



External Reserve Management and the Nigerian Economy (1990 – 2015)

¹Egbulonu, Kelechukwu Godslove (Ph.D) & ²Akamike, Okechukwu Joseph

Department of Economics, Imo State University, Owerri, Nigeria
kelechukwugodslove@gmail.com

Department of Economics, Imo State University, Owerri, Nigeria

ABSTRACT

This study investigated External Reserve Management and the Nigerian Economy over period 1990 to 2015. The external reserve model was estimated using time series data on Gross Domestic Product as the dependent variable while External Reserve, Inflation and Exchange Rate were the independent variables. The study used the ARDL Bounds test approach to estimate the long run relationship between External Debt and Economic Growth in Nigeria. Data for the study were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin (2016 edition). A pre-test was carried out to check for the stationarity of the data and it revealed that the data have mixed order of stationarity. The test for long run relationship using the Bounds test showed that external reserve management has a long run effect on Nigeria's economic growth. The findings revealed that external reserve has a positive effect on Nigeria's economic growth both in the short and long run, but this effect was not significant. Similarly, exchange rate had an inverse relationship with economic growth in the long run and was not significant. Inflation decreased economic growth both in the short and long run periods. The implications of these findings is that Nigeria's external reserve has been fluctuating from moderate to low and very low for most of the period reviewed and this has been adversely affected by increasing exchange rates which in turn was being highly supported by the Central Bank of Nigeria through Nigeria's external reserve. It is recommended that the government ensure proper management of the nation's foreign reserve, invest a good percentage of the reserve in foreign high yielding financial instruments and diversify the sources of foreign exchange inflow into the country so as to ensure a sustained growth of the economy.

Keywords: External Reserve Management, Gross Domestic Product, Inflation, Exchange Rate, Bounds Test

1.0 INTRODUCTION

Many countries in the world usually hold foreign reserves to have a favourable level of exchange rate especially with a view to stabilizing it and maintenance of robust economy. There have been several debates on whether there is need to beef up the level of nations' foreign reserves or trim them, and this debate is becoming more interesting especially in developing countries like Nigeria. Some economists are of the opinion that keeping scarce resources in reserve when there are economic issues to be attended to domestically, such as agriculture, infrastructure, education and health among others, may not be a very wise decision (Osabuohien & Egwakhe, 2008). In recent times, the talk of mismanagement and depletion of Nigeria's external reserve has made headlines. Former Minister, Okonjo-Iweala, on many occasions had to come out to reassure the nation that her external reserve was safe and in good hands. Former president of Nigeria, Olusegun Obasanjo, once accused his successor, former president Jonathan of squandering the nation's external reserve, and was supported by a former Central Bank of Nigeria (CBN) governor Charles Soludo. Obasanjo's claim was that the administration inherited about \$67 billion, and had squandered around \$40 billion. The coordinating minister of the economy then, argued that the

administration inherited only \$43.13 billion, and that part of the foreign reserve was set aside by the Central Bank of Nigeria (CBN), to stabilize the falling value of the Naira at a time crude oil prices in the international oil market crashed in September 2011 to \$31.7 billion (premiumtimes.ng, 2015).

Since the collapse of the Bretton Wood system, many nations, especially low income and developing nations have made tremendous increase in their accumulation of external reserves. The foreign exchange policy markets have become afraid of the uncertainties of the flexible exchange rate system introduced after the collapse of Breton Woods System. In order to intervene in the foreign exchange markets and reduce foreign exchange volatility and achieve price stability, accumulation of external reserves continued unabated. These accumulations are made regardless of whatever effects they have on the exchange rates itself price stability and volatility of both. In spite of the accumulations, policies and measures to manage external reserves, volatility and inflationary pressures have continued to persist. This research work therefore, examines how Nigeria's external reserve has affected the growth of the Nigerian economy using the Autoregressive distributive lag framework. The study is guided by the following specific objectives: To estimate the long run and short run dynamics of foreign reserve, exchange rate and inflation rate on Nigeria's economic growth, individually and jointly.

