



**THE IMPACT OF MONETARY POLICY ON BALANCE OF PAYMENTS IN
NIGERIA (1983-2018)**

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Abstract

This study investigates the impact of monetary policy on balance of payments in Nigeria from 1983 to 2018. It employs the Autoregressive Distributed Lag (ARDL) model, using data such as exchange rate, interest rate, money supply, inflation and balance of payments. The findings of the study reveals that the major reason for the negative disequilibrium in the Nigeria's balance of payments is that it absorbs more than it produces as such, domestic expenditure is greater than the national output. The result shows that exchange rate and interest rate have negative and significant impact on balance of payments in both the long run and short run; money supply is also revealed to be negative in both the long run and short run but only significant in the long run; inflation on the other hand is positive and not significant in the long run and negative and significant in the short run. It therefore concludes that balance of payments is indeed a monetary phenomenon and that the depreciation of currency does not favours the Nigerian balance of payments and recommends export promotion strategies to increase export and maintain the value of the country's currency.

Keywords: Monetary, Policy, Balance of Payment, Exchange Rate, Nigeria

1. Introduction

Nations seek to attain macroeconomic objectives for rapid economic growth, price stability, reduced unemployment and balance of payment equilibrium. Government and monetary authorities employ the use of both fiscal and monetary policies. Since its inception in 1959, the role of Central Bank of Nigeria has been the achievement of macroeconomic objectives of rapid economic growth, price stability, unemployment reduction and balance of payment equilibrium (Fasanya, Onakoya, & Agboluaje, 2014).

The balance of payments is a systematic record of all transactions in an economy with the outside world in a year. Negative balance of payments implies that more money is flowing out of the country and since it is used as an indicator of economic growth and stability, the economy is not performing well, which is why concern have been provoked by the persistent instability of Nigeria's balance of payments (Udude, 2015). The deficit is due to the fact that Nigeria import more than it exports, which is in line with the absorption theory of Alexandra(1952) that when a country has a deficit in its balance of payments, it means that the people are absorbing more than they produce. The persistent deficits can be attributed to the shift of focus from agriculture to the oil since the oil boom of 1970s and the fact that the Nigerian international trade is characterized by the export of primary products and import of finished goods, putting the economy in the position where it absorbs more than it produces since its agricultural and industrial sectors have been left underdeveloped.



Nevertheless, different monetary policy measures have been employed by the CBN to correct balance of payments deficits in Nigeria. In the 1980s, when unrealistic exchange rate aggravated the economic situation and put pressure on current account balances, the government embarked on massive devaluation of the currency through auctioning in the open market and others aimed at reducing the role of the government in the economy in favour of free economy and this was the motivation of the Structural Adjustment Programme in 1986 (Danmola & Olateju, 2013). However, the high dependence on import and the appreciation of the degree of openness during the Structural Adjustment Programme (SAP) of 1986 made the economy more vulnerable to international trade shocks and further widening of the balance of payments disequilibrium (Nwanosike, Uzoechina, Ebenyi & Ishiwu, 2015).

In 2000, due to the deficits recorded in 1996, 1998, and 1999, external sector policy was adopted to aid Nigeria's external reserves. As a result, Nigeria's balance of payments recorded a surplus in 2000 and 2001 (Imoisi, Lekan & Bosco, 2013). However, in recent years the deficits in Nigeria's BOP have remained persistent and the global financial crisis of 2004 and the meltdown of 2008 coupled with the fall in international oil market did not help matters. Following the collapse of the oil prices in 2014 and fall in foreign exchange receipts, controls were tightened which however proved counterproductive as it became clear that a policy frame work that relied on direct control could not manage the economy (Nwanosike, Uzoechina, Ebenyi & Ishiwu, 2015). According to the CBN, in the third quarter of 2018, the balance of payment in Nigeria deteriorated to a deficit of \$4.5 billion from \$503 million surplus in the second quarter of 2018, showing quite a turnaround from the surplus of \$2,787 billion recorded in 2017 (Babajide, 2018). This poses the question that; despite all the efforts to eliminate the problem of balance of payments deficits in Nigeria, why does it persist?

