Contribution of Non Oil Exports to Economic Growth in Nigeria (1985-2015)

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Abstract

This study examines the contribution of non oil export to the growth of the Nigerian economy for the period 1985-2015. The economy is experiencing a fall in exchange earning, a fall in GDP, depletion of external reserve, scarcity of foreign exchange, and high cost of goods. This is as a result of the sudden fall in international oil price. Thus, this forms the motivation for the study. Augmented Dickey Fuller was used to test for unit root and to ascertain the stationarity of the variables. The result showed non oil exports to be stationary at level while economic growth proxied by Gross Domestic Product (GDP) and exchange rate were stationary at first difference. Auto-regressive distributed lag (ARDL) model was then employed to ascertain the relationship between non oil exports and GDP. The Bound test conducted showed the presence of cointegration which means a long run relationship among the variables existed. The ARDL regression result indicated a positive and significant relationship between non oil exports and GDP. This means non oil exports contributed significantly to economic growth in Nigeria. The result also revealed that exchange rate had a negative though not significant relationship with GDP which is in line with economic theory. The study recommended making legislation that makes participation in non oil sectors like agriculture, solid minerals and manufacturing easy by both local and foreign investors, provision of credit at lower interest rate to the non oil sectors and direct participation in developing these sectors by the government.

Keywords: non oil exports, economic growth and Nigeria

1. Introduction

1.1 Background to the Study

Economic theory has established that foreign trade creates an avenue for foreign capital to flow into an economy (Ricardo, 1817). This is especially so when the value of exported goods of such an economy exceeds the value of the imported goods. Exportation is therefore needed by an economy to boost revenue and usher in growth in the economy. Adenugba and Dipo (2013) asserted that when the demand for exports is high more production is required, this therefore creates more employment, raises national income and also helps attain a favourable balance of trade and balance of payment position for the exporting economy. This underlines the importance of exports in the growth of an economy.

The Nigerian economy relies heavily on foreign trade for growth (Adenugba & Dipo, 2013). During the pre-independence era to the late 1960s the economy was driven majorly by agricultural products and a few other solid minerals. However the discovery of crude oil in abundance, the boom in the oil market and the relative high price enjoyed by the product made the country to totally rely on the oil sector as the chief source of foreign earnings and abandon all other sectors that contributed to foreign earnings for the economy. This is a classic example of what economic scholars referred to as the "Dutch disease" a scenario where a natural resource boom triggers a process of de-industrialization (Bature, 2012). The de-industrialization triggered also made Nigeria a consumer goods import-dependent economy as it cannot internally produce enough consumer goods due to neglect of the industrial sector. Enoma and Isedu (2011) pointed out that Nigeria, since the 1970s has been a mono-cultural economy relying heavily on oil as its major income earner. For instance, from 1970 to date, oil

exportation has constituted on the average 90% of the total foreign exchange earnings (Akeem, 2011). The implication of this is that the dynamics of the economy is at the whims and caprices of the price of oil, which for the most part, has been volatile. Omjimite and Akpolodje (2010) also asserted that the dependence of Nigeria on crude oil exports has serious implications for the Nigerian economy since the oil market is a highly volatile one. For example, being dependent on the export of crude oil, the Nigerian economy is subject to the vicissitudes and vagaries of the international oil market such that international oil price shocks will immediately be felt in the domestic economy.

The adverse consequences of over dependency on oil trade heightened the need to diversify the Nigerian economy away from oil towards the direction of non-oil export trade. It is believed that the non-oil trade has great potentials to propel the Nigerian economy to the desired growth and development. For instance, Onwualu (2012) maintained that the value chain approach to agriculture alone has the potentials to open up the economy and generate various activities which are capable of creating jobs and enhancing industrialization and thus makes the non-oil sub-sector to hold the aces for future Nigerian sustainable economic growth. Imoughele and Ismaila (2015) noted that expanding non-oil export to get rid of one-product economy has been known as a solution for economic development in oil producing countries of which Nigeria is one and also the sixth largest oil producing and exporting country in the world.