2.0 LITERATURE REVIEW

2.1 Conceptual Framework: External reserves are regarded as assets of a nation through the Monetary Authority of the country. The assets are held in stocks, currencies or other financial instruments that allow one country to settle amounts owed to other countries. In this way, it may include gold as this was and is still the prime commodity money in use throughout the world. It equally consists of gold, SDRs, foreign currencies, and other liquid assets held by a central bank (Aremu *et al*, 2006). The main function of the external reserves is the backing up of the domestic currency. Other functions include the following, according to Nugee (2012); as a tool of exchange rate or monetary policy, servicing foreign currency liabilities and debt obligations, source of funds to pay for government expenditure overseas, defense against emergencies or disasters and investment fund, Therefore, external reserves are assets held externally by the Central bank that is convertible and available for use to meet stated and official needs of the government of the day.

Prior to the establishment of the Central Bank of Nigeria in 1959, the country was part of the defunct West African Currency Board (WACB). In that period, management of external reserves posed little or no problems to the country because the manner in which the Board operated prevented such problems from arising.

Optimal deployment of reserves then was really not an issue since Nigeria's non-sterling earnings were deposited in London in exchange for credit entries in the sterling accounts maintained there (Aizenman 2013).

Subsequently, the 1959 Act which established the Central Bank of Nigeria (CBN) required the Bank to hold external reserves solely in Gold and Sterling. With the amendment in 1962 of this Act, the Bank acquired the mandate to maintain the country's foreign exchange reserves not only in sterling balance but also in non-sterling assets such as gold coin or bullion, bank balances, bills of exchange, government and government guaranteed securities of countries other than Britain and treasury bills in other countries. The monetary options available to the country widened upon joining the International Monetary Fund (IMF) in 1961 to include many more assets (Yuguda 2013).

Problems of External Reserve Management

The problems of reserve management began during the periods of the First National Development Plan in 1962 to 1966 and the Nigerian Civil War of 1967 to 1970. In these periods, financing the plan and the war consumed a large portion of the country's reserves. Also, the tempo in the foreign trade sector dropped, following the disruption of economic activities in the country. The problems became compounded immediately after the war in the wake of the Federal Government's efforts to reconstruct and reactivate the war ravaged economy which continued to demand immense foreign exchange reserves. Because of the exigencies of this period, the CBN became committed to maintaining an 'adequate' level of external reserves (Olawoyin 2013).

Following the admission into the organization of Petroleum Exporting Countries (OPEC) in 1973 and the oil boom of the era, the problem of reserve management switched from that of 'inadequate' to that of 'excess reserves'. This remained so until 1981 when the country was hit by the global economic recession that led to a consistent decline in her external reserves. In the light of this development, economic stabilization measures revolving stringent exchange control, which ran from April 1982 to June, 1986 (when accretion to external reserves was low), were introduced. By the end of 1985, it was evident that the use of stringent economic controls was ineffective in restraining external reserves depletion. To this end, exchange and trade controls were discontinued in 1986, following the adoption of market based policy measures, the Structural Adjustment Programme (SAP) in July 1986. However, after more than seven years of liberalization, government felt that the overall performance of the economy was unsatisfactory.

Hence, in January 1994, some measures of control were re-introduced which saw the CBN as the sole custodian of foreign exchange and together with its designated agents. Again the trade and exchange policies in 1994 failed to substantially achieve the desired objectives. The guided deregulation introduced in 1995, among other things, abolished the 1962 Exchange Control Act, in a bid to enhance the flow of capital and the reserves position of the country.

Why Countries Hold External Reserves

Foreign reserves are traditionally held and countries expect to maintain to considerable level of exchange rate especially with a view to stabilizing it and removing possible volatility. It is essentially held in terms of marketable securities, among others. According to Archer and Halliday (2014), the reasons for holding foreign reserves include: exchange rate stability, exchange rate targeting, exchange market stability, creditworthy consciousness, provision of emergency fund, and having transactions safeguard. Heller (2011) concludes that emerging-market economies hold reserves as a buffer stock to smoothen unexpected and temporary imbalances in international payments. Thus in theory, a country can decide to accumulate foreign reserves to eliminate some of its volatility.

Sources of Nigeria's External Reserves Inflow

Nigeria's external reserves derive mainly from the proceeds of crude oil production and sales. Nigeria produces approximately 2,000,000 barrels per day of crude oil in joint venture with some international oil companies, notably Shell, Mobil, and Chevron. Out of this, Nigeria sells a predetermined proportion directly, while the joint venture partners sell the rest. The joint venture partners pay Petroleum Profit Tax to the Federal Government through the Federal Board of Inland Revenue (CBN 2013).