A balance of payments deficit is a menace to the development of an economy, which is why the International Monetary Fund and World Bank have directed a great deal of attention towards stable balance of payments in countries as it is the ideal situation. Imoughele and Ismail (2015) posits that countries employ stabilization policy to maintain a healthy balance of payments position in order to safeguard the external value of their currency. In the mid 1980s, between 1985 and 1990, the balance of payments deficits in Nigeria increased from ₦339.60 millions to ₦4.91 billion, which was attributed to the rise in the importation of food, textiles, automobiles, equipments and machinery (Dayo & Akindela, 2017). The economy have exhibited imbalances in the current account and external debt obligations, which grew from \$170,000 million in 1970 to \$94,614 million in 1990 and rose to \$2,695,072 million in 2005 before it was reduced to \$421,461 million in 2006, only for the country to continue borrowing externally (Igbinoba, 2007).

In the first half of 1994, there was persistent deficit of ₦42,623.3 million, compared to a surplus of ₦13,615.9 million in 1993. This deficit was financed through a reschedule of debt service estimated at ₦24,906.4 million in the period. Ubong (2015) postulated that the balance of payments mirrors the relative strength of an economy. Therefore, with the persistent deficits recorded in the balance of payments of Nigeria, the economy is not performing well compared to others, despite several policy initiatives by the government and CBN to restore equilibrium of the balance of payments.



A well structured policy is required to stabilize balance of payments as well as economic growth and development in Nigeria. However, despite the policy measures adopted by the government and Central Bank to correct the balance of payments deficits in Nigeria and improve the overall performance of the economy, it still persists. This persistent fluctuation in the balance of payments despite the monetary policies employed over the years is the major motivation for this study. This study seeks to evaluate the impact of monetary policy on balance of payments in Nigeria as well as analyse the relationship that exists between monetary policy variables and balance of payments in Nigeria.

This study is categorized into five sections, section one comprises of introduction, statement of the problems and aims and objectives of the study, section two covers conceptualization, review of empirical studies, and theoretical framework. The third section comprises of the research methodology employed, section four deals with data presentation, analysis and implications, while the section five presents the conclusion and recommendations.

2. Literature Review

Conceptualization

The Central Bank of Nigeria (2006) describes monetary policy as the actions specifically undertaken by the CBN to regulate the supply, value and cost of money in the economy with the view of achieving the macroeconomic objectives of the government. As a policy strategy, monetary policy is employed by the Central Bank of Nigeria to control the supply of money stock as a means of achieving general macroeconomic goals such as balance of payments disequilibrium (Onuchuku, Chukwueggu, Nenbee & Wosu, 2018).

Balance of payments is the record that shows all the transactions of a country with other countries of the world within a year. Jhinghan (1998) explains balance of payments as the systematic record of all the economic transactions of a country with the outside world in a given year. The balance of payments mirrors the relative strength of an economy and shows the trading partners of the country (Ubong, 2015).

Review of Empirical Studies

Series of studies have been conducted to determine the impact of monetary policy on balance of payments in Nigeria as it is a contemporary issue that continues to hamper economic development. For instance, Onuchukwu, Chukueggu, Nnebee and Wosu (2018) conducted a study employing the Dynamic Ordinary Least Square (DOLS) to investigate the effects of monetary policy on balance of payments (BOP) in Nigeria. Based on the findings of the study, which revealed that monetary policy variables are key determinants of balance of payments in Nigeria, they suggested the use of monetary policy to reduce capital flight, over reliance on imported goods, expenditure and stimulate economic growth and development. Nwanekezie and Onyiro (2018) probed the impacts of the volatility of exchange rates on balance of payments in Nigeria using data from 1981 to 2016, using the Error Correction Model (ECM) to analyze data on nominal exchange rate, inflation, interest rate, government expenditure and balance of payments (BOP). The outcome of the study revealed that exchange rate volatility and BOP have a negative relationship.

In Iran, Hossein and Bahram (2015) studied the impact of monetary and fiscal policy on balance of payments in order to fulfill the fifth development plan objectives. Time series data from 1979



to 2012 were analyzed using the Vector Error Correction Model (VECM). Based on the outcome of the study, both fiscal and monetary policies were found to have negative effects on the BOP of the country in the long run and concludes that increase in liquidity also translates into increase in import due to leakages, which translates into BOP deficits. Adopting the Autoregressive Distributed Lag (ARDL) approach to co integration, to examine time series data from 1980 to 2015, Dayo and Akindele (2017) and found that exchange rate had negative impact on BOP. In contrast, in his own appraisal, using the Error Correction Mechanism, Udude (2015), found exchange rate to having a positive impact on BOP alongside money supply.

