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Analysis of the Impact of Non-Oil Sector on Economic Growth

Felix Olurankinse[a],*; Fatukasi Bayo[b]

[a]Department of Accounting, Adekunle Ajasin University, Akungba-Akoko, Ondo State, Nigeria.
[b]Department of Economics, Adekunle Ajasin University, Akungba-Akoko, Ondo State, Nigeria.
*Corresponding author.

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Abstract

In the period of the 1970s, Agriculture was the main stay of the Nigerian economy. The oil boom of 1970s brought about a gradual shift from agriculture to crude oil making Nigeria to depend heavily on petroleum as a main source of foreign exchange earnings. Agricultural sector which use to be the back bone of the economy was rendered competitive over time. The crux of this of this paper is to analyses the impact of non-oil export on the growth of the Nigerian economy. Data were obtained from secondary source mainly from Central Bank of Nigeria Statistical Bulletin, annual reports and statements of account. The ordinary least square (OLS) statistical tool was used to analyze the data. The findings revealed that non-oil export has positive effect on the growth of Nigerian economy during the period under review, though the performances in terms of output level and revenue generation was below expectation. The paper recommended the need to increase production in both agricultural and manufacturing sectors to ensure product availability for both local and export purposes. Also, there is need to complete the export processing zones in earnest to promote the establishment of export oriented firms that will produce solely for export market.

Key words: Exchange rate; Foreign exchange; Oil boom; Revenue

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INTRODUCTION

In the past, Agriculture and mineral product appear to be the most crucial components of the economic growth. Then it used to be the mainstay of the Nigerian economy and Nigeria earned most of her foreign exchange from the sales of relatively diversified crops such as cocoa, rubber, coffee, cotton, palm produce, groundnut, etc. The advent of crude oil production especially, the oil boom of 1970s brought with it fundamental changes in the Nigerian economy such that prior to July 1986; Nigeria witnessed a traumatic economic crisis. For example, there was a shift from Agriculture to crude oil making Nigeria to depend heavily on petroleum as the main source of foreign exchange earnings and government revenue. Crude petroleum sector has been recognized as a contributor to gross domestic product (GDP). The available data from the Federal Office of Statistics (FOS) shows that oil accounted for about 0.1% of the real GDP for the 1965/1967 fiscal year. By 1967/68 its contribution (to real GDP) has jumped to 3.2 percent. Perhaps, its visibility was enhanced more by a prominence as a contributor to export earnings as at 1966, for instance, it accounted for about 27 percent of total export earnings when it became the largest single export earners. Its share of total export earnings increased systematically such that by 1969/70, it had account for about 35 percent of GDP, providing 80 percent of government revenue and over 96 percent of export earnings.

Agricultural sector, which used to be the backbone of the economy, was rendered less competitive. Between 1962 and 1985, Nigeria implemented four National Development Plans first, (1962-63), second, (1970-75), third, (1976-80) and fourth, (1981-85) as part of the perspective plans. These plans are woven around some specific objective including:

i) Increase in the real income at the average citizen as a more reduction in the level of unemployment and under-employment.

ii) Increase in the supply of skilled manpower.

iii) Increase dependence on local resources in the development of economic stability.

iv) Increase participation enterprises.

v) Maintenance of economic stability.

In spite of these, the nation is still bedeviled by mass poverty and high income concentration among small groups of businessmen and politicians, unemployment and underemployment, lack of executive capacity, over dependence on petroleum and imports of goods and services, etc. The Structural Adjustment Programme (SAP) was put in place in July, 1986 with the aim of reducing the excessive dominance of crude petroleum, amongst others and a number of measures to promote the non-oil sector were introduced.

LITERATURE REVIEW

In examining the structure and growth of non-oil export in Nigeria it is pertinent to compare the situations with those that prevailed prior to the commencement of structural Adjustment Programme. For this purpose, the structure and growth of exports between 1981 and 1998 will be examined. Specifically, the structure and growth of the exports during the 1980-85 eras will be compared to those of 1986-1990 and 199-2008. The first sub-period can be described as one during which Nigerian authority were vigorously engaged in the initialization of the structural adjustment policy (SAP) by establishing relevant institutions and implementing certain key policies and programmes. The 1991-2008 period can be described as one during which the liberal policy posture was largely sustained, though there were certain major but temporal reversals, especially in 1991-1994 when interest rates were fixed and the exchange rate regime became more regulated than hitherto.

