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Export Diversification and Economic Growth in Nigeria: An Empirical Test of Relationship Using a Granger Casualty Test

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Abstract
This study used a thirty (30) years dataset of Oil, manufacturing and agricultural share of total exports of Nigeria as independent variables and per capita income as the dependent variable which is used to capture economic development and welfare, which is important at a time the government of Nigeria is focusing on diversifying the economy. Thus, this study is an inevitable tool for policy makers and sector actors to properly optimize the benefits in their attempts at expanding the export basket of the country. This paper also analyzes theories and several attempts by the government at export diversification, some still ongoing and others not effective due to the changing need of the economy. The result estimation shows that all the variables used in the study are stationary at first differenced and also the Johansen co-integration test confirm the existence of a long-run relationship between the variables. It is of high importance to note that the granger casualty test indicated that there is a uni-directional relationship between Per Capita income and all the variables except Agricultural share of export which exhibits a bi-directional causal effects. This confirm the need for the country to look into diversifying the economy with a view to deepen the impacts of other sector on socio-economic development of the people. The study actually confirmed the assertion of relationship between export diversification and economic growth in Nigeria, using the Granger Casualty test which is the first time this method is adopted in the study of the impact of export diversification of the economy of the country, which has added to the empirical evidence.

Keywords: export diversification, per capita income, oil export, agricultural export, manufacturing export.

INTRODUCTION

The need for most countries in the world to diversify their economy, as well as, expanding their source of foreign earning has been the call of most trade exports and economist since the start of this millennium, this which may be adduced to the fact that facts have shown that there exist a favourable relationship between trade and economic growth. Theoretically, it has been argued that a change in export rates could change output, therefore, increase in export is often considered to be a main determinant of the production and employment growth of an economy which is shown in Gross Domestic Product (GDP) growth (Ramos, 2001).

Therefore, since economic growth and development have been the core target of most developing and developed world macroeconomic policies, this then make the process of economic development to be a change in the social and economic structure as countries move from producing "poor-country goods" to "rich-country goods." In most developing countries including Nigeria, exports (mostly primary goods) remained one of the few channels which significantly sustain and contribute to higher income per capita growth rates of a country. This is as result of high dependence on a product or narrow export basket which often make the countries' economy to be affected by unstable global demand trends. So export basket mix is, thus, becoming the only way to alleviate these particular constraints. By doing this, the issue of global competitiveness of a country's exports will be accelerated as cross-border trade exposes country's exports to global competition.

The last decade of the 20th century saw the transformation of international trade and agreements. Particularly, the establishment of the World Trade Organization (WTO) in 1995; the establishment and reforms of various unilateral, bilateral and regional agreements has brought about changes in terms of trade. The African regional was not left out in this recent development considering the fact that 56% of African exports are mainly primary commodities. Thus, this transformation has created the need for African countries opportunity to diversify their export basket in order for them to maximize the gains of international trade, which can be through introduction of new product to old markets; new products to new markets; and old products to new markets (Kamuganga, 2012).

Nigerian participation in this process has been reactive and peripheral in that it was neither informed

by problem and constraints to the country's development, as only one commodity till take over 60% of her annual export. The export diversification index computed using the Herfindahl-Hirschman Index concentration ratio reported by UNCTAD, 2012 positioned the country among the least country in export diversification with a Herfindahl-Hirschman Index of concentration (0.78), for diversification (0.783) and ranked 176 out of the 216 countries in the world. The situation as presented contradicts the usual assertion that the non-oil sector (especially agriculture) remains very important in the socio-economic development of Nigeria.

However, the dominant position of the oil sector in the country's total export, foreign exchange earnings and government revenue generation cannot be overemphasized as it is the determinant of the federal government yearly budget. Notwithstanding, the agricultural sector performance is non to be ignore as in the pre-oil boom era accounting for about 40 per cent of the GDP; contributes around 80 per cent of non-oil exports and generates employment for over one third of the labour force in Nigeria. The post oil boom era saw a drastic change in the composition of Nigeria's export. Available data show that Nigeria experienced "oil boom" during the period 1973-1977, and its effect lingered on through a substantial part of the second quarter of the decade of the 1970s, and well up to 1981. This oil boom, did not only create tremendous changes in the patterns of economic indicators such as consumption, investment and production but also altered the country's societal values, political and economic style of management. A further effect is on the perception and the role of government in the economy, theses which reflected in policies and programmes that it embarked upon through the various development plans implemented from 1970-1980.

