 1; 2021; Page No. 115-121

The causality effect between exchange rate and the Nigeria's balance of payments

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Abstract
The study investigates the association between causality effect of exchange rate and the Nigeria's Balance of Payment. The main motivation is to empirically determine if there is exchange rate Granger causes Balance of deficits or surplus. The study used annual data from 1980-2016 and the variables are Balance of Payments, exchange rate, money supply, net exports, interest rate and trade openness. We engaged Unit Root test for stationarity for long-run, Co-integration test and ECM test to determine the speed of adjustment from the short to its long run and undertook a trend analysis of the data in the model. Additionally, post diagnostic test were carried out to estimate the stability of the variables. The linear Ordinary least square result indicates that R^2 is 17 per cent and that given the F***** value of 2.694262**,** the entire model is internally consistent. There no auto-correlation in the model since DW is 1.876067 close to two. The results shows variables are integrated of order 1(1) and established a long run link among the variables. The ECM value of -63 per cent is able to correct, adjust and tie the short run dynamics with the long run equilibrium. The study concludes that causality runs from exchange rate to BOP and vice-versa within the economy.

Keywords: causality effect, exchange rate, balance of payments

Introduction

Background to the study

A country's exchange rate and balance of payments (BOPs) is usually regarded as the summation of pointers by which economic strength can be stately. Exchange rate performs a crucial role in the global economic trades because no nation can persist in autarky (close economy) due to fluctuating factor and resource endowment of dissimilar economies. The relying of Nigerian economy on oil sector as a foremost source of national revenue while abandoning agricultural sector triggered the instability and poor value of Naira to other countries' currencies like the dollar, pounds sterling, euro etc. This in turn reinvigorated imports and lowered non-oil export (agricultural products), and over reliance of Nigerian economy on imported inputs over exported output caused adverse BOPs and devalued Naira paralleled with other external currencies, for instance the Nigeria Naira to dollars is $1 to ₦310.35, pounds-sterling is £1 to ₦408.48 (Adekoya and Fagbohun, 2016; Dada, 2017; Central Bank of Nigeria, 2016) [2, 6, 5]. Exchange rate is a vital contributing factor of the BOPs position of any country. If it is cautiously operated, it can assist as nominal anchor for price stability. A number of efforts by successive governments in Nigeria to influence the drive of progress in order to bring about an enhanced quality of life for the people by the institution of several exchange rates management policies have been made. Exchange rate policies announced in Nigeria over the years divulges that exchange rate policy in Nigeria has undergone some changes. It has advanced from a fixed parity in 1960 when it was exclusively tied with the British Pound Sterling. By 1967, resulting from the devaluation of the Pound Sterling, the US dollar was encompassed in the parity exchange. In 1972, the parity exchange with the British Pound was put on hold as a result of the appearance of a stronger US dollar. In 1973, Nigeria returned to a fixed parity with the British Pound subsequent to the devaluation of the US dollar. In 1974, in order to lessen the consequence of devaluation of a single individual currency, Nigerian currency was tangled to both the pound and dollar. In 1978, the naira was pegged to a basket of 12 currencies embracing Nigeria's foremost trading associates. Nevertheless, the 1978 policy was abandoned in 1985 in favour of quoting the naira against the dollar (Ajayi, 2014) [3].

Though, since the change to floating exchange rate system in 1973, the upshot of dramatic movement of exchange rate on trade flow has continued to cause series of reactions. Many market analyst of global economics agree that the universal floating of system in operation since the post Bretton wood period has prompted considerable instability in both advanced and emerging economies. Since 1986, Nigeria seems to have loosened away from fixed and independent floating exchange rate regimes towards intermediate flexibility as the naira was liberalised in September 1986 under the Structural Adjustment Programme Package. Exchange rate policy in Nigeria has undergone a good number of variations and has passed through many variations, traversing between two foremost regimes, namely, the fixed and flexible exchange rate regimes. The fixed exchange rate system was implemented between 1960 and 1985, while the flexible system has continued to be in use from 1986 to date notwithstanding series of adjustment (Dada, 2017) [6]. Regardless of various efforts by the government to maintain a stable exchange rate, the naira has depreciated throughout the 80's. It depreciated from ₦0.61 in 1981 to ₦2.02 in 1986 and further to ₦7.901 in 1990, against the US dollar.

