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Export Trade and Economic Growth in Nigeria: A Study of Selected Agricultural Commodities Exports

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Abstract

The study examined the selected agricultural commodities exports and economic growth in Nigeria from 1999-2022. The objectives of the study are to; examine the impact of cocoa exports, hide and skin exports as well as textile exports on real gross domestic product in Nigeria. Semi-annual data was collected from Central Bank of Nigeria (CBN) statistical bulletin. The study applied the technique of Autoregressive Distributed Lag (ARDL) model to determine both the long run and short run relationship between the dependent and the independent variables. Meanwhile, the technique of Augmented Dickey Fuller (ADF) unit root test was used to ascertain the order of integration of the variables before the variables were subjected to the ARDL technique of analysis. Based on the empirical results; in the long-run, cocoa exports, hide and

skin exports; as well as textile exports all have positive relationship with real GDP in Nigeria. The empirical result showed that, in the short-run, cocoa exports, hide and skin exports, as well as textile exports all have positive and significant relationship with real gross domestic product. The implication of this result is that, the degree of the impact of agricultural commodities exports in term of cocoa, hide and skin, and textile have the potential to boost economic growth of the Nigerians. Thus, it was recommended that various agricultural commodities that are required for exports should be given urgent developmental priority in terms of infrastructural provision because of their advantage of value addition and immediate returns to the economy.

Keywords: Agricultural, Cocoa, Commodities, Exports, Hides, Skin

1. Introduction

In general, international trade creates the flow of foreign capital into both developed and developing economy. Given the proposition by Adam Smith and David Ricardo hypotheses that, international trade remains as the major determinants of economic growth, through specialization of a specific good and technological transfer. Also, the export led growth theory asserted that, export is the main determinant of growth and development of the economy, which have theoretical justifications in the Keynesian theory, higher exports generate higher earnings in the short term through foreign exchange earnings, and as well as economic development is promoted through economies of scale and development of technical know-how among others; (Adeye, Osabuohien, Bowale, Matthew & Oduntan, 2018) ^[2].

Meanwhile, from the pre-colonial through independence of Nigeria, agriculture was the mainstay of Nigeria's economy from. Through this period, the nation was a leading agricultural economy in the African sub-region, being the largest producer of palm oil, groundnut, cotton and cocoa globally. The sector employed over 70 per cent of the labour force, accounted for as much as 62.3 per cent of the nation's foreign exchange earnings. Data obtained from World Bank showed that the sector contributed over 60 per cent to the Gross Domestic Product (GDP). However, the discovery of crude oil in the 1950s progressively led to the neglect of the sector, which has made Nigeria to fall in the global market rankings for which it was taking the lead. (Mwangi, Chen & Njoroge, 2020) ^[12].

Moreover, Nigeria's export sector depends on limited agricultural products largely cocoa, coffee, hide and skin. However, the markets for these products are largely unstable in terms of volume, price and carry a high degree of risk and uncertainty as well as low-income elasticity. Such features are not conducive to the contribution of agricultural exports to the economic growth and development of the nation. It is obvious that the exports of primary goods are less competitive on the world market and weigh less against finished goods exported by developed countries resulting in deteriorating terms of trade. Despite these

unfavorable terms, the nation still dependent on agricultural exports but its impact on the standard of living of the economy has not been evaluated.

Moreover, Onwualu (2012)^[16] identified some weaknesses to the growth of agricultural sector are: Fragile infrastructure, supply side constraints due to low level of technology, low level of human capital development and poor access to finance. This scenario therefore provided a justification to find out if agricultural exports trade impact on economic growth. Thus, objective of the study is to examine agricultural commodities exports and economic growth in Nigeria from 1999-2022. The specific objectives of the study are; to examine the impact of textile export on real gross domestic product; determine the impact of hide and skin exports on real gross domestic product; and find out the impact of cocoa exports on real gross domestic product in Nigeria.

