Effect of Real Exchange Rate Fluctuation on the Growth of Nigeria Economy

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Abstract— The study examined the effects of real exchange rate fluctuations on economic growth of Nigeria from the periods 1986-2018. The study employed Johansen Co-integration, Vector Error Correction Mechanism and Autoregressive Conditional Heteroskedasticity (ARCH). From the results, the study shows that fluctuation in exchange rate negatively influence the growth of the economy, export volume indicates positive relationship both in the short and longrun on the growth of the Nigerian economy, import indicates negative relationship while inflation rate is positive and insignificant on the growth of Nigeria Autoregressive economy. Conditional Heteroskedasticity (ARCH) test indicates that real exchange rate fluctuation is persistent in Nigeria. In line with these findings, the study recommended that government should strengthen exchange rate management framework in the country and take into consideration international fluctuations in the market. For this to be effective, requires the joint efforts of the monetary policies to awake to their core functions.

Keywords— Exchange Rate Fluctuation, Growth Rate of Gross Domestic Product, Vector Error Correction Mechanism.

1. INTRODUCTION

Exchange rate is defined as the interchange of the value of one country's currency in relating to other currency (Oladapo & Oloyede, 2014). The focus of any government or its agencies is to maintain a secured and steady exchange rate that will serve as an inducement to investments. The exchange rate stability therefore becomes paramount important to countries engaging in international trade. This is premised on the ground that no country could produce all its needs, resulting from the discrepancies and uneven distribution of natural resources to different countries of the world (Enekwe, Ordu & Nwoha, 2013). According to Alabi (2015) the stormy growth and development in countries around the world is partially associated with the diversity in the real exchange rate. For that reason, it is highly important to note that an effective exchange rate policy is a vital tool to heighten the growth of any economy. Asher (2012) made a declaration that exchange rate to any country's

economy is seen as a pivotal instrument to influence the growth and development of the economy.

Instability of exchange rate in developing countries especially Nigeria is seen as a serious challenges posing threat to the growth and development, has it affects many areas of the economy. Nigeria has tried many measures to ensure the stability of exchange rate that also lead to the devaluation of naira in order to advance export. Enekwe, Ordu, and Nwoha (2013) perceived that management of exchange rate in most developing nations especially Nigeria has been hindered as a result of the structural reform needed to relatively make the exchange rate stable e.g by reducing the rate of importation goods and discover a possible means of improving the rate of exportation of goods and services. Ikpefan, Isibor, and Okafor (2016) stated that exchange rate was reasonably at stable state from 1973 to 1979 in the oil flourishing time when Agricultural products contributed70% to the Nigeria gross domestic product, but in 1986 at the post-Structural Adjustment Programme, the Nigeria changed from a fixed exchange rate which was influenced by the forces of market (demand and supply). This contradictory exchange rate policy conduced to the fluctuation and unstable state of the Nigeria currency(naira) and the failure to achieve a relative stable in exchange rate as endangered many sectors and the country's economy to confront the challenges brought about by fluctuation in exchange rate (Enekwe, Ordu & Nwoha, 2013).

In a study conducted by Oladipupo and Onotaniyohowo (2011) noted that fluctuation in exchange rate has a great consequence on many macro-economic variables such as gross domestic product, inflation rate, interest rates, unemployment rate, supply of money etc. fluctuation in exchange rate to some extent, also has an adverse effect on the production of goods and services in the economy, investment opportunities, level of employment, and also in distribution of wealth and income. Therefore, proper management of this unstable exchange rate is required in in other to boost the level of confidence to the investors. Elumelu (2012) notes that exchange rate management as an act undertaken; seeking to regulate and moderate the exchange rate variability. A cogent exchange rate management in any country's economy

could be identified as an indispensable factor in structural finance of many industrial sectors.

