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Monetary Policy and Balance of Payments Stability in Nigeria

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Abstract

This study examines the monetary policy phenomenon to Balance of Payment (BOP) in Nigeria. The study uses time-series data which spanned between 1986 and 2013. The effects of stochastic shocks of each of the endogenous variables are explored using Error Correction Model (ECM). The study shows that Long run relationship exists among the monetary policy variables and BOP. The core finding of this study shows that monetary policy variables of Exchange rate, Broad money supply and credit to the private sectors are the major monetary factors that determine BOP in Nigeria. The study concluded that monetary policies and implementation capacity is important in the Nigerian economy, because it is very special for determining the provision of interest rate to private sector which produce for export which will have a spill over effect on BOP and economic growth. Also, Balance of Payment is a monetary phenomenon and monetary policy can be used by monetary authority to improve and stabilised the foreign sector performance in Nigeria.

Keyword: Monetary Policy, Exchange Rate, Broad Money Supply, Balance of Payment, Macroeconomic.

Introduction

Monetary policy is one of the macroeconomic instruments with which monetary authority in a country employed in the management of their economy to attain desired objectives. It entails those actions initiated by the Central Bank which aim at influencing the cost and availability of credits (Horwitz, 1969; Nwankwo, 1991; Wrightsman, 1976).

For most economies, the fundamental objectives of monetary policy include price stability, maintenance of balance of payments equilibrium, and promotion of employment,

output growth and sustainable development. These objectives are necessary for the attainment of internal and external balance of value of money and promotion of long run economic growth.

Ajisafe and Folorunso (2002) noted that the objectives of monetary policy includes increase in Gross Domestic Product growth rate, reduction in the rates of inflation and unemployment, improvement in the balance of payments, accumulation of financial savings and external reserves as well as stability in Naira exchange rate, the policy as well as instruments applied to attain these objectives, however, have until recently been far from adequate. Economic development is one of the major objectives of many countries in the world and economic growth is fundamental to economic development. However, Wanaset (2009) shows that high inflation (and its associated high variability) distorts the decisions of private agents concerning investment, saving, production and ultimately slower the economic growth balance of payment.

The Keynesian theory postulated that changes in the money supply affect aggregate expenditure, output and balance of payment through the changes in the interest rate and thus mechanism works indirectly. Monetarism concludes that monetary expansions influence the real variables such as output and employment in the short-run, while the nominal variables such as nominal national income, interest rates and prices are influenced in the long-run.

Fasanya, Onakoya and Agboluaje (2013) asserted that Since the establishment of the Central Bank of Nigeria (CBN) in 1959, the bank has continued to play the traditional role expected of a central bank, which is the regulation of the stock of money in such a way as to promote the social welfare. This role is anchored on the use of monetary policy that is usually targeted towards the achievement of full-employment equilibrium, rapid economic growth, price stability, and balance of payment balance. Nwosa (2011) established that there have been various regimes of monetary policy in Nigeria some times, monetary policy is tight and at other times it is loose mostly used to stabilize prices and enhance the real sector performance. The economy has also witnessed times of expansion and contraction but evidently, the reported growth has not been a sustainable one as there is evidence of growing poverty among the populace.

One of the major macroeconomic goals of stabilization policy in any country of the world is to maintain a healthy balance of payment position in order to safe guard the external value of Nation currency. Many developing countries like Nigeria have experienced chronic deficit on the balance of payment account and face many difficulties in monetary actions. Most research studies are cantered on monetary approach to balance of payments. This approach has been criticized many times because it considers monetary variables excluding bank credit to the private sector which is an important monetary variable that determine the demand and supply of money to private sector which have a spill over effect on BOP. Furthermore, Alamode (1997) maintained that the Monetary Approaches to Balance of Payment does not work in short term; it is only reliable in long run case. Therefore this study will contribute to literature by examining the impact of bank credit to private sector on Nigeria BOP and also will determine both the short and long run effect of monetary policy on the country BOP.

However, the neglect of the impact of the monetary analysis of the balance of payment has constituted a serious problem in attainment of adequate and timely liquidity to support credit dynamism that would sustain fiscal mechanism in line with on-going reforms by the

regulatory authorities to enhance robust economic growth prospects. Therefore, this study intends to evaluate the impact of monetary policy variables on Nigeria balance of payment. The rest of the paper is divided into the following sections. Section 2 is the literature review, section 3 is methodology of the study, section 4 is data analysis and presentation of result and section 5 is summary of findings, conclusion and policy recommendations.