The seven categories of revenue from crude oil production and sales are:

- i) ***Sale of Nigeria's Crude Oil Equity***: The Nigerian National Petroleum Corporation (NNPC) has the responsibility for the sale of Nigeria's crude oil. Receipts from such sales are warehoused into our foreign accounts and constitute part of external reserves.
- ii) ***Royalties***: These are funds paid by oil companies to the nation arising from the commercial exploitation of Nigeria's oil resources. The Petroleum Act of 1969 provides a percentage to be paid as loyalty on the chargeable value of the crude oil/petroleum spirit production in a particular period.
- iii) ***Petroleum Profit Tax (PPT)***: This is the tax paid by oil companies on profit arising from their operations. A tax rate of 85% effective 1st April 1975 was specified by the Petroleum Profits Tax Act.
- iv) ***Penalty for Gas Flaring, Rentals, Signature Bonuses***: Foreign exchange is realized from penalties for gas flaring, rental payments from Oil Prospecting License (OPL), conversion to oil mining lease, oil exploration license, and concession block allocation. Also signature bonus (an amount payable at the signing of an agreement for the award of OPL as part of the validity process of oil contract agreement) is a source of foreign exchange.
- v) ***Receipt from Gas Sales***: Other sources of foreign exchange inflows include: Withholding Tax, Value Added Tax, Company Income Tax, Education Tax, and Rent/interests received from investments abroad personal home remittances.

- vi) **Export products** from non oil sources agricultural produce, processed and semi-processed products, etc.
- vii) **Grants and other miscellaneous receipts (CBN, 2013):** In Nigeria, over 85 percent of foreign exchange reserves are realized from the oil sector.

Aluko (2012), observed that External reserves has, in recent times, played significant role in the Nigerian economy. It has increased the level of money supply and therefore impact positively on the level of economic activities as more funds became available for investment in productive activities. Also, the contribution of the manufacturing sector to Gross Domestic Product (GDP), which has continued to dip, witnessed a boost.

In a relation to this, Obaseki (2014) noted that the uses of external reserves cannot be over emphasized. Essentially, external obligations have to be settled in foreign exchange. Therefore, the stocks of reserves become important as a source of financing external imbalances. Other uses to which external reserves can be put are to intervene in the foreign exchange market, guide against unforeseen volatility and maintain natural wealth for future generations.

Typically, the purpose of holding reserves is to allow the central bank an additional means to stabilize the issued currencies from shocks. In addition to meeting the transaction needs of countries, reserves are used as a precautionary purpose to provide a cushion to absorb unexpected shocks or a sharp deterioration in their terms of trade or to meet unexpected capital outflows, like the negotiated exit payment of the Paris Club Debt by Nigeria.

The size of Nigeria's external reserves has been fluctuating over the years. Stock of reserve which was US\$7.47 billion at end of December 2003, increased by 127 percent to US\$16.96 billion in 2004, it also increased to US\$64 billion in August 2015 and further rose to US\$30.8 billion in April 2017. The import cover was much higher than the West Africa Monetary Zone (WAMZ) minimum requirement of 6 months.

Prior to the inception of the Central Bank of Nigeria in 1959, the country formed part of the defunct West African Currency Board (WACB). In that period, management of external reserves posed little or no problems to the country because the manner in which the Board operated prevented such problems from arising. Optimal deployment of reserves then was really not an issue since Nigeria's non-sterling earnings were deposited in London in exchange for credit entries in the sterling accounts maintained there.

2.2 Theoretical Framework

Macroeconomic Stabilization Model: Macroeconomic stabilization remains at the fore of national economic policy making in order to aid conditionality in developing countries especially in Africa. This has induced African countries to hold reserves to allow monetary authorities to intervene in markets to influence exchange rate and inflation (Lapavitsas, 2014). Many African countries including Nigeria argue that adequate foreign reserves may allow them to borrow abroad, attract foreign capital and promote domestic private investment as a result of strengthened external position and reduced vulnerability to external shocks. Thus, it is believed that maintaining adequate reserves can boost investors' confidence and enhance investment and growth (Elhiraika and Ndikumana, 2012).