Thus, with the near collapse of the oil market between 1982 and 1985, the Nigerian Economy, which had hitherto claimed that it had no financial problems, began to be stretched by internal and external forces. This trend changed in the 1990s and early 2000s but has also shown a steady decline from 2008 to 2012. For instance, the share of oil export to total export stood at 91.5% in 2008; 84.5% in 2009; 70.4% in 2010; 71.7% in 2011; and 69.2% in 2012 a feat attributed partly to fluctuation in the oil price due to crisis in the middle-east and government conscious strategies to promote non-oil export (i.e. the export expansion grant was made to target the entire non-oil sector by increasing the coverage for post shipment incentives support to firms with a minimum of ₦500,000 worth of semi-manufacturing products). Thus, the changing structure of export composition in recent time as shown by the Nigerian Bureau of Statistic Foreign Trade Report 2012, reveals that non-oil export increased from as low as 8.5% in 2008 to as high as 30.8% in 2012. This means to be successful in export diversification efforts, countries' need to be globally competitive (in all aspect such as product numbers, standard and price) to take advantage of leverage that exist in the world commodity markets. The underlying objectives of this research study are to investigate the relationship between export diversification and economic growth; to examine the effectiveness of various export diversification initiatives of Nigerian government since independence in 1960; and to evaluate the impact of export diversification on economic growth and welfare in Nigeria, and also the Research questions of to be considered are why do countries diversify their exports and does it benefit countries' economic growth? In the following sections of this study, attempt is made to review the existing literature and arguments for export diversification as well as provide an empirical basis of the relationship of export diversification and growth. Similar to the work of Lederman and Maloney (2007), we intend to provide and confirm the robustness of the empirical evidence of a positive effect of export diversification on economic growth, and as well the per capita income of the country which is used as one of the measures of economic development, and also give an all-round recommendation on how the non-sector can be improve towards sustaining the economic growth of the Nigeria, and to chart a path of economic development using the non-oil sector as the foundation.

LITERATURE REVIEW

The growth witnessed in international trade relations and routes between countries in the global commodity market in most part of the 21st century saw a paradigm shift from those predicted by classical trade theories which were built around absolute advantage, comparative advantage and constant returns to scale. Based on the early classical economists such as Adam Smith's concept of division of labour and specialization for economic growth and development, David Ricardo Comparative Cost Advantage and Heckscher- Ohlin Samuelson's (HOS) model of international trade, they postulated that countries should specialize in producing those commodities in which they have absolute or comparative advantage, even where both is obtainable. These theories served as the major trade policy framework for most African countries, especially those blessed with natural resources abundance. Most of them, either concentrate on producing and exporting those natural resources in their primary form or mainly produce cash crops for export. Agriculture/Primary-product exports dependency/dominated has been frequently mentioned as one of the main features of developing nations.

Most of the less developed countries (LDCs) specialize in the production of primary products, instead of secondary and tertiary activities. Consequently, foreign exchange earnings from exports of these primary products play a very prominent role in countries, and also it represents a significant share of their gross national product. (Todaro and Smith 2006: Juan Felipe Mejí, 2011). Which empirical studies confirmed that primary-products exports have been characterized by relatively low income elasticity of demand and inelastic price elasticity, being fuels, certain raw materials, and manufactured goods, some exceptions that exhibit relatively high income elasticity (Todaro and Smith 2006; Juan Felipe Mejía, 2011).

It is as a result of this fact that most economies, especially developing countries, have moved towards diversifying exports, either vertical or horizontal, and this trend gain support as a result of the "export instability argument". Consequently, export diversification has been proposed and considered as a policy framework in trade which aimed at stabilizing export earnings and reduce the shock resulting of world-commodity market price volatility. This effort will be most needed by developing economies where the share of a commodity in its export basket is particularly pronounced.

In their work, Prebisch and Singer as cited by Juan Felipe Mejía, 2011, the prices of primary products tends to have a secular or cyclical trend. Thus, export diversification entails changing the composition of a country's export mix, which include the number of commodities in the export basket mix as well as the distribution of individual commodity share of the total export of the country. This paradigm shift is becoming more interesting as diversifying export is popularly seen as a way towards achieving trade stability and growth oriented policy objectives, this means indirectly advocating that there is a relationship between economic growth and export diversification (Ali et al, 1991; ESCAP, 2004; Juan Felipe Mejía, 2011).

Within in the frame of other modern studies which seek to identify the possible relationship between trade and economic growth have postulated 3 hypotheses which were; growth-led export, export-led growth and bidirectional causality hypotheses. (Grussman and Hillman, 2010). While Traditional development models like the structural development model by Lewis Surplus Labour Model proposed that economic growth also implies a shift from dependence on primary exports towards diversified manufactured exports.