Literature Reviews

Monetary policy as a technique of economic management to bring about Sustainable economic growth and development has been the pursuit of nations and formal articulation of how money affects economic aggregates dates back to the time of Adams Smith and later championed by the monetary economists (Loto, 2012). Since the expositions of the role of monetary policy in influencing macroeconomic objectives like economic growth, price stability, equilibrium in balance of payments and host of other objectives, monetary authorities are saddled with the responsibility of using monetary policy to grow their economies.

The Central Bank of Nigeria (CBN) was established in 1959 with the traditional role of regulating the stock of money in such a way as to promote full-employment equilibrium, rapid economic growth, price stability, and balance of payment. Fasanya, Onakoya and Agboluaje (2013) asserted that the major two goals of monetary policy are inflation targeting and exchange rate policy with the assumption that these are essential tools of achieving macroeconomic stability.

According to central Bank of Nigeria (CBN) excess supply of money will result in an excess demand for goods and services which in turn raises prices and reduces balance of payment. On the other hand, inadequate supply of money retarding growth and development. Nneka (2012) argues that for monetary policy to be efficacious, the economics system must be highly interested and highly monetized corresponding with regular information network system. She also said that Nigeria lacks the fundamental flexibilities which could have aided a more effective use of monetary policy. Obviously, the empirical studies on monetary policy and balance of payment stability in Nigeria are still scanty.

The balance of payment is defined as a systematic record of economic and financial transactions for a given period of time, say one year, between residents of an economy and non-residents and the rest of the world (Sloman, 2004). These transactions involves the provision and receipt of real resources, goods, services and income, changes in claims on and liabilities to the rest of the world. The balance of payment records transaction of goods, services and income, changes in ownership and other changes in an economy's holding of monetary gold, Special Drawing Rights (SDRs) and claims on and liabilities to the rest of the world. A negative balance of payments means that more money is flowing out of the country than coming in, and vice-versa. Balance Of Payments (BOP) may be used as an indicator of economic growth and political stability. For example if a country has consistently positive BOP, this could mean that there is significant foreign investment within that country. It may also mean that the country does not export much of its currency. Adamu and Itsede (2009) categories disequilibrium in the balance of payments to be either temporary or fundamental while Temporary disequilibrium is caused by random variations in trade, seasonal fluctuations, and the effects of unfavourable weather on agricultural production, which tend to be self-equilibrating within a short time.

Amassoma (2011) examined the effect of monetary policy on macroeconomic variables in Nigeria for the period 1986 to 2009 by adopting a simplified Ordinary Least Squared technique and found that that monetary policy had a significant effect on exchange rate and money supply while monetary policy was observed to have an insignificant influence on price instability. Onyeiwu (2012) examines the impact of monetary policy on the Nigerian economy using the Ordinary Least Squares Method (OLS) to analyse data between 1981 and 2008. The result of the analysis shows that monetary policy resented by money supply exerts a positive impact on GDP growth and Balance of Payment. Furthermore, the findings of the study support the money-prices-output hypothesis for Nigerian economy.

Danjuma (2013) determine whether excess money supply has played a significant role in the disequilibrium of balance of payment in Nigeria during the period 1986-2010. Using Johansen Cointegration, Vector Error Correction Mechanism and the Impulse Response Function and Variance Decomposition the results confirm that balance of payment in Nigeria is not a purely monetary phenomenon and the monetary authority in the country should seriously monitor budget deficit because this also cause domestic credit increase. Imoisi (2012) examined the trends in Nigeria's Balance of Payments position from 1970-2010 using an econometric analysis and found that exchange rate and interest rate as monetary variable has a significant impact on Nigeria Balance of Payments and inflation rate was not significant.

Tijani (2013) empirical Analysed Balance of Payment Adjustment Mechanisms using Monetary Channel in Nigeria from 1970– 2010. The regression analysis found a positive relationship between the BOP and Domestic Credit, Exchange Rate and Balance of Trade while Inflation Rate and Gross Domestic product have a negative effect and concluded that monetary measures constitute immensely to the position of BOP, cause disturbances and also serve as adjustment mechanism to bring BOP to equilibrium depending on it application and policy mix by monetary authority.