Nigerian economy has been identified as a monoeconomy after the long time neglect of agricultural sector that provide its major source of revenue before the discovery of oil in Nigeria. A country with higher importation rate will always demand for foreign exchange in other to offset her transaction in the international trade. These greater demands will subsequently pose a threat to the value of local currency (naira) to that of foreign currencies, and at the same time has a great effect on gross national product of the country's economy. Consequently, fluctuation in rate of exchange influences a country's external reserves as the country spends major of its foreign earnings on importation of goods and services. Another threat it pose is on country's balance of payment, if any country's import rate exceeds its rate of export, there will always surface, a balance of payment disequilibrium in such country's economy. Nigeria in its attempt to maintain a stability in exchange rate have sometime in the past, put up several intervention policy that include the devaluation of naira currency in the 1986 that will ameliorate the accomplishment of the economic(macro) variables (Yaqub, 2010). Despite this effort, naira has not for once had its stability, as it continually depreciates and appreciate several times since the introduction of structural adjustment programme till the present time. This results to frequent crash in the price of oil in international market. More so, after many policies adopted for exchange rate stability, what pose a serious threat to Nigeria is her involvement in the production of low quality which could not compete efficiently with its affiliate industrial countries in the international market (Fakiyesi, 2005).

Since the introduction of structural adjustment programme (SAP) that lead to the subsequent devaluation of Nigerian currency in 1986, fluctuation of exchange rate has been a widely topic discussed by many academic researchers and have made known their own opinions and solutions on the bedeviled frequent depreciation in Nigeria currency toward revivification and stable exchange rate that could make strong the country's economy. For a country to have a healthy economy, it must put in place a stable exchange rate as a prerequisite for better economy. The major part of the reason that brought about the 1986 devaluation of naira was to promote export and enable foreign investor to have a free will to invest in Nigeria economy. It could be noted that the reverse is the case with what is happening in Nigeria. The unsuccessful attempt to achieve this objective has in turn dealt a huge blow on

virtually all sectors in the country with frequent exchange rate fluctuation which brought about low productivity which made it difficult for the real sectors to compete efficiently, to meet the requirements of international standard (Opaluwa, Umeh & Abu, 2010). In an attempt to put a halt to this unfortunate situation to maintain stability in exchange rate, the central bank of Nigeria as a sole monetary authority has adopted various policies for stable exchange rate but not much success has been recorded so far. Benson and Victor (2012) expressed that in spite of various policy made by the monetary authority to have stability in its exchange rate, the value of naira has not been stable since 80's up to the present time.

The existing studies in these areas have adopted different estimation techniques such as Autoregressive distributed lag, Vector autoregressive, Johansen Cointegration and many more. The differences in method used have produced conflicting findings in the literature (Opaluwa, Umeh & Abu, 2010; Ehinomen & Oladipo; 2012; Ayodele, 2014; Azu & Nasiri, 2015). All these authors are of the view that fluctuation in exchange rate significantly and negatively related to the growth of the economy while scholars such as Alabi (2015); Amassona and Odeniyi (2016); Enekwe, Ordu, and Nwoha (2013); Oladapo and Oloyede (2014) are of the opinion that exchange rate fluctuation positively impact on the growth of an economy. Consequent to this unsettled empirical evident, this study examines the effect of exchange rate fluctuation on the growth of Nigerian economy.

Aside this section is the review of literature. This is followed by the method used. Analysis and discussion of findings are the basis for section four while the last section presents conclusion and recommendations in line with the findings from the study.

2. LITERATURE REVIEW

Exchange Rate Fluctuations and its Management in Nigeria

Management of exchange rate in Nigeria had gone through many processes after the ordainment of 1962 exchange control act ranging from the two exchange regime (float and fixed) adopted. Fixed rate of exchange was first practice even before the devaluation of 1986 while floating rate of exchange had been in practice since 1986 (Opaluwa, Umeh & Abu, 2010).

