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SOCIETY FOR SCIENCE AND EDUCATION

Industrial Policies, Manufacturing Sector Development and Macroeconomic Stability in Nigeria

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ABSTRACT

The primary focus of this study is on policy determination of industrialization and manufacturing, and the latter's impact on macroeconomic stability in Nigeria. Since independence, Nigeria's potential of becoming a global economic giant has been wasted away due to lack of diversification and sluggish manufacturing sector. Government appears to be both the problem and solution to Nigeria's industrialization. Qualitative and quantitative analysis were applied involving primary and secondary time series data. Questionnaire survey and multiple regression analysis (ARCH) were adopted. The model of manufacturing cannot be complete until political will becomes a major variable/determinant. The survey attributed 32 percent of industrial failure to political factor and lack of political will. This is why Nigeria has not been successful in facilitating industrial transformation, despite the rich endowment. The maximum political commitment to propel industrialization has been absent. Industrialization and manufacturing is state-led through policies and interventions, actualized by private sector investments. Domestic manufacturers invest capital to provide alternative infrastructure for their operations. Consequently, they bear prohibitive costs which result in loss of competitiveness and profitability in the domestic and foreign markets. This is enough dis-incentive to manufacture. It becomes cheaper for them to import from Asia and Europe to repackage and retail. It is a macroeconomic damage that most of Nigeria's entrepreneurs are merely hawkers of foreign goods for foreign manufacturers, where capital is repatriated in a vicious cycle on daily basis, leaving Nigeria poor and the economy sick. This study recommends strict policy implementation, promotion of home-grown technology by investing in education, skills acquisition, research and development and also bargaining with foreign firms to enable technology transfer. Expansionary monetary and fiscal policies, tariff and exchange rate policies to boost domestic manufacturing, domestic demand and export promotion. The study finally concludes that Nigeria can industrialize with aggressive expansion of domestic markets for goods locally manufactured.

Keywords: Manufacturing, economic diversification, exchange rate, Inflation rate, industrial policy, home-grown technology, Macroeconomic stability.

INTRODUCTION

Industrial development in Nigeria is a classic illustration of deficient structure of the economy, the country has neglected a vital manufacturing sub-sector through policy inconsistencies and distortions attributed to colonialism and resource curse (Adeola, 2005). For six decades since independence in 1960, macroeconomic indicators of the level of industrialization in Nigeria are unimpressive. The British met hand-hoe agriculture in 1904 and left it behind at 1960, without any significant changes in agricultural technology. It was just the exports of cotton, cocoa, groundnut and palm oil. Industry was totally ignored. British manufacturers preferred exporting their manufactured goods to establishing industries in Nigeria, (Atul-Kohli, 2008; Abba and Alkasum,1985). Economic exploitation was very much a part of colonialism, and the institutional characteristics acquired from colonialism have adversely affected Nigeria's industrialization with numerous political and economic distortions, (Dike and Onwuka, 1985; Nafziger, 1982). These range from dependency to corruption and wasting of the nation's scarce development resources for decades. Macroeconomic convergence and macroeconomic stability have always been issues of policy without proper implementation. Nigeria's industrial sector has been characterized by high import content of industrial inputs, inflation, volatile exchange rates, dwindling capacity utilization, high cost of production, low value addition, poor quality control, declining output growth, low employment generation and inadequate linkages with other sectors of the economy (Eneji et al,2020; Obioma & Ozughalu, 2005).

Unemployment and poverty tend to perpetuate in Nigeria, given the geometric ratio of increase in population without a corresponding increase in industrial production. Thus, it becomes worrisome considering that Nigeria started out with similar macroeconomics statistics (indicators) as countries like Singapore, Malaysia, India, Brazil, Indonesia, and South Korea and even obtained independence earlier (in the year 1960) than Singapore (in the 1965) but these countries' economies have become highly diversified, (Kwan-Suk and Joon-Kyung, 1985; Awyn-Young,1995). Their manufacturing activities are contributing significantly to Gross Domestic Product in terms of industrial output and industrial employment, while Nigeria's economy remainslargely rudimentary with her manufacturing sector accounting for a meager portion of her GDP and vulnerably import-dependent, (Forest,1992; Olukoshi and Adebayo,1995).

STATMENT OF THE PROBLEM

Given her endowments and the catalog of industrial policies, Nigeria would have been industrialized. However, since independence, Nigeria's potential of becoming a global economic giant has been wasted away due to lack of diversification and sluggish manufacturing sector. With the inaccurate SAP policies imposed on Nigeria by the IMF and the World Bank in 1986, de-industrialization has been aggravated with attendant poverty, unemployment, inflation, increased debts, and balance of payment problems. Nigeria has been a primary commodity exporting economy that is highly dependent on imports of manufactures and spare parts. Nigeria has general weakness in the structure of the economy and the business environment due to poor implementation of industrial policies. About 80 percent of Nigeria's consumptions are imported without domestic value addition, and about 90 percent of her products cannot pass international trade standard to the West. There is urgent need to boost domestic manufacturing, reduce over-reliance on imports, economic vulnerability, increase exports and

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create employment in Nigeria. The sustainable commitment to industrialization and manufacturing seems to be absent. With 2020 being an unusual year, Nigeria is in a recession, two times within five months. The chain effects of Covid-19 pandemic, end SARS Protest, conflict and insecurity, there is need for macroeconomic adjustment of the structure of the economy, think outside the box and to do things differently about industrial policies. Inflation and interest rates are on the rise in Nigeria, against apriori expectations of inverse relationship. Unemployment and poverty rates are surging unsustainably and dangerously too, along with exchange rate volatility. There is no time that Nigeria needs to emphasize and implement industrialization and manufacturing than now. 2021 should be the post covid-19 and economic pandemics recovery and stabilization year for Nigeria. The country faces the challenge of capital inflows and reckless capital out flow and leakages through imports that needs policy intervention. Besides, Nigeria seems not to have shown any significant macroeconomic adjustment towards industrialization and steady economic growth.

Research Questions

The primary focus of this study is on policy determination of industrialization and manufacturing, and the latter's impact on macroeconomic stability in Nigeria. Basic to the established premise and problems, this study sets out to provide answers to the following research questions:

1. Is there any causal relationship between industrial policies and manufacturing sector development in Nigeria?
2. Does any causal relationship exist between the manufacturing sector and macroeconomic stability in Nigeria?
3. What are the impacts of industrial policies on manufacturing sector performance Nigeria?

Objectives of the Study

The broad objective of this research is to appraise industrial policies on manufacturing sector development in Nigeria. The specific objectives are stated as follows:

1. To measure any causal relationship between industrial policies and the manufacturing index in Nigeria.
2. To determine the long-run relationship between manufacturing sector and macroeconomic stability in Nigeria.
3. To evaluate the impacts of industrial policy on manufacturing sector performance in Nigeria.

Hypotheses of the Study

The following hypotheses are tested in the study:

1. H_{01}: There is no significant causal relationship between industrial policy and the manufacturing sector development in Nigeria.
2. H_{02}: There is no significant causal relationship between the manufacturing sector and macroeconomic stability in Nigeria.
3. H_{03}:Industrial policy has no significant impact on the manufacturing indexand macroeconomic stability in Nigeria.

Significance of the Study

Dynamic industrial economies are widely regarded as the defining characteristics of a modern state. Industrial policies seem to be powerful tools to promote rapid economic growth and development. However, they face taunting challenges in Nigeria. In the light of macroeconomic instability, economic recession, fiscal deficits, increase in poverty rate and unemployment, there is an urgent need for the Nigerian government to diversify the economy as well as expand industrial production in the country taking a clue from the West, and East Asian countries. This study will be of great importance to the policy makers. In addition, the study will help to provide a framework for understanding the relationship between industrial policies, manufacturing sector performance and macroeconomic stability in Nigeria. The study will stimulate further research into the model of manufacturing sector and economic growth.