Imoisi, Olatunji and Ekpenyong (2013) study the efficacy of monetary policy in achieving Balance of Payments stability in Nigeria from 1980 to 2010 using an Ordinary Least Squares (OLS) technique of multiple regressions. The estimated result shows a positive relationship between the BOP and the monetary variables of Money Supply, Exchange Rate and Interest Rate. Specifically, Money Supply and Interest Rate had significant relationship with BOP, whereas Exchange Rate was not statistically significant. They concluded that the government should promote the exportation of Nigerian products especially the Non oil products, as this will bring in more foreign exchange earning into the country, boost productive activities and improve the balance of payments position of the country.

Ajayi (2015) examined the determinants of balance of payments in Nigeria between 1970-2010. The study employed the co-integration method to assess the long run impact of macroeconomic variables and found a negative significant relationship between monetary policy instruments (i.e. monetary policy rate and money supply) and balance of payment. The study concluded that a larger exchange rate and a lesser monetary policy rate will raise the balance of payments of the Nigerian economy.

In other countries, Dhliwayo (1996) tests the monetary approach to Zimbabwe's balance of payments during the period 1980 to 1991 using multivariate co-integration and error-correction modelling, the results suggest that money played a significant role in determining the

balance of payments and concluded that balance of payments disequilibrium can be corrected through appropriate financial programming and monetary targeting.

Boateng and Ayentimi (2013) examined monetary approach to balance payment in Ghana using annual data set that covered 1980-2010. The ordinary least squares empirical results showed that the balance of payments in Ghana is not wholly a monetary phenomenon and found that monetary variables of domestic credit, inflation, interest have a significant impact on balance of payment proxy by net foreign assets.

Ali (2010) examines evaluate the monetary approach to the Pakistan balance of payments for the period 1990–2008 employing the reserve flow equation, it tests whether excess money supply played a significant role as a disturbance by using co-integration tests and error-correction modelling. The empirical results showed that monetary variables do not play an overwhelming role in determining Pakistan's balance of payments. The study also revealed that balance of payments is not a purely monetary phenomenon. Therefore disequilibrium in the Balance of payments cannot be corrected only through monetary actions by the authorities.

In the study of Fleermuys (2005) Namibia monetary approach to balance of payments for the period 1993–2003, the empirical results showed that monetary variables do not play an overwhelming role in determining Namibian balance of payments. The results showed that, although some variables suggested by the monetary approach play significant roles and balance of payments disequilibrium can, therefore, not be corrected only through monetary actions by the authorities. Furthermore, Umer, et al., (2010) in their study which examines the monetary approach to Pakistan's balance of payments for the period 1980-2008 using Co- integration test and error correction modelling, The empirical results revealed that showed that monetary variable does not play an overwhelming role in determining Pakistan's balance of payments and conclude that the balance of payments is not a purely monetary phenomenon.

Methods of the Study

Source of Data

To make an assessment of the Impact of monetary policy on balance of payments in Nigeria from 1980-2012, the study utilizes secondary data. The data were obtained from various publications of the Central Bank of Nigeria (CBN) Statistical Bulletin (various issues) and Annual Report and Statement of Accounts.

Model Specification

The model for this study is based on the theoretical framework of impact of monetary policy on BOP in the Nigerian economy. The model used by Magee (1976) is modified and used in this study. In Magee's work, he examines the effect of monetary variables such as, price level, interest rate and nominal domestic credit on the balance of payment (BOP). In addition to the variables used by Magee we have included exchange rate, openness of the economy, broad money supply and bank credit to the private sector in this study. Exchange rate is included because from theory, it is obvious that there is a relationship between exchange rate and the balance of payments. In this study, balance of payment (BOP) position is made the endogenous variable while exchange rates, money supply, bank credit to the private sector, price level, openness of the economy and interest rate are the explanatory variables. This could be stated mathematically as follows:

$$BOP = F(BCP, ER, INT, MS, INF, OP) \dots\dots\dots (4)$$

Where:

ER = Exchange Rate

INT = Interest Rate

MS = Money Supply

INF = Inflation

OP = Openness

BCP = Bank Credit to private sectors.

