

Effect of Non-Oil Sector on the Growth of Nigerian Economy (1990-2021)

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ABSTRACT

This research work assessed the effect of non-oil sector on the growth of Nigerian economy. The major reason for this study was to proffer solution to question of what else need to be done in order to diversify the economy and develop the non-oil sector to realize its potentials in Nigeria. The specific objectives are; to evaluate the relationship between manufacturing sector output on Nigerian economy and determine the relationship between agricultural output on Nigerian economy. Ex-post facto research design was deemed appropriate for the study. Data for this study were sourced from secondary means especially CBN statistical bulletin. Manufacturing sector output, agricultural sector output, power sector output and total bank credit were used to proxy non-oil sector, while GDP was used to proxy economic growth. Hypotheses were tested using regression analysis (OLS), which was adopted due to its simplicity and unbiasedness. The regression was tested using E-view software version 8.0. The result of the study showed manufacturing sector and agricultural sector have significantly contributed to economic growth in Nigeria, while power sector and bank credit have not contributed significantly to economic growth in the country. The study therefore recommends that budget on power sector should be increased and its usage properly monitored to avoid embezzlement of the fund.

Keywords: economic growth, fluctuation, manufacturing; hybrid, inflation,

INTRODUCTION

The importance of export to a nation's economic growth and development cannot be overemphasized. Export is a catalyst necessary for the overall growth and development of an economy (Abo, 2015). Furthermore, a well develop export sector will provide employment opportunity for the people with the attendant reduction in social costs of unemployment. Earnings from export will reduce the strains on the balance of payment position and even improve it. A rewarding export drive can turn a hitherto developing economy into a prosperous economy. Export help in increasing the level of aggregate economic activities through its multipliers effects on the level of national income (Usman & Salami, 2008). Income earned through exporting will help in increasing the level of demand within the economy.

An assessment of the trend and patterns of activities in the non-oil sector of Nigeria revealed that despite the various policies, strategies and reform programmes, the contributions of the sub-sectors of this sector have been dismal, disheartening and below its full potential. Agriculture that serves as mainstay is still characterized by low productivity. This stems from small farm size with crude and outdated farm implements, lacking access to credit facilities and inputs by farmers owing to inadequacies of their provision among others (Iwu, 2013).

Statement of the Problem

Although various factors have been adduced to Nigeria's poor economic performance, the major

problem has been the economy's continued excessive reliance on the fortunes from the oil market without any meaningful economic diversification (Osun, 2007). However, the production of this export crop in Nigeria has suffered a reduction in recent years owing to a number of factors (Oluyole & Sanusi, 2009). Villalobos (2009) identified some of these factors as: low yield, inconsistent production pattern, disease incidence, pest attack and use of simple farm tools. The dilemma facing the non-oil export sector is not only that it is being overshadowed by the oil export trade, but the declining non-oil exports and loss of market share in the non-oil trade globally is a clear evidence of how the non-oil sector competitiveness of the Nigerian economy has been consistently eroded over the last three decades.

A robust and strong export trade is indicative of how competitive the commodities and services are, and how large the scale of the industrial base of an economy is. This is reflected by the comparative advantage possessed by the country. Also, exports of commodities are possible when domestic demand for such are satisfied and surpluses exist in commercial quantities. Thus, the non-oil export sector serves as the hub for exporting these surpluses produced by the non-oil base of the country's economy. The need to correct the existing structural distortions and put the economy on the path of sustainable growth is therefore compelling.

Objectives of the Study

The broad objective of this study is to examine the impact of non-oil sector on the Nigerian economic growth. However, the specific objectives include:

1. To evaluate the relationship between manufacturing sector output and growth of Nigerian economy.
2. To determine the relationship between agricultural output and growth of Nigerian economy.
3. To examine the relationship between total deposit money banks credit and growth of Nigerian economy.

Research Hypotheses

The following research hypotheses are stated in its null form.

H_{01} : There is no significant relationship between manufacturing sector output and Nigerian economic growth.

H_{02} : There is no significant relationship between agricultural output and Nigerian economic growth.

H_{03} : There is no significant relationship between deposit money bank credit and Nigerian economic growth.

REVIEW OF RELATED LITERATURE

Conceptual Review

Prior to the phenomena emergence of the oil sector, agriculture is one of the oldest occupations in Nigeria and has been the main stay of the Nigerian economy contributing 80% of the export earnings and 75% of the Gross Domestic Product (GDP). The Nigerian economy has not recovered from the resultant disequilibria in both domestic and external sectors, this has therefore brought about the need for adjustment in Nigeria to diversify and restructure the productive base of the economy in order to reduce its dependence on oil export (Iwu, 2012).