The Romer model suggested that increase in products variety have a beneficial effect on both labour productivity and human capital. It important to note that diversification in export must be both vertical and horizontal diversification, the vertical is the move from primary commodities to manufactures, through value added mechanisms. The horizontal involves expanding the export basket, by "diversifying into goods within the same broad category of goods, before the effect on the economy can be noticed. It is important to mention that a number of measures have been constructed for calculating an economy's export concentration, such as the ogive index, the entropy index, and the Gini-Hirschman index, among others (Ali et al. 1991; Romer,1990 and Juan Felipe Mejía, 2011).

Further review of trade literature in regards to exports diversification and its impacts on economic growth, have shown that export diversification is an inevitable policy framework for a long-term growth. This assertion was confirmed by the findings in the studies conducted by Vernon (1966), Krugman (1979) and Grossman and Helpman (1991). Most countries with a high degree of diversification were better off or least affected by the global economic downturn, as diversifying their trade structure across products have reduced the impact on productive sector of their economies, as this tends to reduce the export demand shocks. In this regard, broadening the export base through a more diversified national trade portfolio can help in maintaining stability in export receipts, thus fostering long-term economic growth.

Many empirical studies and evidences have also confirmed the validity of the link between export diversification and economic growth in many economics. The study of 91 countries conducted by Al Marhubi (2000) using data between 1961-1988 to examine the possible link between export diversification and growth. The study found out that countries with greater export diversification and lower export concentration have faster rate of growth, and also that export diversification is a positive stimulus for capital accumulation.

Feenstra et al. (1998) examined South Korea and Taiwan using 16 sectors, over the 1975–1991 period, to ascertain the linkage between changes in export variety and the growth in total factor productivity (TFP) of the economies used as case study. The empirical evidence lends a strong support to the argument that export variety has a positive and significant impact on productivity. Other empirical results of studies conducted on this subject, such as Lederman and Maloney (2003), used the influence of natural resources, export concentration and intra-industry trade to analyze the empirical relationship between trade structure and economic growth. The authors utilized panel data of 25 year periods. One of the most interesting findings of the report is that resource abundance adversely affecting growth which is in line with the assertion of the Solow growth

model that the Marginal efficiency of natural resources is negative and also, that export concentration is also detrimental for growth, and finally concludes that export concentration will hampers growth.

Agosin (2006) study investigates the explanatory power of export diversification in empirical model of growth. Cross-sectional data in the 1980–2003 period was used which is mainly of Asian and Latin American countries. The result of the study shows that export growth is not enough to propel economic growth, but its growth together with the impact diversification appears to be significant. This argument is backed by the fact that the diversification and export growth has the expected sign and were significant with a strong explanatory power. He concluded that Export diversification will enhance economic growth through two different means the change in exports composition and expanded comparative advantages.

Amin Gutie´rrez de Pin˜eres and Ferrantino (1997) using the Chilean trade and economic performance between the periods of 1962-1991 examines the possible influence of export diversification on economic growth. Their study shows that there exist a link between the domestic economic performance and diversification, and also, concluded that the export diversification has boosted Chilean growth performance which can be sustained in the long run.

On the need to assess the viability of export diversification as a policy framework in developmental strategies, Ben Hammouda et al. (2006) conducted a statistical and econometric estimations, with the aim of examining the viability of diversification as a strategy framework in Africa. Using a panel data sample of 18 African countries, the result shows that investments should be the main core to determine diversification and by extension, the income level shows a positive and has a significant link with diversification: as income per capita increases, countries tend to become more diversified. This result in line with empirical estimates of Imbs and Wacziarg (2003).

Also, some reports of trade and economic institutions have confirmed the presence of positive relationship between diversification and growth and also stated that diversification is also a significant factor/determinant of growth. An investigation conducted by the ESCAP (2004), which is aimed at empirical estimation of the relationship between GDP growth rates and exports and export diversification and also to test the validity of "export-led growth hypothesis" in three Asian, Bangladesh, Nepal and Myanmar. The results showed that the hypothesis that export growth accelerate the development process in the three stated countries. (ESCAP 2004).

On the contrast note, there are some studies that rejected the assumption of any beneficial effects that export diversification could have on economic growth. Love's (1983) which study empirical evidence shows that some manufactured goods actually experience more volatility and price variations than some "traditional" exports. According to her assertion policies/strategies leading to export diversification would not necessarily propel growth in some developing countries.

Also on same line of argument is Ali et al. (1991) who provided empirical evidence that contradict that assertion of export diversification leading to stable export earnings and growth. They used statistical estimations for three African countries (Malawi, Tanzania and Zimbabwe) over the period 1961–1987. They reported that there was no established relationship between the degree of export diversification and export performance and suggested for the particular case of these countries, moves should be geared towards augmenting and stabilizing some of their most important commodities. This, they concluded, would ensure export earnings growth and/or stability (Ali and Al-Marhubi, 2000).