2. Literature Review

Literature review was looked at in terms of concept, theory and empirics. Conceptually, agricultural exports involves the trade of agricultural product across the border of the nation. The products traded includes but not limited to; rubber and plastic, hide and skin, wood and charcoal, textile export and cocoa. Thus, agricultural exports is a component of non-oil export. 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)^[1]. On the other hand, economic growth is the increase in the production of goods and service in a nation over a period of time usually one year. In the words of Zhattau (2013)^[17], economic growth is the basis of increased prosperity and it comes from the accumulation of more capital and innovations which lead to technical progress. Economic growth can be defined as a periodic increase in a nation's output, which is most commonly measured by the gross domestic product (GDP) of the nation. According to Dewett (2015)^[5], economic growth implies an increase in the net national product in a given period. It is defined as a steady process by which the productive capacity of the economy is increased over time to bring about rising levels of national output and income.

Theoretically, the paper relies on the export-led growth theory which is the main determinant of overall economic growth of any country has its main arguments based on the fact that export growth may affect total factor productivity through dynamic spillover effects on the rest of the economy. The theoretical rationale for this hypothesis hinges on a number of arguments which include the following: First, that the export sector may generate positive externalities on non-export sectors through more efficient management styles and improved production techniques (Jhingan, 2011; Lipsey & Chrystal, 2011)^[8, 9]. Second export expansion will increase productivity by offering potential for scale economies. Third, exports are likely to alleviate foreign exchange constraints and can thereby provide greater access to international markets. These arguments have recently been extended by the literature on "endogenous" growth theory which emphasizes the role of exports on long-run growth via a higher rate of technological innovation and dynamic learning from abroad (Mankiw, 2009; McCombie & Brue, 1993)^[11, 10].

According to the theory, there are several ways in which exports can potentially cause an increase in productivity. An

expansion in exports may promote specialization in production of export products which in turn may boost productivity levels and may cause the general level of skills to rise in the export sector. This then leads to a reallocation of resources from the (relatively) inefficient non-trade sector to the higher productive export sector. This productivity change leads to output growth (Mankiw, 2009)^[11].

The core theoretical criticism of the export-led growth model among others is that it suffers from a fallacy of composition whereby it assumes that all countries can grow by relying on demand growth in other countries. When the model is applied globally in a demand-constrained world, there is a danger of a beggar-thy-neighbour outcome in which all try to grow on the backs of demand expansion in other countries, and the result is a global excess supply and deflation (Palley, 2002)^[18]. Not with standing this criticism, the ELGH is still relevant to this study because it emphasizes export as the key determinant of economic growth.

Empirically, some of the works of eminent scholars shows divergent views about exports and economic growth. Examples of such include, Okorie and Nwachukwu (2022)^[14] who used OLS to examine the impact of fruits and vegetables exports on economic growth in Nigeria from 1981-2019 and found that fruits and vegetables exports contributes negatively but insignificantly to economic growth in Nigeria. Also, Ghimire, Lin and Zhuang (2021)^[6] empirically examine the impacts of agricultural trade on economic growth and agricultural environmental pollution in Bangladesh from 1972 to 2019 with the use of Auto Regressive Distributed Lag (ARDL) model with a structural break to examine the long-run and short-run determinants of agricultural environmental pollution in Bangladesh. The ARDL bounds analysis methodology showed that it does not support the hypothesis that agricultural trade led to environmental pollution in the long-run. The results suggest a relationship between economic growth, energy, and FDI towards agricultural environmental pollution, indicating a positive long-run relationship. Furthermore, in the short run, agricultural trade indicates positive drivers towards agricultural environmental pollution.

Talga and Ameji (2020)^[22] investigated the impact of agricultural exports on economic growth in Nigeria using the Ordinary Least Square (OLS) technique. They found that agricultural exports have a positive and substantial association with economic growth.