Furthermore, a well-developed sector will provide employment opportunity for the people with the attendant reduction in social costs of unemployment. Earnings from export reduce the strains on the balance of payment position and even improve it. A rewarding export drive can turn hitherto under developed

economy into a prosperous economy. Export help in increasing the level of aggregate economic activities through its multipliers effects on the level of natural income. Income earned through exporting will help in increasing the level of demand within the economy. This monoculture situation brought untold hardship on the people of the country. For instance, from 1970 to date oil exporting has constituted on the average of 90% of the total foreign exchange earnings (Ayodele, 2015).

In the attempt to diversity the productive base of the Nigerian economy, various past administrations have introduced measures and established special institutions such as the Nigerian Export Promotion Council (NEPC). Despite the fact that Nigerians non-oil export produces are now cheaper for foreign buyers and the amount being recorded in this local currency by exporters for unit of export is now higher than before, the problem is that available statistical data shows a mere marginal increase in non-oil sector contribution to the total export between 1987 and 1993. Its percentage contribution increased from 5.8 percent in 1986 to 8.6 percent in 1988 but declined to 1.9 percent in 1992 (CBN, 2014).

Relationship between Agricultural sector and economic growth

Prior to the advent of oil, the Nigeria economic mainstay was Agriculture. It accounts for more than seventy percent of our Gross Domestic Product. There were stiff competitions amongst different regions. There were groundnut pyramids in the North, Cocoa in the West and Palm oil in the East. Employment rate was relatively high due to availability of jobs for framers, fishermen, hunters etc. During that period, Nigeria was at par economically with Brazil, China, south Korea, Singapore etc (Omoluwa, 2016). Nigeria is rated as the largest nation on the African continent, with a vast geographical landmass of 923,768 km². Nigeria has an estimated population of over 180 million inhabitants (NPC, 2011). The country adjoined across the tropics of Guinea Gulf on the western Coast of Africa and also the Republic of Benin, Chad, and Cameroon in the east. Nigeria is endowed with a variety of vegetation, dynamic topography, and viable agro-climatological conditions.

Nigeria is also one of the few in the continent blessed with good arable farmland for agricultural activities. Among the Nigerian industries, service accounts for 32% of the GDP, manufacturing 11% and agriculture 30%. Therefore, it is obvious that the agricultural sector plays a significant role in the economic growth and development of the Nigerian economy (Kamil, 2017).

Agriculture deals with the cultivation of land for crop production and rearing of animals for the use of man and also for the feed of animals (livestock). Agriculture has several other sub-sectors like forestry, fishery, processing and marketing of the agricultural products. The agricultural sector provides job opportunities and raw materials for many agro-allied industries.

Relationship Between Banking sector and economic Growth

Fadare (2014) empirically identifies the effect of banking sector reforms on economic growth in Nigeria by using the data 1999 – 2013. Variables used for the study are interest rate margins, parallel market premiums, total banking sector credit to the private sector, inflation rate, size of banking sector capital and cash reserve ratios. Results indicate that the relationship between economic growth and other exogenous variables of interest rate margins, parallel market premiums, total banking sector credit to the private sector, inflation rate and cash reserve ratio show that they are positive and significant. Hence it is suggested that criteria which encourage banking sectors to lend to both manufacturing sectors and Agricultural sectors at a cheaper rate should be encouraged and inflation should be reduced to its bearest minimum. Furthermore, financial policies should consider reform and enforce the lending to infant industries with proper regulatory policies and reduce stringent measures that require excessive collaterals.

Theoretical Framework

This study is hinged on Endogenous growth theory. The linkage between oil, non-oil export and economic growth has occupied a central position in the development literature. The focus is on how some of the components of non-oil export affect economic growth in Nigeria. The application of the endogenous growth theory has only emerged properly not too long ago from the work of Moosa (2012), Devarajan (2016) even though one of the pioneering authors in its original contribution is the work of Barro (2010). Barro made use of the endogenous growth model to find a linkage between public revenues / spending and economic growth which is to be linked with the relationship that exist between non-oil export and economic growth in Nigeria in this research work. Tsoukis and Miller (2009) also built on the work of Barro. All their studies centered on endogenous growth theory. In examining this on Nigeria's data, the study use the neoclassical growth model, otherwise referred to as the growth accounting framework, to explain the source of growth in an economy. The national accounts form the basis of the economies to be analyzed and it is used in conjunction with the aggregate production function. This approach has got a wide application in econometric analysis (for example, Akinlo & Odusola, 2013; Levine & Zervos, 2006; Obstfeld, 2014). Using a production function approach, it states that the growth rate of output (GDP) is principally determined by the following factors: The rate of growth of gross labour and/or the rate of growth of its quality, multiplied by the labour income share; the rate of growth of gross capital input and/or the rate of growth of its quality, multiplied by the capital income share; and Change in technology or total factor productivity (TFP).