Introducing the constant term and the error coefficient, we have the operational specification of the model as: $BOP = \alpha_0 + \alpha_1ER + \alpha_2INT + \alpha_3MS + \alpha_4INF + \alpha_5OP + \alpha_6BCP + U_t \dots\dots\dots(5)$

The a’p priori expectations are: $\alpha_1, \alpha_2, \alpha_5, \alpha_6 > 0; \alpha_3, \alpha_4, < 0$

α_0 = Is the intercept or slope

$\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5, \alpha_6$ = are the coefficients

U_t = is the stochastic error term

The adopted Error-Correction Model (ECM) for this study takes the following form:

$$\Delta BOP = \alpha_1 + \sum_{i=1}^n \beta_i \Delta LN ER_{t-1} + \sum_{i=1}^n \beta_i \Delta LN INT_{t-1} + \sum_{i=1}^n \beta_i \Delta BCP_{t-1} + \sum_{i=1}^n \beta_i \Delta LN MS_{t-1} +$$

$$\sum_{i=1}^n \beta_i \Delta LN INF_{t-1} + \sum_{i=1}^n \beta_i \Delta LN OP_{t-1} + U \dots\dots\dots (6)$$

Method of Data Analysis

The estimation techniques of investigating the model are in four stages:

First, Time series is stationary when the mean $E(x_t)$ of time series (x_t) does not depend on t , and the variance, $E[x_t - E(x_t)]^2$ does not vary systematically with time. A stationary process has the property that the mean, variance and autocorrelation structure do not change over time. Stationary data depends on whether it has a unit root. Non- stationary data has stochastic or random trends and as such they are non deterministic. Therefore, when unit root is present, it implies that the time series data are non- stationary. The standard approach to investigate the stationary of time series data is the unit root test. The most commonly used is the Augmented Dickey Fuller (ADF) test proposed by Dickey and Fuller (1981). Basically, this step seeks to establish whether a particular time series data is stationary or non-stationary. If it is non – stationary, then it has to be differenced either once or twice.

To carry out this test, we test the null hypothesis of a difference stationary against the alternative hypothesis of a trend stationary (Enoma and Isedu, 2011). Thus,

$$H_0: Y_k \sim 1(1)$$

$$H_0: Y_k \sim 1(0)$$

Secondly, the variables are tested for co- integration, to find their convergence status. This is because variables that fail to converge in the long run may be hazardous to policy making. The theory of co-integration pioneered by Engle and Granger (1987) addresses this issue of integrating short-run dynamics with log-run equilibrium.

Thirdly, we estimate the model to evaluate the influence of monetary policy on Nigeria balance of payment. The estimation is carried out by using the ordinary least squares (OLS) technique, which is regarded as the best linear unbiased estimator (BLUE) that can be used in evaluating models of this nature (Gujarati 2002). The estimation, however, presupposes that the variables possess desirable empirical properties of stationary and convergence (co-integration). However, if these desirable properties are not achieved we use the Error Correction specification to estimate the equation before using the ordinary least square technique.

Empirical Results and Analysis

Using the data from period 1980-2012, we regressed and analyzed the prediction equation results of the model which was specified using E-view 7.1 econometric software package to run the OLS. The results of the estimation are presented below in the sub sections.

Unit Root Test

Granger and Newbold (1974), Granger (1986), have demonstrated that if time series variables are non-stationary, all regression findings with these time series will be at variance from the conventional theory of regression with stationary series. That is, regression coefficients with non-stationary variables will be spurious and deceptive. To get over this problem, we test for stationarity of the time series. Conventional method of Augmented Dickey Fuller (ADF) test was used to investigate whether variables used in this study have a unit root or not. The results of the unit root test are presented below.

Table 2: Unit Root Test

| Variable | ADF calculated value in Level | ADF calculated value at 1st Difference | McKinnon 5% Critical value | Order of Integration |
|----------------|-------------------------------|--|----------------------------|----------------------|
| BCP | -1.254004 | -4.304548 | -2.9591 | 1(1) |
| EXR | -1.331683 | -10.00545 | -2.9591 | 1(1) |
| INF | -4.648776 | - | -2.9558 | 1(0) |
| BOP | -2.678862 | -7.421903 | -2.9591 | 1(1) |
| M ₂ | -1.138129 | -3.274908 | -2.9591 | 1(1) |
| INT | -2.722717 | -7.727670 | -2.9591 | 1(1) |

Sources: Authors' calculation.