Beginning with the structure of exports, the compositions of Nigeria's exports for the period between 1981 and 1998, a cursory look reveals that the contribution of non-oil sector to total export earning remained quite small throughout the period. In particular, the contribution of this sector remained below 10%. A close look also reveals that the share of non-oil sector earnings fluctuated upwards between 1981 and 1990 when it peaked at 8.84%. Thereafter, its share started to decline reaching an all time low of 2.29% by 1998. Within the non-oil sector, it is clear that the edible crude materials made up of cocoa and palm produce increase systematically between 1981 and 1988. Ojo *et al.* (1993) opines that the agricultural sector growth has recently been hampered by increase costs arising mainly from general deregulation. The poor quality of exports arising from the vacuum created by the exit of the marketing boards and reduction in the activities of those who seized the opportunity of liberalized agricultural exports to effect capital flight have combined to reduce the demand for these commodities for export purposes.

It should be observed that the performance of manufactured exports could be considered disappointing given the various export incentives put in place by the government. The combination of export promotion incentives as well as liberalization of trade and exchange rate was expected to elicit appropriate responses from the manufacturers by producing for export. More important are the high cost of implications of exchange rate depreciation, high bank lending rates, high cost of infrastructural services despite their poor quality and limited foreign exchange available to produce the high quality inputs needed for the production of goods that meet international standard. The improvements in growth rates between 18987 and 1990 should be interpreted with caution, especially 1980s in the case of oil and total non-oil exports.

The underlying date indicates that there was a precipitous decline in oil and non-oil export earnings between 1985 and 1986. Also, there were considerable improvements in the level of manufactured goods and inedible crude materials during this period. The liberalization of trade that accompanied the SAP also provided opportunities for the Nigerian manufacturers to exploit the West African market.

PERFORMANCE OF NON-OIL EXPORTS

Before crude oil came into prominence in the middle of the 1970s, primary export commodities dominated the export sector. However, since the late 1970s crude oil has become conspicuously dominant. In the period 1980-1985, crude oil exports constituted about 93.0 percent of total exports which increased to 96.0 percent in 1986-1998, conversely, the share of non-oil export of the total, declined from 7.0 percent in the period 1970-1985 to 4.0 percent between 1986 and 1998. Within, the non-oil exports as a proportion of total non-oil exports averaged 61.1 percent. During the period 1981-1987, its share declined to about 30.0 percent. The share of cocoa in total export increased slightly, about 5.0 percent between 1986 and 1987, (CBN, 1986) owing largely to the liberalization of trade and exchange rate. Although, non-oil performance remained largely unimpressive a remarkable development is the expansion of non-oil exports to include non-traditional commodities such as shrimps, cotton, yam, pineapple, etc..

In the manufacturing sub-sector, items currently exported include soaps and detergents, textiles, chemicals, beer and beverages. The non-oil export sector is expanding though slowly, to include non-traditional items such as notable development has been the disappearance of some traditional exports such as palm oil, groundnuts, ginger and hides and skins. Furthermore, the international demand for non-oil products remained low due largely to the development of synthetic alternatives, discriminatory tariffs and the new entrants into the international commodity market. Manufacturing exports have remained low implying that there has not been any significant shift from the primary sector to the industrial sector. In value term, Nigeria's total exports, on the average, stood below ₦500million in the 1960s. During the 1970s, the export figure rose, averaging ₦2,2373 and ₦2,242.3million in 1970-1974 and 1975-1979, respectively, the substantial rise in export earnings was attributable to enhanced receipts from crude oil exports. There was a sharp increase in the export price of crude petroleum before it fell steadily to ₦311,026.4 and ₦7,502.6million in 1982 and 1983 respectively (CBN, 1986).

The value of total exports fluctuated upwards to a peak of ₦218,770.1million in 1993, dropped in 1994 and later rose steadily to ₦1,309,543million in 1996. The improved performance to then export sector in the last two years is traceable to the impact of the depreciation of the exchange rate of the naira and increase in the export price of petroleum. The upward trend was, however, reversed in 1997 and 1998 with total exports declining to ₦1,212,449.4 and ₦717,786.5 million respectively.