Empirical Review

Ogbonna and Ebimobowei (2012) examined the impact of non-oil revenue and the Nigerian economy during the period of 1970-2009. They used Pearson correlation to analyze primary and secondary and descriptive statistics to explain evidence and events. The results of the analysis show that non-oil revenue positively affected the gross domestic product and per capita income of Nigeria. However, the relationship between petroleum revenue and inflation rate was negative. They suggested proper utilization and management of non-oil revenue to achieve long-run growth and development of the country.

Torben and Mideksa (2012) investigated the economic impact of non-oil resource endowment using quantitative comparative method and focusing on the Norwegian economy. The study results indicated that on average, about 20% of the growth in GDP per capita since 1974 has been due to the petroleum endowment.

From an economic point of view, Baumeister and Peerman (2009) explained that oil price shocks results from low price elasticity of demand and supply. The result of this is that large price variation is required to clear the market, that is, to restore the market to equilibrium. Hamilton (2008) agreed that crude oil price elasticity is very low especially in the short run. This is due to technology lock -up; that is, it takes some time before energy-consuming appliances/capital stocks are replaced with more energy efficient substitutes. However, substitution takes place in the long run and price elasticity is thus much larger.

METHODOLOGY

This study is based on ex-post facto research design in order to examine the impact of non-oil sector on the economic growth in Nigeria over a twenty-six year period from 1990 to 2021. This is to ensure enough data points for the econometric analysis in order to cater for the loss of degree of freedom.

Secondary data were collected for the period of 1990 to 2021 from official reports. All the data were on an

annual basis as provided in the various official reports and publications of the Central bank of Nigeria (CBN) and National Bureau of statistics. The data for the study include; manufacturing sector output, agricultural sector output, return on equity (which serve as proxy for bank profitability) and gross domestic product was used to proxy economic growth.

Model Specification and Validity

This research work adapted the model of Abogan, Akinola and Baruwa (2016). The adapted model is expressed as below:

$$RGDP= f (OILR, NONX, EXCR, INF).....(1)$$

However, given that this research has four different objectives, the researcher therefore slightly modified the model by breaking down the variables to show three different relationships which exist between the dependent and independent variables. The new modified model is shown as below:

These functional relationships were further transformed into econometric models as follows:

Where:

= Deposit money credit

AGRS = Agricultural sector output

MANQ = Manufacturing sector output

PSQ = Power sector output

= Error Term

= Slope of the regression line

Method of Data Presentation and Analysis

The data for this research were presented and analysed based on the research questions and hypotheses earlier established for the study. The method of analysis used in this study was the Ordinary Least Square (OLS) method. It was chosen because the alternative econometric techniques such as Two Stage Least Squares (2SLS) give limited information. The computer software application E-Views 8.0 was used for the analysis.

Test of Hypotheses

Hypothesis I

H_{01} : There is no significant relationship between manufacturing sector output and Nigerian economic growth.

H_{11} : There is a significant relationship between manufacturing sector output and Nigerian economic growth.

The result from Appendix II showed a standard error co-efficient which is within acceptable limit. The R-squared showed that the regression line is not well fitted. The Adjusted R-squared showed that only 38% variation in the dependent variable is caused by the independent variable. the Durbin-Watson coefficient is above the stipulated benchmark, which therefore depict no autocorrelation problem.

Decision

The F-statistics value of 0.000360 is less than the significance value of 0.05, hence we reject the null hypothesis and conclude that there is a significant relationship between manufacturing sector output and Nigerian economic growth

Hypothesis II

H_{02} : There is no significant relationship between agricultural output and Nigerian economic growth.

H_{12} : There is a significant relationship between agricultural output and Nigerian economic growth.

The result from Appendix II showed a standard error co-efficient which is within acceptable limit. The R-squared showed that the regression line is not well fitted. The Adjusted R-squared showed that only 12% variation in the dependent variable is caused by the independent variable. The Durbin-Watson coefficient is above the stipulated benchmark, which therefore depict no autocorrelation problem.

Decision

The F-statistics value of 0.038709 is less than the significance value of 0.05, hence we reject the null hypothesis and conclude that there is a significant relationship between agricultural output and Nigerian economic growth

Hypothesis III

H_{03} : There is no significant relationship between deposit money bank credit and Nigerian economic growth.