In Table 1 above, exchange rate, bank credit to the private sector, broad money supply, openness of the economy and interest rate are stationary at first order difference 1(1), since the ADF value of each of the variables at first difference is greater than the McKinnon 5% critical values, while inflation rate is stationary in level 1(0).

Johansen Co-integration Test Result

The result of Johansen co-integration test is shown in table 2 below. The result shows that there exist three (3) cointegrating equations at 5% level of significance. This is because the likelihood

ratio is greater than critical values at 5%. This shows that there is long run relationship between monetary policy variables and Nigeria BOP. The result indicates that, in the long run; the dependent variables can be efficiently anticipated using the specified monetary policy variables. Thus, error correction model can be estimated.

Table 2: Co-integration Rank Test Assuming Linear Deterministic Trend for Model

| Series: LM2, LBCP, LEXR, LINF, LINT, LOP, LBOP | | | | |
|--|------------------|--------------------------|--------------------------|---------------------------|
| Eigen value | Likelihood Ratio | 5 Percent Critical Value | 1 Percent Critical Value | Hypothesized No. of CE(s) |
| 0.909548 | 168.5651 | 94.15 | 103.18 | None ** |
| 0.690419 | 94.07408 | 68.52 | 76.07 | At most 1 ** |
| 0.649772 | 57.72544 | 47.21 | 54.46 | At most 2 ** |
| 0.406119 | 25.20115 | 29.68 | 35.65 | At most 3 |
| 0.220215 | 9.047783 | 15.41 | 20.04 | At most 4 |
| 0.042210 | 1.336933 | 3.76 | 6.65 | At most 5 |

*(**) denotes rejection of the hypothesis at 5% (1%) significance level

L.R. test indicates 3 co-integrating equation(s) at 5% significance level

Sources: Authors computation.

Presentation of Regression Results

The results of error correction model is presented in table 3 below

Table 3: Parsimonious Error-Correction Model D(LBOP) by OLS

| Regressor | Coefficient | Std Error | T-statistic | Probability. |
|-----------|-------------|-----------|-------------|--------------|
| C | 5.8351 | 3.6932 | 1.5780 | 0.1278 |
| D(LBCP) | 1.3441 | 0.4261 | 3.1546 | 0.0055 |
| D(LBCP) | 1.8816 | 0.7351 | 2.5597 | 0.0175 |
| D(LEXR) | | | | |
| D(LINF) | -0.1281 | 0.2237 | -0.5723 | 0.5725 |
| D(LINT) | 1.1330 | 1.4182 | 0.7989 | 0.4325 |
| D(LM2) | 0.4498 | 0.1366 | 3.2927 | 0.0035 |
| D(LOP) | 0.0558 | 0.9650 | 0.0579 | 0.9544 |
| ECM(-1) | -0.4846 | 0.1982 | -2.4454 | 0.0210 |

$R^2 = 0.7427$; $R^{-2} = 0.6644$; F – Statistic = 9.4848; Prob (F – Statistic) = 0.0002; D.W Statistic 2.0743
Sources: Authors computation.

From the parsimonious error correction model shown in table 4.4 above, the coefficient of determination (R^2) value of 0.7427 implies that 74 per cent of the total variation in Nigeria BOP is explained by changes in the endogenous variables while 26% per cent is unexplained due to

error term. The adjusted coefficient of determination (R^2) Value of 0.6644 implies that 66 per cent of the total variation in Nigeria BOP is explained by changes in the endogenous variables when the coefficient of determination is adjusted for degree of freedom. This implies that 34 per cent is unexplained due to error term. While the F-Statistic is highly significant at 5% level of significance with the p-value of 0.0000. This is further strengthened by a high F-ratio of 9.4848 which is greater than the critical value of 2.60, and thus we can say that the model has a high goodness of fit. The Durbin Watson Statistic of 2.0743 indicates absence of autocorrelation in the estimated model. This is in line with the assumption of non-autocorrelation of the error term in the ordinary least square method of regression.

