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Abstract

Industrialization plays a key role in the development and growth of national economies. The process and economic strategy support the achievement of greater global competitiveness in the production of processed and manufactured goods by linking industrial activity with primary sector activity, domestic and foreign trade, and service activity. This is particularly true of Nigeria, where the economic structure is typically underdeveloped. The primary sector, the oil and gas sector, dominates the gross domestic product, accounting for over 95 percent of export earnings and about 85 percent of government revenue between 2011 and 2012. The industrial sector accounts for 6 percent of economic activity, while the manufacturing sector contributed only 4 percent to GDP in 2011. This explains the attempts by several administrations to evolve policies that will promote the industrialization of the country. This paper seeks to examine the performance of the Nigerian Industrial Revolution Plan (2014), with the view to recommending strategies for strengthening the institutional and regulatory framework. The data are obtained mainly from secondary sources and discussed through a content review of the literature. The study concludes and recommends the need to strengthen relevant institutions like the Central Bank of Nigeria, to promote and enhance effective industrial growth in Nigeria.

Keywords: Industrial Revolution Plan, Performance Review, Institutional and Regulatory Framework

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Background to the Study
According to Ajayi (2011), "Nigeria remains a major industrial country in the West African sub-region and Africa south of the Sahara. Although few studies have focused on manufacturing activities within the country, most of these have largely focused on some aspects of manufacturing, especially at the regional level, small-scale industries, and local crafts". Perhaps, Schatzl's (1973), Ayeni (1981a, 1981b) and Mabogunje (1990) studies on the spatial pattern of manufacturing provide a good starting point for detailed studies of manufacturing in Nigeria. The consensus is that manufacturing is concentrated in a few cities, especially the state capitals. These concentrations have usually been explained in terms of specific principles of industrial development. Little attention is given to the emerging pattern despite the changing phases of manufacturing and industrial development policies. From mere crafts works in the earliest times to the valorization of raw materials through import substitution to local sourcing of industrial raw materials in recent times (Ajayi, 2011).

There is a trajectory history of industrialization in Nigeria, from the pre-colonial to the colonial era. The earliest stage in the adoption of production subcontracting as an industrial production technique in Nigeria was characterized by insignificant growth and rapid growth thereafter. However, there was marked variation in the adoption of production subcontracting by industry groups over the years (Ajayi, 1998). Whether in terms of the number of contractors involved or the volume of production subcontracting, the textile, apparel, and leather industry groups dominate the production subcontracting scene. While the number of subcontractors engaged by any contracting firm ranged from one to a maximum of four, over fifty percent of the contractors engaged the services of a maximum of two subcontractors. The number of subcontractors engaged varied markedly, especially in food, beverages, and tobacco; chemicals and pharmaceuticals; and textile, apparel, and leather industry groups (Ajayi, 1998).

The dominant form of subcontracting is specialty subcontracting, mainly carried out by independent subcontractors over short distances. Production subcontracting became very important after the introduction of the Structural Adjustment Programme (SAP) in 1986, and it is perceived by industrialists as being very important in reducing the costs of production. The volume of production subcontracting defined in terms of the monetary values increased and varied significantly among the contracting firms over the years (Ajayi, 1988). It is further shown that there is no significant relationship between the volume of production subcontracting and the size and structural characteristics of contracting firms.

It is only in the motor vehicles and miscellaneous assembly industry group that production subcontracting accounted for more than thirty percent of the total costs of production in any of the years. Textiles, wearable apparel, and leather industry groups accounted for the largest volume of production subcontracting in any of the years. While all the industry groups are involved in production subcontracting within the Lagos region, only five of the industry groups carried out production subcontracting beyond the Lagos region. Production subcontractors are concentrated in Lagos, Ikorodu, Sagamu, and Ibadan in the southwest; Jos, Kaduna, Zaria, Kano, and Sokoto in the north; and a few other locations such as Benin,
Owerri, Port Harcourt, and Ilorin. For instance, in the textile, apparel, and leather industry group, spinners and yarn are received from subcontractors in Ikorodu, Kano, Lagos, and Zaria, while tarpaulin materials are received from subcontractors in Zaria only (Ajayi, 1988). The spatial distribution of production subcontracting activities is significantly explained by the number of industrial establishments in the various locations (Ajayi, 1988).