H_{13} : There is a significant relationship between deposit money bank credit and Nigerian economic growth.

Source: E-view result

The result from Appendix II showed a standard error co-efficient which is within acceptable limit. The R-squared showed that the regression line is not well fitted. The Adjusted R-squared showed that only 2% variation in the dependent variable is caused by the independent variable. The Durbin-Watson coefficient is above the stipulated benchmark, which therefore depict no autocorrelation problem.

Decision

The F-statistics value of 0.221931 is greater than the significance value of 0.05, hence we accept the null hypothesis and conclude that there is no significant relationship between deposit money bank credit and Nigerian economic growth

DISCUSSION OF FINDINGS

The result showed that manufacturing sector has been contributing significantly to increase in GDP which was used to proxy economic growth although the magnitude of contribution to general economic growth is still very minimal considering the potentials of the sector in the Nigerian economy. This result conforms with the pre expectation of this study, which stipulated a positive significant relationship between the variables.

The result showed that banking sector which is being targeted by the policy makers as a means of ensuring economic growth in the country have not actually served its purpose, as it has not significantly contributed

to the growth of the economy. This is because the banks prefer giving credits to the oil sector, rather than other activity sectors. This finding conforms with the findings of Aragu (2012) and Iwu (2009).

CONCLUSION

The Nigerian economy is one of the least competitive globally and even in Africa because of inappropriate policies and an unfavourable business environment. On ease of doing business indicators, Nigeria performs poorly when compared with most other economies including low-income economies in Africa. Only a small proportion of producers have been able to develop into sizeable businesses are able to compete internationally, as shown by the long-term decline in non-oil exports. In agriculture, yields have been falling and, in manufacturing, there is considerable unused capacity. It is instructive that, over the decades, countries such as Indonesia had both increases in capital per worker as well as increases in total factor productivity (TFP), while Nigeria had declines in TFP and negligible increases in capital per worker. This study thereby conclude that non-oil sector of the Nigerian economy has great potential of making the country one of the strongest economies in the world, due to her abundance of Natural resources, but due to over-dependency in the oil sector as the major source of revenue, the no-oil sector have not significantly been contributing to the growth of the economy.

RECOMMENDATIONS

Based on the various findings of this study, the researchers came up with the following recommendations;

1. Basic infrastructures such as good road, power and water should be provided for manufacturing firms, as this will help to lower their cost of production and make them stronger to be able to expand and utilize their capacity.
2. More mechanized farming equipment should be provided and effectively supervised to ensure that they get to the commercial farmers, to ensure that these equipment are not high jacked or given to the wrong people. This will help place Nigeria as one of the most exporting countries in the world, given the abundance of natural resources at her disposal.
3. Incentives should be given banks that extend huge amount of credits to the activity sectors of the economy, as a way of encouraging increase in bank credit to the vital sectors of the economy and breaking the chain of monopoly of the oil sector as the most attractive sector for investment in Nigeria.

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APPENDIX I

Table 4.1: Data for determining the effect of non-oil revenue on the growth of Nigerian economy (1990-2021).