CONCEPTUAL AND EMPIRICAL LITERATURE

The World Bank Report (1983; 1985) identified five subsectors of the industrial sector to include: manufacturing, mining, building and construction, electricity, water and gas. Manufacturing is the most dynamic part of the industrial sector, and without it, industrial development is impossible. The existing literature defines industrial policy in different ways as various aspects of state intervention in support of industrialization. Reich (1982) defined industrial policy as a set of governmental actions designed to support industries that have major export potentials and job creation capacity. Pack (2000), looks at industrial policy as actions designed to target specific sectors to increase their productivity and relative importance within the manufacturing subsector. In the same vein, Lin and Chang, (2009) defined industrial policy as a guide to government intervention to selectively promote manufacturing activities with the aim of industrialization. Industrial policies support the generation of domestic production and technological capacity in industries considered strategic to national development. It is no doubt that Alexander Hamilton observed that it is not only wealth, but the independence and security of a country appear to be materially connected with the prosperity of manufactures. In the context of this study, industrial policy is the regulatory framework that comprises laws, rules and regulations governing and facilitating the entry and operation of industries in Nigeria. It refers to deliberate government actions to directly or indirectly support industrial development. There could be intra-industry policy such as competition and pricing policy, employment policy and general governmental policy such as environmental and tax policy, infrastructure policy, laws for registration and standard regulations. Industrialization is a process of transforming raw materials and intermediate goods into finished industrial products leading to economic growth and macroeconomic stability. Its outcomes are; increase in the index of industrial production, economic, social and political stability, increase in consumption and exports, availability of skilled entrepreneurs, growing body of technological knowledge and emergence of home and foreign markets for industrial goods.

Manufacturing is the making of products from raw materials using various processes, equipment, operations and manpower according to a detailed plan that is cost-effective and generates income through sales. This definition considers cost effectiveness in the processing stage. The value added to the material through processing must be greater than the cost of processing to allow the processing firm to make a profit. Value addition can thus be defined as the increase in market value resulting from an alteration of the form, location or availability of a product, excluding the cost of materials and services. According to Balami (2006) Economic

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growth used as a proxy by GDP is often conceptualized as increase in output of an economy's capacity to produce goods and services needed to improve the welfare of the country's citizens. Jhingan (2007) opined that economic growth is related to a quantitative sustained increase in the country's per capita output or income accompanied by expansion in its industrial activities, consumption, capital and volume of trade.

In an attempt to facilitate and sustain industrialization in Nigeria, several policies and institutions have been put in place: the indigenization policy 1972 (amended 1973), the Structural Adjustment Program (SAP,1986), The Bank of Industry (BOI), the Standard Organization of Nigeria (SON), as well as industrial core projects (ICPs) such as the Iron and Steel Plants in Ajaokuta, Steel Rolling Mills in Jos, Warri, Kaduna; Petrochemical and Fertilizer Factories in Port-Harcourt, Cement Companies at Calabar, Benue and Nkalagu; Machine tools company several textile mills across the country and Sugar Plant in Numan. These were meant to provide the necessary foundation for industrialization in Nigeria, however, empirical literature shows that the ends has not justified the means. What types of policy are needed to facilitate Nigeria's industrialization and manufacturing and what is wrong? Nigeria's largest export earnings and contributions to GDP comes from oil and agricultural sectors, not industrial sector, (CBN, 2012; Ekpo, 2014). According to Duru, (2000), Nigeria has not been able to make positive progress in sustainable industrial development due to poor policy implementation, resulting to industrial failure. Adeoye ,(2014) examined the growth and structure of Nigeria's industrial sector and revealed that it is far behind due to poor and inconsistent policies implementation as a result of inadequate attention given to industries by the government. Similarly, Garba, (2012) identifies corruption, inadequate finances, multiple taxation and decayed infrastructure as the root causes of industrial failure in Nigeria.

Jeon (2006) set out to examine the relation between Manufacturing, Increasing Returns and Economic Development in China from 1979-2004. Both time-series and regional panel data formats were used to ascertain the relationship between productivity and economic growth and development. Secondary industry data was used as a proximate for manufacturing sector data. The study adopted Ordinary Least Square Regression Model in estimating this relationship. In terms of the first law, the results show the growths of secondary and tertiary industries are strongly correlated with the growth of GDP. The variation of the growth of secondary industry explains 90% variation of the growth of GDP.

Obasan and Adediran (2010) investigated the role of the manufacturing sector in the economic growth and development of the Nigerian economy covering twenty years, from 1980 to 2009. The study employs Ordinary Least Square Regression (OLS) model for this purpose. The findings suggest the existence of a very strong relationship between the manufacturing sector and economic development. Obamuyi, Edun & Kayode (2012) studied the relationship between the manufacturing output and economic growth, based on time series data from 1973 and 2009, using the co-integration and vector error correction model (VECM) techniques, they did not find any significant relationship between both variables in Nigeria. The reasons adduced for the non-performance of the sector was the massive importation of finished goods and inadequate financial support for the sector leading to reduction in capacity utilization of the manufacturing sector.

Again, the works of Olumuyiwa & Oluwasola (2016) examined the importance of the manufacturing sector for economic growth in some selected African countries. In an attempt to know whether the manufacturing sector hurt African economic growth in the long-term, they approached the estimation process by way of testing Kaldor's first law of economic growth using panel data for a sample of 28 African countries over the period 1981-2015. Results obtained from pooled Ordinary Least Squares, Fixed Effects, and System Generalized Method of Moments provides current evidence to support manufacturing as the engine of growth in Africa.

Theoretical Framework

This study adopts a combination of Bertrand and Cournot models in a profit maximizing hypothesis with a separation of ownership and control, (Tirole, 1988; Ray and Stiglitz, 1995; Sutton, 2007). Competition influences industrial policy and vice versa. Competition policy in the European Union (EU), the USA, China, India and Japan affects industrial policy towards research and development (R&D). Profits are derivable under quantity setting, (Cournot) and also under price setting, (Bertrand), though the two models are often interpreted as representing different degrees of competition, Carol et al, (2016).The basic intuition of the Bertrand model is that unless prices are the same and equal to the common marginal costs of "N" firms (in this case domestic and foreign firms), each firm has an incentive to undercut the other. There are two firms (say Nigeria and Chinese firms) producing a homogeneous product (say textile). The two firms interact in the market and they simultaneously and independently set prices p1 and p2, and both firms have the same constant marginal cost "c". The Chinese firm with the lowest price (better endogenous characteristics) gets all the market demand at that price. It is only if the two prices are the same that each firm gets half the market demand at that price, producing Nash equilibrium outcome of the game; $p1^* = p2^* = c$.

The basic assumption of the Cournot model is that under certain conditions regarding demand and costs, market power and total industry profits increase as concentration in an industry increases. Higher concentration increases prices and profits because firms have more market power, though it might also facilitate collusion among firms. This potential link between concentration and market power has been influential in the practice of competition policy. Concentration is itself endogenous; both concentration and profitability are determined by basic industry characteristics such as technology, R&D, advertising, demand and general enabling environment, which are inadequate in the context of local industries in Nigeria. The demand is even tilted towards imported products. Increase in marginal cost asymmetry across firms (foreign and domestic) in a Cournot oligopoly raises both industry concentration and industry profits. However, the opposite holds as in Nigeria where foreign firms use favorable industry characteristics to reduce their marginal costs, while domestic industries with unfavorable characteristics and capacity constraints face increases in marginal costs. The competition becomes highly skewed and scaled, in favor of foreign multinationals.Nigerian industries face stiff competition with foreign industries. The Cournot and Bertrand models provide better approximation to Nigeria's industry characteristics as in the textile industry, steel and automobile industry, and manufacturing and telecommunications industries. Industry profits and specific firm's profits vary. There may be profits in the industry, but these profits are hi-jacked by foreign firms, while Nigerian firms run at a loss.

The major weakness of these models is that firms do not take their business decisions simultaneously, and due to operational secrets, firms usually do not know their rivals' costs,

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hence increase in marginal costs asymmetry across firms is not realistic. Also technology transfer from foreign firms to local firms is difficult. As a solution to these weaknesses, government needs to regulate firms with market power under asymmetric information to balance market and industry competition. There should be regulation of trade liberalization in favor of domestic infant industries. Government, through its policies, needs to have firm control of domestic demand for imports. There should also be strict regulation of technology transfer and industry employment policy.

