

# Export Earnings Instability and Economic Growth in Nigeria (1981-2014)

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## ABSTRACT

This paper investigates the impact of export earnings instability on economic growth in Nigeria through the application of regression analysis. The study describes the trend of oil and non-oil export in Nigeria, examines the impact of export earnings instability on economic growth and identifies adequate policy measures and suggestions based on the research findings, towards reducing the undesirable effects of export instability in Nigeria.

Secondary data from various sources were used in the study. Augmented Dickey-Fuller technique was adopted in testing Unit root property of the series. Using the Ordinary Least Squares regression method, the study first examines the impact of export earnings instability on economic growth with the aid of aggregated and disaggregated models. It further uses the Granger causality test to examine the direction of causality between GDP and export earnings (using the same aggregated and disaggregated models).

From the result obtained in the regression of the disaggregated model,  $R^2$  is 0.954. This indicates that oil and non-oil exports actually account for 95.4% of the total variation in economic growth during the years under study. A percentage increase in oil export will cause about 4% economic growth (0.042785), which is statistically significant at all levels. A percentage increase in non-oil export will cause an economic growth of about 10.4%, at 10 per cent level of significance. Also, with a positive and significant value of the intercept, the result indicates that GDP does not only depend on oil and non-oil export, as other variables affect the GDP. The F- Statistics 316.9, which is a measure of the joint significance of the explanatory variables, is found to be statistically significant as indicated by the corresponding probability value 0.0000, and the Durbin-Watson statistics of 1.90, which is in the neighborhood of 2 indicates that there is no autocorrelation. The Granger Causality test of the disaggregated model shows that both Oil and non-oil exports actually granger causes GDP. It also show that non-oil exports granger cause Oil exports. It was found that of all export earnings in Nigeria, oil export has stronger grasp in terms of economic growth compared with the non-oil exports. It was also found that export earnings, from both oil and the non-oil sectors, affects economic growth in Nigeria, and not otherwise. Thus policies geared towards the development of the oil and non-oil sectors will have a positive effect on the economy and thereby resulting to an increase in the gross domestic product.

**Keywords:** Export Earnings, Instability and Economic Growth

## I. INTRODUCTION

Next to the maintenance of national peace, it can reasonably be claimed that raising the standard of living of the Nigerian populace is the most important objective of the country in this era. Less developed countries device different economic measures and social policies to ensure a quick and steady increase in their per capita

income, Price stability, Balance of Payments viability and other desirable economic growth goals and objectives. This is aimed at reducing the development gap between them and developed countries. Foreign trade has been an area of interest to decision makers, policy makers as well as economists; it enables nations to sell their locally produced goods to other countries of the world (Adewuyi, 2005). Foreign trade is the

exchange of capital, goods and services between countries it allows a country or nation to expand her markets for both goods and services that otherwise may not have been available to her citizens. Foreign trade augments per capita income as domestic production, consumption activities, and in conjunction with foreign transaction of goods and services are factored into its calculation.

There is no gainsaying that the pivotal role played by the country's export policy explains its wide macroeconomic importance. The importance of export earnings cannot be overemphasized, as it forms the major source of foreign revenue and exchange to the Nigerian government. These gains are ploughed back into the economy to achieve certain desirable economic conditions such as generation of domestic employment, increase in foreign reserves, aggregate consumption, savings and investments:

The export of most less developed countries, Nigeria inclusive, is characterized by the fact that primary product constitute an overwhelming percentage of total export, the prominent ones in the Nigerian export include crude oil, cocoa, coffee, groundnut, rubber, cotton etc. Although, there is no doubt about the importance of primary commodities, it is frequently claimed that this dependence makes the attainment of economic goals and objectives difficult.

It is generally accepted that both the prices and quantities of export of these primary products vary much more sharply from year to year than that of manufactured goods. Since the prices and quantities of export determine the size of export earnings, variations in any or both of the variables give rise to export earning instabilities. The concern of the less developed countries with the issue is that export instability has damaging effect on both the internal stability and economic development of their countries.