Imoisi, Lekan and Bosco (2013) and Onwe (2014), in their studies conducted to determine the impact of monetary policy on Balance of Payments adjustment found that money supply and interest rate were significant in BOP adjustment while exchange rate was not significant. Mukolu, Illughemi and Otalù (2017), conducted a study on monetary policy and its implications for balance of payments in Nigeria and recommends consistency of the domestic money stock with the macroeconomic objectives, since the variables money supply, interest rate, net export, exchange rates, inflation and bank credit were significant to BOP.

Theoretical Framework

The absorption theory propounded by Sydney Alexandra in 1952, which dwells on the Keynesian National income hypothesis, explains that balance of payments deficits in a country is a result of the people absorbing (consuming) more than they produce, as such, the national income is less than the domestic expenditure on consumption and income.

According to Alexandra, absorption is the sum of all domestically produced goods and all imports, which is equal to the National income [$Y = C + I + G + (X - M)$]. Absorption (A) is the total aggregate of domestic demand, which is the total amount of goods and services consumed from the domestic market

$A = C + I + G$ 1

Where C is Consumption spending of households, I is domestic investment and G is Autonomous government expenditures.

The Balance of payments (B) is $X - M$, Where X represents exports and M is imports

Thus, $Y = A + B$ and $B = Y - A$ 2

Therefore, the balance of payments can be improved by either increasing domestic income (Y) or reducing the absorption (A), for which he advocated devaluation since it acts in both ways. As it increases exports and decreases imports, thereby increasing the National income. The additional generated income further increases the level of income via the multiplier effect which leads to rise in domestic consumption. The effect is

$\Delta B = \Delta Y - \Delta A$ 3

The total absorption (ΔA) depends on the marginal propensity to absorb when there is devaluation and is expressed as “a”. Thus, the devaluation affects the level of absorption directly through the changes in income. Thus

$\Delta A = a\Delta Y + \Delta D$ 4



Substituting eqn 4 in 3, $\Delta B = \Delta Y - a\Delta Y - \Delta D$ or $\Delta B = (1-a) \Delta D$ 5

The equation reveals that since ‘a’ is the marginal propensity to absorb, (1-a) is the propensity to either hoard or save, which are in turn influenced by the existence of unemployed and full employed resources in the country.

In underdeveloped countries, where there are underemployed resources, when the country’s currency depreciates, then it can expand its production in the short run, which leads to the expansionary process of increase in exports and rise in National income via multiplier process. Monetary policy measures of adjustment of interest rate, money supply, exchange rate and stability of prices can be used to increase domestic income and reduce absorption to improve balance of payments.

3. Research Methodology

Model Specification

The model developed for the study is based on the absorption approach to balance of payment developed by Alexandra in 1952, which posits reducing the level of absorption in the economy and increase in the level of national income which can be done through direct monetary policy as well as devaluation of currency to correct BOP disequilibrium in the country. The model is thus specified as thus:

$$BOP_t = \beta_0 + \beta_1 EXCR_t + \beta_2 ITR_t + \beta_3 MONS_t + \beta_4 INFL_t + \mu_t \dots\dots\dots 7$$

Balance of payments (BOP) is measured as a percentage of GDP, EXCR is Exchange rate in natural logarithm, Interest rate (ITR) is the lending rate, Money supply (MONS) is also in natural logarithm and Inflation (INFL) is the price level in percentage. μ_t is the error term, β_0 is the parameter constant and $\beta_1, \beta_2, \beta_3, \beta_4$ are parameter estimates or coefficients

Unit Root

The stationarity of the data employed for the analysis is determined using the Augmented Dickey-Fuller (ADF) test and is carried out on the following regression;

Case 1: Constant without trend $\Delta Y_t = \alpha + \gamma Y_{t-1} + \sum_{i=1}^k \beta_i \Delta Y_{t-i} + \varepsilon_t$ 8

Case 2: With constant and trend $\Delta Y_t = \alpha + \lambda t + \gamma Y_{t-1} + \sum_{i=1}^k \beta_i \Delta Y_{t-i} + \varepsilon_t$ 9

