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THE EFFECT OF INDUSTRIAL DEVELOPMENT ON ECONOMIC GROWTH (AN EMPIRICAL EVIDENCE IN NIGERIA 1973-2013)

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ABSTRACT

The effect of industrial development on the economic growth of Nigeria has over the past decade been a recurring issue for analysis like every economy most especially developing economies. Nigeria has enjoyed a long period of sustained economic growth since 2001 and yet, there is poor contribution from the industrial sector to the country's GDP. There are various studies that have supported that industrial development is a pathway to sustainable economic growth. Thus, this research investigated the effect industrial development on the Nigeria's economic growth 1973 - 2013. PC Give 8.00 version statistical package was used to analyze the secondary data that was collected from National statistical bulletin. GDP was used as the dependent variable, while foreign direct investment, industrial output, total savings and inflation was used as the independent variables. The model explain that the influence of industrial output on economic growth is not statistically significant, though the sign obtained from its àpriori expectation is positively related to (economic growth) GDP but does not hold strong enough. Savings has a positive relationship and also significant impact on the economy. Inflation has a negative relationship while net foreign direct investment is positively significant on the impact of economic growth. R-squared shows a 76% increase on the GDP. Based on the findings, it is therefore recommended that the government and its agencies should ensure political stability and also the implementation of strategic policies that will create a fair playing grounds for foreign investors which will also improve the establishment of industries especially the manufacturing industries to encourage industrialization of the Nigerian economy as this will facilitate the strengthening of economic growth (GDP). Increase in savings will make money available for the economy through high interest rate and income adjustments from the monetary policy. The Bank of Industry (BOI) should be ready to aid Nigerian industrialization along Nigeria's line of development and not a total shift to accepting models which worked elsewhere given their environment and circumstance which differs from place to place.

INTRODUCTION

The impact of manufacturing on economic development has been widely studied. Very few countries have been able to grow and accumulate wealth without investing in their manufacturing industries, and a strong and thriving manufacturing sector usually precipitates industrialization. The manufacturing sector is widely considered to be the ideal industry to drive Africa's development. This is due to the labor-intensive, export-focused nature of the industry. There is a direct correlation between exportation levels and the economic success of a country. By increasingly adding value to products before they are sold, revenues are boosted, thereby raising average earnings per input. Furthermore, the manufacturing sector is also more sustainable and less vulnerable to external shocks than commodities (KPMG,2014).

Industrial development therefore is the application of modern technology, equipments and machineries for the production of goods and services, alleviating human suffering and to ensure continuous improvement in their welfare. Modern manufacturing processes are characterized by high technological innovations, the development of managerial and entrepreneurial talents and improvement in technical skills which normally promote productivity and better living conditions. In recognition of this, successive governments in Nigeria have continued to articulate policy measures and programme to achieve industrial growth and development. This cannot be attained until manufacturing capacity is utilized to a reasonable extent (Fashola, 2004).

In Nigeria, as in many other developing countries, the word industry is used essentially as a synonym for manufacturing. This is because manufacturing is the most dynamic component of the industrial sector. Industrialization has come to be regarded as a crucial and powerful engine in the overall development process. The World Bank has classified Nigeria as inward oriented by trade orientation. Using data for 1963 – 73 and 1973 – 1985, she was deemed moderately inward oriented for the production period 1963 – 1973, but strongly inward oriented for the period 1973 – 1985. Since 2001, Nigeria has enjoyed a long period of sustained expansion of the non-oil economy, with growth occurring across all sectors of the economy and accelerating at about 7%. This growth rate increased to about 8-9% in 2003 despite the financial crisis. This has more than doubled the growth rate in the country prior to 1999. Even in the wake of the global financial crisis in 2009, Nigeria's growth performance fell only to about 4.5 percent. This, according to Ajakaiye and Fakiyesi (2009) has been attributed to the rapid growth rate in the non-oil export. The development of the non-oil economy was in contrast to that of the oil economy, whose contribution has been declining owing to unrest in the Niger Delta. However, an investigation by the World Bank (2012) has revealed that the pattern of growth in the Nigerian economy has not gained significant input from the industrial sector and development.

In spite of the country's vast oil wealth, the World Bank Development Indicators (2012) has shown that majority of Nigerians are poor with 84.5 per cent of the population living on less than two dollar a day. The United Nations Human Development Index (2011) also ranks Nigeria 156 out of 179 countries, which is a significant decrease in its human development ranking of 151 in 2004; and World Bank Development Indicators (2012) have placed Nigeria within the 47 poorest countries of the world. The issue of poverty can be easily traced to mono-economic practice and underutilization of the nation's endowed resources, especially in manufacturing sector, which could have opened up windows of opportunity in job creation and economic development.