However despite' government various efforts to grow the non oil exports, the growth performance of Nigeria's non-oil exports is perceived to have been very slow. For instance, Ogun (2004) stated that non oil exports grew at an average of 2.3% during the 1960 -1990 period, while its share of total export declined from about 60% in 1960 to 3.0% in 1990. This therefore makes it imperative to find out if non oil contributes to economic growth and to what extent has non oil exports contributed to the growth of the Nigerian economy.

1.2 Statement of the Problem and Its Importance

Since the 1970s Nigeria has been a mono cultural economy, relying heavily on earnings from crude oil export for the growth of the economy. The oil sector is known to contribute more than 90% of export earnings to Nigeria (Onodugo, Marius, & Oluchukwu, 2013). More so they affirmed that the oil export earnings are concentrated in the hands of less than one percent of the Nigerian population dominated by expatriates and members of the political class who control production and the proceeds respectively. Worse still, the sector is disconnected from other tiers and sectors of the economy and thus offers little or no linkage and multiplier effect to the economy as a whole. Akeem (2011) stated that this mono-culture situation has brought untold hardship on the people of the country. The Nigerian economy swung from the "oil boom era", as exemplified by the buoyant economy of the period with massive infrastructural development, the Udoji award and the neglect of the non-oil exports productive base to the "oil doom" period which arose from oil glut in the world oil market in 1981.

One major problem with the over reliance on oil export is the fact that its price often fluctuates, its therefore volatile. This implies that the dynamics of the Nigerian economy is at the whims and caprices of the price of oil (Enoma & Isedu, 2011). This means that any structural distortion in the foreign economies capable of causing change in oil price directly affects Nigerian economy. A classic example is what is presently happening to the Nigerian economy characterized by a fall in exchange earning, a fall in GDP, depletion of external reserve, scarcity of foreign exchange, and high cost of goods (inflation) as we are also a heavily import dependent economy. This was all as a result of the sudden fall in international oil price. The continued unimpressive performance of the non-oil sectors in the economy and the vulnerability of the external sector thus dictate the urgent need to diversify the economy back to the abandoned non oil sectors in order to boost our foreign earnings through non oil exports. Non oil sectors like the agriculture and the mining sectors were known to have dominated Nigeria's exports in the past. Non oil exports accounted for more than 66% of Nigeria's total export and contributed immensely to the growth of Nigeria's economy in the 1960s (Ogunkola, Bankole, & Adewuyi, 2008).

This scenario therefore provided a justification to find out if non oil exports do contribute to economic growth in Nigeria. The specific objective of the study is to determine to what extent non oil exports contribute to economic growth in Nigeria.

1.3 Literature Review

1.3.1 Concepts of Non Oil Exports and Non-oil Sector

Non oil exports are those commodities excluding crude oil (petroleum products), which are sold in the international market for the purpose of revenue generation. The Nigeria's non exports sector is structured into four broad constituents which are the agricultural exports, manufactured exports, and solid mineral exports and

services exports (Akeem, 2011). The non oil export products are unlimited as they include agricultural crops, manufacturing goods, solid minerals, entertainment and tourism services etc. (Abogan, Akinola, & Baruwa, 2014). This explains non export in the context of this study.

Akeem (2011) defined the non oil sector of the Nigerian economy as the whole of the economy less oil and gas sub-sector. It covers agriculture, industry, solid minerals and the services sub-sector, including transport, communication, distributive trade, financial services, insurance, government, etc. This definition is sufficient for the purpose of this study.

1.3.2 Concepts of Economic Growth and Gross Domestic Product (GDP)

Economic growth as used here refers to increase in the total goods and services produced in an economy. Pritzker, Arnold and Moyer (2015) identified Gross Domestic Product (GDP)as the economic indicator which measures the value of the goods and services produced in an economy in a given time period. They stated that GDP is a measure of the economy's output and is a measure of current production, not sales. Thus GDP, is the market value of all final goods and services produced in a country in a given time period and it indicates an economy's performance (economic growth). When a GDP is measured using the current market prices it is called a nominal GDP, but when a certain base year is used for the calculation of a GDP, it is called a real GDP. That is the GDP that is used for the purpose of this study.