The economic transformation agenda, otherwise known as Nigeria Vision 2020, sets the direction for the new industrial policy in Nigeria. Thereafter was the Nigerian Industrial Revolution Plan (NIRP). The policy and economic strategy were developed and adopted in January 2014 by the Federal Ministry of Industry, Trade, and Investment, with input from other government agencies and the larger private sector, to provide the needed resources to revolutionize the industrial sector. The policy is a five-year plan to rapidly build up industrial capacity and improve competitiveness in Nigeria. The plan identifies industry groups where we have a comparative advantage: agro-allied and agro-processing; metals and solid minerals processing; oil and gas-related industries; and construction, light manufacturing, and services. The NIRP also addresses the numerous issues that have held back the Nigerian non-oil sector for years: it addresses the high cost of funding and lack of long-term finance in Nigeria; it builds up industrial infrastructure and power for industry; it provides industrial skills; it links innovation and industry; it improves our investment climate; it strengthens product standards; and it promotes local patronage.

The former Minister for Trade and Investment, Mr. Olusegun, stated that "for the first time in Nigeria’s history, links our trade policy with our investment and industrial policies. This brings coherence to the government's agenda to diversify the Nigerian economy. With NIRP, we will increase manufacturing from 4 percent of GDP to over 10 percent by 2017, adding about NGN 5 trillion to manufacturing annual revenues. It is also key to mention the various interfaces the NIRP has with other development plans in Nigeria. The peculiar nature of industry warrants that it integrates with almost every other segment of the economy" (Olusegun, 2014). This paper attempts to examine the performance of the Nigerian Industrial Revolution Plan (2014), with the view to recommending strategies for strengthening institutional and regulatory framework.

**Background to the Study**

The paper seeks to examine the performance of the Nigerian Industrial Revolution Plan (2014), with the view to recommending strategies for strengthening institutional and regulatory framework. Specifically, the study will,

1. Examine the concept of industrialization.
2. Examine the historical perspectives on industrialization in Nigeria.
3. Review some industrialization policies in Nigeria.
4. Assess the objectives of the Nigerian Industrial Revolution Plan (2014)
5. Examine some challenges with achieving industrialization policies in Nigeria.
6. Identify strategies for strengthening the institutional and regulatory framework for industrialization in Nigeria.
Literature Review

Concept of industrialization

The term "industry" originates from French as industries or Latin as industrial, which means 'diligence'. However, several scholars and authors have defined industry from their perspectives. Industry, as defined by some scholars and authors, was as follows:

Dictionary.cambridge.org (2021) defines "express industry as the companies and activities involved in the process of producing goods for sale, especially in a factory or special area (dictionary.cambridge.org, 2021). Investopedia.com (2021) defines an "industry as a group of companies that are related based on their primary business activities (Investopedia.com, 2021). Businessdictionary.com (2021) says that industry is the manufacturing or technically productive enterprises in a particular field, country, region, or economy viewed collectively, or one of these individually. It also says that industry is any general business activity or commercial enterprise that can be isolated from others, such as the tourist industry or the entertainment industry (businessdictionary.com, 2021). However, Dictionary.com (2014) shows that "industry" is the production of goods or related services within an economy.