Sayef and Mohamed (2018)^[19] investigated the influence of agricultural exports and agricultural imports on economic growth in North Africa Countries for the period 1982-2016 using correlation analysis and the static gravity model. Empirical analyses showed that agricultural trade has a positive correlation with gross domestic product, but it appears that agricultural exports and gross domestic product have a weak correlation. The static gravity model estimation shows that agricultural exports have a positive on economic growth. However, agricultural imports have not any effect on economic growth. These results appear that agricultural exports are a fountain of economic growth in North Africa Countries.

Siaw, Jiang, Pickson and Dunya (2018)^[20] examined the correlation between agricultural exports and economic growth in Ghana at the disaggregate level using the Autoregressive Distributed Lag (ARDL) model with yearly time series data spanning from 1990Q1-2011Q4. Both the

long-run and the short-run results revealed that, cocoa export has a positive and significant impact on economic growth while the export of pineapple and banana has negative effect on economic growth even though pineapple export is not significant in both long run and short run. In addition, the study found unidirectional causality running from banana to economic growth, a bi-directional causal relationship between cocoa export and economic growth and no causality between economic development and pineapple export in Ghana.

Verter and Bečvářová (2016)^[24] investigated the impact of agricultural exports on economic growth in Nigeria using OLS regression, Granger causality, Impulse Response Function and Variance Decomposition approaches. Both the OLS regression and Granger causality results support the hypothesis that agricultural exports- led economic growth in Nigeria. The results, however, show an inverse relationship between the agricultural degree of openness and economic growth in the country. Impulse Response Function results fluctuate and revealed upward and downward shocks from agricultural export to economic growth in the country. The Variance Decomposition results also show that a shock to agricultural exports can contribute to the fluctuation in the variance of economic growth in the long run. For Nigeria to experience a favourable trade balances in agricultural trade, domestic processing industries should be encouraged while imports of agricultural commodities that the country could process cheaply should be discouraged. Also, Tigist (2015)^[23], used OLS to examine the impact of agricultural exports on economic growth in Ethiopia and found that coffee, oilseed and pulses have positive impact on the economy. Having examined the historical ladder of studies and scientific research that focused on evaluating the impact of agricultural commodities exports on economic growth, the findings showed that there still exist a controversy on the relationship between agricultural exports and economic growth with the use of different techniques, while some averred that there is an indirect relationship between the two economic variables, the reverse is the case for others. Haven realized the controversy between various scholars on the nexus between agricultural commodities exports and economic growth in Nigeria, an attempt was made to bridge the gap over these vacuums by checking the impact of disaggregated data on agricultural commodities exports in terms of hide/skin exports, textile export and cocoa exports on real GDP with the application of the technique of Auto Regressive Distributed Lag (ARDL) method.

3. Methodology

This study employed ex-post-facto research design in conducting the research and analyzing the data collected. In essence, this research design is normally employed on empirical data for the variables involved in a research work without any manipulation whatsoever (Iyoha & Ekanem, 2011). This study used annual data which covered the period of 1999-2022 and used the Auto Regressive Distributed Lag (ARDL) method as the main technique of analysis. This is because the ARDL helps to ascertain both the short and long run relationship between the dependent and the independent variables. Thus, the independent variable which is selected agricultural commodities exports was measured in terms of; textile exports, hide and skin exports as well as cocoa exports. While the dependent variable which is economic growth was measured with real gross domestic product.

Model specification

Theoretically, the study was anchored on the export-led growth hypothesis which stated that, the growth of exports is a main determinant of economic growth. Empirically, the study is cast in line with the work of Tigist (2015)^[23], who examined the impact of agricultural exports on economic growth in Ethiopia: The case of coffee, oilseed and pulses. But this study will modify Tigist (2015)^[23] model by using cocoa exports, hide and skin exports as well as textile exports as the set of independent variable and used real GDP as the dependent variable. The functional, linear and log-linear relationship between the dependent variable and the independent variables was expressed as follow;

$$RGDP = f(CEP, HEP, TEP) \quad (3.1)$$

The linear relationship between dependent variable and the independent variables was expressed as follow;

$$RGDP = \beta_0 + \beta_1 CEP + \beta_2 HEP + \beta_3 TEP + e_{it} \quad (3.2)$$