The earnings of primary products are notoriously volatile and the damaging effects of this volatility on the economies of the exporting countries are beyond question. Although, these instabilities may not necessarily be detrimental, it has been observed that the instability exerts notable influences being felt on key indicators of economic growth which may include: the Balance of payments, capital accumulation process,

level of employment of productive resources, Domestic distribution of income, general price level, Terms of Trade (to mention just a few)

Many research works on export instability are aimed at curbing the debilitating effects of Nigerian export problems, however, the desired results of these research works are yet to manifest significantly. Hence, there is a need to analyze the true nature of the Nigerian export earnings fluctuations in order to understand its major underpinnings, impact as well as implications on the economic growth of the country.

### **Export Earnings Instability**

Export earnings instability otherwise known as export earning fluctuations can be defined as short-term fluctuations corrected for trend. Some of trend correction is needed to avoid interpreting a constant year-to-year increase or decrease as indicating instability. Recent investigations have presented convincing evidence supporting the fact that developing countries experience greater export earning instability than the developed countries. Studies by Matheison and Mckinnon (1998), S, Naya (2006), Glezakors (1992) and Lawson (2002) all support the view that while export earnings fluctuate for both group of countries, developing countries in general suffer a greater degree of export earnings instability than the developed countries. Individual commodity data presented by Thomas Morrison and Lorenzo Perez in 1990 also support the existence of considerable export instability in developing countries.

It should be noted however, that the major concern of this study is with export proceeds and not export price. This is because statement about price may not necessarily hold for proceeds. Export price maybe very unstable (due to inflationary pressure, or other factors affecting export price) while the total proceeds received remain very relatively stable. Quantities may have compensated for changes in price more often than not. It is export earnings rather than price that influence the national income and a country's ability to purchase capital goods which is important for a developing country like Nigeria.

Export earning Fluctuations means excessive departure from some normal level (or trend). However, it is

difficult to determine a priori the meanings of 'excessive' and 'normal'. Hence it is a *sin-qua-non* for this study to develop a measure of instability on a common sense basis in the light of available facts.

## II. METHODS AND MATERIAL

### A. Review of Related Literature

Most, if not all, international trade and development theories portray a positive relationship between the volume of trade and economic growth, right from classical Comparative Advantage model of David Ricardo, the Neoclassical model of Heckscher and Ohlin, to the contemporary Endogenous Growth models. Although the various models assume that different factors cause the trade, but the end result portrays improvement in the output and welfare.

#### The Ricardian Model

This model as developed by David Ricardo (1817) is based on some simplified assumptions, the model assumes that each country involved in the trade has a fixed endowment of resources, and all units of each particular resource are identical. Also, the factors of production are completely mobile between alternative uses within a country, thus, the prices of factors are also the same among these alternative uses. However, factors are relatively immobile externally, that is, they do not move between countries. This model further employs labor theory of value, thus, the relative value of a commodity is based solely on its relative labor content. This implies that either other factors are not used in the production process or they are measured in terms of labor hours. It also assumes fixed level of technology for the country and full employment of resources, with constant cost of production, and there is no transportation cost both internally and externally.

Again, the model assumes differences in the production function (Labor Productivity) in different countries that are involved in trade, with each production function depicting constant return to scale. And there is perfect competition in the countries so no government-imposed obstacles to economic activity. The model of Comparative Advantage as it is called asserts that "a country should specialize in the export of the commodities that it can produce at the lowest relative