STATEMENT OF PROBLEM

Nigeria would be classified as industrially underdeveloped. Yet a lot of efforts have been put into the industrialization process. Plan after plan, investment policies have been renewed, fine-tuned and at times completely revamped. Resources are abundant and investment opportunities are almost unlimited. Various industrial development policies, perspective plans and medium–term economic plans acknowledged the importance of the manufacturing sector in the economy. For instance, as stated in the nation's 4th Plan, manufacturing is capable of sustaining a minimum growth rate of 15% per annum, contributing over 7% to gross domestic product, promoting employment and enhancing the value of natural resources, to mention but a few.

The history of industrial development and manufacturing in Nigeria is a classic illustration of how a nation could neglect a vital sector through policy inconsistencies and distractions attributable to the discovery of oil (Adeola, 2005). However, Ogbu (2012) argues that the country's oil industry is not a major source of employment, and its benefit to the other sectors in the economy is limited since the government has not adequately developed the capacity to pursue the more value-added activities of the petrochemical value chain. As a result, the oil industry does not allow for any agglomeration or technological spillover effects, Ogbu (2012) stresses.

From a modest 4.8% in 1960, manufacturing contribution to GDP increased to 7.2% in 1970 and to 7.4% in 1975. In 1980 it declined to 5.4%, but then surged to a record high of 10.7% in 1985. By 1990, the share of manufacturing in GDP stood at 8.1% but fell to 7.9% in 1992; 6.7% in 1995 and fell further to 6.3% in 1997. As at 2001 the share of manufacturing in GDP dropped to 3.4% from 6.2% in 2000. However, it increased to 4.16% in 2011 which is less than what it was in 1960. Currently, Nigeria's manufacturing sector's share in the Gross Domestic Product (GDP) remains minuscule (CBN, 2011). Compare that to the strong manufacturing sectors in other emerging economies, where structural change has already occurred and where millions have been lifted out of poverty as a result: manufacturing contributes 20 percent of GDP in Brazil, 34 percent in China, 30 percent in Malaysia, 35 percent in Thailand and 28 percent in Indonesia (Ogbu, 2012). The more recent experiences of the East and Southeast Asian economic transformations demonstrate that diversification into manufacturing and industrial production facilitated by what Arthur Lewis calls the "intelligent governments" are critical to poverty reduction. However, Nigeria has no effective industrial policy that promotes manufacturing; at least not in the sense of policy which provides practical solutions to the difficulties encountered by incipient entrepreneurs or emerging manufacturing firms. It is in the light of the foregoing that this study seeks to evaluate the role of the manufacturing sector in the Nigerian economy.

Although industrialization (with special emphasis on manufacturing) is vital in the process of economic development, its performance in Nigeria has not been quite impressive. Two main strategies have been put in place to correct this anomaly. The first is the import substitution strategy while the second is the export promotion strategy. The second strategy, which has been in vogue since the adoption of the SAP in Nigeria in mid – 1986, emphasizes the promotion of value – added non-oil exports, especially manufactures, and did not actually achieved significant results (Uniamikogbo, 1996).

Generally, the manufacturing sector which plays a catalytic role in a modern economy has many dynamic benefits crucial for economic transformation is a leading sector in many aspects (Oguma, 1995) says it creates investment capital at a faster rate than any other sector of the economy. Available evidence showed that the share of manufacturing value in the Gross Domestic Product (GDP) was 3.2% in 1960. In 1977, its share of GDP increased to 5.4% and in 1992 grew to 13%. The share of the manufacturing in GDP fell to 6.2 in 1993, while overall manufacturing capacity utilization rate fluctuated downwards to 2.4% in 1998 (Chete and Adewuyi, 2004).

In 2003, the manufacturing sector accounted for 4% of the Gross Domestic Product (GDP) (Tamuno & Edoumiekumo, 2012). A country is industrialized when at least one-quarter of this Gross Domestic Product(GDP) is produced in its industrial output arises in the manufacturing section of industrial sectors, and when at least one length of its total population is employed in the industrial sectors of the economy. The manufacturing sector is to be dominant in terms of contribution to the Gross Domestic Product of any economy especially that of Nigeria (Ayodele & Falokun, 2003).

An industrial sector that does not contribute at least one-quarter of the country's GDP is widely viewed as a major challenge enhancing a country's economic growth. Nigerian manufacturing sector is faced with capacity under utilization and this has posed a threat to the economic growth and development of the country. (Adewale, 2002).