The policy of managed deregulation pegged the Naira at ₦21.886 against the US dollar in 1994. Additional

deregulation pushed the exchange rate to ₦86.322 to $1.00 in 1999. The exchange rate had a slight appreciation from 2004 to reach a highest level of ₦132 to $1.00 in 2008. In addition, the exchange rate depreciated to ₦149.58 at the end of 2009 only to keep relatively firm value from 2010 till early 2015 before the Central Bank of Nigeria on 15th June, 2016 pronounced a flexible foreign exchange regime thereby abolishing the dual exchange rate regime **(**Nwanosike, Uzoechina, Ebenyi and Ishiwu, 2017) [12]. Correspondingly, BOPs fell by approximately 78.30% in 2011 and approximately 485.49% in 2012. A prolonged and considerable exchange rate misalignment can create unembellished macroeconomic disequilibria and the rectification of external balance will entail both exchange rate devaluation and demand management policies (Obi, Oniore and Nnadi, 2016) [14]. The focal clairvoyance behind this is that an increase in exchange rate volatility leads to ambiguity which might have a negative influence on trade streams. The economic logic behind the negative association is the repugnance of firms to involve in a risky activity like trade. Subsequent upon the above, this study is focused on the impact of exchange rate on Balance of Payments in Nigeria, 1970 to 2019.

Research Objectives

The broad objective of the present study is to examine the causality effect of exchange rate and Nigeria's balance of payments. The specific objective being to:

1. examine the effect of exchange rate on BOPs in Nigeria,
2. evaluate the influence of money supply on BOPs in Nigeria,
3. investigate the impact of net exports on BOPs in Nigeria,
4. estimate the outcome of trade openness on BOPs in Nigeria,
5. determine the effect of interest rate on BOPs in Nigeria

Theoretical Framework

Though there are several theories on the connections between exchange rate fluctuations and economic growth, two of these theoretical views are relevant to our study. Each of the four theories relevant to our study is briefly discussed here.

Optimal Currency Area (OCA) Theory

The first and foremost theoretical groundwork for the choice of exchange rate regimes reposes on Optimal Currency Area (OCA) Theory, developed by Mundell (1961) and McKinnon (1963) as cited in Obi, Oniore and Nnadi (2016) [14]. This theory is concerned with stabilization of the business cycle and trade. It is based on concepts of the symmetry of shocks, the amount of openness, and labour market mobility. Agreeing to the theory, a fixed exchange rate regime can upsurge trade and output growth by decreasing exchange rate ambiguity and consequently the cost of hedging, and similarly boost investment by dropping currency premium from interest rates. Nevertheless, it can as well reduce trade and output growth by discontinuing, delaying or decelerating the necessary relative price modification process. Modern exchange rate theories are established on the monetary and the asset market or portfolio balance approaches to the BOPs, and views the exchange rate, for the most part, as entirely a financial phenomenon (Nwanekezie and Onyiro, 2018). A traditional exchange rate theory, on the other hand, is centred on trade flows and adds to the explanation of exchange rate movement in the long run.

Purchasing Power Parity

The theory of purchasing power parity (PPP) shows the relation between prices and exchange rate. Even though the origins of the PPP theory is traceable to the Salamanca School back in the 16th-century Spain, its modern use as a theory of exchange rate determination began with the work of Gustav Cassel (1918), who recommended PPP as a means of amending pre–World War I exchange rates parities for countries set to return to the gold standard system after the encounters ended as cited in Obi, Oniore and Nnadi (2016) [14]. Some modification was necessary because countries that left the gold standard in 1914 witnessed extensively different rates of inflation during and after the war. As a principle of exchange rate determination, the easiest and powerful form of PPP (i.e. absolute PPP) is built on a global multi-good edition of the law of one price. Absolute PPP envisage that the exchange rate should modify to liken the prices of national baskets of goods and services between two countries because of market forces driven by arbitrage (Nwanosike, Uzoechina, Ebenyi, Ishiwu (2017) [12].