1.3.3 Theoretical Framework

The theoretical framework of this study is hinged on the international trade theories in economics. These theories include the theory of absolute advantage and the theory of comparative advantage. They are discussed further below.

(i)   The Theory of Absolute Advantage

The theory of absolute advantage is an international trade theory that justifies trade among different economies. It was propounded by Adam Smith in his 1776 publication, an inquiry into the nature and causes of the wealth of nations. The theory says that a country should export products on which it is more productive than other countries. That is goods for which it can produce more output per unit of input than others can. In other words these are the goods it has absolute advantage on. The theory also suggests that a country should import those goods on which it is less productive than other countries. That is goods on which it has an absolute disadvantage (Dunn & Mutti, 2004).

According to Smith (1776), each nation benefits by specializing in the production of the good that it produces at a lower cost than the other nation, while importing the good that it produces at a higher cost. This will increase specialization, world output and the gains from trade (Carbaugh, 2004). According to this theory, foreign trade is a positive-sum game, because both countries involved will benefit from the trade. Thus, a nation need not gain at the expense of other nations, as all nations could gain simultaneously (Sylvester & Aiyelabola, 2012).

However, there arises the question of whether or not to trade when one of the two countries trading has an absolute advantage in the production of the two commodities. Should trade still take place when one partner can produce both commodities more efficiently than the other partner? The theory failed to answer this question satisfactorily and that gave rise to Ricardo's theory of Comparative Advantage.

(ii) Theory of Comparative Advantage

According to Ricardo's theory of comparative advantage, even if a nation has an absolute cost disadvantage in the production of both goods, there still exists a basis for mutually beneficial trade. The less efficient nation should specialize in the production and exportation of the good in which it is relatively less inefficient (where its absolute disadvantage is least) while the more efficient nation should specialize in the production and exportation of the good in which it is relatively more efficient. That is where its absolute advantage is greatest (Adenugba & Dipo, 2013).

Nigeria is blessed with various non oil export goods on which she has both absolute and comparative advantages over other countries. For instance, we have a vast land resource that supports the cultivation of different export crops like cocoa, coffee, groundnut, cotton, rubber, palm kernels, beniseed, etc. The country is also blessed with abundant natural resources like coal, iron ore, tin, columbite, gold, graphite, uranium etc. All these are exports goods on which Nigeria has both absolute and comparative advantages over other countries. Hence these theories of trade explain how Nigeria could diversify its exports away from oil.

1.4 Empirical Review

Studies abound that establishes that export trade enhances economic growth. For instance, Onayemi and Ishola

(2009) reported that elaborate historical studies have provided empirical validation of the view that growth performance is more satisfactory under export promotion. This supports earlier findings by Bhagwati (1978), and Papageorgious, Michaely and Choski (1991), each of whom had earlier reported that sustainable increase in income per capita is better achieved under export promotion policy.

The attempt at finding out the extent to which Nigerian export promotion strategies have been effective in diversifying the productive base of Nigeria led Onayemi and Ishola (2009) into revealing that non-oil export have performed below expectation under export promotion policy. This outcome supports the argument by Subasat (2002) that export promotion does not have any significant impact on economic growth of low income countries. This same result however contradicts Usman (2010) who discovered that an insignificant non-oil export and exchange rate would slow down economic growth given that non-oil export for previous year positively affects growth.

Imoughele and Ismaila (2015) conducted a study on the impact of exchange rate on Nigeria non oil exports. They used time series data obtained from central bank of Nigeria (CBN) for the period1986 to 2013. They used augmented Dickey Fuller unit root test and Johansen co integration. Their result showed that appreciation of exchange rate has a negative effect on non oil export and recommended that monetary authority should ensure exchange rate stability in order to stem inflation which has adverse effect on non oil exports. Using Auto regressive distributed lag (ARDL) estimation technique would have given a better result because it is a better technique when variables are stationary at different levels after unit root test.