The log-linear form of the model which help to put all the variables on the same unit was expressed as follow;

$$\text{LogRGDP} = \beta_0 + \beta_1 \text{LogCEP} + \beta_2 \text{LogHEP} + \beta_3 \text{LogTEP} + U \quad (3.3)$$

Where; RGDP = Real Gross Domestic Product per capita (Proxy for Economic Growth), CEP = Cocoa Exports, HEP = Hide and Skin Exports, TEP = Textile Exports, β_0 = Constant Parameter, $\beta_1, \beta_2, \beta_3$ = Slope Parameters and U = Error Term

Equation (3) is then transformed into ARDL error correction model as;

$$\Delta \ln RGDP_t = \alpha_0 + \sum_{i=1}^m \alpha_i \Delta \ln RGDP_{t-i} + \sum_{i=1}^m \alpha_2 \Delta CEP_{t-i} + \sum_{i=1}^m \alpha_3 \Delta HEP_{t-i} + \sum_{i=1}^m \alpha_4 \Delta TEP_{t-i} + \Phi ECM_{t-1} \quad (3.4)$$

Where; Ln = natural logarithm, α_0 = autonomous component of economic growth, $\alpha_1 - \alpha_3$ = the slope coefficient of the parameter estimates, e_t = Random/stochastic term, Φ = adjustment parameter, m = lag length, Δ = first difference operator, Σ = Summation.

Explanation of variables in the model

Real gross domestic product: Gross Domestic Product is the monetary value of total output of goods and services in an economy over a considerable period of time. But real GDP is the gross domestic product deflated by inflation. In the estimated model, it serves as the dependent variable used to measure economic growth.

Agricultural exports: Agricultural exports are all exports from agricultural commodities which are sold in the international market for revenue generation. In this study, agricultural commodities export will be disaggregated into four, which are; hide and skin exports, textile exports, as well as cocoa exports.

4. Results and Discussion

4.1 Descriptive Statistics of the Variables

The descriptive statistics helps to determine the characteristics and nature of the variables under consideration by considering the measure of central tendency and dispersion as well as the measure of symmetry. The measures of central tendency such as mode,

mean and median identified the central point or value of a dataset. The measure of dispersion such as, standard deviation describes the spread of data around a central mean value. While, the measure of symmetry such as, kurtosis and skewness are measures of symmetry, or more precisely, the lack of symmetry.

Table 1: Analysis of the Descriptive Statistics for the Variables

Variables	Log(RGDP)	Log(CEP)	Log(HEP)	Log(TEP)
Mean	11.27700	6.748113	6.607186	6.732248
Std. Dev.	1.457983	0.369825	0.402697	0.338673
Skewness	1.347821	0.988023	0.588679	1.018970
Kurtosis	5.008507	3.011677	4.028569	3.599154
Jarque-Bera	22.60117	7.809781	4.888254	9.024371
Probability	0.000012	0.020143	0.086802	0.010974
Observations	48	48	48	48

Source: Authors' Computation from E-view 12

The analysis of descriptive statistics of the series in Table 1 indicated that; the approximate mean of real gross domestic product (RGDP) is N11.2billion; while the corresponding standard deviation is N1.5billion. On the other hand, the approximate mean of cocoa exports (CEP) is N6.7billion while the corresponding standard deviation is N0.4million. Hide and skin exports (HEP) is approximately N6.6million, while the corresponding standard deviation is N0.4million. The approximate mean of textile exports (TEP) is N6.7million, while the corresponding standard deviation is N0.3million. Based on the analysis above, the standard deviation of all the variables converged around their respective means (were within their respective means); it therefore denoted that, all the variables used for the estimation were normally distributed.