Overview Of Nigeria's Export Diversification Efforts And Experience

The Nigerian Government and her various developmental plans as well as macroeconomic policy frameworks have been attributed, since the independence in 1960 and till date, with the intention and determination to develop the non-oil sector which is aimed at diversifying the economy as well as reducing the various possible external shocks' effect on the economy. These policies, from various periods, had as core framework, Protectionism policy, Trade liberalisation policy and Export promotion policy, and most times agencies were established to effectively implement these policies such as Nigerian Export Promotion Council, the Nigerian Export-import bank (NEXIM) and many more which have their existence on promoting the non-oil sector of the economy and also to ensure diversification of the export earning structure of the country.

Immediately after the civil war, the export structure of the country changed from the agricultural dominated to Oil dominated, this automatically reduced the agricultural contribution to the gross domestic products. Due to the perceived danger of this and high degree of volatility associated with world Oil prices, the government instituted incentives such as removal of agricultural export taxes and sales taxes to promote agricultural sector and as well, placed high tariffs on agricultural imports. This was the trend between the early 1970s and 1980s (Oyejide, A. 1986).

During this period, the Nigerian export Promotion council was established in 1976 to ensure export development and promotion by generating ideas, suggestions and measures designed to advance the course of Nigeria's export trade; Advise and assist the government in the identification of export oriented industries and to help stimulate the growth of non-traditional exports from Nigeria; Assist the government in the creation of the necessary infrastructures such as export incentives and trade information services. As this was being implemented, the government with the trade liberation policies starting from 1986 with the implementation of the IMF Structural Agreement Programme saw the abolition of the marketing boards, the second tier foreign exchange market (SFEM), as well as various export expansion incentive schemes, as well as establishment of the Nigeria Export- Import Bank etc. these efforts was corroborated by the federal government decree of 11th of July,1986 which establishment of three funds; Export Development. Fund, Export Expansion Grant Fund and Export Adjustment Scheme Fund (CBN, 2010).

A further attempt at expanding the export diversification trend saw the promulgation of decree no. 34 of 1991 which designated and established the Export Processing Zone (EPZ) in the country. This zones are special enclave outside a nation's normal custom barriers where foreign and domestic firms may manufacture or assemble goods for export without the normal customs duties and procedural documented which are required in normal imports and exports activities. The firms operating the zone are normally exempted from industrial regulation applying within the domestic economy, especially with regards to foreign ownership of firms, repatriation of profits, employments of nationals, access of foreign exchange, etc (Afeikhana, 1996).

The restoration of democracy from 1999 occasioned a rapid transformation of the non-oil sector, following intensified policy support to Small and Medium scale enterprises to enhance the export of their products (both as raw materials and finished goods). In all considerations, all the various administrations in these dispensation have policies which are aimed at facilitating the diversification of the economy (Adeloye, 2012). Consequent upon these reforms, informed industry position put it that the growth in non-oil exports from $1billion in 2006 to $2.3billion in 2010.

It is interesting to observe how persistent efforts of Nigerian exporting companies have led to the acceptance of their products in some of the highly quality conscious customers and markets. Consider a few examples. Ten years after AGOA (African Growth & Opportunity Act) was passed by USA to allow duty free access to products from sub-Saharan Africa, Nigerian exports seem to have achieved a breakthrough. A very positive fall out of the non-oil export expansion has been the emergence of export processing clusters. Challawa industrial estate in Kano has emerged as a major export cluster with modern tanneries situated in this zone (Yusuf, 2012). These developments have impacted positively on economic indices in recent times. According to the 2012 Economic Outlook Report by the National Bureau of Statistics (NBS), the non-oil sector grew at 9.07% in Q4 2011 higher than the 8.93% recorded in Q4 2010.

The report also stated that the non-oil sector continued to be a major driver of the Nigerian economy in the fourth quarter of 2011. When compared with the corresponding quarter in 2010, the sector recorded 9.07 percent growth in real terms as indicated in figure 2. This growth was largely driven by improved activities in the telecommunications, Building & construction, Hotel & Restaurant, Business services and other sectors. The performance of the major industries in the non-oil sector in the fourth quarter of 2011 is further analysed to give a better understanding of their contributions to the Nigerian economy.

RESEARCH METHODOLOGY

Data Source

The time series data used in this study are gotten from CBN Statistical Bulletin 2012, CBN Annual Reports and Statements of Accounts (Various Years issued) and World Development Indicator 2013.