That industrialization of a truth is the catalyst of economic growth for many nations in the twentieth century can no longer be disputed. It has been a much emphasised development strategy in Nigeria as in many other countries even see industrialization as providing the basic means of overcoming their economic backwardness. While the exact relationship between industrialization and economic development has been a controversial issue in the economic literature, not many economists doubt the capacity of industry for rapid growth and in turning sharply the table of economic progress. To the less developed countries like ours, the high level of industrialization and rapid economic growth of the advanced countries taken account of and are making frantic efforts towards attaining it too, through several industrial policies aimed at encouraging both individuals and the public/government to establish industries. However, the greatest obstacle to rapid industrial development in Nigeria has been identified to be; inadequate finance. Abdulkadir, (1984) pointedly puts it that "if the country's industrial aspirations are to be achieved, the provision of adequate finance should be accorded high priority. But regrettably, Nigerian industrialists have been badly starved of this very important ingredient for both the establishment and maintenance of industries and could be evidently seen in the following areas; Inadequate initial capital for take off, inadequate funds for maintaining existing industries, insufficient funds for expansion. The lack of funds and enabling environment for industrialists has greatly denied the nation the capacity of achieving significant industrial growth or industrialization which Nigeria has always hoped and craved for. Considering the enormous importance attached to industrialization in our economic growth, any problem militating against its achievement should be of interest to us. We strive to determine to what extent that industrial development have contributed to our economic growth (Dauda, 2006).

THEORITICAL FRAMEWORK

OVERVIEW OF MANUFACTURING IN NIGERIA

It has been argued that the fastest trend through which a nation can achieve sustainable economic growth and development is neither by the level of its endowed material resources, nor that of its vast human resources, but technological innovation, enterprise development and industrial capacity. For instance, despite its poor natural resources, and the hurdles it faced from 1920s chronic inflation, Germany has effectively exploited the manufacturing sector and rose up to become the largest economy in Europe and the fourth largest in the world (Kayode, *et al*, 1977).

In the modern world, manufacturing sector is regarded as a basis for determining a nation's economic efficiency (Amakom, 2012). However, after the discovery of crude oil in Nigeria in the late 1950s, the nation has shifted from its preeminent developing industrial production base and placed heavy weight on

crude oil production (Englama, *et al*. 2010); not only has this jeopardized its economic activities, it also aggravated the nation's level of unemployment. Nigeria as a giant of Africa has for long been regarded as a nation blessed with abundant human and material resources; however, the underutilization of these potentials has amplified widespread poverty, low standard of living at individual level and rising unemployment in the country as a result of incessant mono-economic practice and drastic neglect of other sectors of the economy such as agriculture, tourism, mining and the manufacturing industry.

Manufacturing is a subset of the industrial sector (processing, quarrying, craft and mining). Manufacturing, thus involves the conversion of raw materials into finished consumer goods or intermediate or producer goods. Manufacturing like other industrial activities creates avenue for employment, helps to boost agriculture and helps to diversify the economy while it helps the nation to increase its foreign exchange thus helping local labour to acquire skills. It minimizes the risk of over dependence on foreign trade and leads to fullest utilization of available resources. The degree of manufacturing is a measure of the extent to which the other components of the industrial sector are effectively utilized (Kaldor, 1967).

The organization of manufacturing activities in Nigeria has passed through four (4) clear stages of development. The first is the “Predependence” era when manufacturing was limited to its primary processing of raw material for export and the production of simple consumer items by foreign Multinational Corporation anxious to get a foot held in a growing market. During this period, manufacturing was mostly resource based, but some element of import substitutions and imported raw material base was already present. The second is the immediate “Post colonial era‟ of the 1960‟s characterized by more vigorous import substitution and the beginning of decline for the export oriented processing of raw material. Such a policy of import substitution meant initially to reduce over dependency on foreign trade and save foreign exchange turned out to be more assemblage of these items rather than manufacturing. The third is the (Decade of the 1970s). This was remarkable because the advent of oil and the enormous resources it provided for direct government investment in manufacturing made the government exercise almost a complete monopoly in the following sectors; basic steel production, petroleum refining, petrol chemical, liquidated natural gas, edible salt, flat steel plants, machine tools, pulp and paper (basic), yeast and alcohol and fertilizer (nitrogenous and phosphoric). The period was marked by the limitation of the indigenization programme and hence intense economic activity but poor result since government attempts diversification into non traditional product such as steel, petrol chemical, fertilizer and vehicle assembly yielded little success. The last phase (Decade of the 1990‟s) is marked by the dividing of government revenue consequent upon the nose-diving of oil price at world market.

Hence, many ad hoc attempts by tinkering the economy were made. These attempts include the adoption of export promotion strategy on the realization of the pit-fall of import substitution strategy. The SAP (Structural Adjustment Programme) era beginning from July (1986) have even emphasized this strategy, especially as it relates to non-oil export, hence the extension of export production incentives of various description. Also, due to lop-sided development in the entire manufacturing sector, a strategy of balanced development was emphasized in other to promote greater linkage within the sector but its result have been more theoretical than practical .

Indeed, manufacturing in Nigeria appears a favored sector; probably because it‟s a general believe that the main instrument of rapid, structural change and self sufficient lies in the manufacturing industry.

STRUCTURE AND PERFORMANCE OF THE NIGERIAN MANUFACTURING SECTOR.