Case 3: no constant, no trend $\Delta Y_t = \gamma Y_{t-1} + \sum_{i=1}^k \beta_i \Delta Y_{t-i} + \varepsilon_t$ 10

The Autoregressive Distributed Lag (ARDL) model

The ARDL models used in analyzing econometrics model gained popularity in recent years despite been used for decades due to the work of Pesaran and Shine (1998) and Pesaran, Shin and Smith (2001) as a technique of analyzing the co integrating relationships among variable. The ARDL model is preferably used when the variables adopted for a study/research have mixed stationary that is 1(0) or 1(1). The ARDL co integration method is used to examine long



run and short run relationships among variables with different order of integration (Pesaran & Shin, 1998 & Pesaran, 2001).

The ARDL (p,q₁,q₂,.....q_k) specification of model is given as;

$$\Phi(L,p)y_t = \sum_{i=1}^k \beta_i(L q_i) x_{it} + \delta wt + ut \dots\dots\dots 11$$

Where (L,p) = 1- Φ₁L - Φ₂L²-.....-Φ_pL^p

$\beta(L,q) = 1 - \beta_1 EXCR - \beta_2 ITR - \beta_3 MONS - \beta_4 INFL$, for $i=1,2,3,4$, $ut \sim iid(0; \delta^2)$. L is a lag operator such that $L0y_t = X_t$, $L1y_t = y_t - 1$, and w_t is a $s \times 1$ vector of deterministic variables such as the intercept term, time trends, seasonal dummies, or exogenous variables with the fixed lags. $P=0,1,2,3,4,m$, $q=0,1,2,3,4,m$, $i=1,2,3,4,k$: namely a total of $(m+1)^{k+1}$ different ARDL models.

The diagnostic tests are run to check for other econometrics criteria. They include the R², Adjusted R², T-statistics, F-statistics, Durbin Watson, using eview 10. In addition, the CUSUM test is also employed to determine the model stability.

A priori Expectation

This research expects exchange rate (EXCR) to have a positive relationship with balance of payments ($\beta_1 > 0$). Interest rate (ITR) is expected to have a negative coefficient ($\beta_2 < 0$). Money supply (MONS) is expected to have a positive relationship with balance of payments ($\beta_3 > 0$) and the coefficient of inflation is expected to be negative ($\beta_4 < 0$).

Sources of data

The data employed for analysis in this study are secondary data, obtained from the Central Bank of Nigeria annual statistical bulletin and World Development Indicator (WDI).

4. Results

Unit Root Test

The result of the unit root test of statistical stationarity is presented in the table below

Table 1: ADF unit root test result

Variable	Constant		Constant and linear trend	
	Level	1 st difference	Level	1 st difference
BOP	-3.905336***	-6.005155***	-3.953076**	-5.906963***
EXCR	-2.590859	-4.603168***	-2.339596	-4.753714***
ITR	-2.634767*	-3.733287***	-4.094172**	-3.454705*
MONS	-1.279357	-3.593819**	0.037693	-3.778829**
INFL	-2.740557*	-4.449048***	-3.944435**	-2.874381

*Note: ***, **, * denotes 1%, 5% and 10% level of significance respectively. The lag length was automatically determined by the Schwarz information criteria.*

Following the table, the variables under study have mixed stationarity at both level and first difference and suggest the use of the ARDL model as the most appropriate for further empirical analysis.



ARDL Bound test for Co-integration

The null hypothesis of the absence of co integrating relationship among the variables is ascertained through the value of the F-statistics of the Bounds test.

Table 2: Result of ARDL bounds test

Optimal lag structure		F(EXCR,ITR,MONS,INF)	
ARDL(1, 1, 4, 4, 3)			
f-statistics	20.85303		
Level of significance	Critical value 1(0)	Critical value 1(1)	
10%	2.2	3.09	
5%	2.56	3.49	
2.5%	2.88	3.87	
1%	3.29	4.37	

Note: 1(0) and 1(1) denotes the critical value of the lower and upper bounds respectively

The value of the F-test is 20.85303 and greater than the 1% critical value of the lower and upper bounds of the ARDL Bounds test for co integration. This evidence portrays the existence of co integrating relationship among the regressed variables in the model. It therefore depicts that the monetary policy variables have influence on Balance of payments in Nigeria in the long run.