Before the devaluation of Nigeria currency in 1986, a prevailing exchange rate that enjoyed a long reign is the fixed exchange rate which prevails at the birth of Nigeria independence up to 1986. Initially, the equality condition of naira to pound which was then the number

one trading currency in the international market at that period is at par. Unfortunately, a crises that bedeviled pound sterling which led to its devaluation in 1907 made the government of Nigeria to fixed the local currency (naira) at an overprice value to a dollar as one of the reigning and trading currency at the international market in an attempt to make imported goods cheaper at the local market. But over-reliance of Nigeria on import materials started with the initial problem facing naira depreciation. From 1971-1985, the country experienced boom in its revenue that strengthened the country's external reserves with increase in foreign earnings as a result of hike in the price of crude oil at the international market, this literarily appreciated the naira value. At the same time, has a great consequence on the external sector. By 1985, naira was made equivalent to US dollar that has since then became an intervention currency up to the present time (Ayodele, 2014; Opaluwa, Umeh & Abu, 2010).

The exchange rate management took another dimension after 1986 devaluation by being more trade oriented. This begins with the introduction of second tier rate of exchange with the apportionment of varying exchange rate to various private sectors majorly industrial sector and other non-priority public sector with the rate being regulated base on the market forces (demand and supply) on a timely basis. Various policy reformed has been adopted after 1986 devaluation up to the present time including the Autonomous foreign exchange market (AFEM) adopted in 1988, but to the degree of speculation tendency that lead to its destabilization and subsequently merged with FEM to become a unified foreign exchange market and later lead to the adoption of Dutch Auction System in 1990. In 2002 The Dutch Auction System (DAS) was re-introduced purposely to narrow the gap between the parallel and official market rate and also to help improving the excess reserves (Ehinomen & Oladipo, 2012; Ugwu, 2017).

Empirical Review

Alabi (2015) studied the impact of fluctuation in real exchange rate on Nigeria industrial output. The study employed Ordinary Least Square method regression analysis, with its result revealing a significantly positive correlation between exchange rate and industrial output in Nigeria. In his conclusion, foreign exchange movement has a great impact and a major determinant of the Nigeria industrial output.

Amassona and Odeniyi (2016) examined the relationship between the variations in exchange rate and Nigeria economic development laying emphasis on exchange in international market with the ability to purchase goods by an average Nigerian. This research adopted standard deviation test within 1970-2013. Also make use of estimation techniques such as Johansen Cointegration, as well as ECM for data analysis. They made known their findings by indicating that positive but insignificant relationship exist between exchange rate and economic growth.

Onyeizugbe and Umeaguges (2014) studied impact of management of exchange rate as a surviving aid to Nigerian industrial sector. They adopted Ordinary Least Square Method as a method of estimation technique. In their result found significant and a positive relationship connecting management of exchange rate to the industrial sector survival. Enekwe, Ordu, and Nwoha (2013) observed the consequence of fluctuation in exchange rate on the Nigeria Manufacturing sector from 1985-2010 using regression and descriptive analysis estimation techniques. Their findings revealed that, fluctuation in exchange rate is significant and positively related to Nigerian manufacturing sectors' performance.

Oladapo and Oloyede (2014) studied correlation of management of foreign exchange rate to economic growth of Nigeria ranging 1970-2012. Data were obtained from central bank of Nigeria statistical bulletin and other online gazette. The research study employed Ordinary Least Square (OLS) and Error Correction Mechanism (ECM) as a method of estimation techniques. Finding of the result revealed insignificant but positive correlation subsist between exchange rate and growth of Nigeria economy. Olufayo and Fagite (2014) studied the effect of volatility in exchange rate on performance of manufacturing sector in Nigeria majorly the export sector of which were divided into oil and non-oil sector. The study employed Seemingly Unrelated Regression (SUR) in analysis. Also make use of generalized Autoregressive Conditional Heteroskedasticity (GARCH) to investigate impact of floating exchange rate management on exchange rate volatility. It was observed in the study that, there is existence of volatility in the country's exchange rate. Ayodele (2014) investigated the effect which exchange rate has on Nigeria economic performance. The 13 years of investigation ranging from 2000-2012. The study adopted Ordinary Least Square (OLS) as a method of estimation technique. The result revealed there is a negative relationship between exchange rate and gross domestic product (GDP)

Ehinomen and Oladipo (2012) examined the implication of the fluctuation of exchange rate on industrial sector in Nigeria. Ordinary Least Square was adopted as a method of estimation technique. Data ranging from 1986-2010 sourced from different national bureau de change reportand CBN annual bulletin various issues. The result from the study revealed that there exist no significant relationship between exchange rate and growth of economy. Opaluwa, Umeh and Abu (2010) studied the effect of fluctuation of exchange rate on performance of industrial sector in Nigeria. The study adopted regression analysis of ordinary lease square for 20 years data, ranging from 1986-2005. The result of the study showed that exchange rate fluctuation is not suitable for any economy has it affect the economy negatively, resulting to zero growth.