The manufacturing sector is one of the most dynamic sectors in Nigeria. Manufacturing sector grew between 1970 (when the civil war ended) and 1982, using the index of manufacturing output. The average annual growth rate of manufacturing was more rapid during the second millennium of the 1970s than during the first and began to accelerate at the first half of 1980s and manufacturing declines after 1982. The index of the manufacturing production showed the negative growth rate 28.6, 12.0, 64.3 and 21.8 percent were recorded for the years 1982, 1984, 1985 and 1986 respectively (Manufacturers Association of Nigeria, 2012).

Manufacturing industries in Nigeria so far has done well in production of goods to the nation. Recent, study has shown that Nigeria goods are been exported to other countries. Nigerians now patronize made in Nigeria goods. The performance of the industry sector improved slightly during the first half of 1997 where the industry production index 132.6 increased by 0.69 over its level in the first half of 1996 but declined by 0.2% below that level in the second half of the same year. The rise in output relative to the position during the corresponding period in 1996 was accounted for by 1.0 and 0.4% increase in mining and manufacturing production.

Index of Industrial Production.

YEAR	MANUFACTURING	MINING
WEIGHT	**31.9**	**65.6**
1973	134.5	103.1
1974	135.3	103.2
1975	137.8	105.6
1976	139.9	105.3
1977	137.5	105.5
1978	138.6	110.2
1979	139.6	112.4
1980	133.4	114.5
1981	134.7	115.3
1982	135.9	115.6
1983	135.7	102.6
1984	136.7	101.7
1985	137.5	105.6
1986	134.8	106.4
1987	135.1	107.6
1988	135.2	108.5
1989	154.3	109.3
1990	162.9	115.1
1991	178.1	120.1
1992	169.5	119.9
1993	145.5	124.6
1994	138.7	129.0
1995	136.2	124.2
1996	136.7	129.0
1997	133.1	141.5
1998	137.7	134.1
1999	138.2	125.5
2000	142.2	144.3
2001	146.2	144.9
2002	146.3	144.6
2003	148.0	146.5
2004	145.7	154.0
2005	145.8	164.8
2006	145.9	174.9
2007	152.2	185.1
2008	156.3	186.2
2009	156.4	186.7
2010	157.0	186.2
2011	160.3	186.5
2012	162.7	187.0
2013	165.4	187.4

Source : Central Bank of Nigeria Statistical Bulletin of various Issues

The structure of industrial growth was heavily based in favor of consumer goods industries because food, beverage, tobacco, beer, spirit and textile industries dominated the structure of manufacturing activities. The overwhelming dominance of the consumer goods sector both in value added and employment is evident. Durable consumer goods industries which began to expand rapidly in the middle of the 1970s were yet to make significant impact by 1985. Similarly, the contribution of machinery and transport, equipments, mental fabrication, chemicals, energy and engineering industries to manufacture value added were insignificant. In 1981, due to the slump in international oil market, there was a sharp decline in the performance of the manufacturing sector. This weak performance exposes the inherent weakness of the sector that had largely been sheltered by competition by the Import Substitution Industrialization (ISI) policy that the country adopted after independence in 1960. The ISI process was thus marked by the pyramid tariff structure with relative low duties on intermediate and capital goods import and progressively increasing duties on consumer goods imports.

Under SAP (Structure Adjustment Programme), there was a modest increase in import substitution in durable consumer goods production while there was a significant decline of import substitution in non-durable consumer production. This showed that the manufacturing sector received the lion share of foreign exchange at the auction market. Industrial growth, especially raw material, machineries and spare parts typically absorbed 70-80% of auction funds with the remainder going to finished consumer goods. The poor performance of the manufacturing sector can be attributed to many factors. These include the existence of trade barriers in industrial countries, the general poor macroeconomic performance of the economy which means weak aggregate demand, weaker demand for local manufacturers as a result of poor quality product and the influx of relatively cheaper imports. The high price of domestic manufacturers is partly due to the increased cost, inefficient and old equipments, inadequate infrastructure and the depreciating naira.

The failure of infrastructural service extends to the area of water supply and telecommunication. All these have implication for the cost of producing manufactured goods and any extension, the competitiveness of domestic industries. According to Central Bank of Nigeria (CBN), as manufacturers are required to invest huge capital funds to provide alternative infrastructure facilities for their operation, domestic industries carry high cost/price structure which results in loss of competitiveness for their product in both domestic and foreign market.

Since 1992-1993, industrial GDP has been tracked closely by crude petroleum and natural gas implying that crude oil exploration accounts largely for it. This leads to a paradox in definition, as the crude component as the name implies is „crude‟ with no real value added. Furthermore with a mining component defined as coal, metal ores and quarrying all primary products. Industrial GDP fails to capture the term „industrial‟ in the popular sense of the word. It does not refer to the sum total of productive processes involved in value adding to primary/raw materials to create a final good that can be consumed (Olapade and Olapade, 2010).