The Simple A-K Growth Model (Rebelo, 1990): In the model, growth is endogenous, that is either growth process is determined by the actions of the economic agents described in the model. This feature of the model gives it an edge over the Solow's growth model. The model's production function can be given as:

$$Y = A_t K^\alpha L^{1-\alpha}$$

Where Y = Output Level

A_t = Constant representing efficiency parameter

L = Labour

K = Capital

α and 1- α are elasticity of outputs in respect to inputs.

Basically, exchange rate takes the form of affecting the quantity and quality of K capital in the model, which is measured and captured by the constant factor A_t

Solow Growth Model and External Debt: The Solow growth model is built on a closed economy which makes use of labour and capital as its means of production. Under this scenario the implication of external debt on growth can be seen through its effect on the domestic saving which in turn is used as investment in a closed model. The general effect of external debt on the Solow growth model can be analyzed by looking at the individual effects of the debt overhang and debt crowding theories on the Solow growth model. According to the debt overhang hypothesis, the government in an attempt to amortize the accumulated debt, will increase tax rate on the private sector (as means of transferring resources to the public sector). This will discourage private sector investment and also reduce government expenditure on infrastructure as the resources are used to pay up huge debt service payments instead of being put into good use. This will lead to a reduction of total (private and public) investment in the economy and a shift downward of both the investment and production function curves in Solow growth model. On the other hand in the case of debt crowding out, in a bid to clear their outstanding debts use their revenue from export earnings and in some cases transfer resources including foreign aid and foreign exchange resources to service their forthcoming debt. Those countries which transfer revenue from export earnings which can be used in investment in the economy to avoid huge debt payments will discourage public investment. This in turn will decrease economic growth and will shift both the investment and production function curves in Solow growth model downward (Dereje, 2013).

2.3 Empirical Literature Review

Osuji and Ebiringa (2012) examined the effects of external reserve management on macroeconomic stability of Nigeria from 1981-2010 using secondary data. Their analysis employed multiple regression, granger casualty test, VAR model and unit root tests. They found that a direct relationship exists between external reserves and macro-economic variables.

Ibrahim (2011) investigated the impact of change in external reserves position of Nigeria on domestic investment, inflation and exchange rate between 1986 and 2006. He used a combination of ordinary least squares and vector error correction models. His results show that changes in reserves influence only foreign direct investment and inflation rates.

Fapetu and Oloyede (2014) examined foreign exchange management and Nigeria's economic growth between 1970 to 2012 using ordinary least square estimation techniques within the error correction model (ECM) framework. Their findings showed that there is a unique long run relationship amongst the variables. They further found that export and foreign direct investment were statistically significant in determining economic growth. However, exchange rate, import and inflation were found to be statistically non-significant.

Shegal and Chandan (2008) analyzed the demand function of India's reserves holdings with a large number of quarterly time series data covering the period 1986 to 2011, using the co-integration and VECM approach. They found that the variables considered had significant impact on reserves demand of India. Their analysis in this case showed that growth was inversely related to reserves, while capital flows and volatility in the external sectors are the key drivers in external reserves accumulation. Based on this analysis, the researchers concluded that the reason for reserve accumulation in India was mainly precautionary and not transactionary or speculative.

Umeora (2013) carried out a study on foreign exchange reserves accumulation and macroeconomic stability in Nigeria. The study deal with time series figures from the period of 1986 to 2011. The results of their analysis showed that exchange rate and GDP have positive and significant relationship with Foreign Reserve accumulation while inflation has negative and insignificant relationship with Foreign Reserve.

Alasan and Shaib (2011) examined the management of external reserves and economic development in Nigeria between 1980 and 2008. They employed ordinary least square estimation technique. Their analysis revealed that there is statistically significant relationship between external reserve management and economic growth in Nigeria.

3.0 METHODOLOGY

The data for the study were sourced from the Central Bank of Nigeria (CBN) Statistical bulletin (2016 edition). The data were purged of spurious nature by testing for unit root. The result of the stationarity test was followed by the test for long run relationship amongst the variables using the Bounds test, having found that the variables have mixed order of integration. The model is estimated using the Autoregressive Distributive Lag (ARDL) technique and the analysis concludes with the test for autocorrelation and model fitness.