METHODOLOGY

The methods of analysis used in this research are descriptive and quantitative analysis. A total of 380 questionnaire survey was carried out, with 361 valid ones received. These methods of analysis were adopted to allow for proper and detailed analysis of data using tables, simple percentages evaluation, models, charts and graphs. Also, regression analyses were used to estimate the models formulated.

MAJOR INDUSTRIAL POLICIES AND MANUFACTURING SECTOR DEVELOPMENT IN NIGERIA

Table 1: Catalog of some of the Industrial Policies/Institutions in Nigeria

POLICY	YEAR
Customs Duties(Dumped and Subsidized Goods) Act	1958
Import Substitution Industrialization (ISI)	1960s
Exchange Control Act	1962
Companies Act	1968
Industrial Development(Income Tax) Act	1971
Industrial Training Fund Act	1971
Nigerian Enterprise Promotion Decree (Indigenization Policy)	1972(1977)
National science and technology (S&T) policy	1986
Structural Adjustment Program (SAP)	1986
The Raw Materials Research and Development Council	1987
Nigerian Export Credit Guarantee and Insurance Decree	1988
The New Industrial Policy of Nigeria	1989
Trade and Financial Liberalization Policy	1989
Small and Medium Enterprises Equity Investment Scheme (SMIEIS)	2000
The Bank of Industry	2000
National Economic Empowerment & Dev. Strategy (NEEDS)	2004
National Integrated Industrial Development (NIID)	2007
The Nigeria Vision 20:2020 Industrial Strategy & 7-Point Agenda	2007
Nigeria Bank for Commerce and Industry	1973
The Standards Organization of Nigeria (SON)	1971
Industrial Park Development Strategy(IPDS)	2009
The National Information Technology Development Agency(NITDA)Act	2007
The Nigerian Export Promotion Council Decree	1976

A national science and technology (S&T) policy was formulated and launched in 1986.The objectives of this policy were to increase public awareness in S&T and their vital role in national development and well-being; direct S&T efforts along identified national goals; promote the

translation of S&T results into actual goods and services, and to create, increase and motivate output in the S&T community. The S&T policy marked the beginning of the recognition of S&T efforts as a vehicle for successful industrial development in Nigeria. In order to facilitate the achievement of the 'self-reliance' aspiration of the S&T policy, the Raw Materials Research and Development Council, was established by Decree No. 39 in 1987. The Standards Organization of Nigeria (SON) was also established for the purpose of ensuring standardization and adequate quality control in industrial production. The S&T policy emphasized the transfer of foreign technology to local firms, via the licensing and registration of patents, trademarks, technical assistance, research and development, training, and operations.

In line with the NEEDS and Vision 20:2020 that sets the direction of Nigeria's industrial policy, industrialization strategy aims at achieving global competitiveness in the production of processed and manufactured goods. This was to be achieved by linking the industrial activities with primary sector activities, integration of domestic and foreign trade, and service activities. However, by the end of 2020, the Nigeria industrial sector contributes less than 6 percent to aggregate economic activities, while manufacturing subsector of the industrial sector accounts for about 4 percent of the gross domestic product (GDP).

Challenges of Manufacturing Sector in Nigeria.

Does manufacturing sub-sector contribute to economic growth? It depends on its development. It is evident that the manufacturing sector contributes to economic growth. There are basically two possible reasons why manufacturing sector exerts positive influence on economic growth. The first relates to the fact that the expansion of manufacturing output and employment leads to the transfer of labor from low productivity and low sustainable sectors such as agriculture and oil respectively, to industrial activities that present higher sustainability and productivity levels. The outcome is an increasing overall productivity in the economy, with positive multiplier effects on the output of the former traditional sectors, (agriculture and oil sectors). The second reason for the relation between manufacturing growth and productivity relates to the existence of static and dynamic increasing returns in the industrial sector.

Table 2: Comparative Relevant Indicators: % Manufacturing & Agriculture to Real GDP in Selected Countries

Years/Countries	1960s	1970s	1980s	1990s	2000s	2010s	2020s
Nigeria	56.94 (6.53)	30.01 (6.90)	31.17 (6.63)	33.87 (5.07)	41.14 (3.95)	38.4 (6.55)	22.12 (11.6)
Brazil	16.83 (28.16)	12.69 (30.00)	10.45 (32.72)	6.87 (20.28)	6.09 (16.96)	6.6 (20.7)	4.44 (18.5)
South Korea	33.78 (15.57)	26.06 (21.61)	13.43 (27.51)	6.64 (27.14)	3.44 (27.52)	4.9 (30)	1.7 (33)
India	42.53 (14.25)	38.91 (15.75)	31.99 (16.57)	27.64 (16.29)	19.74 (15.30)	18.3 (15.4)	27.4 (17.4)
South Africa	10.03 (21.68)	7.26 (21.52)	5.48 (22.84)	4.11 (20.96)	3.19 (17.73)	2.8 (29.7)	1.8 (16.2)

Sources: World Bank 2012; CEIC Global Economic Data Indicators; Trading Economics Data, 2020.

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Static returns relate mainly to economies of scale internal to the firm, whereas dynamic returns refer to increasing productivity derived from learning by doing, 'induced' technological change, and external economies in production. Energy supply and energy consumption in the Nigerian manufacturing and industrial sector is comparatively low, far below global standard in support of effective industrialization. Nigeria has innovation deficiency in the energy sector, which also affects the agricultural sector and other sectors. However, Nigeria's energy resources endowments ought to be converted and utilized for industrial production.

The figures outside the brackets represent the percentage contribution of agriculture to GDP, while the figures in brackets represent percentage contribution of manufacturing to GDP.

Table 3a: Some Industrial potentials operating, but yet to attain full Capacity Utilization

Tie and die clusters in Oshogbo and Abeokuta	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Aba leather and footwear clusters	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Aba fashion and garment clusters	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Rice processing clusters in Ebonyi, Kebbi, Cross River, Lagos, Benue, Nasarawa, Niger and Anambra States	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Wood and furniture processing clusters in Calabar, Uyo, Ibadan and Osun.	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Nnewi automobile industry cluster	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Sea foods processing clusters in Borno, Niger, Cross River, Benue, Akwa-Ibom, Kebbi, Rivers and Kogi States.	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Computer hardware village , Nigeria Silicon Valley, Otigba, Lagos, Abuja	Capacity under-utilized, challenged by imports and unfavorable domestic policies

Table 3b: Other industrial endowments

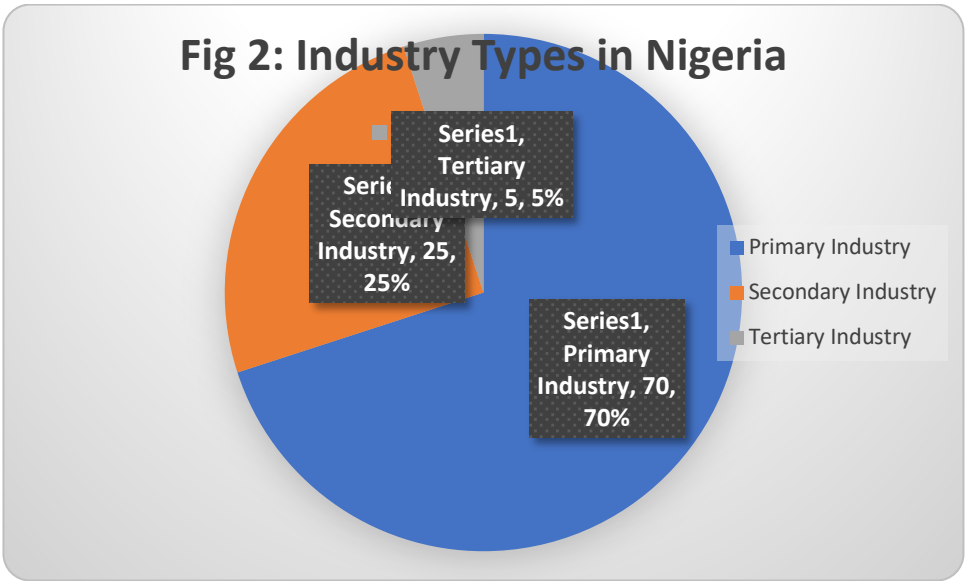
Fishery and sea foods	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Livestock processing	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Refined milk	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Metal, chemical and electricity generating industries	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Machine tools industries	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Tobacco related industries	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Car manufacturing industries	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Ship building	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Large scale investment in iron and steel and industrial inputs	Capacity under-utilized, challenged by imports and unfavorable domestic policies
pharmaceutical	Capacity under-utilized, challenged by technology, domestic policies and imports