Industrialization simply means a system by which an economy that hitherto produced basic agricultural goods now manufactures those same goods with the use of machines instead of manual labor and assembly plants instead of skilled artisans. It also refers to the scientific and socio-economic growth of a nation that improves the standard of living of its citizens. Industrialization is the period of social and economic change that transforms a human group from an agrarian society into an industrial society, involving the extensive reorganization of an economy for manufacturing (O'Sullivan and Sheffrin, 2003). Industrialization is part of a process where people adopt easier and cheaper ways to make things. Using better technology, it becomes possible to produce more goods in a shorter amount of time. More things can be produced by fewer people (Maddison, 2007). As industrial workers' incomes rise, markets for consumer goods and services of all kinds tend to expand and provide a further stimulus to industrial investment and economic growth (O'Sullivan and Sheffrin, 2003). Some of the characteristics of industrialization include economic growth, more efficient division of labor, and the use of technological innovation to solve problems as opposed to dependency on conditions outside human control (Investopedia.com, 2021).

Historical perspectives on industrialization in Nigeria

The growth in industrial activities discussed in this section is in three phases. These are the pre-colonial era; early post-colonial era; and events since the mid1980s (cited from Ajayi, 2009).

Pre-colonial era

The pre-colonial era, that is, the pre-1900 economy of Nigeria, featured considerable craft industries in the various clans and kingdoms; modern factory activity was then hardly known (Onyemelukwe, 1983). Prominent among these craft industries that featured in local and inter-regional trade were artifacts of wood, brass, and bronze; leather; handwoven textiles and bags; iron workings; and fire-baked pottery from local clay. The various zones specializing in different crafts are closely linked with the available raw materials. However, the crafts industry has declined considerably following superior competition from modern industrial activities, particularly manufacturing.
Onyemelukwe (1983) notes that Nigeria has embraced factory-type industrialization as the main panacea to her underdevelopment. The transformation of the Nigerian economy during the post-war years was faced with a low level of technology and the small size of the available indigenous manpower, thus industrial development involved an assembly-type pattern of import substitution. Full-scale industrialization involving the production of basic capital goods could not be embarked upon. The gradual assumption of political decision-making power by Nigerians during the 1950s enhanced the substitution of capital goods imports or raw material imports for consumer goods. Onyemelukwe (1953) notes that of the 47 industrial establishments in the country in the pre-1947 period, 21 (44.71 percent) were engaged in processing activities. The remaining 26 (55.3 percent) establishments were engaged in the finishing aspects of manufacturing. Out of the 26, as many as 15 (31.9 percent) establishments were small printing works and bakeries. All these had the bulk of their patronage among the few foreign (mainly European) administrators, missionaries, and merchants (Ayeni, 1981; Onyemelukwe, 1983).

Early post-colonial era

The post-colonial era was characterized by vigorous import substitution and the beginning of the decline of the export-oriented processing of raw materials. The policy of import substitution, which was meant to reduce dependence on foreign trade and save foreign exchange, however, led in the direction of a mere assemblage of foreign-produced items rather than manufacturing per se. At independence, there were only about 150 plants of medium- and large-scale size in the industrial sector, the majority of which were established in the late 1950s. By 1965, however, the number of medium- and large-scale firms had risen to 380, arising from the intensification of the process of import substitution and the establishment of firms to undertake domestic manufacture of goods hitherto imported, though it was still largely dominated by low-technology light industries. Items manufactured include food, beverages, and tobacco. The engineering sector was dominated by metal furniture and fixtures, structural metal products, and fabricated metals. The value-added contribution of agricultural and special industrial machinery and equipment, household appliances, and transportation equipment was quite low (Teriba et al. 1981).

As a part of the reconstruction efforts, the Second National Development Plan, 1970–74, which had the objectives of a united, strong, and self-reliant nation; a great and dynamic society; a just and egalitarian society; a land of bright and full employment for all citizens; and a free and democratic society, had as its major policy thrust: to promote even development and fair distribution of industries in all parts of the country; ensure a rapid expansion and diversification of the industrial sector of the economy; increase the incomes realized from manufacturing activity; create more employment opportunities; create more employment opportunities; Others include: promoting the establishment of industries that cater to overseas markets in order to earn foreign exchange; continuing the program of import substitution; raising the level of intermediate and capital goods production; initiating schemes designed to promote indigenous manpower development in the industrial sector; and raising the proportion of indigenous ownership of industrial investments. To do these, the government laid down priorities and initiated measures to achieve them, such as reconstructing damaged
industrial capacities, promoting the expansion of the intermediate and capital goods industries to raise the contribution of value added in the manufacturing sector, and promoting rapid industrial development, etc. The situation continued in this manner into the mid-1980s (Ajayi, 2009).