MODEL SPECIFICATION

To meet the core objective of this study, which is assessing the effect of export diversification on economic growth of Nigeria, the study will adopt the model used by Dierk and Felicitas (2006), Muhammad Zahir Faridi (2010) and Noula et al (2013). The model used in these studies examined the contribution of export diversification to economic growth in Pakistan and Chile and Cameroun respectively. They specified an econometric model base on a generalized Cobb Douglas production function.

$$Yt = f(Lt, Kt) \quad (1)$$

The model was extended by including non-agricultural export as one of the in depended variables computed using the principal component approach, which is premised on the structural theory of development which advocated the need for diversifying the economy with active resurrection of the manufacturing sector.

The model to be specified in this study will consider the impact of the non-oil sector on the economy as well consider the impact of oil sector output on the economy. This method will adoption of a more broad

base content, results and analysis which makes it easily and better for policy implementations.

As a result, the contribution of Oil export, Agricultural export and manufacturing products to economic growth in Nigeria, using per capita income as the measure of economic growth. Thus, the model for this study is specified as follow, considering the Neo-classical production function and the structural growth model;

PCGDPt = f (Oil/Ex, Agric/Ex., Manu./Ex) (2)

PCGDPt = C_1+ C_2 Oil/Ex + C_3 Agric/Ex + C_4 Manu./Ex +e (3)

Where PCGDPt is the annual Per Capita Income of the Country, Oil/Ex is the Oil export share of the total export, Agric/Ex is the Agricultural products share of total export and Manu/Ex is the manufactured products share of the total export and t the time trend. Finally, we estimate the equation (3), to empirically examine the effect of the stipulated sectors share of export on economic growth in Nigeria from 1983 to 2012.

ESTIMATION TECHNIQUES

Test Of Stationary

A stochastic process is said to stationary if its mean and variance are constant overtime and the value are auto-covariance between the two time period depends only on the distance or lay between the two time periods and not the actual time at which the covariance is computed (Gujarati, 2003). In other word, a stationary stochastic process is one with constant mean, variance and covariance. Hence, stationarity test is carried out to verify whether a time series is stationary or time-invariant so as to avoid a spurious regression.

The Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit roof tests will be employed. The choice of two tests to ensure a more robust test as they are some anomalies associated with the conventional Augmented Dickey-Fuller (ADF) test which The Phillips-Perron test is devoid of, and also the Phillips-Perron test use non-parametric statistical methods to take care of the serial correlation in the error terms without adding lagged difference terms. This test is specified thus:

$\Delta Y_t = \square + \alpha \Delta Y_{t-1} + \mu_t$ 5

Where Δ = difference operator

Y_t = Time series

μ_t =Pure white noise.

Under the null hypothesis that $\alpha = 1$ for stationarity, we use the ADF and PP tests statistics to verify the presence of unit root in the series.

TEST OF COINTEGRATION

In Economic and econometric analysis, two or more variables will be co integrated if they have a long term, or equilibrium, relationship between or among them (Gujarati, 2003). Individual time series in a model may be spurious but their linear combination may not, for this purpose co-integration test is conducted to confirm the existence of a long run linear relationship between time series variables.

To identify the number of cointegrating vectors, Johansen's methodology uses two different test statistics namely the trace test statistic and the maximum Eigen-value test statistic. The trace statistic tests the null hypothesis that the number of distinct cointegrating relationships is less than or equal to 'r' against the alternative hypothesis of more than 'r' cointegrating relationships, and is defined as:

$$\lambda_{\text{trace}}(r) = -T \sum_{j=r+1}^{p} in(1-\lambda_j^{\wedge}). \quad 6$$

Where

$\lambda_j^{\wedge}$ = the eigenvalues

T = total number of observations.

The maximum likelihood ratio or put another way, the maximum Eigen-value statistic, for testing the null hypothesis of at most '*r*' cointegrating vectors against the alternative hypothesis of '*r+1*' cointegrating vectors, is given by:

$$\lambda_{\max}(r, r+1) = -Tin(1-\lambda_{r+1}^{\wedge}). \quad 7$$

Johansen (1988) argues that, λtrace and λmax statistics have nonstandard distributions under the null hypothesis, and provides approximate critical values for the statistic, generated by Monte Carlo methods.

GRADUAL CASUALTY TEST

This test is conducted to check the casual effect of each variable on the other i.e it is believed that variable; Y can have casual effect on X and also X can have a causal effect on y as well. The test assumption is stated in the equations below:

$$Y_t = \sum_{i=1}^{n} \alpha_i X_{t-i} + \sum_{j=1}^{n} \beta_j Y_{t-j} + u_{1t} \quad 8$$

$$X_t = \sum_{i=1}^{n} \lambda_i X_{t-i} + \sum_{j=1}^{n} \delta_j Y_{t-j} + u_{2t} \quad 9$$

It is must be noted that the disturbances u_{1t} and u_{2t} are assumed to uncorrelated. It is assumed that if an X variable (Granger)- causes a Y variable without being caused by the latter, it is known as uni-directional casualty while if the two variables Granger-cause one other it is known as bi-lateral or bi-directional casualty (Gujarati and Porter, 2009).