3.1 Model Specification

The hypothesis to be tested in this study is that good external reserve management stimulates economic growth in Nigeria and that exchange rate is an important determinant of the external reserve management. Hence the model for the study in its implicit form is specified thus:

$$RGDP = F(EXTR, INF, EXCHR) \quad \dots(1)$$

Where:

RGDP = Growth Rate of Real Gross Domestic Product

EXTR = External Reserve growth rate

INF = Inflation Rate

EXCHR = Exchange Rate

Thus, expressing this model in explicit econometric (Linear equation) form, we obtain:

$$RGDP_t = \alpha_0 + \alpha_1 EXTR_t + \alpha_2 INF_t + \alpha_3 EXCHR_t + U_t \quad \dots(2)$$

Where: α_0 = Intercept of the model, α_1 , α_2 , and α_3 = Unknown parameters of the model and U_t is the error term.

The ARDL bounds testing approach to cointegration is based on the following error correction model:

$$\Delta RGDP_t = \theta_0 + \theta_1 RGDP_{t-1} + \theta_2 EXTR_{t-1} + \theta_3 INF_{t-1} + \theta_4 EXCHR_{t-1} +$$

$$\sum_{i=1}^m Y_{i1} \Delta RGDP_{t-1} + \sum_{i=0}^n Y_{2i1} \Delta EXTR_{t-1} +$$

$$\sum_{i=0}^p Y_{3i} \Delta INF_{t-1} + \sum_{i=1}^q Y_{4i} \Delta EXCHR_{t-1} \dots \dots \dots (3)$$

3.2 ANALYSIS OF DATA

Unit Root Test Result

The Augmented Dickey Fuller (ADF) unit roots test IS presented in Table 1 below:

Table 1: Unit Root Test Result

Variable	ADF statistics		ADF statistics		
	Level	Critical values at 5%	1 st difference	Critical values at 5%	Order of Integration
RGDP	-3.045762	2.986225			I (0)
EXCHR	-0.457294	2.986225	-4.589891	2.991878	I (1)
EXTRESV	-2.300410	2.998064	-9.156725	2.998064	I (1)
INF	-10.6638	3.020686			I (0)

The result in Table 1 above show that the variables RGDP and INF were stationary at level i.e. integrated of order I(0) at 5% level of significance. Exchange rate (EXCHR) and External Reserve (EXTR) were stationary at first difference i.e. integrated of order I(1).

ARDL Bounds Test For Cointegration

A necessary condition for testing for ARDL bound co-integrating test is that each of the variables be integrated of either of order one or zero or both (Pesaran, Shin and Smith, 2001). Since all the variables

are integrated of order one and zero, we proceeded to estimate the ARDL bound test and the result is shown in Table 2 below:

Table 2: ARDL Bound Cointegration Test Result

F-statistics	K	Significance Level	Critical Bound Value	
			1(0) (Lower Bound)	1(1) (Upper Bound)
4.365220	3	10%	2.72	3.77
		5%	3.23	4.35
		2.5%	3.69	4.89
		1%	4.29	5.61

From the table above, since the F-statistics of 4.365 is greater than the upper I(1) bound of 4.35 at 5% level of significance, we reject the null hypothesis and conclude that there is cointegration in the model. This implies that there is long run relationship between external reserves and economic growth in Nigeria. Consequently, we estimate the long run ARDL regression model and the results are presented in tables 3 below:

Table 3: Summary of Short Run and Long Run Relationship between External Reserve and Economic Growth

