THE IMPACT OF NON–OIL EXPORT ON ECONOMIC GROWTH IN NIGERIA

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ABSTRACT
This paper tries to examine "The impact of non oil export on economic growth in Nigeria", using the Ordinary Least Square (OLS) for the analysis with the aid of data sourced from CBN statistical bulletin for the period of 1980 to 2010. The variable in the analysis are RGDP, forms the dependent variable, oil export, interest rate and real exchange rate, forms the dependent variables. From the analysis, it was discovered that the model was normally distributed and the error term was constant over time and also the unit root test which was applied to check the stationary data, conform that the data was stationery after the analysis. It was also discovered generally that non oil export has a significant impact on economic growth in Nigeria. The implication is that there was stable exchange in the country during the year under reviewed. Statistically; the t-test statistics of the variables under consideration indicates that the variables under consideration were significant and all estimates of the regression were statistically adequate. Durbin-Watson statistic indicates that the entire regression statistically significant. It was recommended as a policy implication and concluded that the government should make ideas that will regulate its spending in the country and promote economic growth in Nigeria.

Keywords: oil-export, non-oil-export, central bank of Nigeria, and dependent and Independent Variables.

INTRODUCTION
The importance of export to a nation's economic growth and development cannot be over emphasized; export is a catalyst necessary for the overall development of an economy. The primary objective of export policies in any economy is to increase the level of economic activities. It follows therefore that export policies should be directed to the sector in which the impact of an increase in export demand will be both desirable and large. It is a source of foreign exchange earnings since trade transaction among nation's are settled in foreign exchange.

A prominent feature of Nigeria's external sector has remained basically the same since 1960. The export sector is characterized by the dominance of single export commodity. In the decades of the 1960s and 1970s the Nigerian economy was dominated by agricultural commodity exports. Such commodities included cocoa, groundnut, cotton and palm produce. From the mid 1970s crude oil became the main export product of the Nigerian economy the economy is said to be suffering from the Dutch disease. Nigeria crude oil is of the light and sweet types and is highly sought after in the international oil market. The export of crude oil now constitute about 96% of the total exports. The performance of the non-oil export sector in the past two decades leaves little or nothing to be desired, it's share of the country's total export earnings has remained very low at an average of 2.52% over the period 1993-2002-2003. The policy concern over the years has therefore been to expand non-oil export in a bid to diversify the nation's export base. The diversification of the Nigerian economy is necessary for important reasons. First the volatility of the international oil market with the attendant volatile of government revenue gives credence to any argument for diversification of exports. Secondly, the fact that crude oil is an exhaustible asset makes it unreliable for sustainable development of the Nigerian economy (Utomi, 2004).

Trade policies 1986 have aimed at liberalization of the economy as well as achievement of greater openness and greater integration with the World economy. The policies thus ranged from abolition of marketing
boards, to introduction of the second tier foreign exchange market (SFEM), various export expansion incentive schemes, establishment of the Nigeria Export-Import Bank etc. in a bid to expand her market access, Nigeria has signed bilateral, regional and trade preferential agreements with different countries. Apart from signing bilateral agreement with Benin Republic, Bulgaria, Equatorial Guinea, Jamaica, Niger, Romania, Turkey, Nigeria, Uganda and Zimbabwe, the government has also signed investment promotion and protection treaties with France, Switzerland, the United kingdom, the Netherlands, North Korea, China and Turkey (Ogunkola2003). Nigeria is one of the founding members of economic Community of West African States and of the World Trade Organization and a signatory of the home convention despite these efforts non-oil exports have dwindled in the period of great openness. The dependency syndrome is likely to continue unabated leading to dumping of waste goods, importation of all goods, inflation, high cost of production further determination of terms of trade, lower standard of living and increased urban and rural unemployment as well as poverty. Indeed the need for a change in the policy focus and a shift in the industrialization strategy is imperative, if Nigerian economy is to be returned to the path of sustainable growth and external viability.

STATEMENT OF THE PROBLEM

The share of non-oil export in the country's total export earnings has remained low. It was 3.6% in 2010 (CBN 2010). The policy has been to expand non-oil export in a bid to diversify the nation's export base (Adedipe, 2004). The diversification of the Nigerian economy is necessary for important reasons. First the volatility of the international oil market with the attendant volatility of government revenue gives credence to any argument for diversification of exports.

Secondly, the fact that crude oil is an exhaustible asset makes it unreliable for sustainable development of the Nigerian economy (Utomi, 2004).