EMIPIRICAL RESULT

Unit Root Test

As mentioned above, the first point of our analysis is to conduct the unit root test of stationarity using the Augmented Dickey-Filler (ADF) test. The result is presented in table 1 as shown in the appendix.

Decision Rule: Reject the null hypothesis if the t – adf calculated is > the value of the two critical values; that is at 1% and 5%.

As shown in Table 4.1, the variables have different order of stationary, Gross Domestic Products was stationary at second differenced using ADF-test and first differenced while other variables are stationary at different order of integration. That is, they are integrated of order 0 ~ (1) and 1 ~ (2). Evidence of co-integration was shown from the order of integration presented above, which proves that the dependent variable has the same order with some of the explanatory variables. And for this reasons, we conduct co-integration test as shown below.

Co-Integration Test

Given the unit root properties of the variables, we proceeded to implementing the Johasen Co-integration Test. Since the dependent variable has the same order of integration with some explanatory variables, we estimate their linear combination at level form without the intercept and obtain their residual, which is then subjected to co-integration test as shown below in the appendix. The result presented in table 2 (Appendix) shows that there is presence of at 3 co-integrating equation , which confirm the long-run relationship among the variables, the Per capita income of Nigeria , percentage shares of Oil, Agriculture and Manufacturing products of Total exports and also are significance at 5% and 1%.

Pairwise Granger Causality Tests

This research paper attempt to detect the impact of export diversification of Nigeria on economic growth of the country using the per capita GDP as the measure of economic growth. Table 3 (Appendix) reports the results of the pairwise granger causality tests. The second line results display the Granger causality test of the response of agricultural share of export and manufacturing share of export. The F-ratio from the table 2.89031, which indicates the rejection of the Null hypothesis. Thus Agricultural share of export does not granger causes manufacturing share of export only at 10% levels of significance. Similar result is obtainable at the third line of the result, the F-ratio of 2.5258, it is difficult for us to accept the given null hypothesis at 10% level of significance, making us to conclude that alternative hypothesis is obtainable. Therefore, Agricultural share of export granger causes Oil share of the total export of Nigeria. It must be noted that these granger causality between Agriculture, Manufacturing and Oil shares of the exports are uni-directional.

The other sections of the results, line five, shows that Per capita GDP granger cause agricultural share of export as the F-ratio of 14.3358 stipulate the rejection of the Null hypothesis even at the conservative level of 1% level of significance. Confirming earlier Expectation, line 9 of the granger causality tests shows F-ratio of 11.3528 which mean the Null hypothesis cannot be accepted. Thus, the Per capita GDP granger cause the Oil share of total exports of Nigeria and also significance at 5%.

CONCLUSION AND RECOMMENDATION

The estimation results reveal that the explanatory variables that PCGDP (Per Capita GDP) granger causal all other variables used in the study, while only the export share of the Agricultural granger causal PC GDP (Per Capita GDP) which means that increase in Agricultural sector outputs and potentials will impact on the welfare of the people. This finding is in line with the Rostow Stages of Development, which stipulated that increase in Agricultural sector is a first stage in very country's development path. Also, the agricultural share of export also have an impact of the manufacturing and Oil shares of the exports which means that agricultural sector development will propel an inter-sectorial growth in the country.

As of a result of the above, the following recommendations are put forward;

1. Government should promote efficiency in the allocation of development resources to the agricultural sector through provisions of funds and other infrastructural facilities.
2. The guiding principle for public investment in Nigeria should be a complimentary efforts to development of agricultural and manufacturing sector in Nigeria.
3. An urgent need to engage in semi-finished and finished goods exportation in order to create an attractive manufacturing sector.
4. Government has a bigger responsibility in creating stable and conducive economic and political environment, building general consensus and mobilizing private investment in the agricultural and manufacturing sector.

LIMITATIONS OF THE STUDY

This study encountered challenges ranging from non-availability of data on the variables used for previous period before 1983. Thereby, limiting the span of years used in the study. The study scope is also hindered by fund and other personal and environment induced challenges.