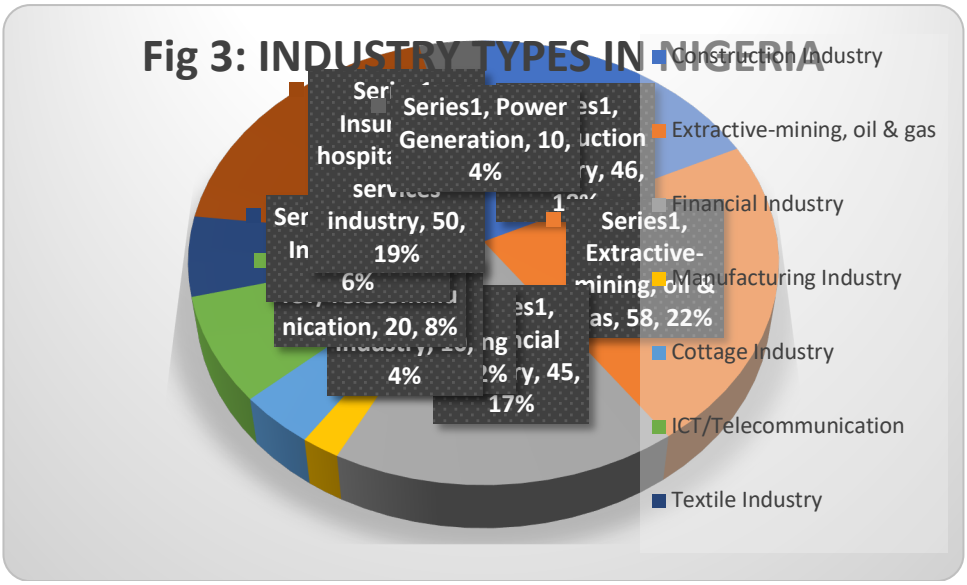
Table 3c: Cottage or Household Industrial Opportunities

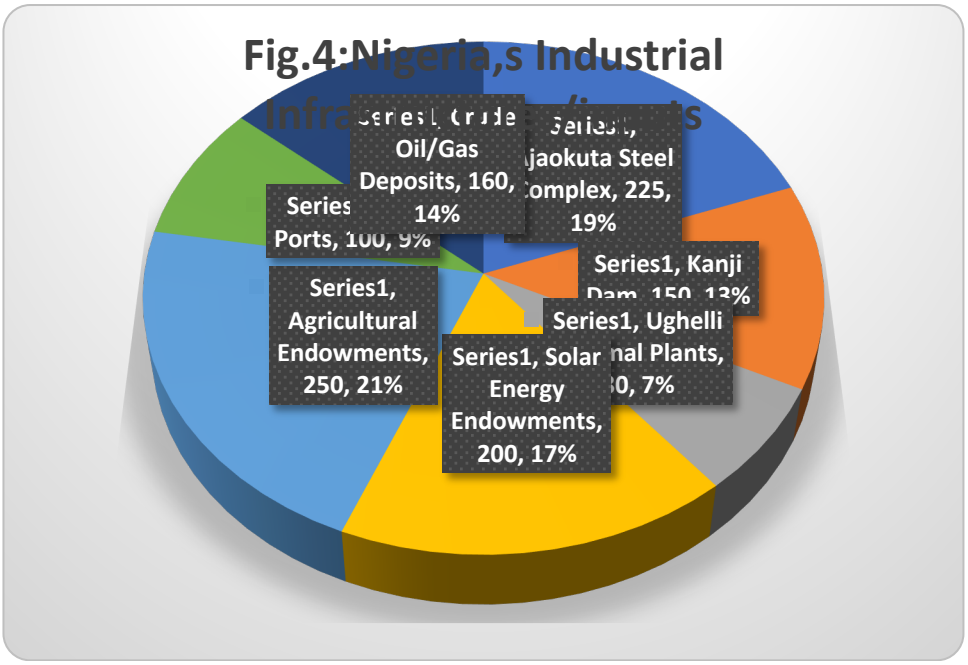
Shoe and leather works industry	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Textile and garment industries	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Agro-processing (cocoa, groundnut, Cashew, Fruits, palm oil products etc.)	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Toys and baby wears/napkins	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Ceramics, paper manufacture	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Arts and Culture	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Calculators and handsets	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Cosmetics and perfumes	Capacity under-utilized, challenged by imports and unfavorable domestic policies
Stationeries and utensils	Capacity under-utilized, challenged by imports and unfavorable domestic policies

Innovation deficits and lack of political will aremajor factors responsible for capacity under-utilization in the oil and gas industry, as well as the non-oil industries. The manufacturing sector has the potential to generate massive employment in Nigeria if the capacity was fully utilized. The sector holds the key to Nigeria's industrial development and macroeconomic stability.

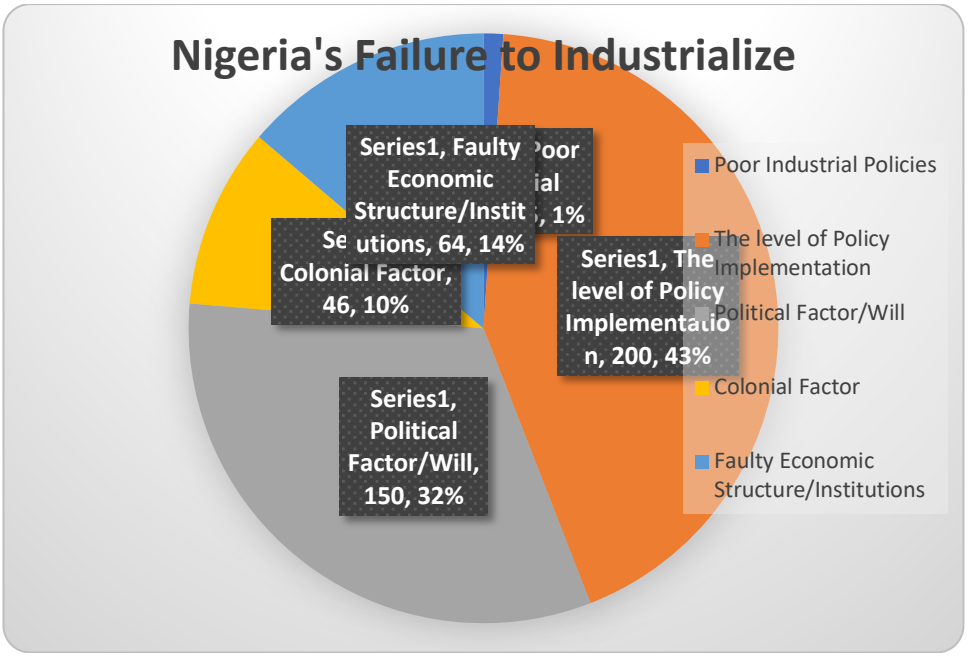
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Fig 2: Industry Types in Nigeria
Series1, Tertiary Industry, 5, 5%
Industry, 25, 25%
Series1, Primary Industry, 70, 70%
Primary Industry
Secondary Industry
Tertiary Industry


Fig 3: INDUSTRY TYPES IN NIGERIA
Series1, Power Generation, 10, 4%
industry, 50, 19%
6%
nication, 20, 8%
4%
17%
Series1, Extractive-
as, 58, 22%
Construction Industry
Extractive-mining, oil & gas
Financial Industry
Manufacturing Industry
Cottage Industry
ICT/Telecommunication
Textile Industry