Events since the mid-1980s
The industrial sector of the Nigerian economy has improved over the years. The relative share of the manufacturing industry in the GDP increased from 19.8 percent in 1966/67 to 32.4 percent in 1971/72 (Teriba & Kayode, 1977). However, the manufacturing sector has witnessed a considerable decline since the mid-1980s. For instance, Table 1 shows that the percentage share of manufacturing in Nigeria's gross value added decreased from about 17 percent in the early 1980s to 13 percent in 1987, 10.7 percent in 1993, and 12.1 percent in 1994. The share of manufacturing in the GDP decreased from 9.2 percent in 1981 to 6.8 percent in 1987, 5.5 percent in 1993, and hovered around 6.0 percent in the years between 1994 and 2002. The number of industrial establishments, which increased from 421 in 1964 to 1,293 in 1975 and 2,360 in 1989, decreased to 1,891 in 1993. The number of industrial employees, which increased from 64,965 in 1964 to 93,270 in 1969 (excluding the eastern region), decreased to 27,102 in 1989 but increased again to 244,243 in 1985 (Schatzl, 1973; FOS, 1971; Federal Ministry of Industries, 1989; MAN, 1983). Nigeria's manufacturing consists largely of assembly plants with little or no backward linkage in the economy. This is because the bulk of inputs were imported (Schatzl, 1973; Corfrey et al. 1979; Ayeni 1981a). Most industrial activities were linked to industries in foreign countries both for the final consumption goods and the intermediate products (Nwafor, 1982; Adegbola 1983).

The Structural Adjustment Programme (SAP) was in part adopted in July 1986 to redress the prevailing industrial scenario (Ukwu, 1968), which pushed capacity utilization up from 30 percent at the end of 1986 to 36.7 percent by mid-1987 (MAN, 1983), 40.3 percent in 1990, 42.0 percent in 1991, and 41.8 percent in 1992 but witnessed a decrease to 29.3 percent in 1995 and 32.5 percent in 1996 (Nigeria, 1990). However, the situation deteriorated for some highly import-dependent industries like electrical and electronics, basic metals (iron and steel), and vehicle assembly, where capacity utilization has fallen below 10 percent (Ajayi, 1998). A recent survey of manufacturing industries by the Central Bank of Nigeria (2003) shows that capacity utilization rates increased to 46.2 percent in 2002. Although the average capacity utilization rate increased in the Lagos area, Enugu, and Bauchi zones to 59.1, 51.1, and 35.5 percent, respectively, it declined in the Kano and Ibadan zones to 42.6 and 43.0 percent, respectively. Some industries now obtain raw materials locally within Nigeria.

The revitalization of the industrial sector to promote the development of other sectors and the entire economy has attracted a major consideration in the National Rolling Plans, as policy objectives include the achievement of maximum growth in investment and output, and expansion of employment. An average growth rate of 0.8 % was projected in the First Rolling Plan (1990-1992) for this sector. This was expected to increase its share of the GDP to slightly over these targets and expected to be achieved through improvement in capacity utilization in existing industries and increased investment in new ones, as well as more effective
implementation of relevant policy–reform measures. These policy measures include strengthening administrative machinery, implementation of the privatization and commercialization policy, local sourcing of material raw materials, and the promotion of Small-scale industries (Federal Republic of Nigeria, 1990), but generally lacking in strategies to achieve the set objectives.