More clarity can be obtained by painting a picture that takes into cognizance the nature of output and value addition. A bit of theory here the Lewis 2- sector theory named after Arthur Lewis the first and only Blackman ever to win a Nobel Price in Economics proposes that every economy is made of two sectors initially. The first sector is a primary often agrarian labour intensive sector with the other being a capital intensive industrial one Lewis left out the services sector as he felt distributive activities takes prominence after a country attains a high economic growth. More clearly, after countries have attained high growth rates, their citizens became less interested in efficiency and more agitated about equitable distribution of growth. Furthermore, the services type economy requires a higher level of human capital than the previous types. Today people talk about a knowledge economy fired by technological innovation. Clearly these latter two sectors require much richer quality of human capital than the earlier two (Manufacturers Association of Nigeria, 2010).

His theory posits that in the beginning the rapid increases in agricultural output spur growth and create a surplus, which is the leftover of what is not consumed locally. This surplus is exported and/or fed into industrial or manufacturing sector as capital. With more growth, this process is made faster and eventually taking advantage of economies of scale, industrial output rises faster than primary produce lending to a nation being termed industrial. Clearly, manufacturing GDP in our present past democratic decade has declined from what it was in the 1990s. Basically, Nigeria's economy has not been able to utilize the excess surplus created by its primary sector for industrial growth. It appears that Nigeria's real sector has struggled to contribute more than 10% throughout her history. The tertiary component comprising services and trade are clearly in second place implying that Nigeria will transit next to a service type economy excluding building and construction in the secondary or industrial component which refers to the production of houses to give a clearer picture of the real sector's contribution to Nigeria's GDP. In addition, trade lies higher than services implying that Nigeria's economy is largely a trading outpost production takes place elsewhere and we are a roadside market for sale of wares produced in other countries. This explains why the Central Bank is constantly behind the curve in fighting inflation always fire fighting with its attendant implications for interest and exchange rate management.

OBJECTIVES OF THE STUDY

The overall objective of this study is to appraise critically, the effect of Nigerian industrial development on it's economic growth. Specifically, the sub-objectives of the study include:

1. To investigate the performance of the industrial sector on the economic growth and development of Nigeria.
2. To assess the level of productivity in the Nigerian industrial sector.
3. To identify the major constraints confronting the Nigerian industrial development.
4. To find out the various policies measures available to the government that can be used to redress the persistent decline in the industrial development.

RESEARCH QUESTIONS

The study would also explore the following question:

1. To what extent has the Nigerian industrial sector contributed to the economic growth and development of the country?
2. What has been the performance of the Nigerian Industrial sector?
3. What are the bottlenecks that impede industrial development?
4. What policy measures could be adopted to redress the persistent decline in the industrial development?

RESEARCH HYPOTHESIS

The hypothesis tested in the course of the analysis is stated below:

Ho: Industrial development does not contribute significantly to Nigerian economy growth.

RESEARCH METHODOLOGY

Ordinary Least Square (OLS) method was used in testing the influence of the independent variable on the dependent variable.

The model will be specified in the general form as:

GDP=f (JMQ, TSV, FCF, INF)
Where,
GDP=Gross Domestic Product at current basic prices
JMQ=Industrial Output
TSV=Total Savings
FDI= Foreign Direct Investment
INF=Inflation Rate

The representation of the econometric form of the model is summarized as a functional relationship below:
GDP=f (JMQ, TSV, FDI, INF)

Stating the relationship mathematically, we get.
GDP=β0+β1 JMQ+β2 TSV+β3FDI+β4INF>0
Where; β0 is the constant intercept which shows the level of GDP, when the explanatory variables JMQ, TSV, FCF and INF are zero. Gross Domestic Product (GDP) is the dependent variable in this study and dependent on JMQ, TSV, FCF and INF. This means that JMQ, TSV, FDI and INF are the independent variables and therefore determine the behavior of the GDP.
Stating the relationship in an econometric model, it becomes;

GDP=β0+JMQ+TSV+FDI+ INF+ Ui

The secondary data that was used for the study was generated from the Central Bank of Nigeria Statistical Bulletin and Central Bank of Nigeria Annual Report and Statement of Account of various issues. The result was subjected to economic statistical and econometric tests. PC Give 8.00 version was used for the regression analysis

RESULTS AND DISCUSSIONS

Variable	**Coefficient**	**Standard error**	**t-statistics**	**t-probability**	**PartyRỳ**
Constant	1.26540	1.55100	0.816	0.4220	0.0250
INDO	1.1601	0.70456	1.647	0.1117	0.0944
SAV	1.9546	0.84145	2.323	0.0283	0.1719
FDI	10.416	87.319	0.119	0.9060	0.00050
INF	-20276	55715	-0.364	0.7189	0.0051

R-square 0.76445 DW 2.15 F (4, 26) 21.105 (0.0000)
à 4.18036e + 014 for 5 variables and 40 observations.