Although various factors have been adduced for Nigeria's poor economic performance, the major problem has been the economy's continued excessive reliance on the fortunes of the oil market and the failed attempts to achieve any meaningful economic diversification, reflecting the effect of the so called "Dutch disease". The need to correct the existing structural distortions, and put the economy on the path of sustainable growth is therefore compelling. To do this there is however the need to empirically establish what impact the past efforts at boosting non-oil export have had on the economy. This would inform effective policy posture. That is the task of this paper.

EMPIRICAL LITERATURE

many researchers have investigated the determination of economic growth using cross-sectional data. Some of the results from these studies are discussed below. Empirical literature overwhelmingly suggests that increased trade or reduced protectionism is associated with greater growth.

Edwards (1998) explained that after taking into account the roles of all other factors including capital accumulation, growth in labour force including differences in level of technology, countries with lower degrees of protectionism, on the average tend to grow at a much faster pace than countries with higher trade restrictions.

Harrison (1991) synthesized previous empirical studies between openness and the rate of GDP growth, comparing the results from cross-section and panel estimates while controlling for country effects, conclude that correlation across openness measures seem to be positively associated with GDP growth. The more open the economy, the higher the growth rate or the more protected the local economy, the slower the growth in income.

Some of the studies showing that trade is good for growth, include in particular, those by Edwards (1992) and Dollar and Kraay (2001). In a data set spanning 100 countries, Dollar and Kraay (2001) found that changes in growth rates are highly correlated with changes in trade volumes. In fact, there have been a number of attempts to relate trade policy variables to growth rates.

Dollar (1992), Edwards (1992) and Sachs and Warner (1997) have all found that trade openness is associated with more rapid growth.

These works are not without criticisms as Rodriguez and Rodrik (1999) have questioned the results of the statistical works relating growth to open trade policies, on such grounds as the absence of good measures of the extent of production. Similarly, Birdsall and Hamoudi (2002) have shown that the "increase in openness" variable used by Dollar and Kraay (2001) is subject to bias from capturing primarily the erosion of world prices for raw material exports rather than any failure to open trade.

Sachs and Warner (1997) in there studies on various African countries, confirmed that trade restrictions
impact negatively on growth. In fact, Sachs and Warner (1997) found that lack of openness was the most significant contributor to the dismal economic growth performance in sub-Saharan Africa. In their study, Guha - Khasnobis and Bari (2001) found out that openness measured by the Sachs - Warner criteria accounted for the majority of the differences in total factor productivity growth between East and South Asia. They also found that two apparently contrasting effects of openness and growth, i. e., which restricted trade regimes (in the sense of high tariffs), are positively associated with growth while unrestricted foreign investment regimes promote growth.

While a substantial part of earlier studies showed evidence of correlation between exports and growth which was used to support the export - led growth hypothesis, this tends to hold only for cross section studies. Recent evidence on time series analysis cast doubts on the positive effects of exports on growth in the long run (Medina - Smith, 2001). Krueger (1997) expressed in his work additional empirical demonstration of a strong association between export performance and economic growth by undertaking a comprehensive study of the role of exports on the economic growth of 10 countries from 1954 - 1974.

A single non - linear regression equation was specifically estimated for each of the chosen countries and found exports and GNP to be highly correlated. Balassa (1980) noted that the proponents of the export - led strategy and free trade point out that most developing countries that follow inward - oriented policies under the import substitution strategy in Latin America had poor achievements. This was buttressed by Barro and Sala Martin (1995) who demonstrated in their study that some of the Latin American countries on the average exhibited a complete lack of growth with real income declining between 1960 and 1990. This view was corroborated by Cline (2004) who also observed that the ultimate source of global poverty reduction is sustained economic growth, the least developed countries particularly in Africa, have been increasingly marginalized in International trade mainly due to their high dependence on the production and export of primary commodities. The study found no clear systematic association between exchange rate devaluation on the one hand, and growth and diversification of exports on the other hand since the early 1980s. His paper attributes success or failure of GDP and industrial growth, inter alia, to the volume of investment and the availability of imports, the majority of the previous approaches have emphasised demand factors. Such models have generally been rather unsuccessful in explaining long run trends in export performance.‘ The study takes into account both supply side and demand side factors and applies the model to the West German manufacturing sector using quarterly data over the period 1961 to 1987. The findings of the study suggest that supply side factors are much more important for explaining export performance than demand side factors.