Azu and Nasiri (2015) examined fluctuation in exchange rate and sustainable growth in the economy of Nigeria using VAR technique. Result from their study indicated that RER fluctuation indicates significant and positive relation with real import as well as its negative relation to real GDP and foreign direct investment. Adeniran, Yusuf and Adeyemi (2014) studied the effect of exchange rate fluctuation in relation to Nigeria economic growth from 1986-2013 using Ordinary Least Square as an estimation technique. The result unveiled that there exist a positive but insignificant correlation between exchange rate and gross domestic product which is proxy to economic growth.

Serve'n (2003) investigate the fluctuation in the real exchange rate and private investment in most underdeveloped countries. The study adopted generalized Autoregressive Conditional Heteroskedasticity (GARCH) to investigate the relationship of exchange rate volatility and economic development. The study revealed there is perfect negative relationship between exchange rate and investment putting into consideration its efficacy. Christopher and Tomilade (2012) investigate the contribution of exchange rate management as an improve tool to industrial sector covering 1986-2010. They adopted in their research study the Ordinary Least Square as a method of estimation technique. The result of the study revealed that the structural adjustment programme of 1986 devaluation of exchange rate is insignificant to productive output of industrial sector.

Harley (2018) examined effect of fluctuation in exchange rate on productive performance in Nigeria industrial sector. The paper work employed descriptive and ordinary least square as a method of estimation. Result from the study showed a significant and positive correlation between exchange rate and investment return i.e a rise in exchange rate result to a corresponding increase investment return. Ugwu (2017) examined the effect of the fluctuation in exchange rate on the industrial sector performance for the period of 1986-2016. Data for analysis were sourced from central bank of Nigeria statistical bulletin and tested using Ordinary Least Square. Augmented Dickey fuller unit root was test to know the stationarity of the variables Johansen co-integration was also run to show the long run relationship between fluctuations in exchange rate and industrial firm profitability. The result showed a significance relationship between fluctuations in exchange rate and firms profitability

Lawal (2016) in his paper, studied the implication of fluctuation in exchange rate on performance of industrial output for 28 years 1986-2014. The study employed Autoregressive Distribution Lag (ARDL) as an estimation technique to show the short and long run correlation on industrial sector's output. The result revealed positive but insignificant correlation of exchange rate fluctuation output of industrial sector. Iyeli and Utting (2017) investigated how fluctuation in exchange rate has affected the growth of Nigeria economy for the periods 1970 to 2011. The study Johansen **Co-integration** employed estimation techniques to test for the short and long runs effect of the variables. The results showed that OREV and EXR are positively related to GDP. Further findings revealed that exchange rate volatility and oil revenue contributes positively to GDP in the long run. Nwafor (2018) investigated how naira rate influences the growth of Nigeria economy using Ordinary Least Squares technique of analysis for the periods 2006 and 2016. The study revealed that Naira rate has no significant impact on economic growth in Nigeria and that the Naira rate has a significant influence on inflation rate in Naira.

3. METHODOLOGY

This study which is set to examine effect of real exchange rate fluctuation on the growth of Nigeria economy sourced its data from Central Bank of Nigeria Statistical Bulletin from 1986-2018. The based year, being the period of policy shift from fixed exchange regime to flexible exchange in Nigeria. The study used growth rate of gross domestic product as the dependent variable, while the explanatory variables are exchange rate, import volume, export volume and inflation rate. The study employed Johansen Co-integration estimation techniques and Autoregressive Conditional Heteroskedasticity (ARCH) in its analysis.