The summary of the regression result in table 4.4 shows that, in the short run when the value of explanatory variable that is exchange rate, bank credit to the private sector, broad money supply, openness of the economy, interest and inflation rate are held constant at zero value, the average value of BOP is 5.8351 units. The coefficients of the different explanatory variables are explained below:

Bank Credit to Private Sector (DLBCP)

This variable has a positive sign which imply that direct relationship existing between bank credit to private sector and BOP. This is consistent with the theoretical expectation. The value of the coefficient is 1.3441, which implies that 1 percent increase in DLBCP will lead to 1.3441 per cent increase in Nigeria BOP. The coefficient of the variable is statistically significance at 5 percent level of significance with a probability value of 0.0055 and a T-Value 3.1546 which is greater than the critical value 2.056. The significant of this variable attributed to the various policies put in place by monetary authority to induce the supply and demand for credit by the private sectors which lead to high productivity and induce BOP stability.

Exchange Rate (DLEXR)

The coefficient of this variable is positively signed, this shows that DLEXR has a direct relationship with BOP. This result is consistent with the apriori expectation. The value of the coefficient is 1.8816 which implies that 1 percent increase in DLEXR will lead to 1.8816 per cent increase in Nigeria BOP. The coefficient of the variable is statistically significant at 5% level of significance with a probability value of 0.0175 and T-Value 2.5597 which greater than the critical value of 2.056. This implies that the continue devaluation of Nigeria currency has the ability to induce balance of payment stability in Nigeria. This is consistent with the economic theory of Marshal Learners.

Inflation Rate (DLINF)

The coefficient of this variable is negatively signed. This shows that the variable have inverse relationship with BOP. This is consistent with the apriori expectation. The value of the coefficient is -0.1281 which imply that 1 per cent increase in DLINF will lead to 0.1281 per cent decrease in Nigeria BOP. The variable is not statistically significant at 5 per cent level of significance. It has a probability value of 0.5725 and T-Value 0.5725, which is less than the critical value of 2.056. The negative value of this variable indicates that there is macroeconomic stability in the Nigerian

economy but the insignificance means that adequate macroeconomic policies that will improve the external sector of Nigeria economy should be enhanced.

Interest Rate (DLINT)

This variable is positively signed, indicating that there is a direct relationship between DLINT and BOP. This is not consistent with the apriori expectation. With a coefficient of 1.3300, which implies that 1 per cent increase in DINT will lead to 1.3300 per cent increase in Nigeria BOP during the study period when other factors are held constant. The coefficient of the variable is also statistically insignificant, with a probability value of 0.4325 and T-value of 0.7989 which is less than the critical value of 2.056. This finding indicates that a well managed interest rate regime by the monetary authority have the potential to grow the Nigerian economy and stability in Her BOP.

Broad Money Supply (DLM₂)

The coefficient of this variable is positively signed. This shows that the variable has direct relationship with BOP. The value of the coefficient is 0.4498 which imply that 1 per cent increase in Broad Money Supply (DLM₂) will lead to 0.4498 per cent increase in Nigeria BOP. The variable was also statistically significant with a probability value of 0.0035 and T-Value 3.2927, which is greater than the critical value of 2.056. This also indicates that a well managed monetary policy by the monetary authority has the potential to stabilized Nigeria BOP by extension BOP is a monetary phenomenon.

Openness of the Economy (DL0P)

The coefficient of this variable is positively signed. This shows that the variable has direct relationship with BOP. The value of the coefficient is 0.0558 which imply that 1 per cent increase in openness of the economy (DL0P) will lead to 0.0558 per cent increase in Nigeria BOP. The variable was statistically insignificant with a probability value of 0.9544 and T-Value 0.0579, which is less than the critical value of 2.056. Thus, we reject the alternate hypotheses that openness of the economy has no significant impact on Nigeria BOP in the short run.

The result from table 4.4 shows that the coefficient of ECM is negative -0.4846 and significant at 5% percent critical level. This shows that about 48 percent disequilibria in the BOP in the previous year were corrected for in the current year. The significance of the ECM is an indication and a confirmation of the existence of a long run equilibrium relationship between Nigeria BOP and monetary policy variables used in this study. The robustness of the error correction method further buttresses that only 48 percent is corrected in the previous year. This means that Bank credit to the private sectors and other monetary indicators had the tendency to induce Nigeria BOP and economic growth during the study period.