Togan (1993) investigates the changes in the structure of export incentives in Turkey from 1983 to 1990. The export incentives are export credits, tax rebate scheme, premium from the "Support and Price Stabilization Fund", duty free imports of intermediates and raw materials, and exemption from the value added tax, foreign exchange allocations, exemption from the corporate income tax and other subsidies. The study finds that during the 1980s the level of the economy-wide subsidy rates and that of inter-industry dispersion of incentives has substantially been lowered. The study also finds that the Turkish export- and import-competing industries have benefited from the export incentives more than the other sectors.

In a comprehensive study Riedel, Hall and Grawe (1984) investigate quantitatively the determinants of export performance in India on the basis of time-series analysis over the period 1968-1978. The study analyses the effects of relative price of exports, relative domestic demand and domestic profitability on export performance. The dependent variable used is the ratio of indexes of constant price exports to industrial production. Exports are expressed as a ratio to output in order to account for the effect of expansion of production capacity. The results support the view that domestic market conditions strongly influence export behaviour. The variable measuring domestic profitability or relatively domestic demand is found to be statistically significant in explaining export behavior in 23 of 30 sectors. Relative price, incorporating export policy incentives and the exchange rate turn out to be statistically significant in only 10 of the 30 sectors. However, relative prices tended to be significant in those sectors where comparative advantage is presumed to be strongest, for example, ready-made garments, carpet weaving, handicrafts and metal products. The study has the loophole of using short period. It requires a long period for better estimates.

A more recent study of Sharma (2001) investigates exports determinant in India using annual data for 1970-98. The study uses simultaneous equation framework. The results of study suggest that demand for Indian exports increase when its export price falls in relation to world prices. Furthermore, the real appreciation of the rupee adversely affects Indian exports. Exports supply is positively related to the domestic relative price of exports and higher domestic demand reduces export supply. Foreign investors appear to have statistically no significant impact on export performance, although the coefficient of FDI has a positive sign.
UNIT ROOT TEST

However, literature has shown that most macro economic variables are not mean reversing as a result of their time sensitiveness, Dickey and Fuller (1981). It implies that they are not integrated to order zero. Hence, we shall subject the variables to unit root test using Augmented Dickey - Fuller (ADF) test in order to check the problem of auto correlation. It is stated below, Equations 4 transform to:

\[ \Delta \ln RGDP = \beta_0 + \beta_1 \Delta \text{NONOIL}_{t-1} + \beta_2 \Delta \text{RER}_{t-1} + \beta_3 \Delta \text{INT}_{t-1} + U_t \ldots \]  

Where \( \Delta = \text{First difference operator} \)
\( t-1 = \text{lag of each of the series} \)
\( X_{t-1} = \text{the lag of other explanatory variables} \)

DIAGNOSTIC TEST OF THE MODEL

Diagnostic test of the model were carried out using the coefficient of multiple determination, R2 analysis of variance and Durbin Watson statistics.

ANSWERING OF RESEARCH QUESTION

The research question was answered using the coefficient of the independent.

TEST OF SIGNIFICANCE

The significance test were tested at 5% level of significance using the coefficients of the independent variables and following the Rule; Reject the Null hypothesis if the t-prob is less than 0.05. otherwise accept the Null hypothesis when t-prob is greater than 0.05 i.e. Reject if t-prob < 0.05. Accept if t-prob > 0.05

TEST OF HYPOTHESIS

The Hypotheses were tested using the f-statistics: Reject the Null hypothesis if the f-cal is greater than f-tab, otherwise accept the Null hypothesis when f-cal is less than f-tab

NORMALITY TEST

The Normality test procedure is conducted to ascertain the normality distribution of the error term of the variables under consideration. The decision rule that guide the test is stated as follows: If the probability of Jarque-Bera is less than 0.05 you conclude that the variables are not normally distributed or otherwise.

MULTICOLLINEARITY TEST

This is one of the assumptions that must hold before applying OLS estimation. The multicolinearity test is calculated to ascertain the degree of relationship that exists between the dependent and independent variables. The decision rule that guide the test is stated as follows: if the correlation matrix shows a variable that have above 0.8 then there is multicolinearity in the model

HETROSCEDATICITY TEST

This is one of the assumptions of random variable (Ut), it is used to test if the error term is constant over time.