Model Specification

In an effort to examine effect of real exchange rate fluctuation on the growth of Nigeria economy, certain modifications were made to the model used by Adeniran, Yusuf and Adeyemi (2014) based on this, the study hereby formulates its model as:

GDPGR = (EXGR, IMP, EXP, INFR)1

This model can also be stated as:

 $LGDPGR = \beta 0 + \beta 1 LEXGR + \beta 2 LEXPT + \beta 3$ $LIMPT + \beta 4 LINFR + e....2$

Where:

LGDPGR = Growth Rate of Gross Domestic Product

LEXGR = Real Exchange Rate Fluctuation

LEXPT = Export Volume

LIMPT = Import Volume

LINFR = Inflation Rate

 $\beta 0 = Intercept$

 $\beta 1 - \beta 4 =$ Coefficients of the Independent Variables

4. DATA ANALYSIS AND DISCUSSION OF FINDINGS

Unit Root Result

The study starts with the presentation of unit root test to ascertain the order at which the variables could be integration. This test is necessary as it assist the study on the appropriate estimation techniques suitable for the analysis. The result of the unit root test is presented in Table 1.

| Variables | ADF Test at | Critical Values at | ADF Test at First | Critical Values at | Decision |
|-----------|-------------|--------------------|-------------------|--------------------|----------|
| | Level | 5% | Difference | 5% | |
| LGDPGR | -2.924222 | -2.957110 | -5.366142 | -2.963972 | I(1) |
| LEXGR | 1.109355 | -2.957110 | -4.094001 | -2.960411 | I(1) |
| LEXPT | -0.858781 | -2.957110 | -4.152990 | -2.960411 | I(1) |
| LIMPT | 0.213311 | -2.957110 | -4.934645 | -2.960411 | I(1) |
| LINFR | -2.734219 | -2.957110 | -4.849520 | -2.971853 | I(1) |

Table 1: Augmented Dickey Fuller (ADF) Unit Root Test

Source: Author's Computation, (2019)

Presented in Table 1 is the unit root result that shows the integration order of the series used in the study. The Augmented Dickey Fuller statistics reveals that none of the variables are stationary at level but after they are all converted to first difference then they became stationary. This is evident from the ADF test statistics at first difference that has a value greater than the critical

values at 5% level of significance. Indicating that the variables are all integrated at order one i.e I(1). Sequel to the unit root test result, it is clearly indicated that the appropriate estimation techniques is Johansen Co-integration. This test reveals if or otherwise long-run relationship exists among the variables of estimate.

| Jon | ansen Co-Integration I | est |
|-------|------------------------|--------|
| Table | 2: Co-integration Test | Result |
| | Traca | 0.05 |

| Hypothesized | Eigenvalue | Trace | 0.05 | Prob.** | |
|--------------|------------|-----------|-----------------------|---------|--|
| No. of CE(s) | | Statistic | Critical Value | | |
| None * | 0.734622 | 88.54797 | 69.81889 | 0.0008 | |
| At most 1 | 0.549065 | 47.42342 | 47.85613 | 0.0549 | |
| At most 2 | 0.376336 | 22.73400 | 29.79707 | 0.2594 | |
| At most 3 | 0.175297 | 8.097568 | 15.49471 | 0.4550 | |
| At most 4 | 0.066187 | 2.122866 | 3.841466 | 0.1451 | |

* denotes rejection of the hypothesis at the 0.05 level | Source: Author's Computation, (2019)

| Table 3: Normalized | Co-integration |
|---------------------|----------------|
|---------------------|----------------|

| | | • 0 | | |
|------------------|-----------|-----------|-----------|-----------|
| LGDPGR | LEXGR | LEXPT | LIMPT | LINFR |
| 1.000000 | -0.805799 | 0.197741 | -0.282157 | 0.157195 |
| | (0.17226) | (0.29406) | (0.31433) | (0.08034) |
| <u>a</u> , 1 , a | (2010) | | | |

Source: Author's Computation, (2019)