| YEAR | GDP | MANQ | AGRQ | DMBC |
|------|-----------|------------|---------|-----------|
| 1990 | 26,755.0 | 35,020.55 | 8360.1 | 205,971.4 |
| 1991 | 26,537.91 | 37,474.95 | 10580.7 | 204,806.5 |
| 1992 | 27,136.5 | 39,995.50 | 4612.2 | 219,875.6 |
| 1993 | 27,483.3 | 42,922.41 | 19542.3 | 236,729.6 |
| 1994 | 27,545.6 | 46,012.52 | 8807.1 | 267,550 |
| 1995 | 20,353.20 | 49,856.10 | 12442.0 | 265,379.1 |
| 1996 | 21,177.92 | 54,612.26 | 19047.6 | 271,365.5 |
| 1997 | 21,789.10 | 57,511.04 | 18513.8 | 274,833.3 |
| 1998 | 22,332.87 | 35,020.55 | 15860.5 | 275,450.6 |
| 1999 | 22,449.41 | 37,474.95 | 20640.9 | 281,407.4 |
| 2000 | 23,688.28 | 46,824.00 | 16857.9 | 293,745.4 |
| 2001 | 25,267.54 | 44,542.30 | 14861.6 | 302,022.5 |
| 2002 | 28,957.71 | 52,428.40 | 20551.8 | 310,890.1 |
| 2003 | 31,709.45 | 82,368.80 | 64490.0 | 312,183.5 |
| 2004 | 35,020.55 | 90,176.50 | 18461.9 | 329,178.7 |
| 2005 | 37,474.95 | 54,981.20 | 3118.5 | 356,994.3 |
| 2006 | 39,995.50 | 50,672.60 | 3082.3 | 433,203.5 |
| 2007 | 42,922.41 | 21,201.70 | 13411.8 | 477,533 |
| 2008 | 46,012.52 | 40,243.50 | 3296.2 | 527,576 |
| 2009 | 49,856.10 | 77,567.05 | 2230.7 | 561,931.4 |
| 2010 | 54,612.26 | 56,899.00 | 9456.7 | 595,821.6 |
| 2011 | 57,511.04 | 62,657.40 | 8037.5 | 634,251.1 |
| 2012 | 59,929.89 | 71,211.30 | 9676.2 | 205,971.4 |
| 2013 | 63,218.72 | 72,345.80 | 8782.4 | 204,806.5 |
| 2014 | 67,152.79 | 77,432.60 | 1022.3 | 219,875.6 |
| 2015 | 69,023.93 | 90,268.80 | 1168.7 | 236,729.6 |
| 2016 | 67,984.20 | 98,276.45 | 8360.1 | 267,550.7 |
| 2017 | 72,347.30 | 100,567.32 | 3296.2 | 271,678.2 |
| 2018 | 85,567.20 | 102,346.18 | 2230.7 | 276,344.8 |
| 2019 | 91,765.48 | 105,276.19 | 3657.9 | 281,567.9 |
| 2020 | 93,678.81 | 107,375.10 | 4115.4 | 291,319.1 |
| 2021 | 96,789.91 | 111,458.21 | 4565.2 | 298,428.2 |

Source: Central bank of Nigerian annual reports and Central bank Bullion for various years

APPENDIX II

Hypothesis I (E-View testing)

Dependent Variable: GDP
 Method: Least Squares
 Date: 06/30/22 Time: 11:48
 Sample: 1990 2022

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|--------|
| C | 8476.093 | 0.738328 | 1.095339 | 0.2838 |
| MANQ | 0.534106 | 0.129516 | 4.123857 | 0.0004 |
| R-squared | 0.404850 | Mean dependent var | 38662.91 | |
| Adjusted R-squared | 0.381044 | S.D. dependent var | 16575.84 | |
| S.E. of regression | 13040.84 | Akaike info criterion | 21.86075 | |
| Sum squared resid | 4.25E+09 | Schwarz criterion | 21.95673 | |
| Log likelihood | -293.1201 | Hannan-Quinn criter. | 21.88929 | |
| F-statistic | 17.00619 | Durbin-Watson stat | 2.447332 | |
| Prob(F-statistic) | 0.000360 | | | |

Hypothesis II (E-view testing)

Dependent Variable: GDP
 Method: Least Squares
 Date: 06/30/2022 Time: 11:53
 Sample: 1990 2022
 Included observations: 33

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|--------|
| C | 45653.68 | 0.376470 | 10.43162 | 0.0000 |
| AGSQ | -0.546670 | 0.250523 | -2.182119 | 0.0387 |
| R-squared | 0.159993 | Mean dependent var | 38662.91 | |
| Adjusted R-squared | 0.126392 | S.D. dependent var | 16575.84 | |
| S.E. of regression | 15492.94 | Akaike info criterion | 22.20534 | |
| Sum squared resid | 6.00E+09 | Schwarz criterion | 22.30133 | |
| Log likelihood | -297.7721 | Hannan-Quinn criter. | 22.23389 | |
| F-statistic | 4.761644 | Durbin-Watson stat | 2.275574 | |
| Prob(F-statistic) | 0.038709 | | | |

Hypothesis III (E-view testing)

Dependent Variable: GDP
 Method: Least Squares
 Date: 06/30/22 Time: 11:56
 Sample: 1990 2022
 Included observations: 33

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------------------|-------------|-----------------------|-------------|----------|
| C | 28350.01 | 0.817045 | 3.215365 | 0.0036 |
| DMBC | 0.031737 | 0.025336 | 1.252632 | 0.2219 |
| R-squared | 0.059057 | Mean dependent var | | 38662.91 |
| Adjusted R-squared | 0.021419 | S.D. dependent var | | 16575.84 |
| S.E. of regression | 16397.36 | Akaike info criterion | | 22.31882 |
| Sum squared residual | 6.72E+09 | Schwarz criterion | | 22.41480 |
| Log likelihood | -299.3040 | Hannan-Quinn criter. | | 22.34736 |
| F-statistic | 1.569087 | Durbin-Watson stat | | 2.059197 |
| Prob(F-statistic) | 0.221931 | | | |