Empirical Literature Review

Nwanekezie and Onyiro (2018) consider the influence of exchange rate unpredictability on BOPs in Nigeria using data from 1981 to 2016. The key objective of this study is to study the degree to which exchange rate volatility measures have predisposed the BOPs position in Nigeria during the period under study. The data was considered with the co-integration/error correction model (ECM) method. The test for stationary using Augmented Dickey Fuller (ADF) exhibited that all the variables were not stationary in levels but were stationary in first difference. The Johansen-Juselius co-integration methods were engaged in testing for long run equilibrium link among the variables and the results showed that co-integrating link was established among the variables. Findings from this study point out that the logical variation in the dependent variable (BOP) is elucidated by the four independent variables comprising of nominal exchange rate, inflation rate, real interest rate and government expenditure. The outcome also divulges that there is long run association between exchange rate instability and BOPs. The study concluded that dissuasion of over-reliance on imported goods and the preferment of domestic export products is very vital. This can only be attained if the Nigerian economy is expanded and entrepreneurial development stimulated in the country. In addition, the government should boost export promotion approaches in order to uphold a surplus balance of trade which will help make the domestic currency resilient and correspondingly avert further depreciation of the Nigeria naira. Fasanya and Olayemi (2018) [8] examine the Balance-of-Payments constraint growth model in Nigeria for the period of 1980 to 2012 using the bounds testing Auto regressive Distributed Lag (ARDL) method. The ARDL test submits that the variables in the context have a long run link. The empirical findings divulge that import is co-integrated with relative price and income, and the equilibrium growth rates correspond with actual growth

rates, hence, the result shows that the Thirlwall's law, of actual growth rate being equal to the predicted growth rate by the balance of payment current account equilibrium holds in Nigeria. This reason may be due the fact that the economy of Nigeria depends primarily on global trade even though oil controls the export. Attainment of potential growth can be enthused by making exports more competitive through macroeconomic firmness, sound institutional qualities, and improvement in human and physical capital development, and decreasing access to external market, among other factors. Akatugba (2018) [4] examine the effect of exchange rate volatility on Balance of Payments in Nigeria from 1980 to 2016. The GARCH approach to measure the links was employed and the empirical results established that exchange rate is positively linked to balance of payments; while real gross domestic, inflation rate and instability of exchange rate are negatively related to balance of payments. Consequently government should not underemphasize exchange rate instability in Nigeria. In addition, government should boost export promotion policies in order to retain a surplus balance of trade which will help make the domestic currency strong and similarly avert additional depreciation of the Nigeria naira in the future. Udo, Udo and Imolemen (2018) study the links between exchange rate and balance of balance from 2000 to 2015 by means of Classical Linear Regression Model, The OLS method was employed in the study. Empirical results shows that exchange and the inflation rate were established to have a positive and significant association with gross domestic product while, external debt and public investment was negative and internally inconsistent. The results discloses that devaluation does more damage than good within the Nigerian context since the required condition to guarantee gains from devaluation are not existing in the system. Echekoba (2017) try to find to find out how exchange rates fluctuation impacts on BOPs. The secondary data where used explicitly from CBN and National Statistics publications from 1990-2013. Average values for import, exports, exchange rate and BOPs were collected for various years. Data were analysed using multiple regression and unit root test with the use of Augmented Dickey Fuller Test. The findings exhibited that foreign exchange rate variation in general affects some of these macro-economic variables. The study settles that government should complement monetary and fiscal policies to lift non-oil exports. A market determined exchange rate will boost exports and take care of disequilibria in BOPs. Evaluating the causality effect of foreign exchange rate and Nigeria balance of payment between the periods of 1970 and 2015, Abdullahi, Fakunmoju, Abubarkar and Giwa (2017) [1] used Vector error correction mechanism (VECM) Granger Causality method to analyse the data. The outcomes exposed that exchange rate and balance of payment granger cause each other. The study recommended a limit on trade openness concerning goods or services that can be manufactured domestically and diversification of Nigerian economy. The study concluded a high propensity for Nigerian economy to attain favourable balance of payments should the economy be diversified. Nwaolisa (2017) studied to find out how exchange rates fluctuation impacts on Balance of Payments from 1990-2013, data employed were analysed using multiple regression test, unit root test and Augmented Dickey Fuller Test. The data employed are import, exports, exchange rate and balance of payment. Findings exhibited that foreign exchange rate fluctuation in general affects some of these macro-economic variables. The study concludes that government should match monetary and fiscal policies to enhance non-oil exports. The study recommends that a market determined exchange rate will encourage exports and take care of fluxes in balance of payments.