Selected Model: ARDL(4, 4, 4, 4)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
RGDP(-1)	-0.067752	0.312078	-0.217101	0.8483
RGDP(-2)	1.178481	0.688046	1.712794	0.2289
RGDP(-3)	-1.424588	0.931232	-1.529789	0.2657
RGDP(-4)	-1.547352	0.769654	-2.010452	0.1821
EXCHR	-0.263377	0.127722	-2.062108	0.1753
EXCHR(-1)	0.406223	0.293960	1.381895	0.3011
EXCHR(-2)	0.046208	0.064879	0.712219	0.5502
EXCHR(-3)	-0.156224	0.110194	-1.417716	0.2920
EXCHR(-4)	0.152864	0.105273	1.452070	0.2836
EXTRESV	0.002997	0.032514	0.092191	0.9349
EXTRESV(-1)	0.111015	0.097448	1.139224	0.3727
EXTRESV(-2)	0.038552	0.032543	1.184645	0.3579
EXTRESV(-3)	0.015039	0.057696	0.260663	0.8187
EXTRESV(-4)	0.036539	0.015609	2.340888	0.1441
INF	-0.127875	0.198091	-0.645536	0.5848
INF(-1)	0.433477	0.220088	1.969560	0.1877
INF(-2)	-0.078941	0.083962	-0.940196	0.4464
INF(-3)	-0.438364	0.206916	-2.118558	0.1683
INF(-4)	0.485792	0.479351	1.013438	0.4175
CointEq(-1)	-0.861212	0.108582	7.931444	0.0001
C	-8.512224	28.73099	-0.296273	0.7950
R-squared	0.980304	Mean dependent var	5.862479	
Adjusted R-squared	0.793197	S.D. dependent var	3.444997	
S.E. of regression	1.566635	Akaike info criterion	3.156023	
Sum squared resid	4.908688	Schwarz criterion	4.147880	
Log likelihood	-14.71626	Hannan-Quinn criter.	3.389675	
F-statistic	5.239247	Durbin-Watson stat	3.379267	

Long Run Coefficients

Variables	Dependent Variable = RGDP			
	Coefficient	Std. Error	t-statistics	Probability
EXCHR	0.064900	0.048270	1.344504	0.3110
EXTRESV	0.071348	0.025827	2.762492	0.1099
INF	-0.095794	0.209889	-0.456405	0.6929
Constant	-2.975041	9.382851	-0.317072	0.7812

The result presented in the table above shows that external reserve has a positive influence on Nigeria’s economic growth both in the short run and long run. However, this influence was not significant both in the short run and long run. The value of the coefficient of external reserve 0.002997 in the short run and 0.071348 in the long run show that a unit increase in external reserve will bring about 0.003 units increase and 0.071 unit increase in economic growth in the short and long run periods respectively. The non-significance of the impact of external reserve on economic growth of Nigeria is probably due to the fact that Nigeria’s external reserve under the period had fluctuated from moderate to low and very low, and then the trend reverses to low and moderate.

Similarly, exchange rate is negatively signed in the short run but positively signed in the long run. The positive impact of Naira exchange rate on economic growth in the long run is deceptive because it gives the impression that high exchange rate is beneficial to the economy. The only reason for this anomaly is that the exchange rate of the Naira was being highly supported by the Central Bank of Nigeria through Nigeria’s external reserve. Inflation rate has an expected sign of -0.1278 and -0.095794 in the short and long run periods respectively meaning that it has a negative relationship with Real GDP decreasing it by 0.1278 and 0.0958 units respectively.

4.0 CONCLUSION

The study investigated the impact of External Reserve on Nigeria’s economic growth over the period 1990 to 2015. The work employed the Autoregressive Distributive Lag framework to analyze the data collected from the CBN Statistical Bulletin, 2015 edition. The result of the analysis established a long run relationship between Foreign Reserve, Exchange rate, Inflation Rate and Nigeria’s economic growth. We also discovered that external reserve has a positive influence on the Nigerian economy both in the short run, and in the long run, but this influence was insignificant. Similarly, exchange rate had a detrimental effect on the Nigerian economy in the long run, though again, this effect was not significant. The non-significance of exchange rate on the Nigerian economy is attributed to her dependence on oil; over 90% of her foreign exchange earnings (with its attendant cycles of economic booms) and her high import bills, which deplete the level of foreign reserve availability. Therefore, the study concludes by making the following recommendations:

1. There is need to ensure proper management of the external reserve, and to avoid wasteful spending. Ensuring accountability and transparency in the reserve management will help to grow the economy.
2. The government should invest a good percentage of the foreign reserve into foreign financial instruments; examples include foreign treasury bills and bonds, special drawing rights etc. This will yield additional income and liquidity to the economy.
3. There is need to diversify the sources of foreign exchange inflow into the country particularly in agriculture which was neglected with the discovery of oil.

REFERENCES

Aizenmann J. and J. Lee (2013). *International reserves: Precautionary versus Mercantilist Views, Theory and Evidence*. Working Paper 05/198. Washington, DC: International Monetary Fund

Alasan A. B. & Shaib I. O. (2011). *External reserves management and economic development in Nigeria*. *Eur. J. Bus. Manage.* 3(11):1-7.