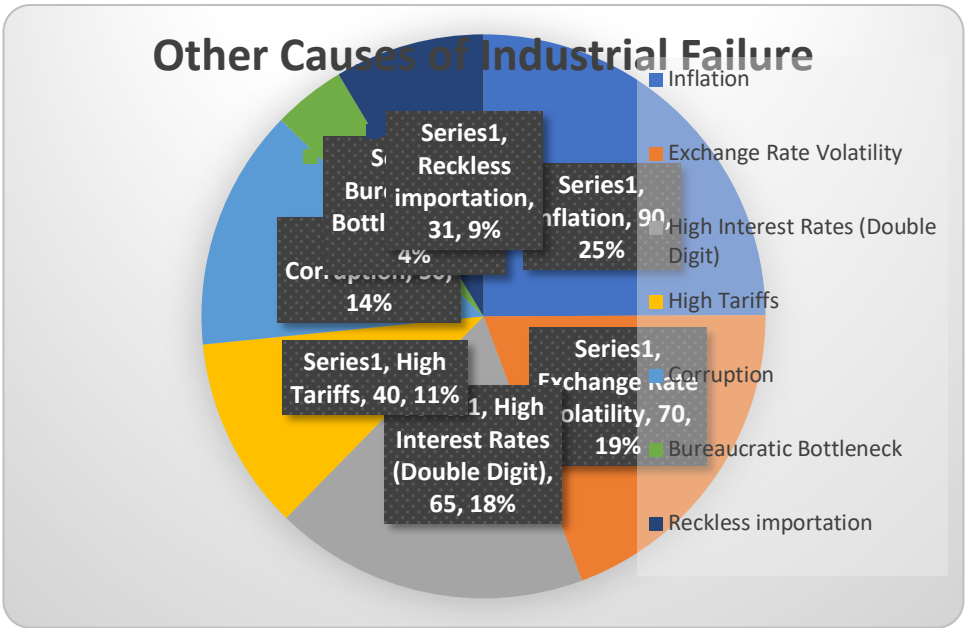


The question was raised on why Nigeria has not been successful in facilitating industrialization and manufacturing. The valid questionnaires received were 361, with the following responses:



Other Causes of Industrial Failure in Nigeria:

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Why Nigeria has not been successful in facilitating industrialization? The level of implementation of industrial policies has the lion's share with 43 percent. It shows clearly and significantly too, why Nigeria has not been successful in achieving industrialization and manufacturing. Nigeria started out the same time with South Korea, India and Brazil, but is now struggling to catch up. What alternative strategies of industrialization has Nigeria failed to adopt? Many blamed Nigeria's lack of industrialization on neo-patrimonial colonial background, but this practical survey shows that colonial factor had a small but significant 10 percent reason for Nigeria's industrial failure. Therefore, one cannot deny the fact that colonialism has a role to play in the process of state construction, economic structure and industrialization in Nigeria. Power is the currency that states use to achieve their desired industrialization and general development as in South Korea, India and Brazil. However, most at times it has been used illegitimately in Nigeria, leading to lack of desired industrialization and economic development. A clear example is the use of power during military rules in Nigeria that caused political instability and policy inconsistencies. The survey above confirms this by attributing 32 percent of industrial failure to political factor and lack of political will. This is why Nigeria has not been successful in facilitating industrial transformation. The maximum political commitment to propel industrialization has been absent. Industrialization and manufacturing is state-led through policies and interventions, actualized by private sector investments. Domestic manufacturers invest capital to provide alternative infrastructure for their operations. Consequently, they bear huge costs which result in loss of competitiveness and profitability in the domestic and foreign markets. This is enough dis-incentive to manufacture. It becomes cheaper for them to import from China and Europe to repackage and retail. It is a macroeconomic damage that most of Nigeria's entrepreneurs are merely hawkers of foreign goods for foreign manufacturers, where capital is repatriated in a vicious cycle on daily basis, leaving Nigeria poor and the economy sick. Underutilization of industrial capacity has resulted to low productivity of investment, low rate of returns, and very low aggregate absorptive capacity and vice versa. Due to over dependence on imports of manufactured and industrial inputs, exchange rate is a key determinant of manufacturing/industrial performance in Nigeria.

Do the economic and social indicators favor industrial production and manufacturing?

Table 4: Nigeria's Industrial Production and Value-Added Indices 2020

Corruption Index	26
Capacity Utilization (%)	15
Composite PMI	40.70
Competitiveness Index	116
Ease of doing Business (%)	10
Crude oil Dependence (%)	80
Solid Minerals (%)	0.10
Agricultural Value added (%)	25
Manufacturing to RGDP	-1.90
Manufacturing PMI (%)	5.2

Source: Authors' analysis of data 2020.

From the table, it is obvious that Nigeria's industrial sector suffers from capacity constraints. Transparency International (TI), in January 2021 rated Nigeria as the second most corrupt country in Africa, after Guinea Bissau and 149th out of the 180 most corrupt countries in the world. Apart from corruption, another social index with negative impact on Nigeria at the moment is insecurity. These affect investment, the ease of doing business, imports, exports control and manufacturing production. Since Nigeria has failed to have control over her manufacturing production, it means she has also failed to have control over inflation, especially imported inflation and exchange rate problems. If you can stabilize your production, then you can control your prices.

Challenges of the Industrial Sector

There are obvious challenges, and these challenges are multi-dimensional, ranging from infrastructure to institution, requiring a multi-dimensional approach. The primary data presented in table 5 is a clear demonstration.

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Table 5: Responses depicting major challenges of the Nigeria industrial sector

ITEMS	SA	A	UD	D	SD
1. There was no significant investment in power, railway, ports and other infrastructure	48%	50.5%	1.5%	0%	0%
2. There was no significant financial, legal and infrastructural support from the government	36.6%	51.6%	3.6%	5.2%	3.1%
3. There was no significant investment in manufacturing and export promotion	55%	34%	8%	3%	0%
4. Rails, roads and ports are extremely important for trade and industrialization	72.7%	25.8%	1%	0.05%	0%
5. Industrialization affects unemployment rate, poverty rate, exports and standard of living	40.2%	45%	5%	6.8%	3%
6. Inflation, exchange rate and imports affect industrial performance	50%	20.5%	15%	8%	6.5%
7. The Bank of Industry(BOI) and Standard Organization of Nigeria (SON) are currently doing a great job to facilitate industrialization and manufacturing in Nigeria	30%	32%	10.6%	20%	7.4%
8. Local entrepreneurs need more encouragement to invest in domestic import substituting industrial production	20.4%	48.3%	6.3%	15%	10%
9. Expansionary monetary and fiscal policies are needed to shift incentives in favor domestic manufacturing and exports promotion	36%	34%	5.5%	20%	4.5%
10. Control of tariffs, subsidies, excise duties, credits, loans, business registration and land ownership could promote industrialization and manufacturing in Nigeria	40..6%	30%	5%	24.4%	0%

Policy is also identified as a major challenge to industrialization and manufacturing in Nigeria. What types of policies are needed to facilitate Nigeria's industrialization and manufacturing? This is shown in table 6.

Table 6: Responses on policy needs.

ITEMS	SA	A	UD	D	SD
1. Education, Research and Development Policies	45.4%	42.3%	3.1%	5.6%	3.6%
2. Trade, capital, credits and technology transfer policies	53.6%	41.8%	2%	2.1%	0.05%
3. Infrastructure policies	50%	33.7%	6.3%	7%	3%
4. Exports and Imports policies	31%	60%	2%	4.8%	2.2%
5. Financial reform policies	10%	40.5%	0%	30%	19.5%
6. Security policies	40.3%	35%	5.4%	10%	9.3%
7. Policies to protect infant industries	48%	44.6%	3%	1.4%	2%
8. Investment policies	20.5%	30%	10%	20.5%	29%
9. Land policy	10%	15.8%	25%	40.1%	9.1%
10. Legal policies on patent, copyright, trademark, standardization, and company registration, tax	45%	22%	3.5%	19%	10.5%
11. Environmental policy, climate change and global warming	36%	20.4%	12%	20.3%	11.3%
12. Broad macroeconomic policies	50.6%	33%	4%	10%	2.4%
13. Local Content development policy	51%	40%	2%	3%	4%

Nigeria's industrial failure and economic recession have market power explanations, though Covid-19 has had significant impact on Nigeria's trade, investment and economic growth. What are the underlying policies and development model? The underlying policies should be industrial policies and the development model is manufacturing. In order for the Nigerian industrial sector to function efficiently and for the economy to grow consistently, Nigeria needs to control a significant share of the regional and global markets. As a mere consumer, Nigeria has no significant market power until it becomes a serious manufacturer and exporter of diversified products. The absence of this is the cause of macroeconomic instability and the disease with the Nigerian economy, with titanic impacts on poverty, unemployment and inflation rates. Nigerian manufacturers face prohibitive costs due to policy duplication, over reliance on imports, lack of basic infrastructure and ex-inefficiency.