The Skewness test result showed that all the variables are positively skewed. Thus, positive skewness means that the tail on the right side of the distribution is longer or fatter. Moreover, the analysis of the kurtosis test showed that, all the variables have leptokurtic distributions relative to normal, since their approximate values for kurtosis are more than 3. This indicated a flatter than normal distribution and the variables have large tails. That is, their central peaks are higher and sharper. The probability of Jarque-Bera statistics suggested that the null hypotheses of all the variables except hide and skin export are rejected at 5% level. Meaning that the variables were normally distributed. Therefore, the study concluded from the statistical properties of the time series that the variables were largely not normally distributed, which may have resulted from the problem of unit root. This necessitated stability via ADF unit root test.

4.2 Stationarity Test Results

This unit root test conducted via the Augmented Dickey Fuller (ADF) established the order of integration or stationarity of the variables. The ADF test was conducted based on constant and time trend; at level and first difference at 5 percent critical values. The stationarity status of the data series are presented in Table 2.

Table 2: Results of ADF Unit Root Test for the Model

Variables	Unit Root Test @ Level		Unit Root Test @ First difference		Order of integration
	ADF Statistics	5% Critical Value	ADF Statistics	5% Critical Value	
RGDP	-2.927653	-2.925169	--	--	1(0)
HEP	-4.715714	-2.925169	--	--	1(0)
TEP	-4.034483	-2.925169	--	--	1(0)
CEP	-1.903766	-2.925169	-6.744845	-2.925169	1(1)

RGDP	-2.927653	-2.925169	--	--	1(0)
HEP	-4.715714	-2.925169	--	--	1(0)
TEP	-4.034483	-2.925169	--	--	1(0)
CEP	-1.903766	-2.925169	-6.744845	-2.925169	1(1)

Source: Authors' Computation from E-view 12

The test of stationarity via the Augmented Dickey Fuller (ADF) unit root test for the variables in the estimated model showed that, three independent variables; RGDP, HEP and TEP were stationary at order zero (at level). This is because the ADF test statistic value of each of these variables is greater than the critical value at 5percent. However, the remaining one variable (CEP) which was not stationary at level, was differenced and became stationary at first differences; 1(1). In as much as some of the variables were integrated of order, 1(0) and some at order one, 1(1); the condition to fit into an ARDL model to test for both long run and short-run relationship is fulfilled.

4.3 Lag Selection Criteria

Lag selection is required to determine the mode at which the model gives a robust result. Thus, in the estimation of the ARDL model, the selection of the lag length for the estimated model was automatically determined based on the Akaike information criterion (AIC). Thus, the model with the lowest order of lag out the possible models of the ARDL short run result was selected. See appendices III for the results. Thus, the appropriate lag order for the estimated model is (1, 1, 0, 2) lengths of lags.

4.4 Empirical Result for the Estimated Model

As earlier discussed in the ADF unit root test result, three variables were stationary at order zero; while, four other variables were stationary at order one. Given the combination of stationarity of the variables at I(0) and I(1); the condition to fit into an ARDL model to test for long run relationship is fulfilled.

4.4.1 ARDL Bounds Test for Cointegration

The ARDL Bounds test for co-integration help to determine the long run relationship among the variables in an estimated model. In order to do this, the Pesaran and Shin ARDL Bounds test for co-integration was applied in order to determine if the null hypothesis of no co-integration is rejected or otherwise. The result of the ARDL bounds test is presented in Table 3.

Table 3: ARDL Bounds Test for the Estimated Model

Model		F-Statistic = 4.978784
F(Log(CEP), Log(HEP), LOG(TEP))		K = 3
Critical Values	Lower Bound	Upper Bound
10%	2.72	3.77
5%	2.3.23	4.35
1%	4.29	5.61

Source: Authors' Computation from E-view 12

The co-integration test using real gross domestic product (RGDP) as the dependent variable showed that the F-statistic value of 4.978784 is higher than the upper bound critical value of 4.35 at 5percent level of significance using restricted intercept and no trend in specification for the model. The result showed that all the explanatory variables which measures selected agricultural commodities export (CEP, HEP and TEP) as well as RGDP have long-run relationship in Nigeria.