The Stochastic equation for conducting the rest is stated as follows:

\[ U_t = \beta_0 + \beta_1 (\text{NONOIL}) + \beta_2 (\text{RER}) + \beta_3 (\text{INT}) + \beta_4 (\text{NOIL})^2 + \beta_5 (\text{RER})^2 + \beta_6 (\text{INT})^2 + V_t \ldots \]  

The decision rule that guide the test is stated as follows: if the probability of f-statistics is less than 0.05 we conclude that there is heteroscedaticity in the model inclining that the error term is not constant, if the probability of f-statistics is greater than 0.05 we conclude that there is homoscedaticity inclining that the error term is constant.

SOURCE OF DATA

Data were sourced from the Central bank of Nigeria (CBN), Statistical Bulletin, and Annual Report and statement of Account of various Years.

DIAGNOSTIC TESTS OF THE MODEL

Diagnostic test of the model were carried out using the coefficient of multiple determination, Analysis of variance and Durbin Watson statistics. The relevant results.
### DIAGNOSTIC TEST RESULTS FOR HYPOTHESIS ONE

<table>
<thead>
<tr>
<th>TEST STATISTIC</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>$R^2$</td>
<td>0.919929</td>
</tr>
<tr>
<td>Adjust $R^2$</td>
<td>0.911032</td>
</tr>
<tr>
<td>F- statistics</td>
<td>103.4001</td>
</tr>
<tr>
<td>Prob(F Statistic)</td>
<td>0.000000</td>
</tr>
<tr>
<td>D.W</td>
<td>1.535095</td>
</tr>
</tbody>
</table>
EXPLANATORY POWER OF THE MODEL

$R^2$, the coefficient of multiple determinations was used to test the explanatory power of the model and the goodness of fit. From the result $R^2$ adjusted for degree of freedom is 0.911032. This indicates that 91% of systematic variations in the dependent variable are explained by changes in the independent variables in the model. This level of explanatory power was considered satisfactory.

OVERALL SIGNIFICANCE OF THE MODEL

To test the overall significance of the regression, analysis of variance (ANOVA) in the model is 103,4001. (F-Statistic) is 0.000000, Testing the null hypothesis that the coefficients are equal to zero at 5% level of significance, we reject the null hypothesis since the probability $f$-statistics is less than 0.05 in the model. We therefore conclude that the independent variables have significant impact on the dependent variable in the model.

AUTO-CORRELATION

The Durbin Watson (DW) Statistic was used to test the first order auto-regressive scheme. From the result (Table above) $D.W$ is 1.535095. Testing the null hypothesis that the residuals are not auto-correlated with a first order scheme, we reject the null hypothesis of no autocorrelation in the model.

DIAGNOSTIC TEST: CONCLUSION

We conclude that the model developed for this paper was adequate for the purpose judging by the explanatory power, the overall significance of regressions and the absence of auto-correlation.

ANSWERING OF RESEARCH QUESTIONS

The research questions were answered using the coefficients of the independent variables. The regression results are displayed

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
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<tbody>
<tr>
<td>C</td>
<td>149800.1</td>
<td>38149.84</td>
<td>3.926625</td>
<td>0.0005</td>
</tr>
<tr>
<td>NONOIL</td>
<td>1.800754</td>
<td>0.233136</td>
<td>7.724032</td>
<td>0.0000</td>
</tr>
<tr>
<td>RER</td>
<td>817.3693</td>
<td>352.9622</td>
<td>2.315742</td>
<td>0.0284</td>
</tr>
<tr>
<td>INT</td>
<td>4420.278</td>
<td>2759.409</td>
<td>1.601893</td>
<td>0.1208</td>
</tr>
</tbody>
</table>

The result of the regression can be summarized in equation from as follows:

$$RGDP = 149800.1 + 1.800754 \times NONOIL + 817.3693 \times RER + 4420.278 \times INT$$

TEST OF SIGNIFICANCE

The significance was tested for the significance of the independent variables at 5% level using t-prob, t-statistic and the coefficients of the independent variables. The rule applied was: if significant probability is greater than the prescribed level of 5% or 0.05 we accept the null hypothesis otherwise we reject the null hypothesis when significant probability is less than 0.05. The regression results are shown in the Table below.