Model specifications

This study seeks to determine the causality effect of exchange rate on balance of payments in Nigeria for the periods 1970-2017. This study adapted the econometric model of Abdullahi, Fakunmoju, Abubarkar and Giwa, (2017) and the model was re-modified. The model specified below:

$$BOP = f(\text{EXR, MSP, NET, TOP, ITR}) \quad (1)$$

The re-modified mathematical form is as below

$$BOP = f(\text{EXR, MSP, NET, TOP, TOP, ITR}) \quad (2)$$

Explicitly the above equation can be stated in econometric form thus

$$BOP = \phi_0 + \phi_1 EXR_t + \phi_2 MSP_t + \phi_3 TOP_t + \phi_4 NET_t + \phi_5 ITR_t + \mu_t \quad (3)$$

Where:

BOP=Balance of Payments, EXR = Exchange Rate, MSP = Money supply, NET=Net export, ITR= Interest rate and TOP= Trade openness

Interpretation of empirical results

Table 1: Unit Root Test (ADF)

ADF Test: level				ADF Test: 1ST DFF		
Variables	**Test Stat**	**5 %**	**Order**	**Test Stat**	**5 %**	**Order**
BOP	-3.815728	-3.526609	S	-5.196878	-3.536601	1(0)
EXR	-1.790521	-3.508508	NS	-6.900714	-3.510740	1(1)
ITR	-3.002526	-3.508508	NS	-6.913422	-3.513075	1(1)
MSP	-2.805246	-3.508508	NS	-6.373352	-3.510740	1(1)
NET	-0.732065	-3.533083	NS	-4.324699	-3.536601	1(1)
TOP	-1.744255	-3.508508	NS	-6.841624	-3.510740	1(1)
NS= Not stationary. N = Stationary. 5 %						

***Source*:** Authors' computation (E.view 9.0)

From Table 1, the variables have a mix of integration i.e 1(0) and 1(1) using the ADF test to determine the time series properties of the model. PGEE variable became stationary in levels while others at their first differences thereby fostering the problem of spurious regression associated with time series data. According to the Granger Representation theorem, when variables are co-integrated, there must also be an error correction model (ECM) that defines the short-run dynamics or adjustments of the co-integrated variables towards their equilibrium values.

Table 2: Unit Root Test (PP)

PP Test: Level				PP Test: 1ST Dff		
Variables	Test Stat	5 %	Order	Test Stat	5 %	Order
BOP	-3.809463	-3.526609	1(0)	-21.21240	-3.529758	1(0)
EXR	-1.790521	-3.508508	NS	-6.900814	-3.510740	1(1)
ITR	-2.827896	-3.508508	NS	-13.90811	-3.510740	1(1)
MSP	-2.927609	-3.508508	NS	-6.750686	-3.510740	1(1)
NET	-2.718585	-3.508508	NS	-7.803361	-3.510740	1(1)
TOP	-1.753644	-3.508508	NS	-6.841605	-3.510740	1(1)
NS= Not stationary. N = Stationary. 5 %						

Source: Authors' computation (E.view 9.0)

From Table II, the variables have a mix of integration i.e 1(0) and 1(1) using the P-P test to determine the time series properties of the model. PGEE variable became stationary in levels while others at their first differences thereby fostering the problem of spurious regression associated with time series data.