Onodugo, Marius, and Oluchukwu (2013) conducted a study titled Non oil export and economic growth in Nigeria: A time series econometric model. They used data from 1981 to 2012 and employed Johansen co integration. The result showed that non oil exports have an infinitesimal impact in influencing economic growth in Nigeria. The study is limited to the year 2013.

Akeem (2011) undertook a study titled Non oil export determinant and economic growth in Nigeria. Akeem employed data from CBN for the period 1989 to 2008. He used multi linear regression method and found non oil export for previous year and consumer price index to positively affect GDP. Multi linear regression was used in this study without carrying out a unit root test. Not carrying out a unit root test may lead to a spurious result.

Adenugba and Dipo (2013) studied Non oil exports and the economic growth of Nigeria: A study of agricultural and mineral resources. The study evaluated the performance of Nigeria's export promotion strategies as to whether they have been effective in diversifying the productive base of the Nigerian Economy from Crude oil as the major source of foreign exchange. The study was carried out for the period 1981to 2010. Findings from the study revealed that non–oil exports have performed below expectations giving reason to doubt the effectiveness of the export promotion strategies that have been adopted in the Nigerian Economy. The study revealed that the Nigerian Economy is still far from diversifying from crude oil export and as such the crude oil sub–sector continues to be the single most important sector of the economy. The study made some recommendations for diversification to be achieved and for enhancing the productivity and output of non–oil commodities as well as providing markets for the commodities. Unit root test was not conducted before the estimation. This may undermine the result.

Evidence from the above reviewed studies showed that most recent studies on the contribution of non oil sector to economic growth are limited especially given the remarkable changes in the Nigerian economy. This study which covered the period 1985-2015 is therefore an extension over all the studies reviewed. Also within the period the liberalization of both foreign market and the economy as a whole under structural adjustment programme (SAP) and the banking reforms (the banking consolidation reform and the post consolidation reform) all took place within the economy. Again the GDP of Nigeria was rebased within this same period. The result of this research study is therefore expected to differ from previous similar studies that were carried out before this time as a result of the effect of the aforementioned reforms that took place within the study period.

1.5 Hypotheses

The hypotheses of the study are stated in both null and alternative forms as follows:

H_0: Non oil exports do not contribute significantly to economic growth in Nigeria.

H_1: Non oil exports contribute significantly to economic growth in Nigeria.

2. Methodology

For the purpose of this study quantitative methodology was used. Secondary time series data for the period 1986-2015 was obtained from central bank of Nigeria's (CBN's) statistical bulletin. Ordinary least squared (OLS)

method was used to regress Gross Domestic Product (GDP) which is the proxy for economic growth on non oil exports and exchange rate of naira against the dollar. However before running the OLS analysis the natural log of all the variables was taken to bring the variables to a common base and econometric unit root test was also carried out. This was done in order to find out if the variables were stationary and to ascertain the exact estimation technique to use. The justification for using the OLS method stems from its superiority over other estimators. The OLS method possesses the best linear unbiased estimator (BLUE) property (Gujarati, 2004). The OLS is unbiased and has the minimum variance within the class of linear estimators. Thus, the model for the study and the estimation technique are specified below.

2.1 Model Specification

The model for this research study is specified in the following functional form:

$$GDP = f (NOL, EXG) \tag{1}$$

The behavioural equation is given by:

$$LOG(GDP) = a_0 + b_0 LOG(NOL) + b_1 LOG(EXG) + U_t \tag{2}$$

Where:

LOG = Natural logarithm

GDP = Gross domestic product

NOL = Non oil exports

EXG = Exchange rate

a_0 = Model intercept

b_0 = Coefficient of non oil exports

b_1 = Coefficient of exchange rate

U_t = Error term

2.2 Estimation Technique

The estimation procedure adopted in this study is in the following sequences. To stem the problem of spurious regression, it is important that the time series properties of the data set employed in estimation of equation is ascertained. It is reasonable to test for the presence of a unit root in the series using the most general of the models as:

$$\Delta y_t = \alpha_0 + Y y_{ti} + \alpha_{2t} + \Sigma \beta j \Delta y_{t-1} + e_t \tag{3}$$