Table 2 shows that a valid long-run relationship subsists among growth rate of gross domestic product and exchange rate, import volume, export volume and inflation rate in the model. The result reveals 1 cointegration equation at 5% significance level. This longrun relationship is indicated by the trace statistics 88.54797 (none*) greater than its critical value. Hence, the study rejects the hypothesis of no co-integration (H0) and upholds the existence of long-run cointegration (H1). Table 3 presents the long run model for the effects of exchange rate fluctuations on the growth of Nigeria economy. The Table indicates that in the long-run, export volume and inflation rate are positively related to the growth of gross domestic product while exchange rate and import depict positive relationship on the growth rate of gross domestic product. Once the study justifies the existence of long-run relationship, it is necessary to examine the speed of adjustment using vector error correction mechanism. The speed of adjustment from previous period disequilibrium is reported in Table 4.

| Variables | Coefficient | Std. Error | t-Statistic | Prob. |
|---------------|-------------|------------|-------------|--------|
| ECM(-1) | -0.630513 | 0.200645 | -3.142427 | 0.0044 |
| D(LGDPGR(-1)) | -0.002295 | 0.166700 | -0.013765 | 0.9891 |
| D(LEXGR(-1)) | -0.235132 | 0.545508 | -0.431034 | 0.6703 |
| D(LEXPT(-1)) | 0.733297 | 0.353841 | 2.072392 | 0.0491 |
| D(LIMPT(-1)) | -0.104810 | 0.453103 | -0.231316 | 0.8190 |
| D(LINFR(-1)) | 0.057078 | 0.072301 | 0.789450 | 0.4376 |
| С | -0.051283 | 0.110662 | -0.463423 | 0.6472 |

| Table A. | Danain | | Closed muse | Dunamian | Vector | F amor | Commontion | Maal | |
|----------|---------|------|-------------|-----------|--------|---------------|------------|-------|--------|
| adie 4: | Parsimo | mous | Snori-run | Dynamics, | vecior | Error | Correction | wiech | ianism |

R2 = 0.542458; Adjusted = 0.428072; F-statistic = 4.742363; Prob. (F-statistic) = 0.002564 Source: Author's Computation, (2019)

Reported in Table 4 is the vector error correction mechanism, it indicates that the coefficient of error correction mechanism and its corresponding probability value are -0.630513 and 0.0044 respectively. The result shows that ECM is appropriately signed and significant at 5% level. The implication of this result is that the model adjusts to a value of 63% from previous period disequilibrium. The coefficient of lagged value of gross domestic product growth rate D(LGDPGR(-1)) is negative with a value of -0.002295 units. It implies that a unit increase in one period lag will lead to -0.002295 units decrease in growth rate of gross domestic product. The coefficient of the lagged value of exchange rate fluctuation is -0.235132 units. The result implies that a unit increase in one period lag value of exchange rate

will lead to -0.235132-unit decrease in the growth of gross domestic product. Export volume lag one has a coefficient of 0.733297 units. The result shows that a unit increase in one period lagged of export volume will lead to 0.733297 units increase in growth rate of gross domestic product. Import volume lag one has a coefficient of -0.104810 unit.

The result indicates that a unit increase in import volume lag one will lead to -0.104810 units decrease in the growth rate of gross domestic product. The result also shows that one period lag of inflation rate is 0.057078 units. This implies that a unit increase in inflation rate lag one will lead to 0.057078 units increase in gross domestic product growth rate.

| Diagnostic Test for LGDPGR Model |
|----------------------------------|
| Table 5: Diagnostic Test |

| Normality Test | | |
|----------------------------|----------|-------------|
| Statistics | Values | Probability |
| Jarque-Bera | 5.804171 | 0.254909 |
| Serial Correlation LM Test | | • |
| Statistics | Values | Probability |
| Obs*R-squared | 2.11287 | 0.5315 |
| Heteroskedasticity Test | | • |
| Statistics | Values | Probability |
| Obs*R-squared | 6.249587 | 0.7939 |

Source: Author's Computation, (2019)

Table 5 presents the three diagnostics test conducted on the model that analyses the effects of real exchange rate fluctuations on the growth of Nigeria economy. From the results, it is clearly indicated that the variables are normally distributed, it has no problem of serial correlation and there is no heteroskedasticity problem. Based on this, the model can be accepted for forecasting.