The value of the intercept which is 1.26540, shows that the Nigerian economy will experience a 1.26540 increase when all other variables are held constant. The coefficient of industrial output (INDO) is 1.1601. This shows that industrial output is positively related to GDP and that a unit change increase in industrial output will increase GDP by 1.1601%.

Inflation (INF) has -20276 as its coefficient. This shows that inflation is negatively related to GDP and that a unit change increase in inflation will reduce GDP by 20276%.

Savings (SAV) also has a positive coefficient of 1.9546. The result shows that a unit change increase in saving will increase in GDP by 1.9546%.

Foreign Direct Invest (FDI) has a positive coefficient of 10.416. The result shows that a unit change increase in net foreign capital outflow will increase GDP by 10.416%.

Evaluation Based On Economic Apriori Expectation

The test is aimed at determining whether the signs and sizes of the results are in line with what economic theory postulates. Thus, economic theory tells us that the coefficients are positively related to the dependent variable, if an increase in any of the explanatory variables leads to a decrease in the dependent variable.

Therefore, the variables under consideration, their parameter and priori signs have been summarized in the table below.

This table will be guarded by these criteria:

When $\beta>0$=conform

When $\beta<0$=not conform

Variables	**Expected signs**	**Estimate**
GDP	+	$\beta>0$
INDO	+	$\beta>0$
SAV	+	$\beta>0$
FDI	+	$\beta>0$
INF	−	$\beta<0$

From the above table, it is observed that all the variables actually conform to the economic theories. A positive relationship which exists between GDP, INDO, SAV and NFCF indicates that no increase in INDO, SAV and FDI will result in a positive change in the GDP. This conforms to the à priori criteria because an increased or high INDO, SAV and FDI over the years will increase GDP in the economy.

Statistical Test of Significance of Parameter Estimated (t-statistics).

The test is carried out, to check for the individual significance of the variables. Statistically, the t-statistics of the variables under consideration is interpreted based on the following statement of hypothesis.

Ho: The individual parameters are not significant.

Decision Rule:

If t-calculation > t-tabulated, we reject the null hypothesis (Ho) and accept the alternative hypothesis (H_I), and if otherwise, we select the null hypothesis (Ho) and reject the alternative hypothesis (H_I).

Level of Significance =at 5%

Degree of freedom: n-k

Where n: Sample size

k: Number of parameter

The t-test is summarized in the table below:

Variables (t-value)	t-tab	Remark
INDO(1.647)	± 2.056	Insignificant
SAV(2.322)	± 2.056	Significant
FDI(0.119)	± 2.056	Insignificant
INF(-0.364)	± 2.056	Insignificant

The t-statistics is used to test for individual significance of the estimated parameters (β_1, β_2 and β_3).
From the table above, we can deduce that SAV (2.322) is greater than (2.056) which represent the t-tabulated implying that SAV is statistically significant.

On the other hand, the intercept 0,816, INDO (1.647), FDI (0.119) and INF (-0.364) are less than the t-tabulated (± 2.056) signifying that the intercept, INDO, FDI and INF are statistically insignificant.

Adequacy of Regression Equation (F-test)
The F-statistics is used to test for simultaneous significance of all the estimated parameters.
Ho: $\beta_1=\beta_2=\beta_3=\beta_4$
H_1: $\beta_1\neq\beta_2\neq\beta_3\neq\beta_4$

Level of significance α at 5%

Degree of freedom $\frac{k-1}{n-k}$

Decision Rule:
If the f-calculated is greater than the f-tabulated (f-cal >f-tab) reject the null hypothesis (Ho) that the overall estimate is not significant and conclude that the overall estimate is statistically significant.
From the result, f-calculated (21.105) is greater than the f-tabulated (2.69), that is, f-cal> f-tab. Hence we reject the null hypothesis (Ho) that the overall estimate has a good fit which implies that our independent variables are simultaneously significant.

Goodness of Fit Test (R^2)
The (R^2) shows the amount of the variation in the dependent variables (GDP) that are explainable by the explanatory variable. The (R^2) which measures the overall goodness of fit of the entire regression shows the value of 0.76445=76.445% approximately 76%. This indicates that the independent variables accounts for about 76% of the variation in the dependent variable.

Test for Autocorrelation.
From the regression result, we have;
Dw =2.15
D =1.062
Du=1.759
4-d =2.94
4-du=2.24
Conclusion:
Since dw (2.15) < D, (1.062) then we reject the null hypothesis of no correlation and accept that there is positive autocorrelation of first order.

Test For Heteroscedasticity

Ut= βo +β_1INDO +β_3NFCF+β_4INF+β5INDO2+β6SAV2+β7FDI2+ β8INF2+Vi.