CONTRIBUTION TO LITERATURE

This study shows that export diversification has been a major policy framework of the federal government of Nigeria, which has seen the implementations of various initiatives towards this end, with some having little success and other marred with mass failure. The study have established the existence of a long-run relationship between the Per Capita Gross Domestic Products and the three major industries that dominate the Nigerian export composition. Also, the Granger Casualty Test showed clearly that there exist a significant relationship between Per Capita Gross Domestic Products and Crude Oil share of Export, Agricultural Products share of Export and Manufactured Products share of exports. All these are addition to the existence empirical literature. Also, the theoretical literature has also been enhanced as the various theories on export led growth and various other hypotheses stipulating that export has a significant impacts on economic growth and welfare of the people in a country.

REFERENCE

Abayomi, Y. O. (1997, July/September). The Agriculural Sector in Nigeria: The Way Forward. Bullion, 21(3).

Abebefe, H. A. (1995, October/December). The Structure of Nigria's External Trade. Bullion, 19(4).

Abou-Strait, F. (2005, July). Are Exports The Engine Of Economic Growth? An Application of Cointegration and Causality

Analysis for Egypt, 1977-2003. African Development Bank, Economic Research Working Paper.

Al-Marhubi, F. 2000. Export Diversification and Growth: An Empirical Investigation. Applied Economics Letters 7: 559--562.

Amin Gutie_rrez de Pin~eres, S., and Ferrantino, M. J. 1997. Export Diversification and Structural Dynamics in the Growth Process: The Case of Chile. Journal of Development Economics 52(2): 375--391.

Amin Gutie_rrez de Pin~eres, S., and Ferrantino, M. J. 2000. Export Dynamics and Economic Growth in Latin America. Burlington, VT: Ashgate Publishing Ltd.

CARICOM 2001. Single Market and Economy. Kingston: Department of Trade, Ministry of Foreign Affairs and Foreign Trade, Government of Jamaica.

Chow, P. C. 1987. Exports and Growth a Reconsideration of Causality. Journal of Developing Areas 27:227--44.

De Ferranti, D., Perry, G. E., Lederman, D., and Maloney, W. F. 2002. From Natural Resources to the Knowledge Economy. Washington, D.C.: The World Bank.

Dickey, D., and Fuller, W. A. 1981. Likelihood Ratio Statistics for Autoregressive Time Series with a Unit Root. Econometrica 49: 1057--1072.

Dollar, D. 1986. Technological Innovation, Capital Mobility, and the Product Cycle in North-South Trade. American Economic Review 76(1): 177--190.

Engle, R. F., and Granger, C. W. J. 1987. Cointegration and Error- Correction: Representation, Estimation and Testing. Econometrica 55: 251--276.

Engle, R. F., and Yoo, B. S. 1987. Forecasting and Testing in Cointegrated Systems, Journal of Econometrics 35(1): 143--159.

Esfahani, H. S. 1991. Exports, Imports and Economic Growth in Semi-Industrialized Countries. Journal of Development Economics 35: 93--116.

Feder, G. 1983. On Exports and Economic Growth. Journal of Development Economies 12: 59--74.

Food and Agriculture Organization. 2003a. FAOSTAT Online Agriculture Database, http://apps.fao.org/page/collections? subset¼agriculture (07/07/03).

Giles, J. A., and Williams, C. L. 2000. Export-Led Growth: A Survey of the Empirical Literature and Some Non-Causality Results. Journal of International Trade & Economic Development 9(3): 261--337.

Granger, C. W. J. 1969. Investigating Causal Relations by Econometric and Cross-Spectral Method. Econometrica 37(3): 424--438.

Granger, C. W. J. 1988. Some Recent Developments in a Concept of Causality. Journal of Econometrics 39: 199--211.

Grossman, G., and Helpman, E. 1991. Innovation and Growth in the Global Economy. Cambridge, MA: MIT Press.

Gujarati, D. N. 1995. Basic Econometrics 3rd ed. New York: McGraw-Hill, Inc.

Hayami, Y. 1996. Conditions of Agricultural Diversification for Economic Development, Choice, Growth and Development --- Emerging and Enduring Issues: Essays in Honor of Josa^e Encarnacia^on, pp. 151--170.

Hendry, D. Pagan, A. R., and Sargan, J. D. 1984. Dynamic Specification. In Handbook of Econometrics Chriliches, Z. and Intriligator, M. D. eds. Amsterdam: North Holland.

Herzer, D., and Nowak-Lehmann, F. D. 2005. What Does Export Diversification Do for Growth? An Econometric Analysis.

Hughes, A. (1992). Competition Policy and the Competitive Process: Europe in the 1990s. Metroeconomica 43(1--2): 1--50.

Johansen, S. 1988. Statistical Analysis of Co-Integrating Vectors, Journal of Economic Dynamic and Control 12: 231--284.

Johansen, S., and Juselius, K. 1990. Maximum Likelihood Estimation and Inference on Cointegration with Application to the Demand for Money, Oxford Bulletin of Economics and Statistics 52: 169--210.