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|------------------------|-------------------|------------|-------------|--------|
| @SQRT(GARCH) | 7.063356 | 0.004025 | -1755.021 | 0.0000 |
| С | 5.875187 | 0.001333 | 4407.867 | 0.0000 |
| LEXGR | 0.100893 | 0.029895 | 3.374960 | 0.0007 |
| | Variance Equation | | | |
| С | 0.329176 | 0.029568 | 11.13289 | 0.0000 |
| RESID(-1) ² | 0.119953 | 0.007296 | 16.44031 | 0.0000 |
| GARCH(-1) | 0.475367 | 0.070632 | 6.730163 | 0.0000 |
| LIMPT | -0.036615 | 0.005590 | -6.550453 | 0.0000 |
| LEXPT | -0.030335 | 0.003030 | -10.01246 | 0.0000 |
| LINFR | -0.029620 | 6.33E-07 | -46823.00 | 0.0000 |

| Testing Exchange Rate | Fluctuation on the | Growth a | of Nigeria | Economy |
|-----------------------|--------------------|----------|------------|---------|
| | Table 6: ARCH M | odel | | |

Source: Author's Computation, (2019)

Table 6 presents the fluctuation in exchange rate on the growth rate of Nigeria economy. From the Table, SQRT(GARCH) which symbolized the exposure caused by exchange rate fluctuations is positive and significant. The implication of this is that the more the standard deviation of this coefficient, the more the fluctuation in exchange rate and the higher the exposure caused on the growth of the economy. The coefficients of the ARCH and GARCH are also positive and significant, which indicates the level of fluctuation in exchange rate.

Discussion of Findings

This study examines the effect of real exchange rate fluctuations on the growth of Nigeria economy. From the vector error correction mechanism, it can be deduced that fluctuations in exchange rate impacts negatively on the growth of Nigeria economy while the long-run derived from the Johansen Co-integration also follow this trend. This result shows that for a country to improve her growth rate in gross domestic product, it will require a steady exchange rate. This is premised on a believed that increase in exchange rate fluctuations reduces the capacity of a countries in acquiring materials and equipment that are meant to boost the growth of the economy. This result is consistent with the work of Opaluwa, Umeh and Abu (2010); Ehinomen and Oladipo (2012; Ayodele (2014) and Azu and Nasiri (2015), but negates the work of Alabi (2015); Amassona and Odeniyi (2016); Enekwe, Ordu, and Nwoha (2013); Oladapo and Oloyede (2014).

Result derived from vector error correction mechanism also indicated that export volume indicates positive and significant relationship on the growth of the economy. The implication of this result is that in the short and long-run periods, increase in export will boost the growth of Nigerian economy. The result is consistent with the work of Ehinomen and Oladipo (2012) Ugwu (2017). Also, both the lagged value of import volume in the vector error correction mechanism and the Johansen results revealed negative relationship on the growth of the economy.

The implication of this result is that, continuous increase in importation of commodities into the country adversely affects the growth rate of the country. This finding is in line with the work of Azu and Nasiri (2015). Revealed from the result is the positive relationship between inflation rate and the growth of the economy. The result shows that inflation rate also serves as an inducement to the growth of the economy.

5. CONCLUSION AND RECOMMENDATIONS

This study has revealed the effect of real exchange rate fluctuation on the growth of Nigeria economy. The study used real exchange rate, export volume, import volume and the rate of inflation. In line with the findings that emanated from the study, it can be concluded that the fluctuations in exchange rate influence the growth of the economy.

The study recommended that government should strengthen exchange rate management framework in the country and take into consideration international fluctuations in the market. For this to be effective, requires the joint efforts of the monetary policies to be awake to their core functions. Also, pragmatic efforts are needed to reduce the volume of goods and services import and concentrate on export promotion strategies. This will go a long way in increasing the growth of the economy.

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