ARDL Long-run and Short-run Relationship Analysis

From the presence of long run relationship among the variables in the model, the ARDL long run form and Error Correction Regression shows the nature of the relationship that exists between the variables in the model in both the long and short run.

Table 3: ARDL long run Test result

Dependent variable (BOP)				
EC = BOP - (-23.0532*EXCR -0.8997*ITR -1.6034*MON + 0.0389*INFL +144.0090)				
Variable	Coefficient	standard error	t-statistic	(p-value)
EXCR	-23.05317	3.474964	-6.634075	(0.0000)***
ITR	-0.899735	0.262562	-3.426755	(0.0041)***
MONS	-1.603383	0.481279	-3.331502	(0.0049)***
INFL	0.038925	0.090970	0.427888	(0.6752)
C	144.0090	19.29336	7.464174	(0.0000)***

Note: ***, **, * represents 1%, 5% and 10% levels of significance respectively

The Table 3 and 4 above displays the long and short run test result. In both the long run and short run, Exchange rate (EXCR) is negative and significant at 1%. This explains that the continuous depreciation of the domestic currency against foreign currencies causes harm to the



Table 4: ARDL Error Correction Result

ARDL ERROR CORRECTION ANALYSIS				
Variable	Coefficient	Standard error	t-statistics	p-value
$\Delta(\text{EXCR})$	-6.364603	1.453253	-4.379557	0.0006***
$\Delta(\text{ITR})$	-0.808831	0.213979	-3.779957	0.0020***
$\Delta(\text{MONS})$	-9.689245	4.689216	-2.066283	0.0578
$\Delta(\text{INFL})$	-0.302073	0.043123	-7.004907	0.0000***
CoIntEq(-1)*	-1.077498	0.082688	-13.03086	0.0000***

Note: ***, **, * denotes 1%, 5% and 10% levels of significance of the probability value of the T-statistics of the variables under study.

balance of payments in Nigeria. This is consistent with the findings of Nwanekezie and Onyiro (2018) who investigated the effect of exchange rate volatility on BOP in Nigeria, using the ECM models. Interest rate (ITR) is negative and significant at 1% in the long run and short run which implies that increase in the interest rate will lead to decrease in the BOP by 0.8%. This result summates that increase in interest rate discourages borrowing, which reduces the rate of investment in the Nigerian economy and stimulates increase in importation to meet domestic demand which worsens the BOP. This is in line with the findings of Onuchukwu, Chukueggu, Nnebee and Wosu (2018). Money supply (MONS) is negative in the long run and short run but only significant in the long run. This demonstrates that increase in money supply, decreases the BOP and attributes to the low level of domestic investment in Nigeria, causing the rise in the supply of money in the economy to lead to increase in the demand for foreign commodities due to the low level of domestic output and a 1.6% decrease in BOP. This proves the theory of the Monetary Approach to Balance of Payments (MABP), which posits that increase in money supply in an open economy leads to deficit BOP and fall in external reserves since the excess money leaks out of the economy through international trade due to the low level of production in the economy, evidencing that Nigeria absorbs more than it produces. Inflation (INFL) is positive and not significant in the long run but negative and significant in the short run at 1% level of significance. This depicts that as the prices of domestic goods and services increases in the country in the short run, the BOP position is worsened because the rise in prices will discourage export and encourage import. This conforms to the findings of Dayo and Akindele (2017).

Diagnostics Test

The diagnostic testing is use to test the explanatory power of the ARDL model through its R^2 , Adjusted R^2 and F-statistics. It also checks for the stability of the parameters, serial correlation, Durbin Watson, Heteroskedasticity of the model.