Where Vi= pure noise error.

This model is run and an auxiliary R2 from it is obtained.

This hypothesis to the test is stated thus;

Ho: β1=β2=β3=β4= β5= β6= β7=β8=0 (Homoscedasticity)

H1: β1 ≠β2 ≠β3 ≠β4 ≠β5≠β6 ≠β7 ≠β8=0 (Homoscedasticity)

Decision Rule:

Reject the null hypothesis if x2 cal > x2 at 5% level of significance. If otherwise, accept the null hypothesis. From the obtained results, x2 cal = 21.551 > x2 0.05(8)= 15.5073 we therefore accept the alternative hypothesis of hetroscedasticity showing variance and reject the null hypothesis showing that the error terms has a constant variance.

Test For Normality

The Jarue- Bera test for normality is an asymptotic, or large- sample, test. It is also based on the ordinary least square residuals. This test first computes the skew ness and kurtosis measures of the ordinary least square residuals and uses the chi- square distribution (Osuala, 2007).

The hypothesis is:

H0: x1=0

H1: x1≠0 not normally distributed. At 5% significance level with 2 degree of freedom.

JB=+=49.441

While critical JB > (x2(2) df) = 5.99147

Conclusion:

Since 49.441 > 5.99147 at 5% level of significance, we reject the null hypothesis and conclude that the error term does not follow normal distribution.

Test For Multicollinearity

	GDP	INDO	SAV	NFCF	INF	REMARK
GDP	1.000					-
INDO	0.8456	1.000				M
SAV	0.8366	0.8545	1.000			M_1M
FDI	0.6569	0.7941	0.6602	1.000		Nm, Nm, Nm
INF	-0.2829	-0.3112	-0.08960	0.08960	1.000	Nm, Nm, Nm, Nm

Where M=Presence of multicolliearity

Nm=No multicollinearity

From the above table, we can conclude that multicollinearity exists in INDO and SAV. It means that there is a perfect or exact linear relationship among INDO and SAV, while there is no relationship existing in FDI and INF.

Evaluation Of Research Hypothesis

The research hypothesis as stated earlier thus:

H0: Industrial development does not contribute significantly to Nigerian economy growth (GDP). From the result and the analysis so far, was to reject H0: Industrial development index showed a positive effect on the economic growth (GDP). The t-test also showed that the impact of industrial output is statistically insignificant while the f-test implies the model is significant in explaining the variations in GDP. We therefore, conclude that the industrial development index has a significant on Gross Domestic Product (GDP).

CONCLUSION

In an attempt to explore the impact of industrial output on the economy with the inclusion of other variables affecting the economy (GDP) in Nigeria such as savings, inflation, and net foreign Direct Investment using the Ordinary Least Square (OLS) estimator, the findings were made.

a. Industrial output was not statistically significant in terms of its influence on the economic growth.
b. The sign observed is positive but not strong to be significant. It is deserved that industrial output is not significant to improving the level of economic growth, although it has a positive relationship with GDP but was not significant to improve the level of economic growth. Inflation had a negative relationship with GDP. Foreign Direct Investment (FDI) had a positive relationship with GDP while savings had a positive relationship and also a significant impact on economic growth.

The above findings call for strategic policy recommendation so as to restructure industrial output on the right track so as to impact significantly on economic growth (GDP).

RECOMMENDATIONS

1. The Bank of Industry (BOI) should be ready to aid Nigerian industrialization along Nigeria's line of development and not a total shift to accepting models which worked elsewhere given their environment and circumstance which differs from place to place.
2. There is also the need for proper allocation and management of existing industries so as to ensure proper and positive linkage effects on the economy.
3. Awareness also needs to be made for people or investors and industrialization to be aware of opportunities available whereby they can obtain credit form the World Bank.
4. The general and common problem faced by a developing economy like ours – inadequate infrastructure should be tackled by the government – efficient production and distribution need reliable supply of electricity, water an good transportation network. The presence of these lessens the burden of industrialists and thus enhances their ability to service their debt obligations.
5. The Nigeria industrialist could as well assist in many wastes to achieving the nation's long goal of industrialization – through better organization of their businesses and by preparing good feasibility studies and keeping proper books of accounts. This applies more specifically to the small scale industries that seem more favored by the Bank of Industry who see based on experience government's king size industrial dreams as waste-pipes through which scarce resources are lavished.
6. Productivity is the most desirable form of economic growth. Hence, there is need to encourage and accelerate the factors that affect productivity in the country especially manpower and skills for as long as productivity is low, there cannot be a meaningful growth. Effort should be made to increase agricultural¬productivity through the supply of necessary inputs to farmers.
7. Government should ensure political stability and also invest in the people since high¬economic performance is a function of the people working in the country (Capacitiy Development).
8. Government should pursue a favorable policy framework and provide necessary infrastructures and create an enabling environment will foster huge investment in research and¬development.
9. Government industrialization policies should be one that creates fair playing grounds for foreign investors as this will go a long way in increasing our Foreign Direct Investment which in turn leads to enhanced economic growth. Some of Nigeria's key medium term challenges to attracting investment in the manufacturing sector are its challenging business environment, widespread corruption, and high levels of poverty. These issues could see companies looking to enter the West African market choosing Ghana rather than Nigeria, especially since Ghana has a significantly more investor-friendly business climate. The country is ranked 67th in the world in the World Bank Doing Business Index, compared to Nigeria's 147th position. Over the short term, though, Ghana has many challenges of its own, mainly due to fiscal indiscipline in recent years. Large increases in government spending have led to high inflation and interest rates, a sharp depreciation of the cedi, as well as foreign exchange shortages. The country has also suffered from power shortages, though the completion of gas processing infrastructure should boost the availability of electricity and reduce the need to import expensive fuel to generate power.
10. The issue of electricity is one of the biggest obstacles for the development of the industrial sector, and therefore improving electricity generating capacity will be an important driver of industrial growth and development.