cost". Germany may be able to produce cameras and cars as well as fruits and vegetables at lower absolute unit costs than Kenya, but because the commodity cost differences between countries are greater for the manufactured goods than for agricultural products, it will be to Germany's advantage to specialize in the production of manufactured goods and exchange them for Kenya's agricultural products, whereas Kenya which has absolute disadvantage in the production of both goods in relation to Germany may still benefit from trade with Germany if it will specialize in the production of agricultural produce which the absolute disadvantage is less than that of manufactured goods (Todaro, 2009). It is this phenomenon of differences in comparative advantage that gives rise to beneficial trade even among the most unequal trading partners. However, there are contradicting views on the relationship between exports and productivity. Some argue that increase in export increases foreign competition, and this may have detrimental effect on growth of GDP, as it may lead to marginalization or even closure of factories. On the other hand, some argue that growth of export brings about higher growth of GDP through educative process. For example, higher contact with foreign competitors as a result of export growth can motivate rapid technological changes and managerial know-how, and enhance efficiency. For instance, Nashimizu and Robinson (1994) accepted the hypothesis that export growth causes productivity growth in Japan, Turkey, Yugoslavia, and South Korea. They concluded that the larger the share of output that goes into exports the higher the productivity growth. These contradicting views are the reasons for conducting the empirical test using Nigeria as a case study.

#### Empirical Literature

Many writers in Nigeria's export have chosen the stance of relating the behavior of the country's exports to change national income as one of the major determinants of the country's imports from Nigeria. One of such works undertaken by Olayide (1980) covered the pricing of Nigeria's export commodities. He observed that Nigeria's approach to empirically obtain the co-efficient of flexibility for prices of numbers of Nigeria.

Many empirical studies have been carried out to determine or evaluated the role of export promotion on economic growth and development. Most of these

studies employed cross sectional analysis of inter – country data on export and Gross Domestic product (GDP) or Gross National Product (GNP). Maizzls (1968) carried out a study on the relationship between exports and economic growth in sixteen countries. In estimating the relationship, he performed time series analysis of exports and GNP. He found out that, there is no strong association between export and the growth of the economy. He however, offered two plausible explanations for this.

First, is the small sample sizes, and second, the relative instance of export in national incomes is not taken into account in each of the countries.

Fajana's (1979) study was meant to test the validity of the widely held view that trade has been a major relate to economic growth in Nigeria. Fajana employed a chancery. Generally, the result indicates a positive and strong relationship between output changes and hence provides empirical support for this thesis that trade has been an important factor in Nigeria's growth.

In 2001, Olayide conducted another study on the demand for Nigeria's export for the period 2000-2001. He employed a linear correlation co-efficient analysis and included that only groundnuts, groundnut oil, palm kernel, and cotton in their investigation. His interest lied mostly in determining the elasticity of demand for the mentioned non-oil export products and the other factors responsible for fluctuations in the demand for those products. He included changes in income of the importing countries in their model. But again, his work was rendered rather detective by the inclusion of a variable for a measure of export control. Another defect of Olayide work is that total Nigeria cocoa export was regressed on the means of real income of only four importers. This formulation wrongly presumes that the demand of the four countries whose real income was used constitutes the total demand for Nigeria's exports. It would have been more logical to estimate the individual function in each country. He forgot to acknowledge the fact that the conditions that influence the demand for Nigeria cocoa for instance, may vary from one country to the other.

Oni (1986) conducted a research in Nigeria's palm oil export using the person and spearman correlation analysis. His main point of deviation from other

researchers' work is that instead of aggregating, he took a separate study of the quantities exported to each of the major trading partners. This new approach used information on the demand conditions that exist in each of the countries importing Nigeria palm oil.

Akinole (2001) in his study adopted the ordinary least square (OLS) regression technique. He investigated the prospects for Nigerian petroleum, groundnut, coca and palm oil in the expanded economic commodity. He discovered that the demand for Nigeria oil by the common market countries is price elastic. But the membership of Nigeria in the Organization of Petroleum Exporting Countries, a collective bargaining organization makes the exploitation of the high price elasticity of demand unlikely. He said that there exist an effective competition between Nigeria's groundnut and soya bean in the following common market countries, France, Netherlands, Belgium, Luxemburg and United Kingdom. He said that Nigeria groundnut oil and cake are not inferior goods in these markets. He observed that this might be due to the fact that the quantities of proportions of total quantities observed. As a result, Nigeria should shift from the export of groundnuts by groundnut oil and cake and this should be boasted by an effective export promotion in market currently exploited. Helleiner (2002) carried out a study using the Keynesian export multiplier approach and two variants of the two – gap frame work, incorporating, and the Harrod Domar model, which shows that only a small part of total agricultural output of the developing countries receive elaborates local processing, since the bulk is usually sent abroad. He points out that the agriculture normally better in the supply of intermediate inputs to other rectors than in the use of other intermediate inputs.