Table 5: Diagnostics Test

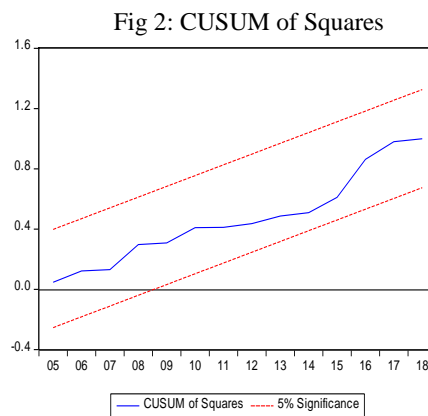
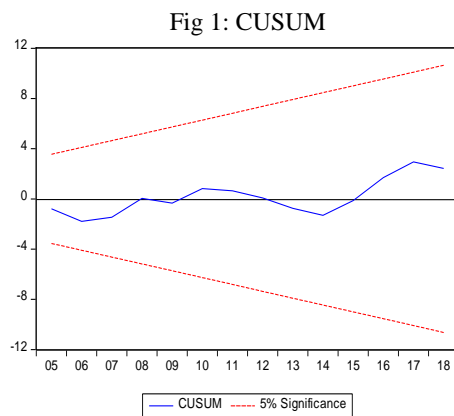
Diagnostics Result			
R-squared	0.9328	Heteroskedasticity Test	0.8979(0.5888)
Adjusted R-squared	0.8904	Serial correlation Test	0.2126 (0.8114)
F-statistics	9.2828(0.000065)***	Durbin Watson	1.9607



From the result above, the R^2 (93%) and F-statistics empirically reveals monetary policy to having significant impact on balance of payments in Nigeria. It further revealed that the model is free from heteroskedasticity and autocorrelation.

Stability Test

The stability test is carried out to check for the stability of the model, using the CUSUM and CUSSUM of Squares test.



The result from Figure 1 and 2 above indicates that the model is stable since the blue line lies within the boundary of 5% significance.

5. Conclusion and Recommendation

The purpose of this study is to determine the impact of monetary policy on balance of payments in Nigeria with the aim of determining the impact of exchange rate, interest rate, money supply and inflation on BOP in Nigeria. Based on the outcome of the empirical analysis, the monetary policy variables in the model are significant in correcting the balance of payments position of Nigeria. The following recommendations are therefore made to promote better utilization of monetary policy variables to tackle the balance of payments crises in Nigeria.

The government should develop export promotion strategies aimed at increasing export and maintaining the value of the domestic currency to prevent further worsening of balance of payments as the depreciation of the Nigerian currency have proven to be ineffective in maintaining balance of payments equilibrium. Increase in domestic income can be used to reduce balance of payments deficits. This can be done by increasing the level of domestic production through lower interest rates to stimulate investment and increase productivity, thereby making the production in the economy to overshadow its absorption and increase export.

The CBN should put adequate mechanism in place to ensure the stability of the prices of goods and services, so that the rate of inflation in the country does not diverge too far from normal. The Central bank of Nigeria should intensify their monitoring of the deposits in other financial



institutions to ensure strict compliance with its guidelines. In addition, institutions that do not comply with the CBN directives should be heavily sanctioned. Reliance on just the use of monetary policies may prove inefficient due to its long transmission mechanism. Therefore, the government and CBN should align the objectives of both monetary and fiscal policies to increase their level of efficiency in the elimination balance of payments deficits and promotion of general economic growth and developments in Nigeria.