Under Structural Adjustment Programme (SAP) introduced in 1986 export promotion incentives were targeted at non-oil export. This group of export rose from ₦532million to ₦8349.0million and ₦20102.5million in 1994 and 1995 respectively. Exchange rate depreciation pursued under SAP represents the principle factor explaining the rapid expansion in the value of export, as the dollar value of non-oil export decline from 613 million US Dollar to 244 million between 1988 and 1992. Agricultural export also rose in naira value from ₦407million naira in 1986 through ₦2429.3million in 1990 to ₦13431.1million in 1995, the contribution of non-oil export to the total export climbed from about 6.25percent in 1986 to 8.8 percent. Thereafter, the relative share of non-oil export has been recording positive growth rate of 9.6 percent (CBN 1995). This is an improvement from what obtained in the oil boom era and late 1980s. However, the growth rate of non-oil export is less than encouraging apart from 1987, 1988-1991 and year 2000 in which growth rate was higher as 20 percent for the period under study (CBN 2000).

It would be noted that relative impressive growth rate recorded in certain years would be linked to the depreciation in the value of naira in those years. The average annual growth rate of non-oil export is about 24.8 percent in the 1985 to 1990 period and then drastically reduced to 14.8 percent in the 1990 to 1995 and to year 2001. The decline in the average growth rate of non-oil export in the world oil market export of unprocessed agricultural commodities with little value added account for the bulk of non export earning in spite of various diversification programmes implemented. The structure of non-oil export shows that the share of manufacture increase substantially from 2.9 percent in 1987 to 23.8 percent in 1992 after which it declined, the total export was insignificantly increased from 0.2 percent in 1987 to 0.9 percent in 1991 and then decreased to 0.6 percent in 1995 (CBN, 1996).

Table 1
Non-Oil Exports by Product (Naira in Million)

	Product	2007	2008	2007 % share of total	2008 % share of total
1	Agriculture Produce	44,395.49	50,498. 86	41.9	37.8
	Cocoa	13,244. 48	18,569. 69	12.5	13.9
	Rubber	6,569. 26	7,214. 12	6.2	5.4
	Fish/Shrimps	7,734.77	9,218.05	7.3	6.9
	Cotton	6,781.17	4,542.23	6.4	3.4
	Others	10,065.80	10,954.78	9.5	8.2
2	Mineral	4,238.23	11,355.56	4.0	8.5
	Aluminum/Carbonate	3,390.59	7,748.50	3.2	5.5
	Others	847.65	3,607.06	0.8	2.7
3	Semi- Manufactured	42,912.11	50,632.45	10.5	37.9
	Processed skins	21,720.94	35,536.23	20.5	27.6
	Cocoa products	5,085.88	6,546.15	4.8	4.9
	Textile	7,840.73	1,068.76	7.4	0.8
	Furniture/processed wood	2,225.07	1,870.33	2.1	1.4
	Other	6,029.48	8,610.98	5.7	4.2
4	Manufactured	10,383.67	14,829. 03	9.8	11.1
	Textiles	1,050.56	935.16	1.0	0.7
	Tyres/Tubes	1,059.56	534.38	1.0	4.8
5	Other Exports	4,026.32	6,278.96	3.8	4.8
6	TOTAL	105,955.82	133,594.80	100. 0	100. 0

Source: CBN Annual Reports and Statements of Account (2006 – 2009 series)

CONTRIBUTION OF NON-OIL EXPORT TO THE GROWTH RATE OF GDP

The non-oil sector GPD achieved a growth rate of 8.9 percent compared with 8.6 percent in 2005 and the annual average of 7.7 percent over the period 2002-2008. The improved performance in the sector was largely driven by the agricultural sector.

Table 2
Non-Oil Sectoral Growth Rate of GDP (%)

Activity sector	2002	2003	2004	2005	2006/1	2007/2	2008/3
Agriculture Produce	4.20	5.66	10.00	9.61	10.11	10.22	9.82
Mineral	4.32	5.44	10.85	4.32	5.23	4.14	6.31
Semi-Manufacture	6.48	5.76	9.70	7.50	8.22	9.00	6.91
Manufactured	0.09	6.64	6.50	5.06	7.31	8.33	3.61

Source: National Bureau of statistics (2008)

METHODOLOGY

Data Source and Model Specification

Data for this study were obtained mainly from the secondary source. The data were presented in tables and analyzed using Ordinary Least Square (OLS) regression analysis models. The model is specified to assure the relationship between the non-oil export being the dependent variable and inflation rate, exchange rate, and interest rate being the explanatory variables. The model is specified thus:

$$GDP – B_o + B_1\ EXR + B_2\ INTR + B_3\ INFR + U$$

Data Analysis

The data below was regressed using Ordinary Least Square (OLS) regression analysis model followed by the empirical results obtained thereafter.