- Aluko, J. J. (2012). *The Monetization of Nigeria's Foreign Exchange Inflows*. CBN Bullion. Vol. 31(2).
- Anifowose, O. K. (2013). *Management of Foreign Exchange: A peep into the next decade*. CBN Bullion, Vol. 21, No. 4.
- Anyanwu, A (2000): *Research Methodology in Business and Social Science*, Canun publishers, Owerri Imo-state.
- Barrinda, (1990): *The Practice of Research*, California round publishers.
- CBN (2013). "Reserves Consumptions and Future Savings: what options" <http://www.cenbank.org/intops/reservemgt>.
- CBN (2015). The 93rd *Monetary Policy Committee Communique*, January 20 – 21.
- Egbulonu, K.G. (2005): *Basic Econometric methods*, peace publishers.
- Egwakhe A. J. & Osabuohie E. (2008). *External reserves and the Nigerian economic growth*. Afr. J. Bus. Econ. Res. 3(2):28-41.
- Elhiraika A. (2012). *Reserves Accumulation in African Countries: Source, Motivations and Effects*. Available [http://www.uneca.org/acc/documents/retrieved 25/4/12](http://www.uneca.org/acc/documents/retrieved%2025/4/12)
- Fapetu O. & Oloyede J. A. (2014). *Foreign exchange management and the nigerian economic growth*. Eur. J. Bus. Innov. Res. 2(2):19-31.
- Fapetu O. & Oloyede J. A. (2014). *Foreign exchange management and the nigerian economic growth*. Eur. J. Bus. Innov. Res. 2(2):19-31.
- George, O. (2012), *External Reserves Management in Nigeria*. The Bullion Publication of the CBN, Vol. 31 No. 2. April – June.
- Heller H. R. (2011). *Optimal International reserves*" Econ. J., 76: 296-311.
- Ibrahim W. (2011). *External reserves holdings in Nigeria: Implications for investment, inflation and exchange rate*. J. Admin. Policy Res. 3(4):106-112.
- International Monetary Fund, IMF (2010). *Guidelines for foreign exchange reserves management*, International Monetary Fund September.
- Koutsoyannis, A. (1977): *Theory of Econometrics* (eds), Macmillan press Ltd, England.
- Lapavitsas, C. (2014). *Using ODA to Accumulate Foreign Reserves in Sub-Saharan Africa*. IPC One pager No. 37, Brasilia.
- Nnamocha, P.N (2000): *A manual for writing and presentation of thesis*. Concept publishers, Aba, Abia-state.
- Obaseki, P.J. (2014), "Foreign Exchange Management in Nigeria; Past, Present and Future", CBN Economic and Financial Review, Vol. 29, pp 57 – 78.
- Odozi V. (2012). *Foreign exchange management: The role of CBN*. CBN Bullion. 10(3):17-22.
- Olawoyin G. A. (2013). *Reserves management in Nigeria*. A paper presentation, CBN. 31(2):19-23.
- Osabuohien, E.S.C. and A.J. Egwakhe (2008), 'External reserve management in Nigeria'
- Osuji C. C. & Ebiringa O. T. (2012). *Analysis of effect of external reserves management on macroeconomic stability of Nigeria*. Int. J. Bus. Manage. Econ. Res. 3(6):646-654.
- Rebelo S. (1990), "Long Run Policy Analysis and Long Run Growth", NBER WP, 46(8):1475 – 1500.
- Shegal, S. and Chandan. (2008). *International Reserve holding in India: Self Insurance for Future*. *International Journal of Economics*.
- Soludo, C.C. (2006), 'Can Nigeria Be the China of Africa?'
- Udo A. B. & Antai A. S. (2014). *Opportunity Cost of Nigeria's External Reserves*. *Journal of Economics and Finance*. 3(5): 7-16.
- Umeora C. E. (2013). *Foreign exchange reserves accumulation and macro-economic stability: The Nigerian experience*. Int. J. Bus. Manage. Invent. 2(9): 150-157.
- Vojtisek, P.(2012), *The Measurement of External Debt and External Reserves: The Case of the Czech Republic*, Statistics Department, Czech National Bank.
- Yuguda L. (2013). *Management of External Reserves*. 13th Annual International Auditors Conference, CBN, Kaduna, No. 27-30.