References

- Alexander S. (1952). *Effect of devaluation on The Trade Balance* I.M.F staff paper
- Bukonla G.O, Sherifdeen A.T & Bolade A. A (2018). The empirical analysis of monetary policy on balance of payments adjustments in Nigeria: A bound testing approach, *Iran. Economic Review*. Vol. 23(1), 129-147
- Babajide, K. (2018). Nigeria's Balance of Payments deteriorates to \$4.5b-CBN. Retrieved from: <https://www.vanguardngr.com/2018/12/nigerias-balance-of-payments-deteriorates-to-4-5b-cbn/>
- Central Bank of Nigeria. (2006). what is monetary policy? Central Bank of Nigeria, monetary policy department. *monetary Policy Series*. CMN/MPD/Series/01/2006
- Central Bank of Nigeria (2019). Balance of Payments Statistical Brief. Retrieved from: <https://www.cbn.gov.ng/>
- Dave, G. (2013). Econometrics Beat: Dave Giles' Blog. Retrieved from: <https://davegiles.blogspot.com/2013/06/ardl-models-part-ii-bounds-tests.html?m=1>
- Danmola, R. A. & Olateju, A. O. (2013). The Impact of Monetary Policy on Current Account Balance In Nigeria. *IOSR Journal Of Humanities and Social Science (IOSR-JHSS)* e-ISSN: 2279-0837 p-ISSN: 2279-0845. Volume 7, Issue 3, PP 67-72 www.iosrjournals.org
- Dayo, B. O. & Akindele, J. O. (2017). Balance of payment crises in Nigeria: the role of exchange rate. *International Journal of Economics, Commerce and Management* Vol. V (5),
- Emeka, N. & Aham, K. U. (2016). Autoregressive Distributed Lag (ARDL) cointegration technique: application and interpretation. *Journal of Statistical and Econometrics Methods*, Vol. 5(4), 63-91
- Fasanya, I. O., Onakoya, A. B. O., & Agboluaje, M. A., (2014). Does monetary policy influence Economic Growth in Nigeria? *African Economic and Business Review* Vol. 12 (1)
- Hossein O. & Bahram, T. (2015). The impact of monetary and fiscal policies on balance of payments in order to fulfill the objectives of the Fifth Development Plan. *Journal of Scientific Research and Development*. Vol. 2(6), 71-74
- Ishola, K. A. (2010). *Macroeconomics*. Basorun, Ibadan, Cresthill publishers LTD
- Imoisi, A. I, Lekan M.O. & Bosco I. E. (2013). Monetary Policy and Its Implications for Balance of Payments Stability in Nigeria: 1980-2010. *International Journal of Economics and Finance*; Vol. 5 (3).
- Imoughele, L. E. & Ismaila, M (2015) Monetary Policy and Balance of Payments Stability in Nigeria. *International Journal of Academic Research in Public Policy and Governance*, Vol. 2(1), 1-15
- Igbinoba E. (2017). Balance of Payments Constrained Economic Growth in Nigeria. *African Journal of Economic Review*, Vol V(II), 1-13
- Jhingan, M. L. (1998). *Advanced Economic Theory*. Delhi, Vrinda Publication



- Mukolu, M. O, Illugbemi, A. O & Olatu, J. A. (2018). Monetary policy and its implication for balance of payment stability in Nigeria between (1986-2015). *Asian Journal of Economic Modelling*. Vol. 5(4), 480-492.
- Nwanekezie S. I. & Onyiro H. C. (2018). Exchange Rate Volatility and the Nigerian Balance of Payments (1981-2016). Munich Personal RePEc Archive (MPRA) Paper No. 90562
- Nwanosike, D. U., Uzoechina, B., Ebenyi, G. O & Ishiwu, V. (2015). Analysis of Balance of payments Trend in Nigeria: A Test of Marshall-Lerner Hypothesis. *Saudi Journal of Business and Management Studies*.
- Onwe, G. E (2014). Monetary policy and balance of payments in Nigeria: a co-integration approach (1986-2012). *International Journal of Social Sciences and Humanities Reviews*. Vol.4 (4), 175 – 184
- Onuchuku, O., Chukueggu, C. C., Nenbee, S. G. & Wosu, C. (2018). Monetary policy and Nigeria's balance of payments. Proceedings of ISER 128th International Conference, New York, USA, 16th-17th May 2018, pp 72-79
- Osisanwo, B. G., Maku, O. E , Ajike, E.O. & Egwuonwu, T. K. (2015). Growth Effect of Balance of Payments and Monetary Policy in Nigeria (1980-2013): A Time Series Analysis. *Global Journal of Management and Business Research*
- Pesaran, M. H., & Shin, Y. (1998). Generalized Impulse Response Analysis in Linear Multivariate Models. *Economics Letter*. 58(1), 17-29
- Pesaran, M. H., Shin, Y. & Smith, R. J. (2001). Bounds Testing Approaches to Analysis of Level Relationships. *Journal of Applied Econometrics*, Vol. 16, Issue (3), pp 289-326
- Sebastin, K. & Daniel, C.S. (2018). ARDL: Estimating autoregressive distributed lag and equilibrium correction models.
- Ubong S. U. (2015). Technical Notes on Balance of Payments Compilation and Analysis: The Case of Nigeria, *CBN Journal of Applied Statistics*, Vol. 6(1), 335-349
- Udude C. C. (2015). Monetary Policy and balance of Payments in Nigeria (1981-2012). *Journal of Policy and Development Studies* Vol. 9 (2),