Table 3: ARDL Bound Test to Cointegration

Dependent Variable	AIC Lags	F -statistics	F Prob.	Outcome
BOP/EXR	(1, 0)	23.12564	0.000000	Cointegration
EXR/BOP	(1, 0)	23.12564	0.000000	Cointegration
ITR/BOP	(1, 0)	0.426400	0.076280	No Cointegration
MSP/BOP	(1, 0)	24.65297	0.000000	Cointegration
NET/BOP	(1, 0)	21.33421	0.000000	Cointegration
TOP/BOP	(1, 0)	0.542861	0.084628	No Cointegration
ARDL results shows 3 Cointegrrrating equation				
Lower Bounds = 4.13			Upper Bounds = 5.76	

***Source*:** Authors' computation (E. view 9.0)

From Table IV, ARDL Co-integration test is used to identify the co-integrating relationship among the variables. The null hypothesis of no co-integration is rejected at 0.05 levels for 4 co-integrating equation. The ARDL test indicate that there is 4 co-integrating equation between the variables at 5 per cent level of significance. Hence, a long run equilibrium relationship is established between these variables and the hypothesized fundamentals for the period under consideration, 1970 - 2017.

Table 4: ECM Parsimonious Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.335656	1.207762	0.277916	0.7829
D(EXR)	-0.073295	0.096268	-0.761362	0.4522
D(ITR)	-0.074655	0.074924	-0.996417	0.3268
D(MSP)	-0.004317	0.322795	-0.013374	0.9894
D(MSP(-1))	0.002926	0.310316	0.009427	0.9925
D(NET)	1.92E-06	1.00E-06	1.917190	0.0645
D(NET(-1))	-1.71E-07	1.21E-06	-0.141176	0.8886
D(TOP(-1))	0.023704	0.074047	0.320118	0.7510
ECM(-1)	-0.637428	0.193925	-3.286974	0.0025
Adj. R^2 =0.177192; DW = 1.876067; F* = 2.049833				

Source: Authors' computation (E.view 9.0)

From table IV, the ECM(-1) is negatively signed and indicates that the speed of adjustment from the short run dynamics to its long run equilibrium is -0.637428 or 63 per cent and is internally consistent at 5 per cent too given the t* value of -3.286974. The adjusted R^2 is 17 per cent. The F* value of 2.049833 shows the entire model is stable over time while the Durbin-Watson test statistic value of 1.876067 is close to 2 and reveal absence of positive first order serial correction in the model.

Table 5: Multiple Regressions at Linear. (BOPs)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.792738	5.497554	1.781290	0.0835
EXR	-0.014417	0.025123	-0.573861	0.5697
ITR	-0.035343	0.079800	-0.442889	0.6606
MSP	0.085929	0.277602	0.309540	0.7587
NET	2.90E-06	1.08E-06	2.675806	0.0113
TOP	-0.149543	0.054283	-2.754866	0.0093
R2 =0.277923; F* =2.694262; DW = 1.867325; AIC =6.988436; SC = 7.239203				

Source: Computed Result (E-View 9.0)

From Table V, the R^2 value is 0.277923 or 27 per cent. This implies that the systematic variation in BOPs is caused by the independent variables used in the model. The remaining 63 per cent is subsumed into the error terms. The AIC and SC values are not too far from zero respectively. The consequence for this result is that it can be pliable for policy formulations and implementations within the review periods. The model is entirely, internally consistent given the F* value of 2.694262. The Durbin –Watson test indicated that absence positive first order serial correlation in the model with a value of 1.867325. The coefficient of exchange rate is -0.014417 units meaning that 1 per cent increase in exchange rate implies a decrease in BOPs. The relationship is rightly signed and in line with economic theory but internally inconsistent at 5 per cent level. The coefficient of ITR is -0.035343 units meaning that 1 per cent increase in interest rate implies a decrease in BOPs. The relationship is rightly signed and in line with economic theory and internally inconsistent at 5 per cent level.

The coefficient of money supply is 0.085929 units meaning that 1 per cent increase money supply implies an increase in BOPs. This is in line with economic theory but exhibited internal inconsistency at 5 per cent level. The coefficient of NET is 2.90E-06 units meaning that 1 per cent increase in

NET implies an increase in BOPs. This is in line with economic theory and equally shows that it is internally consistent at 5 per cent level. The coefficient of TOP is -0.149543 units meaning that 1 per cent increase in TOP implies a decrease in BOPs. This is in line with economic theory and equally shows that it is internally consistent at 5 per cent level. This result is so because most economic liberalization causes serious economic damage to the domestic production.