Myint, H. 1958. The Classical Theory of International Trade and Underdeveloped Countries. Economic Journal 68: 317--37.

Romer, P. (1993), "Two Strategies for Economic Development: Using Ideas and Producing Ideas", Proceedings of the World Bank on Development Economics 1992, Washington, D.C.

Schmitz, A. 1989. Introduction. In Free Trade and Agricultural Diversification: Canada and the United States. Schmitz, A. ed. Boulder, CO, San Francisco, London: Westview Press.

Stanley, D. L., and Bunnagi, S. 2001. A New Look at the Benefits of Diversification: Lessons from Central America. Applied Economics 33(11): 1369--1383.

Taylor, T. G., and Antoine, P. 1997. Banana Diversification --- Major Issues and Constraints, Paper presented at the Inter- Governmental Group on Bananas Group Meeting, FAO,
Rome, May.

Taylor, T. G., and Francis, B. 2003. Agricultural Export Diversification in Latin America and the Caribbean, Journal of Agricultural and Applied Economics, Henri (Hans) Theil Memorial Supplement Issue 35(2): 77--87.

Theil, H. 1967. Economics and Information Theory, Chicago: Rand-McNally.

Todaro, M. (1996). Economic Development. USA: Black Star Publishing company.

Todaro, M. P., & Smith, S. C. (2011). Economic Development (11th ed.). USA: Addison Wesley.

World Bank. (1994). World Development Indicators.
World Trade Organisation. (2010). 10 benefits of the WTO trading system

APPENDIX

Table 1: Unit Roots Test (ADF AND PP Tests)

Variable	ADF	Critical Values		Order of Integration	PP	Critical Values		Order of Integration
		1%	5%			1%	5%	
MANU/EX	-7.6799	-4.2967	-3.5684	I(1)	-3.6025	-3.6892	-2.9719	I(1)
OIL/EX	-4.76128	-4.2967	-3.5684	I(1)	-17.6662	-4.2967	-3.5684	I(1)
AGRIC/EX	-4.7425	-4.2967	-3.5684	I(1)	-4.7426	-4.2967	-3.5684	I(1)
PCGDP	-5.0895	-3.7379	-2.9919	I(2)	-3.6025	-3.6892	-2.9719	I(1)

** indicates significance at 5% and 1% levels and indicates the order of integration.
Source: Researcher's Computation from EViews 7.

Table 2: Johansen Co-Integration Tests

Date: 12/22/13 Time: 22:10
Sample (adjusted): 1972 2012
Included observations: 41 after adjustments
Trend assumption: Linear deterministic trend
Series: OIL PCGDP MANU AGRIC
Lags interval (in first differences): 1 to 1

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	5 Percent Critical Value	1 Percent Critical Value
None **	0.561324	70.77349	47.21	54.46
At most 1 **	0.424677	36.98972	29.68	35.65
At most 2	0.287589	14.32394	15.41	20.04
At most 3	0.010212	0.420826	3.76	6.65

Trace test indicates 2 cointegrating equation(s) at both 5% and 1% levels
*(**) denotes rejection of the hypothesis at the 5%(1%) level

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	5 Percent Critical Value	1 Percent Critical Value
None **	0.561324	33.78377	27.07	32.24
At most 1 *	0.424677	22.66578	20.97	25.52
At most 2	0.287589	13.90311	14.07	18.63
At most 3	0.010212	0.420826	3.76	6.65

Max-eigenvalue test indicates 2 cointegrating equation(s) at the 5% level
Max-eigenvalue test indicates 1 cointegrating equation(s) at the 1% level
*(**) denotes rejection of the hypothesis at the 5%(1%) level

Table 3: Pairwise Granger Causality Tests

Date: 12/25/13 Time: 21:04
Sample: 1970 2012
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
MANU does not Granger Cause AGRIC	41	0.52940	0.5935
AGRIC does not Granger Cause MANU		2.89031	0.0685
OIL does not Granger Cause AGRIC	41	1.23426	0.3031
AGRIC does not Granger Cause OIL		2.52575	0.0941
PCGDP does not Granger Cause AGRIC	41	14.3358	3.E-05
AGRIC does not Granger Cause PCGDP		0.48805	0.6178
OIL does not Granger Cause MANU	41	3.06568	0.0590
MANU does not Granger Cause OIL		1.18643	0.3170
PCGDP does not Granger Cause MANU	41	2.03636	0.1453
MANU does not Granger Cause PCGDP		0.41483	0.6636
PCGDP does not Granger Cause OIL	41	11.3528	0.0002
OIL does not Granger Cause PCGDP		0.53655	0.5894