Nigeria should learn a lesson from a country like China in terms of aggressive manufacturing but with regulation of quality. China is selling cheap labor-intensive products like textiles, shoes and all kinds of consumer goods which is crowding out jobs for Africa's unskilled and semi-skilled labor. It also sells more sophisticated and fake products such as different electronic devices, mobile telephones, wrist watches, kitchen utensils, military uniform and security gadgets, cars and building materials, agricultural inputs and chemicals especially for low income consumers and the governments. The Chinese have intimidating foreign reserves, their economy has been growing consistently since the 1980s, and did not contract during covid-19 pandemic. China is using product differentiation to promote its exports with different marketing strategies and channels. They develop a network of big and small Chinese traders that penetrate local markets and assures regional sales where other foreign traders do not go. These have helped the Chinese to capture African and Asian markets for Chinese goods. Nigeria has the industrial potential to do these in the whole of Africa and beyond, but rather, Nigeria

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has been industrially captured by European, American, Chinese and other Asian entrepreneurs. In the present global challenges of open trade, the pandemic and changing technology, governance makes the difference in building an export-driven economy in Nigeria. Government is the prime promoter of industrial policies, (Ndebbio and Akpan, 1991). Adequate provision of physical infrastructural facilities such as feeder/access roads, water, electricity, communications, storage and marketing facilities are preconditions for purposeful industrial development.

Model Specification

This study adopts the multiple linear regression model. Models for time series data as this are tested for autocorrelation usually with the assumption of homoscedastic disturbances. A form of homoscedasticity that can be encountered in time series models is the (generalized) autoregressive conditional heteroskedasticity (ARCH) or (GARCH). The estimation procedures for ARCH were also carried out using Eviews 10. The concept of ARCH is suitably applied for volatile markets, in speculative markets like exchange rates and stock markets.The functional form of the model is specified as;

$$MANIN = f(IP, ECHR, INFR, BOP) \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

Where:
MANIN= Manufacturing Index
IP= Industrial Policy
BOP= Balance of Payment
ECHR= Exchange Rate
INFR= Inflation Rate

The functional form in equation 1 above was transformed into a regressible model. In a multiple linear equation form, equation (1) becomes:

$$MANIN = \beta 0 + \beta 1IP \pm \beta 2\ ECHR - \beta 3NFR + \beta 4BOP + \mu t \quad \text{---------- (2)}$$

Industrial policy (IP) is represented by time variable which makes one year one data point. The balance of payment is a book keeping system for recording all receipts and payments that have a direct bearing on the movement of funds between a nation (private sector and government) and foreign countries. The BOP contains some key items such as; the current account, the capital account, trade balance and the official transaction balance, (Eneji, 2020). It is considered by this study as one of the essential measures of macroeconomic stability in relation to Nigeria's manufacturing sector.The current account shows international transactions that involve currently produced goods and services. The difference between merchandise exports and imports, the net receipts from trade is called the trade balance. When merchandize imports are greater than exports, we have a trade deficit, if exports are greater than imports, we have a trade surplus.

Regression Results

Table 7

Dependent Variable: MANIN				
Method: Least Squares				
Date: 04/09/21 Time: 22:48				
Sample: 1 37				
Included observations: 37				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.053193	2.559085	2.365374	0.0242
ECHR	-0.038013	0.020194	-1.882351	0.0689
BOP	-0.000665	0.001232	-0.539994	0.5929
INLFR	-0.121686	0.083936	-1.449747	0.1569
IP	0.194600	0.187010	1.040586	0.3059
R-squared	0.672819	Mean dependent var		3.929730
Adjusted R-squared	0.569421	S.D. dependent var		5.561967
S.E. of regression	5.365436	Akaike info criterion		6.322921
Sum squared resid	921.2129	Schwarz criterion		6.540612
Log likelihood	-111.9740	Hannan-Quinn criter.		6.399667
F-statistic	1.671400	Durbin-Watson stat		1.024528
Prob(F-statistic)	0.180878			

Table 8 ARCH-Autoregressive Conditional Heteroskedasticity

Dependent Variable: MANIN
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 04/09/21 Time: 22:53
Sample: 1 37
Included observations: 37
Convergence achieved after 34 iterations
Presample variance: backcast (parameter = 0.7)
GARCH = C(6) + C(7)*RESID(-1)^2 + C(8)*GARCH(-1)

Variable	**Coefficient**	**Std. Error**	**z-Statistic**	**Prob.**
C	4.248729	2.018154	2.105255	0.0353
ECHR	-0.043265	0.027117	-1.595518	0.1106
BOP	-0.000555	0.001892	0.293246	0.7693
INLFR	-0.021503	0.128650	-0.167142	0.8673
IP	0.283591	0.206288	1.374729	0.1692
Variance Equation				
C	4.331179	5.202657	0.832494	0.4051
RESID(-1)^2	0.627603	0.479338	1.309312	0.1904
GARCH(-1)	0.349898	0.366325	0.955159	0.3395
R-squared	0.510844	Mean dependent var		3.929730
Adjusted R-squared	0.400301	S.D. dependent var		5.561967
S.E. of regression	5.562804	Akaike info criterion		6.404583

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Sum squared resid	990.2333	Schwarz criterion	6.752890
Log likelihood	-110.4848	Hannan-Quinn criter.	6.527378
Durbin-Watson stat	1.036179		

Source: Authors' computation using Eviews-10. Secondary time series data and graphs depicting analysis are presented in the appendices.

Table 9

Pairwise Granger Causality Tests			
Date: 04/09/21 Time: 23:13			
Sample: 1 37			
Lags: 2			
Null Hypothesis:	Obs	F-Statistic	Prob.
ECHR does not Granger Cause MANIN	35	1.35540	0.2732
MANIN does not Granger Cause ECHR		1.19079	0.3179
INLFR does not Granger Cause MANIN	35	2.72331	0.0819
MANIN does not Granger Cause INLFR		3.88695	0.0315
BOP does not Granger Cause MANIN	35	3.28475	0.0513
MANIN does not Granger Cause BOP		6.92926	0.0034
IP does not Granger Cause MANIN	35	4.35753	0.0328
MANIN does not Granger Cause IP		6.09622	0.0064
INLFR does not Granger Cause ECHR	35	0.56904	0.5721
ECHR does not Granger Cause INLFR		0.84150	0.4410
BOP does not Granger Cause ECHR	35	0.11471	0.8920
ECHR does not Granger Cause BOP		0.56142	0.5763
IP does not Granger Cause ECHR	35	6.68134	0.04255
ECHR does not Granger Cause IP		4.59211	0.00683
BOP does not Granger Cause INLFR	35	5.81562	0.0073
INLFR does not Granger Cause BOP		5.49076	0.0093
IP does not Granger Cause INLFR	35	0.75386	0.0054
INLFR does not Granger Cause IP		2.65338	0.6228
IP does not Granger Cause BOP	35	5.94625	0.2475
BOP does not Granger Cause IP		3.31117	0.0698

DISCUSSION

Results show negative relationship between manufacturing (MANIN), exchange rate (ECHR), inflation rate (INLFR) and imports, the latter proxied by the balance of payment (BOP). Industrial policy inconsistencies and lack of implementation, imported finished goods, high exchange rates and inflation rates have caused macroeconomic instability and crowded-out domestic manufacturing. Industrial failure in Nigeria is a transmission effect of policy failure and macroeconomic instability. Manufacturing failure granger causes macroeconomic instability and vice versa. Nigeria has been an outlet for British manufactured goods, and presently, for manufactured goods and consumables from China and other industrial countries. The institutions inherited from colonialism favored only the exports of primary commodities.