Post Estimation Test

The Test of Structural Stability of the Model

The stability test carried out displays that all the variables are stable since the CUSUM and within 5 per cent critical bound for stability as can be seen in fig 1.

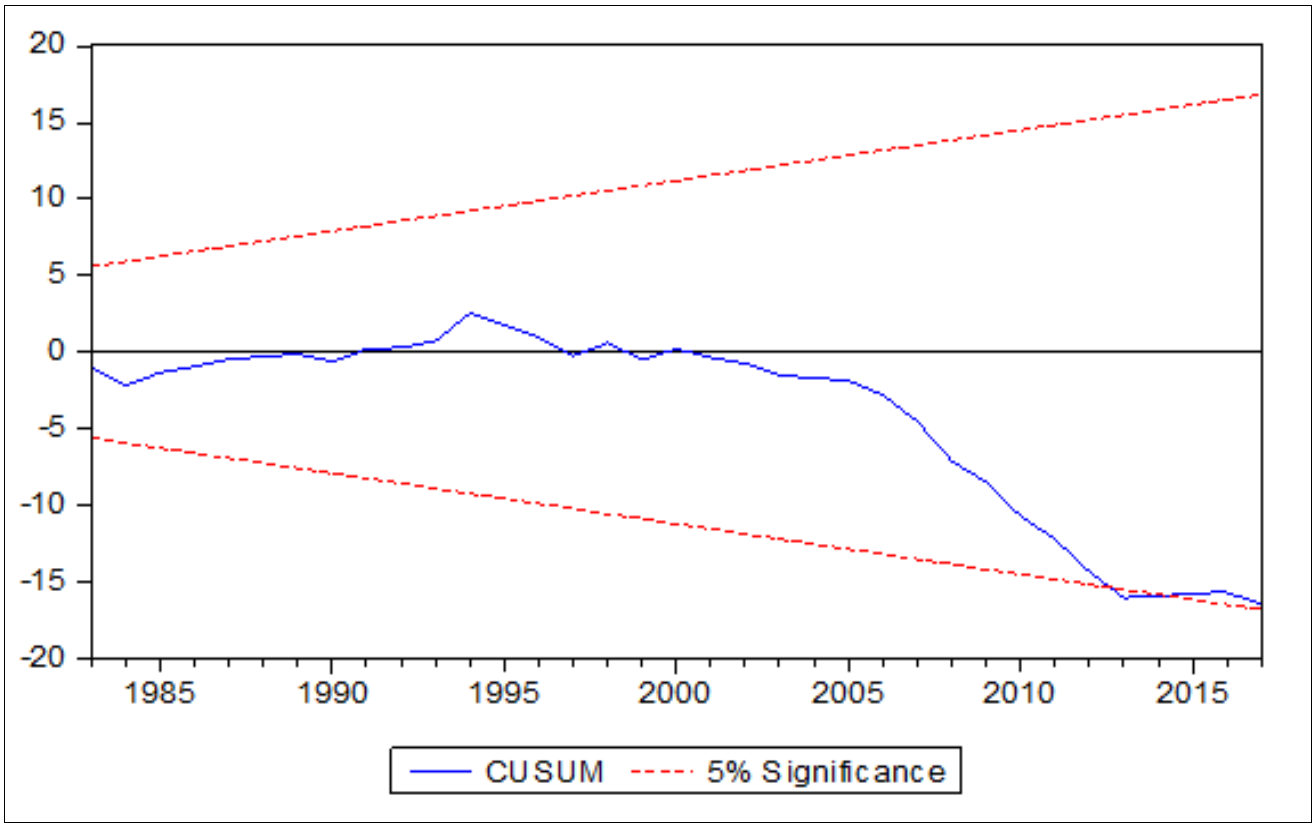
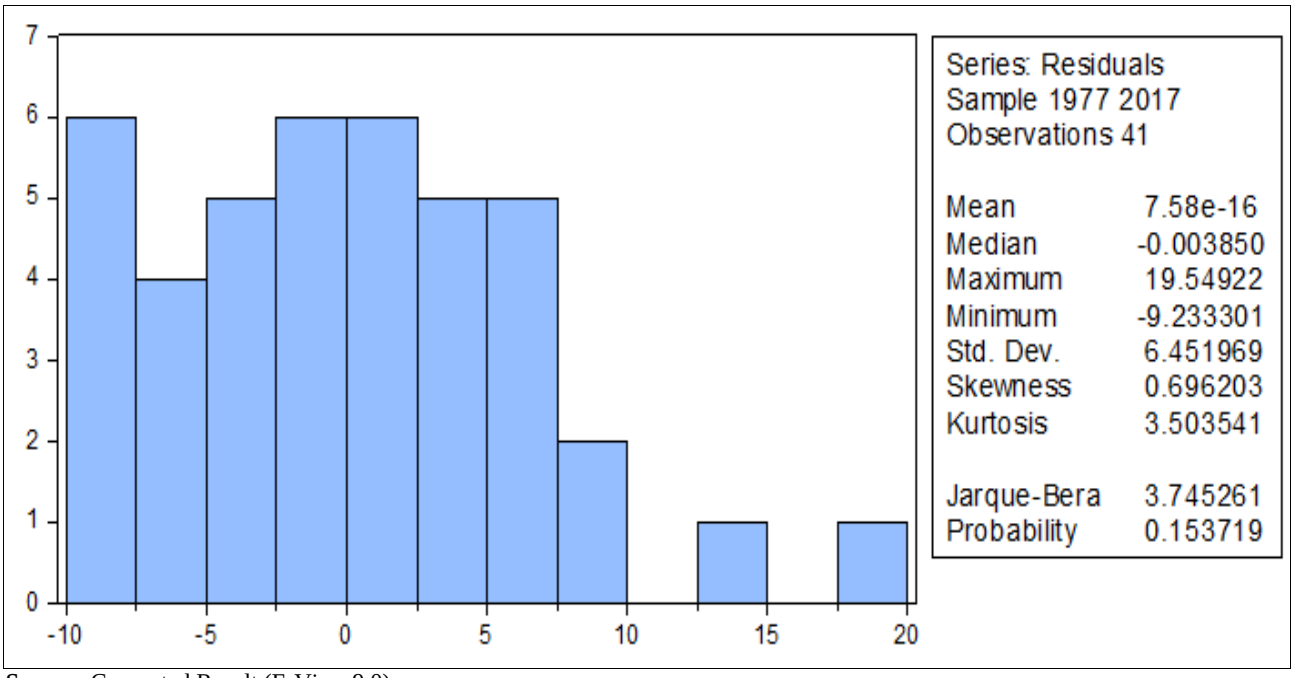