Asanebi (2007) carried out a research using linear correlation coefficient analysis and observed that the performance of exports was below expectation in aggregate terms and so, has not made significant impact on the GNP of the country, cannot sustain the country in terms of economic growth and development. He also came up with the following findings; That primary commodities dominates Nigeria's basket of non-oil export That introduction of the Structural Adjustment Program (SAP) came with export promotion policy that saw some improvement in the proportion of semi – manufactures and manufactures. Though the performance of non-oil exports was below expectation in terms of market diversification, it however, recorded

some success in terms of a gradual growth in the proportion of value added exports.

Furthermore, he identified some major constraints that militated against non – oil export performance especially inefficient credit scheme and his period of research covered 1990 – 2000. Okoro (2009), in his work on the impact of export on the Nigeria economy using econometric growth without the industrial, agricultural and manufacturing sectors improving from their present state. He states that a very strong link exists between these three sectors and other sectors of the economy. His period of study covered 1995 – 2005. Ogbonna (2010) emphasize that the contributions of the non-oil export to the GDP is still marginal and almost insignificant. What this implies is that all the export promotion strategies adopted failed to achieve the desired results, which is to improve the performance of the sector. In her research on “the impact of export promotion policies on Nigeria’s export” using ordinary least square (OLS) regression technique she noted that there is a general need for policy frame work, otherwise, the non – oil sector will continue to make less contribution to the country’s balance of payments, and her research work covered the period from 1981 – 2000.

Ozoudo (2010) also discovered using econometric method, that the dominance of petroleum / crude oil in the export sector’s export. He recorded that the inefficient performance of the non – oil marketing of board deterred progress of the non – oil sector. His research covered the period from 1991 – 2008.

## B. Research Methodology

The method of analysis used is the econometric analysis with focus on the regression analysis. This method was adopted because economic theory is mainly concerned with relationship between economic variables hence; this method of analysis would help to establish the relationship that exists between export earnings instability and economic growth.

### i. Nature and Sources of Data

For the purpose of this study, secondary data was employed and were generated from the CBN Statistical Bulletin. However, there is no doubt envisaged on the reliability of secondary data used, but, the possibilities

of random errors were not neglected. The research work covers a period of 34 years (1981-2014).

### ii. Method of Analysis

The study used simple regression analysis to measure the impact of export earnings instability (given by the Export Earnings Instability Index) on economic growth in Nigeria. This will be achieved by using the Gross Domestic Product (GDP) as the dependent variable and the export earnings as the independent variable.

### iii. Model Specification

The variable of interest for economic growth is Gross Domestic Product which is the dependent variable while percentage growth rate of export is the independent or explanatory variable.

Aggregated Model

$Y_t = F(\text{EXP})$  Implicit function

$Y_t = A_0 + A_1 \text{EXP}_t + U_t$  Explicit function

Where  $Y_t$  = Gross Domestic Product proxy for Economic Growth (Dependent Variable)

EXP = Growth Rate of Total Export (Independent Variable)

$U_t$  = Stochastic Error Term

Disaggregated Model

$Y_t = A_0 + A_1 \text{OIL} + A_2 \text{NOIL} + U_t$

Where  $Y_t$  = Gross Domestic Product proxy for Economic Growth (Dependent Variable)

OIL = Oil Export (Independent Variable)

NOIL = Non oil Export

$U_t$  = Stochastic Error Term

### iv. Apriori Expectation

On a Priori ground, we would expect the coefficient of the equation  $A_1$  to be positive and the constant term  $A_0$  to be positive since export earnings is positively related to the gross domestic product (GDP). For the disaggregated model, we also expect the coefficients of the equation  $A_1$  and  $A_2$  to be positive and constant term  $A_0$  to be positive since both oil and non-oil export earnings is positively related to the GDP.