Summary of Findings, Conclusion and Recommendations

Summary of Findings

In this study, we set out to empirically investigate if Balance of Payment can be determined by monetary phenomena in Nigeria between 1986 and 2013. The study was conducted with a view to identify those factors that can promote Balance of Payment equilibrium in Nigeria. In order to

achieve the objectives of the study, an econometric model was formulated. Balance of payment was regressed on Exchange rate, Interest rate, Broad money supply, Inflationary rate, bank credit to the private sectors and Openness of the economy. This variable was included in our econometric model based on review of past studies. Using Error Correction Mechanism to estimate monetary approach to Balance of Payment in Nigeria after conducting stationarity test which was carried out to avoid false results. The stationarity test showed that Balance of Payment, Openness of the economy, bank credit to private sector, Broad money supply and interest rate are stationary at first order level of difference. Therefore, the null hypothesis of a unit root is accepted for the variable while inflationary rate is stationary at a level. The results from co-integration test showed presence of long run relationship between BOP and the monetary policy variables in the model.

The major findings of the study are summarized as follows.

- i. Exchange rate has positive and significant impact on Balance of Payment in Nigeria. This indicate that exchange rate in Nigeria during the study period has robust effect on her economic growth and balance of payments.
- ii. The result shows that interest rate has positive and insignificant influence on Nigeria's balance of payment. This is not consistent with the a priori expectation.
- iii. The result shows that inflationary rate has negative, but insignificant relationship with Nigeria's balance of payments. This result indicates that increase in inflationary rate will distort Nigeria's balance of payment equilibrium.
- iv. Broad money supply has direct and significant effect on Nigeria's balance of payment. The positive and significant nature of this variable indicates that BOP can be determined by monetary policies (i.e. monetary approach). However, adequate monetary policies need to be put in place to ensure stability in Nigeria BOP.
- v. Bank credit to private sectors has direct and significant effect on Nigeria's balance of payment. The positive and significant nature of this variable implies that supply and demand for credit by the private sectors leads to high productivity and induce BOP stability. Therefore, adequate monetary policies need to be put in place to ensure supply and demand for credit in the Nigerian economy.
- vi. Openness of the economy has positive and insignificant effect on Nigeria's Balance of Payment.
- vii. The error correction term (ECM) from the result shows that deviation in BOP is corrected by 48% percent the following year by monetary policy. This is significant. This means that monetary variables have the tendency to induce Nigeria's BOP under the study period.

Conclusion

In this study, we examined the monetary determinants of Balance of Payment in Nigeria. From our findings, it can be reasonably concluded that monetary policy variables of Exchange rate, Broad money supply and credit to the private sectors are the major monetary factors that determines BOP in Nigeria. The general lesson that emerges from this study is that monetary policies and implementation capacity is important in the Nigerian economy, because it is very special for determining the provision of interest rate to private sector which produce for export which will have a spill over effect on BOP and economic growth. Also, the findings of this study

show that Balance of Payment is a monetary phenomenon and monetary policy can be use in improving the foreign sector performance in Nigeria.

Recommendations

Based on the findings of this study, the following recommendations are advocated to enhance Nigeria's BOP.

- i. The government through the monetary authority should ensure that the domestic money stock is consistent with the macroeconomic objectives of the country in order to maintain sustainable BOP position.
- ii. Since inflationary rate has negative effect on BOP, Monetary authority should put adequate policies in place that will stem price volatility. Such policies include appropriate targeting of inflationary rate to make sure that domestic price level does not diverge significantly from the rate existing in the world market
- iii. It is important that the exchange rate is not over valued, because this will result in unsustainable Balance of Payment and escalating external debt stock. In contrast, the exchange rate should find its equilibrium level to make the BOP position viable. The government should encourage export diversification. Non-oil sector exports should be encouraged. This will enhance BOP position in Nigeria.
- iv. Monetary authority should make available, short, medium and long term credit to productive investments as they constitute an integral part of the growth and transformation process of an agro based economy like that of Nigeria, this will induce employment and income of the various economic agent which will have a spill over effect on private savings and BOP stability.
- v. Furthermore, Monetary authority should create and implement monetary policies that favoured efficient provider of more investment climate by facilitating the emergency of market based interest rate and exchange rate regimes that attract both domestic and foreign investor to invest in the Nigerian economy.
- vi. Finally, The Central Bank should make more stringent punishment for non-compliance to the monetary policies by financial institutions mostly especially in the provision of credit facility since bank credit has a significant effect on Nigeria BOPs.

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