4.4.2 ARDL Estimates and Long run Parameters for the Estimated Model

The ARDL estimates and long-run parameters for the model is presented in Table 4.

Table 4: ARDL Long-Run Coefficients for the Estimated Model

Dependent Variable: Log (RGDP) ARDL (1, 1, 0, 0)			
Regressors	Coefficient	t-Statistic	P-Value
Log(CEP)	3.931866	3.409842	0.0016
Log(HEP)	1.489268	1.151091	0.2569
Log(TEP)	4.623082	2.459570	0.0039
C	6.154202	0.840201	0.4061

NB; Real gross domestic product (RGDP), Cocoa exports (CEP), Hide and skin export (HEP), Textile export (TEP)

Source: Authors' Computation from E-view 12

Table 4 showed the estimated ARDL long-run coefficients to determine the relationship between selected agricultural commodities export and the economic growth (Real GDP) in Nigeria. The ARDL long-run result showed that cocoa exports (CEP) has positive and significant relationship with real gross domestic product in Nigeria. Similarly, the estimated result showed that textile exports (TEP) has positive and significant relationship with real gross domestic product in Nigeria during the period of study. Meanwhile, the estimated ARDL result showed that hide and skin exports (HEP) has positive but insignificant relationship with real gross domestic product in Nigeria.

Meanwhile, the values of the t-statistic for the independent variables (cocoa exports, as well as textile exports) were statistically significant in explaining the level of real GDP in the long-run in Nigeria during the period of study. Thus, the null hypothesis was rejected. But the t-statistic for the independent variables (textile exports) was statistically not significant in explaining the level of real GDP in the long-run in Nigeria during the period of study. Thus, the null hypothesis was accepted.

4.5 Short-Run Auto Regressive Distributed Lag (ARDL) Estimates for the Estimated Model

The essence of the error correction estimate of the ARDL model was to determine the dynamic short-run behaviors of the independent variables and as well determine the speed of adjustment of the estimated model. The ARDL estimates and short-run parameters for the model is presented in Table 5.

Table 5: Error Correction Representation for the Estimated Model

Dependent Variable GDP; ARDL Selected Lags (1, 1, 0, 0)			
Regressors	Coefficients	t-Statistic	P-Value
Log(RGDP(-1))	1.326299	2.044779	0.0478
Log(CEP)	0.497945	3.013709	0.0011
Log(HEP)	0.944962	2.112633	0.0268
Log(TEP)	1.490894	2.183673	0.0104
ECM(-1)	-0.634515	-4.258245	0.0001
R-squared = 0.6588	Adjusted R-Squared=0.5591	Prob(F-statist) = 0.0000	DW=2.12903

Source: Authors' Computation from E-view 12

In the meantime, the ARDL short-run result showed that cocoa exports (CEP) have positive significant relationship with real gross domestic product in Nigeria during the period of study. This means that, a proportionate increase in cocoa exports increases real gross domestic product by 49.7percent. Similarly, given that the probability value of

the t-statistic (0.0011) for the coefficient of cocoa exports is less than the p-value at 5percent; the study concludes that there is a significant relationship between cocoa exports and real gross domestic product during the period of study. Thus, the alternative hypothesis which states that, there is a significant relationship between cocoa exports and the economic growth in Nigeria was accepted. The finding supports the empirical work of Omojolabi, Mesagan and Adeyemi (2015) [15] that examined the impact of non-oil exports on economic growth in Nigeria and revealed that non-oil exports does not have significant impact on economic growth. Similarly, the coefficient of hide and skin exports (HSX) is positively related with real gross domestic product and statistically significant. This means that percentage change in hide and skin exports increases real gross domestic product by 94.4percent. Similarly, given that the probability value of the t-statistic (0.0268) for the coefficient of hide and skin exports is less than the p-value at 5%; the study concludes that there is a significant relationship between hide and skin exports and real gross domestic product during the period of study. Thus, the null hypothesis of no significant relationship was rejected and the alternative hypothesis accepted. The implication of this result is that, a positive and significant contributions of revenue from hide and skin exports, increases real gross domestic product in the Nigerian economy. The impact has significantly boosted economic growth during the period of study. The result corroborates the study of Akeem (2013) [4] that, concluded that, there is a significant impact of non-oil exports and economic growth in Nigeria in both short and long-run.