REFERENCE

1. Adeola, F. A. (2005) Productivity performance in developing countries: Case study of Nigeria. United Nations Industrial Development Organization (UNIDO) Report.
2. Ayodele, A.I & Falokun, G. (2003). The Nigerian Economy: Structure and Pattern of Development, JODAD Publishers.
3. Ajakaiye, D. O., & Fakiyesi, T. (2009). The Global Financial Crisis and the Nigerian Economy. Research Report Submitted to Overseas Development Institute, UK. Presented at the Department of Economics, University of Lagos.
4. Amakom, U. (2012) Manufactured Exports in Sub-Saharan African Economies: Econometric Tests for the Learning by Exporting Hypothesis. American International Journal of Contemporary Research. Vol. (2) 4.
5. Central Bank of Nigeria. (2006). Central Bank of Nigeria Statistical Bulletin, Vol.17.
6. Central Bank of Nigeria. (2008). Central Bank of Nigeria Statistical Bulletin, Vol. 19.
7. Central Bank of Nigeria. (2009). Central Bank of Nigeria Statistical Bulletin, Vol. 20.
8. Central Bank of Nigeria. (2010). Central Bank of Nigeria Statistical Bulletin Vol. 21.
9. Central Bank of Nigeria. (2011). Central Bank of Nigeria Statistical Bulletin, Vol.22.
10. Central Bank of Nigeria (2011) Statement of Accounts and Annual Reports. Abuja: Central Bank of Nigeria.
11. Central Bank of Nigeria. (2012). Central Bank of Nigeria Statistical Bulletin, Vol. 23.
12. Central Bank of Nigeria. (2013). Central Bank of Nigeria Statistical Bulletin, Vol. 24.
13. Chete, L. N. and Adewuyi, A. O. (2004): "NISER, Survey of Business Conditions, Experience and Expectations in the Manufacturing Sector", Nigerian Institute of Social and Economic Research (NISER).
14. Dauda, R. O. S. (2006): "The Determinants of Manufacturing Sector Growth Performance in Nigeria. "Nigerian Journal of Economic and Social Studies, Vol. 5.
15. Englama, A.; Duke, O.; Ogunleye, T. and Isma'il, F. (2010) Oil Prices and Exchange Rate Volatility in Nigeria: An Empirical Investigation. Central Bank of Nigeria Economic and Financial Review. Vol. 48/3 September.
16. Fashola, M. A. (2004): "A Scheme for Nigeria's Optimal Industrial Development in Industrialization, Urbanization and Development in Nigeria (1950-1999), ed: M. O. A. Adejugbe, Concept Publications Limited.
17. Kaldor, N. 1967. *Strategic Factors in Economic Development*. New York: W.F. Humphrey Press.
18. Kayode, M.O. and O. Teriba, eds. 1977. *Industrial Development in Nigeria*. Ibadan: University Press.
19. Olapade, B. C., & Olapade, D. O. (2010). The Impact of Government Expenditure on Economic Growth and Development in Developing Countries: Nigeria as a Case Study. Retrieved from www.ecomond.org/files/ papers/1569pdf. on 30th March 2015.
20. Ogbu, O. (2012) Toward Inclusive Growth in Nigeria. The Brookings Institution's Global Economy and Development Policy Paper. No. 2012-03, June.
21. Tamuno, S.O. & Edoumiekumo, S.G. (2012). Industrialization and trade globalization: What hope for Nigeria? International Journal of Academic Research in Business and Social Sciences, 2(6), 157-170.
22. The World Bank (2012) World Bank Development Indicators. Washington D.C.
23. United Nations Development Programme (2011) Human Development Reports. New York: Palgrave Macmillan.