Where y is the series t is (trend factor); α_0 is the constant term, e_t is the stochastic error term, β is the lag length. The Augmented Dickey Fuller (ADF) unit root test would be employed to determine the order of integration of the variables. If the data indicate different integration level for different variables in the model, then we proceed to employ auto-regressive distributed lag (ARDL) model to estimate our equation. ARDL is suitable for estimating equations whose variables are stationary at different levels ie some stationary at level and some stationary at first difference (Pesaran and Shin, 1999). The general form of the ARDL is shown below:

$$y_t = \propto + \sum_{i=1}^{P} \gamma_i y_{t-i} + \sum_{j=1}^{k} \sum_{i=0}^{q} X_{j,t-i} \beta_{j,i} + \varepsilon_t \tag{4}$$

Autoregressive distributed lag (ARDL) automatically includes the lag of the dependent variable as part of the explanatory variables. Our behavioural equation represented by equation (1) is then transformed to ARDL form below:

$$\Delta LOG(GDP)_t = a_0 + b_0 \Delta LOG(GDP)_{t-1} + b_1 \Delta LOG(NOL)_{t-1} - b_2 \Delta LOG(EXG)_{t-1} + U_t \tag{5}$$

After estimating the equation using ARDL we then test for the presence of co integration using bounds test popularized by Pesaran and Shin (1999). This will let us determine if there exists a long run relationship among the variables in the model. Our behavioural equation is thus further transformed to include the long run equation as indicated below:

$$\Delta LOG(GDP)_t = a_0 + b_0 \Delta LOG(GDP)_{t-1} + b_1 \Delta LOG(NOL)_{t-1} - b_2 \Delta LOG(EXG)_{t-1} + \lambda_1 LOG(NOL)_{t-1} - \lambda_2 LOG(EXG)_{t-1} + U_t \tag{6}$$

Thereafter serial correlation and heteroskedasticity tests would be carried out.

3. Results and Discussion

3.1 Unit Root Test Result

Table 1. Augmented Dickey Fuller (ADF) unit root test result

Variable	ADF statistic	Prob. Value	1%	5%	10%	Order of integration	Conclusion
LOG (GDP)	-5.35	0.0001	-3.68	-2.97	-2.62	I (1)	Stationary
LOG (NOL)	-6.13	0.0000	-3.68	-2.97	-2.62	I (1)	Stationary
LOG (EXG)	-4.06	0.0038	-3.67	-2.96	-2.62	I (1)	Stationary

Source: Authors' computation using Eviews 9.

Table 1 which is the result of the unit root test at level showed that GDP and non oil exports (NOL) were stationary at 5% level of significance after first differencing. Their respective ADF values stood at -5.35 and -6.13while their p values stood at 0.0001 and 0.0000 respectively. Exchange rate (EXG) is found to be stationary at level at 5% level of significance with an ADF value of -4.06 and p value of 0.0038.

The findings that GDP and non oil exports (NOL) were stationary at first difference while exchange rate (EXG) was stationary at level warrants the use of auto-regressive distributed lag (ARDL) model to estimate our model. The Bounds test which was used to determine if there is a long run relationship between the dependent and the independent variables also became eminent.

3.2 The Auto-Regressive Distributed Lag Model Estimation Result

Table 2. The Auto-regressive distributed lag model estimation result

Dependent Variable: LOG (GDP)				
Method: ARDL				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
LOGGDP(-1)	0.729958	0.116043	6.290397	0.0000
LOGNOL	0.488091	0.187038	2.609576	0.0148
LOGEXG	-0.464337	0.258216	-1.798246	0.0838
C	-2.487714	2.428238	-1.024494	0.3150
R-squared	0.890067	Mean dependent var		27.72915
Adjusted R-squared	0.877383	S.D. dependent var		2.065437
S.E. of regression	0.723249	Akaike info criterion		2.313440
Sum squared resid	3.60033	Schwarz criterion		2.500266
Log likelihood	-30.70160	Hannan-Quinn criter.		2.373208
F-statistic	70.16934	Durbin-Watson stat		2.104797
Prob(F-statistic)	0.000000			

Source: Authors' computation using Eviews 9.