Moreover, the coefficient of textile exports is positively related with real gross domestic product and statistically significant. This means that percentage change in textile exports increases real gross domestic product by 149.08percent. Also, since the probability value of the t-statistic (0.0104) for the coefficient of textile export is less than the p-value at 5percent; the study concludes that there is a significant relationship between textile exports and gross domestic product during the period of study. Thus, the null hypothesis of no significant relationship was rejected and the alternative hypothesis accepted. The implication of this result is that, the positive contribution of revenue from textile exports to real gross domestic product in the Nigerian economy, impacted on economic growth during the period of study. The finding negates the empirical work of Adenugba and Dipo (2013) [3] that assessed the impact of non-oil exports on economic growth in Nigeria and revealed that non-oil exports have indirect relationship with economic growth. Also, the finding is supported by the empirical work of Ijirsha (2015) [7] that, there is positive contribution of non-oil exports on economic growth in Nigeria.

The short-run dynamic model presented on Table 5 showed that showed that the coefficient of lag value (current value) of the GDP is positively signed and significant with the past value. Thus, a proportionate increase in the lag value of real GDP increases the past value of real GDP by 132.6percent. The coefficient of determination (Adjusted R-squared) is 0.5591. Meaning that, the dynamic model is a good fit. Thus, the variation in real gross domestic product brought about by the explanatory variables is about 0.56percent. Therefore, the explanatory power of the estimated model is 55percent. To buttress the result of the adjusted R², the

overall model is significant; given the probability value of f-statistic (0.0000) which is less than 5percent level of significant. Thus, the explanatory variables are significant in explaining increase in real gross domestic product (proxied foreconomic growth) in Nigeria during the period of study.

As a matter of fact, one of the importance parameter in the estimated ARDL short-run model is the coefficient of the ECM, which theoretical must be negative and statistically significant. From the estimated model, the coefficient of ECM has the hypothesized negative sign and statistically significant at 5percent level. Thus, the deviations from the short-term in real GDP adjusted to long-run equilibrium with the speed of 0.6345. This showed that the disequilibria in real GDP in the previous year were corrected for in the current year at a speed of 63.45percent. Moreover, the approximate coefficient of the Durbin Watson (DW) test is 2.12903 which is not too far from 2.0; based on rule-of-thumb implies that, the model is free from positive first order correlation. Thus, the independent variables in the model are not serially dependent (correlated). Therefore, the model is valid for policy making and implementation.

5. Conclusion and Recommendations

The study used ARDL method to investigate selected agricultural commodities exports and economic growth in Nigeria and concludes that, in the long-run, agricultural commodities exports measured with cocoa, hide and skin exports, as well as textile exports all have positive relationship with real gross domestic product in Nigeria. Moreover, in the short-run, agricultural commodities exports in terms of cocoa hide and skin exports, as well as textile exports have positive and significant impact on the real GDP. Given the findings above, the agricultural sector is well endowed with the capacity to improve the revenue base of the country, which will in turn increase the growth of the economy. Based on these findings, it was recommended that, various agricultural commodities that are required for exports should be given urgent developmental priority in terms of infrastructural provision because of their advantage of value addition and immediate returns to the economy. Similarly, policies aimed at boosting the level of the non-oil exports in term of agriculture should be encouraged, in order to maintain international competitiveness of such products. This could include improved standardization and packaging. Also, government should ensure that investors in the agricultural sector have suitable business environment in terms of power generation and security.

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