We would also expect both the oil and non-oil export earnings to cause gross domestic product and not the other way round meaning we expect one way causation flow that is, export earnings should Granger cause GDP.

### III. RESULT AND DISCUSSION

#### A. Trend of Export Earnings

The export earnings of Nigeria which stood at 11.02 billion naira as at 1981 decreased to 8.20 billion naira in the year 1982. It reduced further in 1983 to 7.50 billion naira but started increasing in 1984 and stood at 9.09 billion naira. It increased again in 1985 to 11.72 billion naira but went back again in the year 1986 to 8.92 billion naira. It increased again to 30.36 billion naira in 1987 and it had been increasing ever since then and stood at 205.61 billion naira in the year 1992 and also increased to 218.77 billion naira in 1993 but still dropped to 206.06 billion naira in the year 1994. Ever since, export earnings of Nigeria have been on the same pattern; increasing and decreasing year by year and stood at 1.95 trillion naira as at year 2000. The export earnings began to drop in the year 2001 and dropped to 1.87 trillion naira and dropped again to 1.74 trillion naira in the year 2002 but increased tremendously to 3.09 trillion naira in the year 2003. It kept increasing and stood at 7.33 trillion naira in the year 2006 and rose to 10.16 trillion naira in the year 2008 but reduced drastically to 8.36 trillion naira in 2009. Since then, it had been increasing, rising to 15.13 trillion naira in 2011, but it reduced to 14.69 trillion naira in 2012 and later rose to 14.81 trillion naira in the year 2014.

The trend shows that the export earnings of Nigeria have increased since 1981 to 2014 which is the period that this study covers but the increment in the export earnings have not experienced stability not even for consecutive five years. It has always been increasing and decreasing over the years.

From the findings of this study, the trend of export earnings in Nigeria has been that of continuous fluctuation during the period of this study.

#### B. Table 1: Unit Root Test Results for GDP

The results of the unit root tests in table 1 above revealed that the two variables of the model were found to be stationary at 1 percent, 5 percent, and 10 percent level, which is indicated by ADF results at all levels less than the critical values in the negative direction. The ADF value for GDP is 5.2417 and the critical values are -3.6576, -2.9591 and -2.6181 at 1, 5, and 10 percent

respectively. The Durbin-Watson statistics of 1.88 which is in the neighborhood of 2 means that the data are stationary.

ADF Test Statistic	5.241666	1%	Critical Value*	-3.6576
		5%	Critical Value	-2.9591
		10%	Critical Value	-2.6181

\*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GDP)

Method: Least Squares

Date: 05/08/15 Time: 12:46

Sample(adjusted): 1983 2014

Included observations: 32 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP(-1)	0.125990	0.024036	5.241666	0.0000
D(GDP(-1))	-0.467084	0.185630	-2.516218	0.0179
C	-15733.84	8168.511	-1.926158	0.0643

R-squared	0.817082	Mean dependent var	24207.38
Adjusted R-squared	0.782587	S.D. dependent var	27655.78
S.E. of regression	19893.19	Akaike info criterion	22.72591
Sum squared resid	1.11E+10	Schwarz criterion	22.86468
Log likelihood	-349.2516	F-statistic	14.99041
Durbin-Watson stat	1.882121	Prob(F-statistic)	0.000038

#### C. Table 2: Regression Results

Dependent Variable: GDP

Method: Least Squares

Date: 05/08/15 Time: 12:46

Sample: 1981 2014

Included observations: 34

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EX	0.045582	0.001745	26.12483	0.0000
C	248293.7	10440.22	23.78241	0.0000

R-squared	0.956553	Mean dependent var	409620.8
Adjusted R-squared	0.955151	S.D. dependent var	228347.3
S.E. of regression	48358.39	Akaike info criterion	24.46936
Sum squared resid	7.25E+10	Schwarz criterion	24.56006
Log likelihood	-401.7444	F-statistic	682.5068
Durbin-Watson stat	0.982233	Prob(F-statistic)	0.000000

The result in table 2 above shows that  $R^2$  is 0.956. This implies that about 96 percent of the total variation in economic growth is being explained by export earnings. The coefficient of export earnings is positive; implying that a percentage increase in export earnings will lead to a 4 percent increase in economic growth. The result is significant at all levels. The significance of the result is also corroborated by the t-statistics of 26.125 which is greater than the critical t.