Fig 1: CUSUM test



Source: Computed Result (E-View 9.0)

Fig 2: Normality test for parsimonious ECM

The series did not fail the normality test as the Jarque-Bera (JB) has higher value and the probability value of the JB is greater. P > 5%.

Table 6: Serial Autocorrelation Test

Breusch-Godfrey Serial Correlation LM Test			
F-statistic	3.721552	Prob. F(2,33)	0.1349
Obs*R-squared	7.545595	Prob. Chi-Square(2)	0.6230

Source: Authors Computation (2018)

Table VI above shows the Breusch-Godfrey Serial Correlation LM test for the presence of auto correlation. The result reveals that the probability values of 0.1349 and 0.6230 are greater than the critical value of 5%. This implies that there is no evidence of serial correlation.

Table 7: Heteroskedasticity Test

Heteroskedasticity Test: ARCH			
F-statistic	5.994803	Prob. F(1,38)	0.1901
Obs*R-squared	5.450464	Prob. Chi-Square(1)	0.1960

Source: Authors Computation (2018)

The Arch test of heteroskedasticity in Table VII above exposes that the p-value of about 0.1901 is greater than critical value of 5%. This confirms that there is no evidence for the presence of heteroskedasticity since the p-values are substantially in excess of 5 per cent.

Table 8: Multicollinerity Test

Variance Inflation Factor			
Variables	**Coefficient Variance**	**Uncentered VIF**	**Cantered VIF**
C	25.91464	22.33328	NA
EXR	0.000541	4.567033	2.255207
ITR	0.005460	2.852124	1.359948
MSP	0.066077	18.33519	2.167073
NET	1.01E-12	4.615197	3.143876
TOP	0.002527	6.505334	2.153985

Source: Authors Computation (2018)

Table VIII exposed that the model in this study does not suffer from multi-collinearity problem since the cantered VIF of each variable do not exceed 5.

Table 9: Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
EXR does not Granger Cause BOP	39	3.67825	0.0142
BOP does not Granger Cause EXR		3.58272	0.0239
ITR does not Granger Cause BOP	39	0.45503	0.6382
BOP does not Granger Cause ITR		0.17284	0.8420
MSP does not Granger Cause BOP	39	0.44554	0.6442
BOP does not Granger Cause MSP		5.69649	0.0074
NET does not Granger Cause BOP	39	1.19041	0.3165
BOP does not Granger Cause NET		0.09997	0.9051
TOP does not Granger Cause BOP	39	0.64188	0.5326
BOP does not Granger Cause TOP		0.82320	0.4476
ITR does not Granger Cause EXR	46	0.38235	0.6847
EXR does not Granger Cause ITR		0.38349	0.6839
MSP does not Granger Cause EXR	46	0.46234	0.6331
EXR does not Granger Cause MSP		3.18695	0.0517
NET does not Granger Cause EXR	46	3.88694	0.0571
EXR does not Granger Cause NET		7.12475	0.0022
TOP does not Granger Cause EXR	46	0.25414	0.7768
EXR does not Granger Cause TOP		1.01118	0.3727
MSP does not Granger Cause ITR	46	0.16884	0.8452
ITR does not Granger Cause MSP		0.49939	0.6105
NET does not Granger Cause ITR	46	0.41111	0.6656
ITR does not Granger Cause NET		0.03946	0.9613
TOP does not Granger Cause ITR	46	2.17474	0.1266
ITR does not Granger Cause TOP		0.09031	0.9138
NET does not Granger Cause MSP	46	0.81825	0.4483
MSP does not Granger Cause NET		2.66568	0.0816
TOP does not Granger Cause MSP	46	0.29841	0.7436
MSP does not Granger Cause TOP		1.74711	0.1870
TOP does not Granger Cause NET	46	0.38721	0.6814
NET does not Granger Cause TOP		5.02738	0.0112

Source: Authors Computation (2018)

The criteria for granger causality between variables are determined by the probability value. If the P-value of the two variables is less than 5% level of significance, then there exists Granger causality or bidirectional bond between the variables and vice-versa. The Granger causality result shows that causality runs from exchange rate to BOPs and vice versa. The same applies for NET to exchange rate and vice versa.

This nexus represents bidirectional causality. Unidirectional causality runs from NET to TOP, exchange rate to money supply and BOPs to MSP. Others run independent causality amongst themselves. That bidirectional causality runs to and from between exchange rate and BOPs is confirmed in the result obtained by Iyoboyi and Muftau (2014) [9] and Abdullahi, Fakunmoju, Abubarkar and Giwa (2017) [1].

Conclusion

This study concludes that causality runs from exchange rate to Balance of Payments and vice-versa. Therefore, this study accepts the alternative hypothesis that causality exist between exchange rate and Balance of Payments (BOP) in Nigeria. Empirical literatures also revealed that over dependence on importation leads to fluctuation in its exchange rate and in turn causes BOPs deficits. Also, the rsults reveals along run link among the variables and that the model is internally consistent and stable over tome of the study.

Recommedations

Established on the result of this study, the subsequent recommendations are optional;

1. Trade openness of goods and services that can be manufactured domestically be banned or be reduced since over importation creates more economic harm than good and in turn leads to unfavourable BOPs
2. Increase in exportation of goods and services produced locally should be considered a policy option by the government of Nigeria.
3. Government policies should target diversification of the economy into the agricultural sector.

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