<table>
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</table>

To test the significance, the significant probability of IBT, from the regression result (Table above) significant probability is (0.0000). Following the rule we reject the null hypothesis since significant probability is less than 0.05, and conclude that NON OIL EXPORT has a significant impact on ECONOMIC GROWTH in Nigeria.
HYPOTHESIS 1
Null Hypothesis HO: NON OIL EXPORT does not have a significant impact on ECONOMIC GROWTH in Nigeria.
To test the hypothesis, the f-statistics shall be used, from the regression result (Table above) the f-cal is greater than the f-tabulated i.e 161.5570 > 2.84 and we conclude that NON OIL EXPORT has a significant impact on ECONOMIC GROWTH in Nigeria.

UNIT ROOT TEST / STATIONARITY
The Unit Root test is conducted to ascertain the level of stationary of the variables under consideration. It is conducted based on the following decision rule: If the absolute value of the Augmented Dickey Fuller (ADF) test is greater than the critical value, either at the 1%, 5% Or 10% level of significant at the order zero, one or two, we conclude that the variables under consideration are stationary, otherwise they are not. For the variable under consideration the following values were obtained:

RGDP /3.894874/ = 3,894874 (at level form).
NONOIL /-9.213872/ = 9.213872 (at second difference)
RER /-5.950247/ = 5.950247 (at second difference)
INT /-6.226992/ = 6.226992 (at first difference)

The critical value is calculated at the 5% level of significant. Decision: Since the absolute value of the variables under consideration is greater than the critical value of the 5% level of significant, we conclude that the variables under consideration are stationary.

MULTICOLLINEARITY TEST
This is one of the assumptions that must hold before applying OLS estimation. The multicolinearity test is calculated to ascertain the degree of relationship that exists between the dependent and independent variables. The decision rule that guide the test is stated as follows: if the correlation matrix shows a variable that have above 0.8 then there is multicolinearity in the model. However, from the result in the appendix, it was discovered that there is evidence of multicolinearity in the model though not a severe problem.

NORMALITY TEST
The Normality test procedure is conducted to ascertain the normality distribution of the error term of the variables under consideration. The decision rule that guide the test is stated as follows: If the probability of Jarque-Bera is less than 0.05 you conclude that the variables are not normally distributed or otherwise. However, from the result in the appendix, it was discovered that the variables are not normally distributed because the probability of Jarque-Bera is less than 0.05 in the model, i.e 0.000043.

HETROSCEDATICITY TEST
This is one of the assumptions of random variable (Ut). it is used to test if the error term is constant over time. The decision rule that guide the test is stated as follows: If the probability of f-statistics is less than 0.05 we conclude that there is hetroscedaticity in the model inclining that the error term is not constant, if the probability of f-statistics is greater than 0.05 we conclude that there is homoscedaticity inclining that the error term is constant., it was discovered that there is evidence of hetroscedaticity inclining that the error term is not constant in the model, i.e 0.000783.

RECOMMENDATIONS
The findings of the study, the following recommendations have been made available for proper considerations;
1. Government should and impose high tariff on the importation of goods so that the non-oil export of the country will be encouraged. An increase in non-oil export will increase the country's Gross Domestic Products, the real exchange rate and the human capital growth.
2. Also, the Nigerian economic system should be diversified; Nigeria should not focus on the exportation of crude oil. They should invest more on the local manufacturing industries food production and processing.
3. Government should through his spending invest more on educational infrastructures creation of enabling a sound and dynamic education system, a motivating operational environment and dependable support services. The more a nation has knowledgeable, skilled and resourceful individuals contributing to national growth, the higher the value of the human capital of that nation.
CONCLUSION

The impact of Non-oil export on the Nigeria economy can not be overemphasized; the share of non-oil export in the country's total earnings has remained low. The policy has been to expand non-oil export in a bid to diversify the nation's export base. The diversification of the Nigerian economy is necessary for important reasons such as the volatility of the international oil market with the attendant volatility of government for diversification of exports and the fact that crude oil is an exhaustible asset makes it unreliable for sustainable development of the Nigerian economy.

From the results obtained, we observe that non-oil exports has a significant and a positive impact on the economic growth of Nigerian and also that human capital has a significant and a positive impact of human capital on the Nigerian non-oil export growth.

Thus, Nigeria being properly organized and motivated has all it takes to be one of the leading economies of the modern world following her populated and abundant resources. Government should reactiviate and increase domestic production and impose high tariff on the importation of goods so that he non-oil export of the country will be encouraged. Also the Nigerian economic system should be diversified and government through it's spending should invest more on educational infrastructures, make available a sound and dynamic education system, a motivating operational environment and dependable support services. The more resourceful individuals contributing to National growth, the higher the value of the human capital of that Nation.

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