The constant is statistically significant implying that GDP does not only depend on export but other variables may affect the GDP. The F-statistics 682.5, which is a measure of the joint significance of the explanatory variables, is found to be statistically significant as indicated by the corresponding probability value 0.0000.

The Durbin-Watson statistic 0.982 in Table 1 is observed to be higher than  $R^2$  0.956 indicating that the model is non-spurious (meaningful).

#### D. Table 3: Causality Test Result

##### Pairwise Granger Causality Tests

Date: 05/08/15 Time: 22:09

Sample: 1981 2014

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
EX does not Granger Cause GDP	31	1.77684	0.18910
GDP does not Granger Cause EX		8.62742	0.00134

The results of table 3 revealed that export earning Granger causes GDP, the null hypothesis is rejected as indicated by the probability value 0.18910. The null hypothesis is rejected as indicated by the probability value of 0.00134 and this is confirmed by the F-statistics value 1.78. This result therefore indicates a one-way causation flowing from GDP to export earnings. Therefore, the alternative hypothesis is accepted meaning that there is unidirectional relationship between the Gross Domestic Product (GDP) and export earnings, that is, export earnings Granger cause GDP.

#### E. Results of Disaggregated Model

Regression Result

Dependent Variable: GDP

Method: Least Squares

Date: 05/09/15 Time: 13:37

Sample: 1981 2014

Included observations: 34

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	250229.4	11019.92	22.70700	0.0000
OIL	0.042785	0.005845	7.320559	0.0000
NOIL	0.104333	0.155658	0.670273	0.5078
R-squared	0.954816	Mean dependent var	409620	.7
Adjusted R-squared	0.951804	S.D. dependent var	228347	.3
S.E. of regression	50130.45	Akaike info criterion	24.569	15
Sum squared resid	7.54E+10	Schwarz criterion	24.705	20
Log likelihood	-402.3910	F-statistic	316.97	72
Durbin-Watson stat	1.903091	Prob(F-statistic)	0.0000	00

Level of significance: 1% \*\*\*; 5% \*\*\*; 10% \*\*\*

$$GDP = 250229.3503 + 0.4278546035 \cdot OIL + 0.1043332699 \cdot NOIL + U_t$$

#### Analysis of the Regression Coefficients:

From the result above, when all the independent variables are equal to zero, the intercept for GDP becomes 250,229.3503 million while unit change in oil export revenue increases Gross Domestic Product by 0.4279 units and unit change in non-oil export revenue increases Gross Domestic Product by 0.1043 units.

From the result obtained in the regression,  $R^2$  is 0.954 showing a goodness of fit of 95.4%, on the grounds that the explanatory or independent variables explain 95.4% of the total variation in the dependent variable.

The coefficient of export earnings is positive; this implies that increase in export earnings will lead to increase in economic growth. However, the export earnings are significant at 10 percent.

The constant is statistically significant implying that GDP does not only depend on oil and non oil export but other variables may affect GDP. The F-statistics 316.9, which is a measure of the joint significance of the explanatory variables, is found to be statistically significant as indicated by the corresponding probability value 0.0000.

The Durbin-Watson statistic 1.90 which is the neighborhood of 2 indicating that the model is non-spurious (meaningful), that is, there is no autocorrelation. From the results, oil and non-oil export was revealed to have a positive relationship with the gross domestic product in Nigeria. Thus, policies geared towards the development of the oil and non-oil sectors will have a positive effect on it and thereby resulting to an increase in the Gross Domestic Product.