Table 2 above, shows the coefficient of exchange rate (EXG) to be -0.464337 which indicates a negative relationship between GDP and exchange rate. This is consistent with apriori expectation. It implies that a 1% increase in exchange rate will lead to a 46% decrease in GDP. The p value at 0.0838 shows that exchange rate is not significant in affecting GDP at 5% level of significance. The value of the coefficient of non oil exports stood at 0.488091 and the p value stood at 0.0148. It indicates a positive and significant relationship between non oil export and GDP, meaning that a 1% increase in non oil exports will lead to 49% increases in GDP. Based on this result we therefore reject the null hypothesis (H_0) of this study which says non oil exports do not contribute significantly to economic growth in Nigeria and accept the alternative hypothesis (H_1) which says non oil exports contribute significantly to economic growth in Nigeria.

The result in table 2 also shows the intercept (C) to be -2.487714. This means the GDP will have the value of -2.487714 when it is not affected by any of the variables. The value of adjusted R squared (R^2) which shows the overall goodness of the model is 0.877383, meaning that about 88% of the variation in GDP is explained by independent variables, that is exchange rate and non oil exports in the model. The F-statistic which measures the joint statistical influence of the explanatory variables in explaining the dependent variable stood at 70.16934 with a p value of 0.000000. This implies that the explanatory variables are important determinants of GDP. It also indicates the influence of the explanatory variables to be statistically significant at 5% level of significance.

Based on this result and analysis the null hypothesis (H_0) that non oil exports do not contribute significantly to economic growth in Nigeria is therefore rejected. The alternative hypothesis (H_1) which stated that non oil

exports contribute significantly to economic growth in Nigeria is then accepted.

3.3 Bounds Test

Bound test is carried out to determine the presence of co integration in the model. This tells if there is a presence of long run relationship among the variables. The result is indicated below:

Table 3. Bound test result

Variable	F-Statistic	k	Significance / Bound (I0)	Significance/Bound (I1)
GDP	2 680541	2	10% (3.17) 5% (3.79) 1% (5.15)	10% (4.14) 5% (4.85) 1% (6.36)
NOL	0.684873	2	10% (3.17) 5% (3.79) 1% (5.15)	10% (4.14) 5% (4.85) 1% (6.36)
EXG	5.265419	2	10% (3.17) 5% (3.79) 1% (5.15)	10% (4.14) 5% (4.85) 1% (6.36)

Source: Authors' computation using Eviews 9.

The decision rule as explained by Pesaran and Shin (1999) requires that the F statistics values of any of the variables be greater than the critical bound values (pesaran values) at any significance level (10%, 5%, or 1%) for long run relationship to exist. One of the variable, exchange rate (EXG) with an F value of 5.265419 which is greater than both I (0) and I (1) Pesaran values at 5% level of significance shows the presence of co-integration. This means there exist a long run relationship in the model and as such it is imperative to estimate the co-integrating and long run form of the model as presented the Table 4 below:

Table 4. Co-integrating and long run result

Dependent Variable: LOG (GDP)				
Co-integrating Form				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
D(LOGNOL)	0.488091	0.187038	2.609576	0.0148
D(LOGEXG)	-0.464337	0.258216	-1.798246	0.0838
CointEq(-1)	-0.270042	0.116043	-2.327085	0.0280
Cointeq = LOGGDP - (1.8075*LOGNOL - 1.7195*LOGEXG-9.2123)				
Long run Coeefficients				
LOGNOL	1.807460	0.550803	3.281501	0.0029
LOGEXG	-1.719496	0.882033	-1.949469	0.0621
C	-9.212312	10.363711	-0.888901	0.3822

Source: Authors' computation using Eviews 9.