The nearly exclusive focus in the literature on appropriate policy choices is incomplete, even misleading. Industrial policy choices matter, and its implementation matters most. These policy choices must be explained, and more importantly, the impact of the same policy applied in two different countries may vary in outcomes due to different contextual settings, different initial conditions or backgrounds of the two economies, the political will and institutional conditions. On issues of comparative political economy, there are dramatic variations in performance across South Korea, Brazil, India and Nigeria, especially in rates of industrialization and manufacturing. Adaptability to state economic priorities is a necessary prerequisite for successful industrialization. Oil exports in Nigeriaprovided a ready source of income and demand for foreign manufactures which blinded the government against local content development and other sectors for decades, but this is not sustainable. It was worsened by policy inconsistencies, political instability, corruption, low quality, high costs of imported inputs, failure to support indigenous entrepreneurs and develop local contents, which reinforced the existing weakness of the national private sector in manufacturing and industry. Nigeria did not have a significant industrial base. Amongst the factors hindering Nigeria's industrialization are low rates of investment in the sector and unfavorable domestic preconditions. There is a causal positive relationship between manufacturing exports and economic growth. Manufacturing is a necessary and sufficient condition for macroeconomic stability in Nigeria. Consequently, Nigeria needs greater economic competitiveness through industrialization, manufacturing and exports. The Bank of Industry (BOI) and the Standard Organization of Nigeria (SON) are doing a great job, however, local entrepreneurs need more encouragement to invest in domestic import-substituting industrial production.

There is a significant bi-directional causality between industrial policy, manufacturing, exports and macroeconomic stability. The absence of significant manufacturing exports is significantly responsible for macroeconomic instability in Nigeria and vice versa. Weak industrial sector and over-reliance on imports have created inflationary trends, exchange rate volatility and macroeconomic instability. Domestic manufacturers face serious financial stress, policy somersault and inconsistencies. Land, machines, buildings and other industrial inputs are inflated beyond the reach of small scale industrial entrepreneurs. Total expenditure on electricity, plant and equipment that is mostly undertaken with the expectation of reducing costs, producing goods, increasing competitiveness, generating profits and growing the economy often produces the opposite outcomes.

Nigeria has had a number of trade facilitation initiatives suitable for industrialization. In the year 2020-2021, we have had the African Free Trade Facilitation Agreement signed with common border arrangements, but with severe domestic fiscal crisis. We also have the Economic Partnership Agreement and the Nigeria Industrial Revolution Plan. What matters is evaluating the implementation of these initiatives. If 60 percent-70 percent of Nigeria's production and consumption are home-made, with quality value-addition, it will reduce over reliance on imports, economic vulnerability and create employment. Nigeria will benefit from these plans and agreements. Government revenue will increase for industrial infrastructures, per capita income as well as the standard of living will rise. However, smaller African countries like South Africa, Ghana, Kenya, Ethiopia, etc. could hijack the gains of trade agreements, if Nigeria's manufacturing subsector remains stagnant. Adequate preparation should be made to facilitate domestic manufactures and exports. Presently, currency and exchange rate is a serious challenge to Nigeria's commerce and industry. The Nigerian economy is vulnerably tied

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to the US Dollar. This hinders domestic, regional trade facilitation as well as industrialization. Importation of industrial inputs are so costly that Nigerian manufacturers are not competitively profitable both at domestic and foreign markets.

RECOMMENDATIONS

This study recommends strict industrial policy implementation, economy diversification, manufacturing value added, local content development, imports restriction, and export promotion. Nigeria should strengthen her capacity to produce. An integrated manufacturing transformation, using the instrument of industrial policy is urgently needed in the oil and non-oil sectors. Government intervention aimed at boosting private sector's investment/profitability is strongly recommended to achieve rapid industrialization in Nigeria: creating enabling environment and putting solid infrastructure in place. Others are tariff, subsidies, credit control, research and development, technology promotion, manpower training and removal of bureaucratic bottlenecks in business registration, land ownership and general transactions.

If Ajaokuta and other steel complexes in Nigeria were well developed, Nigeria will have no business importing iron and steel. The costs of these inputs for building and construction will drastically reduce, railway inputs, cars, spare parts, bicycle refrigerators, tractors and machineries and other farm and industrial inputs will be domestically manufactured, used and also exported. The multiplier effects on government revenue and jobs will be amazing. A survey of Nigerian streets shows dumping of bicycles, cars and machineries that are not road-worthy, but were imported using our hard-earned foreign exchange and causing macroeconomic instability. If there are not financial control or exchange rate policy to protect domestic manufacturers, high exchange rate has forced many out of business due to prohibitive costs; cost of imported raw materials, electricity, transportation and inflation. This is why local manufacturers in Nigeria find it difficult to produce competitive products both for exports and for the domestic markets. For instance, a rubber shoe made in Nigeria at N2000 is more expensive than a synthetic leather shoe imported from China at N1000.

Promotion of technology by investing in education, skills acquisition, research and development and also bargaining with foreign firms to enable technology transfer. Expansionary monetary and fiscal policies, tariff and exchange rate policies to boost domestic investment and domestic demand. Others are newer policies that shift the incentives in favor of export promotion, promoting production for both domestic and foreign markets, subsidizing exports without devaluing domestic currency. We recommend the aggressive expansion of domestic markets for goods locally manufactured.

CONCLUSION

Nigeria deserves restitution from her colonial masters for the exploitation of her scarce resources and underdevelopment of her industrial sector. Again, Nigeria would have used the unsustainable huge oil revenue after independence to develop a sustainable industrial sector. Market imperfections prevalent in Nigeria necessitated state intervention, indigenization, and import substitution industrialization policies, but these have not been implemented to the latter. Industrial growth is a key determinant of any country's overall economic growth and macroeconomic stability. Furthermore, economic growth remains a core element of development. Government appears to be both the problem and solution to Nigeria's

industrialization. The only authority to create industrial policies and enforce compliance is the government. The model of manufacturing cannot be complete until political will becomes a major variable/determinant. Domestic manufacturing holds the key to Nigeria's industrialization and macroeconomic stability. Government should stop exporting primary products, rally round the private sector to mobilize our natural resource endowments and develop a technically up-to-date, diversified domestic economic structures characterized by dynamic manufacturing. Nigerian industries need infrastructure, security as well as market, which policy needs to implement.