#### F. 4.6 Results of Granger Causality Test

Pairwise Granger Causality Tests

Date: 09/05/15 Time: 17:24

Sample: 1981 2014

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
OIL does not Granger Cause GDP	31	1.79771	0.18567
GDP does not Granger Cause OIL		9.02267	0.00106
NOIL does not Granger Cause GDP	31	0.28425	0.75488
GDP does not Granger Cause NOIL		1.89785	0.17008
NOIL does not Granger Cause OIL	31	2.90036	0.07294
OIL does not Granger Cause NOIL		7.59527	0.00253

The results of the Granger Causality test show that:

HYPOTHESIS	PROBABILITY	DECISION	DIRECTION
OIL does not Granger Cause GDP	0.18567	Reject	Unidirectional
GDP does not Granger Cause OIL	0.00106	Accept	
NOIL does not Granger Cause GDP	0.75488	Reject	Unidirectional
GDP does not Granger Cause NOIL	0.17008	Accept	
NOIL does not Granger Cause OIL	0.07294	Reject	Unidirectional
OIL does not Granger Cause NOIL	0.00253	Accept	

The results of the Granger Causality revealed that oil export earning Granger causes GDP, the null hypothesis is rejected as indicated by the probability value 0.18567. The null hypothesis is rejected as indicated by the probability value of 0.00106 and this is confirmed by the F-statistics value 1.79.

The results of the Granger Causality revealed that non oil export earning Granger causes GDP, the null hypothesis is rejected as indicated by the probability value 0.75488. The null hypothesis is rejected as indicated by the probability value of 0.17008 and this is confirmed by the F-statistics value 0.28.

The results of the Granger Causality revealed that non oil export earning Granger causes oil export earnings, the null hypothesis is rejected as indicated by the probability value 0.07294. The null hypothesis is rejected as indicated by the probability value of 0.00253 and this is confirmed by the F-statistics value 2.90.

These results therefore indicate a one-way causation flowing from GDP to export earnings.

#### IV. CONCLUSION

This paper investigated the impact of export earnings instability on economic growth in Nigeria through the application of regression analysis. We also adopted the Augmented Dickey-Fuller technique in testing the unit



root property of the series and Granger causality test of causation between GDP and export earnings.

The result showed that there was fluctuating trend in export earnings during the period of the study. The results of unit root suggest that the two variables in the model were stationary at 1%, 5% and 10% critical value with first difference. The results of Causality suggest that there is bi-directional causation between GDP and export earnings. The results concluded that export earnings instability had a negative impact on economic growth of the country.

## V. RECOMMENDATIONS

Sequel to the result of our empirical investigations, the following policy options which if pursued vigorously would help in no small measure to minimize the hardship caused by export earnings instabilities in the Nigerian economy are prescribed. Priority should be given to the establishment and operations of industries with export potentials, (like petro-chemical industries) by providing adequate flow of the needed raw materials and spare parts for the smooth running of their operations. This will help to shift our focus from dependence on oil and primary goods. The government should endeavor to support various export promotion programs and institutions. This could be achieved by encouraging financial institutions, both formal and informal; to make loans available at reduced rates of interest for investors so as to increase the level of investment in this country thereby leading to a more expanded export. There should be a quick diversion from monoculture economy to a multicultural one. This is so since the oil which Nigeria depends on is prone to shocks beyond the control of the nation. As such, crude oil revenue should be put to use so as to make Nigeria's economy self-sustaining.

The Nigerian government should encourage the use of local raw materials as substitutes for the imported ones used in production. This will go a long way in reducing the marginal propensity to import of producers Tariffs on export should be reduced or removed in order to provide incentives for the exporters. Over the years, policies have been made without their full implementation. So to review the economy, proper policies must be squarely implemented as to promote exports. Collection and Banking of Data in modern

world play vital roles in planning. The government should make provisions for a systematic collection of data and their banking by equipping the relevant ministries, departments and agencies with computers and other enabling ICT infrastructures that will improve the collection and processing of these data by researchers. Lastly, intensive research should be embarked upon which will help in discovering new areas of export opportunities to exploit from which we can derive some comparative cost advantage. This should be done in the area of non-oil export such as agricultural products and manufacturing. This will boost the export earnings potentials of the country

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