Table 4, above displayed both the short run and the long run estimation result. From the table the long run coefficient of non oil exports (NOL) and the p-value stood at 1.80746 and 0.0029 respectively, meaning a positive and statistically significant relationship exist between NOL and GDP at 5% level of significance. This finding debunks the finding of Ogunjimi, Aderinto and Ogunro (2015) who found that non-oil exports reportedly had a negative significant impact on Nigeria's economic growth. The short run coefficient of 0.488091 (about 48.81%) also indicated that non-oil sector's impact on economic growth has improved remarkably which is in contrast to the 26% reported by Abogan, Akinola and Baruwa (2014). It implies that diversifying the economy away from oil in recent times is gradually yielding positive results in Nigeria. The coefficient of exchange rate (EXG) at -1.719496 and p-value of 0.0621 indicated a negative relationship between EXG and GDP in the long run. Though the relationship is not statistically significant at 5% level of significance, the long run intercept (C) is found to be -9.21231. This is the value that GDP will have when it is not affected by any of the explanatory variables. The coefficient of cointegration (CointEq(-1)) which denote the speed of adjustment stood at -0.2700 with a p-value of 0.3822 (not statistically significant) means that 27% of the disequilibrium in the model will be corrected annually. From the above result, the long run equation is stated below:

$$LOGGDP = 1.8075*LOGNOL - 1.7195*LOGEXG - 9.2123 \qquad (7)$$

3.4 Post-Diagnostic Tests: Breush-Godfrey Serial Correlation and Heteroskedasticity Tests

Table 5. Breush-Godfrey serial correlation test result

Breusch-Godfrey Serial Correlation LM Test			
F-statistic	0.562705	Prob. F (2, 24)	0.5770
Obs*R-squared	1.343752	Prob. Chi-square (2)	0.5107

Source: Authors' computation using Eviews 9.

Although the Durbin Watson statistics in the ARDL estimation result showed there was no serial correlation. It is still advisable to take the Breusch-Godfrey serial correlation test to make sure the model does not suffer from second order serial correlation. Here H_0 = There is no serial correlation in the model indicates the null hypothesis and H_1 = There is serial correlation in the model. The Decision rule stated that if p value is less than 0.05, we reject H_0 and accept H_1, otherwise accept H_0 (Gujarati, 2004).

The result of the test for the presence of serial correlation on table 5 above showed the probability value at 0.5770 is above 0.05(5% level of significance) and is therefore significant. We therefore accept our null hypothesis (H_0) and reject the alternative hypothesis (H_1). This means the model is free from serial correlation.

Table 6. Heteroskedasticity test result

Heteroskedasticity Test: ARCH			
F-statistic	0.039320	Prob. F (1, 27)	0.8443
Obs*R-squared	0.042171	Prob. Chi-square (1)	0.8373

Source: Authors' computation using Eviews 9.

It is required for the ARDL estimated result to pass heteroskedasticity test. Here, H_0 = There is no heteroskedasticity in the model is the null hypothesis and H_1 = There is heteroskedasticity in the model is the alternative hypothesis. The decision rule as specified by Gujarati (2004) says if the p value is less than 0.05(5% level of significance) we reject H_0; otherwise we accept H_0 and reject H_1.

From the heteroskedasticity test result, the p values is 0.8443 this is greater than 0.05(5% level of significance) and is significant. We therefore accept H_0 and reject H_1. This indicates the model is homoskedastic.

4. Conclusion and Recommendations

In response to Nigeria's economic problems which were caused by the mono-cultural nature of the economy (a situation where Nigeria depends heavily on the exportation of crude oil), this study has examined the contribution of non oil exports on the growth of the economy. The study has established a positive and significant relationship between the non-oil exports and Nigeria's economic growth proxied by GDP. That is non-oil exports contributed significantly to the growth of Nigeria's GDP.

Based on the outcome of this study, it is imperative to recommend to the authorities in charge to put in more effort to diversify the economy by developing the non-oil sectors of the economy in a way they can efficiently contribute to exportation and earn more foreign exchange for the country for the purpose of growth. They can do that in the following ways:

i.   Making legislation that favours and makes participation in non oil sectors like agriculture, solid minerals and manufacturing very easy by both local and foreign investors.

ii. Providing support in form of credit at lower or no interest to the non oil sectors through the manipulation of the monetary policy.

iii. Government can directly participate in the running and development of these non oil sectors and later sale them off to the private concerns.

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