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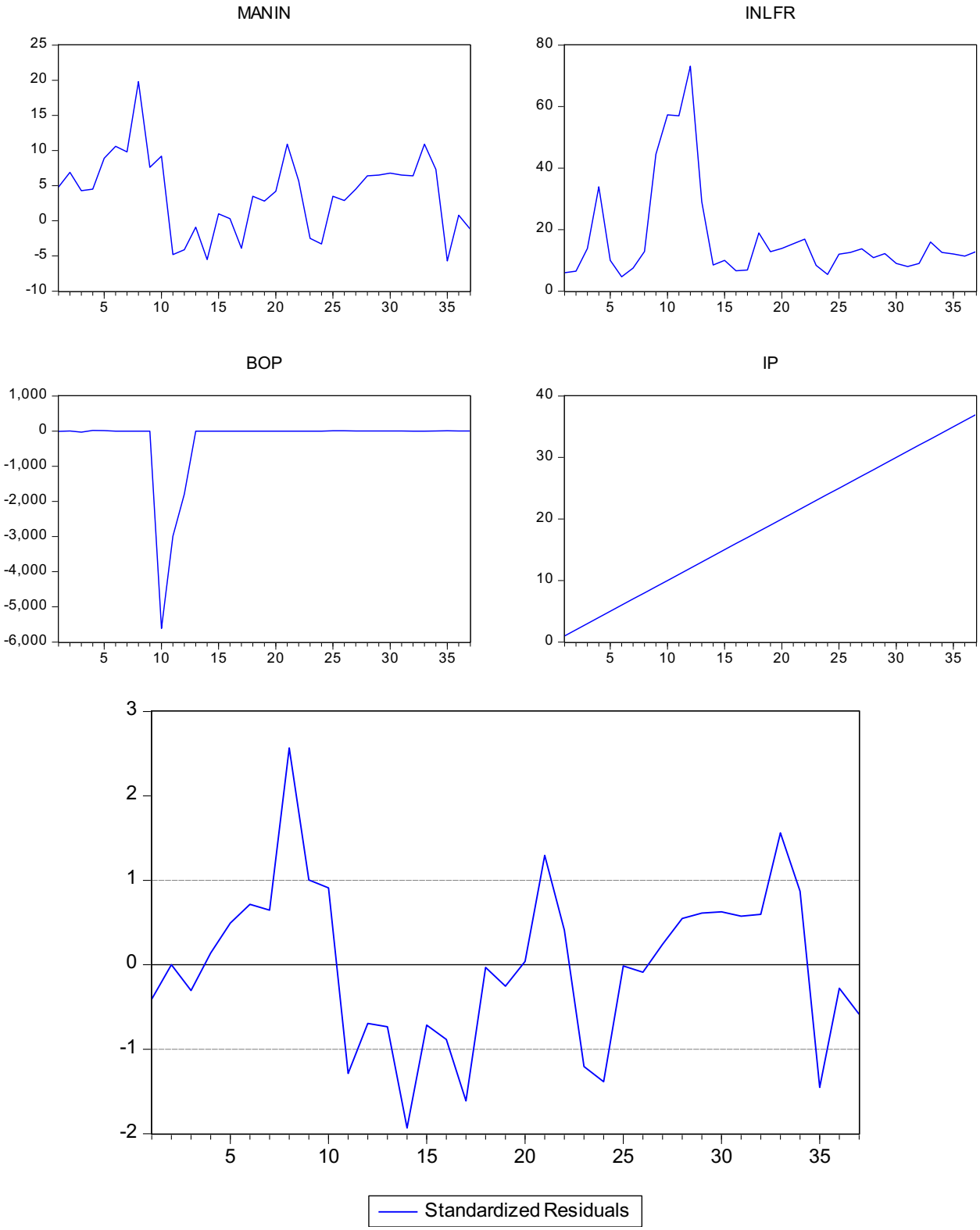
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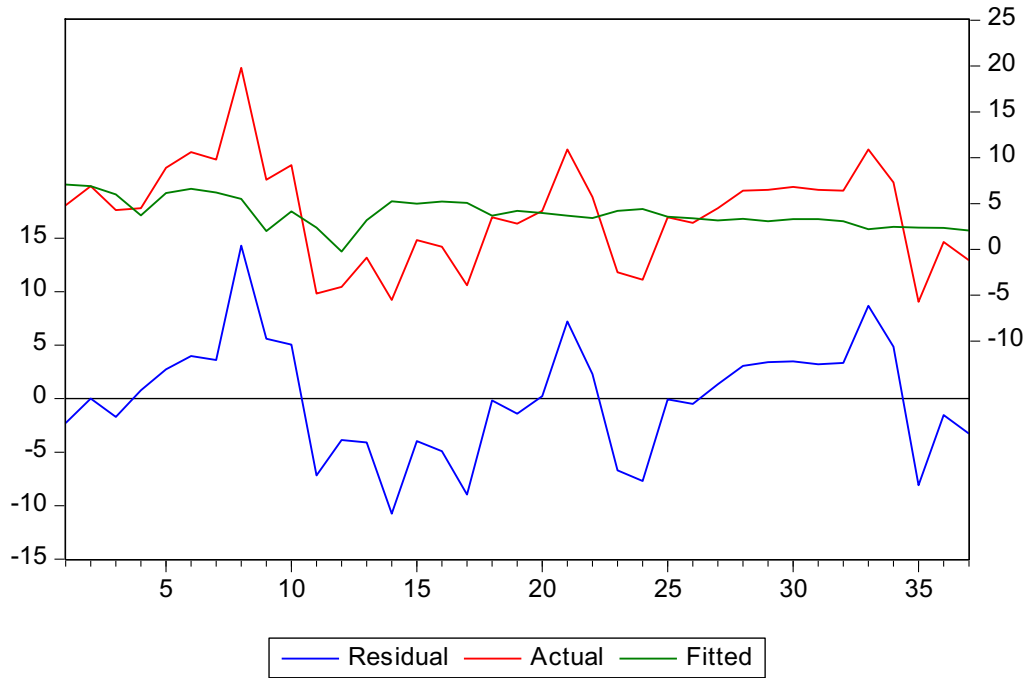
APPENDICES
DATA FOR REGRESSION

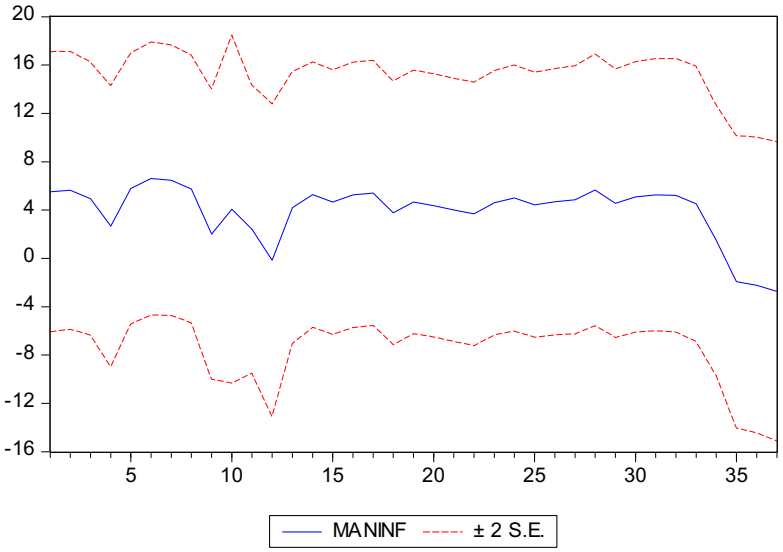
ECHR	INLFR	BOP	IP	MANIN	YEAR
0.426	6	-8	1	4.8	1960
0.563	6.5	1	2	6.9	1965
0.645	13.9	-29	3	4.3	1970
0.614	33.9	20	4	4.5	1975
0.53	10	12.94	5	8.9	1980
1.062	4.7	-2.31	6	10.6	1985
1.002	7.5	-2.74	7	9.8	1990
8.0596	12.9	-2.52	8	19.8	1991
9.9	44.5	0.16	9	7.6	1992
18	57.3	-5614	10	9.2	1993
21.86	57	-2989	11	-4.8	1994
21.87	73.1	-1794	12	-4.1	1995
22.05	29.1	-0.7	13	-0.9	1996
64.82	8.5	-0.6	14	-5.5	1997
81.65	10	-0.2	15	1	1998
81.886	6.6	-0.4	16	0.3	1999
81.886	6.9	-2.5	17	-3.9	2000
91.8	18.9	-2.2	18	3.5	2001
92.69	12.8	-2	19	2.8	2002
102.105	13.9	-2.1	20	4.2	2003
111.94	15.4	-1.7	21	10.9	2004
120.97	16.9	-1.8	22	5.7	2005
129.3565	8.4	-1.2	23	-2.5	2006
133.5	5.4	-2.3	24	-3.3	2007
132.14	12	10.7	25	3.5	2008
128.65	12.6	9	26	2.9	2009
125.83	13.8	5.1	27	4.5	2010
118.56	10.9	3.9	28	6.4	2011
148.88	12.2	3	29	6.5	2012
150.29	9	4.4	30	6.8	2013
153.86	8	3.6	31	6.5	2014
157.31	9	0.2	32	6.4	2015
158.55	16	-1.8	33	10.9	2016
253.49	12.6	3.4	34	7.3	2017
350.65	12.09	7.639	35	-5.7	2018
365.37	11.4	3.903	36	0.8	2019
379.5	12.88	4.355	37	-1.2	2020

Sources: CBN Money and Credits Statistics 2013-2016; CBN statistical bulletin (Various Issues); CBN annual report and statement of accounts (Various Issues); World Development Indicators(Various Issues) and CEIC, Global Economic Data Indicators.

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MANIN
INLFR
BOP
IP
Standardized Residuals





Forecast: MANINF	
Actual: MANIN	
Forecast sample: 1 37	
Included observations: 37	
Root Mean Squared Error	4.989754
Mean Absolute Error	3.828291
Mean Abs. Percent Error	142.7632
Theil Inequality Coefficient	0.441879
Bias Proportion	0.000000
Variance Proportion	0.412714
Covariance Proportion	0.587286

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