Table 3
Pattern of Growth of Exports

Year	Non-oil export of GDP	Exchange rate ₦	Interest rate %	Inflation rate %
2000	4630.62	96.26	24.85	6.9
2001	4296.38	110.31	22.72	18.9
2002	5099.83	118.29	23.20	12.9
2003	5799.61	120.36	21.11	14.0
2004	7163.35	132.50	15.04	15.0
2005	8907.36	132.15	20.52	17.9
2006	11084,90	128,65	1963	8.2
2007	9252.42	123.54	21.26	17.4
2008	9638.56	118.92	16.91	15.5

Source: CBN statistical bulletin (2001-2008)

The empirical results obtained are shown below:

GDP = 165495. 93 + 1152. 23 EXR + 3040.258 INTR – 369.09 INFR

S.E = (18525,76)(148,654) (1167,897) (427,678)

R-square = 0.822

F = 33,806

The results show the existence of a relationship between dependent variable (GDP) and each of the explanatory variables, that is (EXR, INTR, INFR). The coefficient of exchange rate is 1152.234. The empirical investigation shows that there is a positive or direct relationship between the domestic Product and the Exchange rate. A unit change in the exchange rate will change GDP by 1152.234.

In the result, it is observed that the coefficient of interest rate is 3040.258 and this implies a positive relationship between the GDP and interest rate, that is, a unit increase in the interest rate will lead to 3040.258 change in the GDP. On the other hand, the relationship between GDP and inflation rate is negative since the coefficient is -369.09. This simply means that a percentage increase in inflation will lead to reduction in the GDP.

As shown above, the coefficient from the results are:

B_o = 165495.93

B_1 = 1152.234

B_2 = 3040.258

B_3 = - 369.091

To test for the statistical significance, the following hypotheses shall be established:

H_0 = The parameter is not statistically significant.

H1 = The parameter is statistically significant.

DECISION RULE

If $S.E_{(B1)} < \frac{B_1}{2}$ Accept H_1

If $S.E_{(B1)} > \frac{B_1}{2}$ Accept H_0

Where

S.E = Standard Error

B_1 = 1, 2, 3

To test for statistical reliability using standard error it is found out that the standard error (S.E) is 148.654 which is less than 576.177. Therefore, the estimate is statistically significant.

Also, the statistical reliability using standard error test S.E

(B_2) = 1167.879

$$\frac{B_2}{2} = \frac{3040.258}{2} = 1520.129$$

S.E $\frac{(B_2)B_2}{2}$ accept H_0

Therefore, the estimate is statistically significant, that is 1167.879 < 1520.129.

To test for B_3, it is found the result that S.E.(B_3) = 4278.678

$B_3/2$ = 369.091/2 = 184.545

S.E. (B_3) > B_3 accept H_0

To test for the overall significance of the regression, we use

F Statistics

F (Calculated) = 33.806 at 5% degree of confidence

F (tabulated) = 3.04

Since F* (cal) > F (TAB)

With the results above, H_1 is accepted H_0 is thus rejected. The overall estimate is statistically significant. It is further observed that R^2 = (0.922) which is the coefficient of determination showed that 82.2% variation in GDP (Non-oil export) can be explained by the independent variable such as interest rate, exchange rate and inflation rate and the remaining 18.8% can be computed by error term.

CONCLUSION

The objectives of developing a variable in non-oil sector are highly desirable in view of the dynamic of global economic environment, the peculiarities of the national economy, as well as the long-term development goals of the nation. In order to achieve this objective, however, there is need for policy consistency, programme synchronization and coordination with a view to achieving overall macroeconomic stability under which the activities of the non-oil sector would thrive. Also, the need for stable social political environment cannot be overemphasized. Finally, there must be sustained momentum and the will to succeed.

POLICY RECOMMENDATION

In order to achieve an optimal as well as sustained growth and development of the non-oil sector, there is need to stimulate increase in production of both agricultural and manufactured products. In addition, foreign investment capital is a vehicle for industrial growth especially in a developing country like Nigeria. Since the bulk of industrial inputs are imported, foreign financing helps to complement as it provides funding for the import needs of the investors. There is also an urgent need to upgrade basic infrastructural facilities to functional levels. Regular and adequate water and power supply must be guaranteed. Rural roads, port facilities as well as telecommunication facilities should be upgraded and made continually functional.

Most of the existing firms in Nigeria produce largely for the local market as they cannot effectively compete in terms of product prices and quality of goods in the international markets. There is need to complete the export processing zones in earnest to promote the establishment of export oriented firms that will produce solely for the export markets.

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