Industrialization is a factor of science, technology discovery, and entrepreneurial development. At independence in 1960, and for much of that decade, agriculture was the mainstay of the Nigerian economy. The sector provided food and employment for the populace, raw materials for the nascent industrial sector, and generated the bulk of government revenue and foreign exchange earnings. Following the discovery of oil and its exploration and exportation in commercial quantities, the fortunes of agriculture gradually diminished. Table 1 highlights the extreme dominance of the primary sector in Nigeria's GDP and the small contribution from the manufacturing sector. At independence, the contribution of the primary sector to the GDP was about 70 percent. The transition from primary production to secondary and tertiary activities was sluggish; in 2009, more than half of Nigeria's output was still generated by the primary sector. The secondary sector contributes the least to GDP in Nigeria (Louis, John, Foluso, and Femi, 2016).

**Table 1:** Percentage distribution of real GDP by sectoral group, 1961–2009

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<td><strong>Primary sector</strong></td>
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<td>Agriculture</td>
<td>68.88</td>
<td>49.45</td>
<td>28.37</td>
<td>22.99</td>
<td>34.62</td>
<td>42.02</td>
<td>41.69</td>
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<tr>
<td>Mining and quarrying</td>
<td>1.66</td>
<td>17.54</td>
<td>30.03</td>
<td>32.69</td>
<td>33.74</td>
<td>19.90</td>
<td>16.75</td>
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<td><strong>Secondary sector</strong></td>
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<td>Manufacturing</td>
<td>4.73</td>
<td>7.66</td>
<td>5.60</td>
<td>5.12</td>
<td>4.32</td>
<td>4.03</td>
<td>3.72</td>
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<tr>
<td>Building and construction</td>
<td>3.30</td>
<td>7.77</td>
<td>2.83</td>
<td>1.78</td>
<td>2.70</td>
<td>1.72</td>
<td>2.01</td>
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<td>Utilities</td>
<td>1.63</td>
<td>0.60</td>
<td>3.71</td>
<td>2.14</td>
<td>3.49</td>
<td>3.49</td>
<td>3.32</td>
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<td><strong>Tertiary sector</strong></td>
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<td>Wholesale and retail</td>
<td>19.79</td>
<td>16.86</td>
<td>29.46</td>
<td>35.28</td>
<td>21.13</td>
<td>28.84</td>
<td>32.51</td>
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<tr>
<td>Other services activities</td>
<td>0.43</td>
<td>3.29</td>
<td>15.29</td>
<td>26.60</td>
<td>8.21</td>
<td>12.68</td>
<td>14.37</td>
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<tr>
<td>Total (GDP)</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
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**Source:** National Bureau of Statistics (NBS various years); authors' calculations.
The macroeconomic performance of the economy within these periods is divided into five distinct periods, characterized by significant shifts in economic policy management (Adeoti et al., 2010). These periods are:

1. The immediate post-independence period started from independence in 1960 to the advent of the first military regime in 1966.
2. Post-civil war oil economy started from the end of the 30-month civil war in 1970 to the handover of government by the military to civilians in 1979.
3. Transition to an austere economy that emerged in the second republic and the subsequent adoption of the WB–IMF-led economic structural adjustment programme (SAP) in 1986.
4. The era of SAP and guided economic liberalization started in 1986 to the advent of the new democratic dispensation in 1999.
5. The regime of further economic liberalization started in 1999 and resulted in emergent macroeconomic stability in recent years.

Nigeria's experience with the recession can be linked to several factors, including a lack of proper industrial and developmental ideology that will revolutionize gains from internally generated revenue (IGR) and foreign earnings. Industrialization is more than just an old form of a new order; it is an economic engine that energizes wealth, develops technical skills, creates new technologies, and creates a diverse labor force. A nation is said to be underdeveloped when a larger proportion of its workable age bracket is not resourceful or gainfully engaged in economically productive labour. Africa's industrialized profile is still sleeping and has yet to reach the heights it deserves in the Committee of Nations. Another positive impact of industrialization on an economy is the improvement of its citizens' disposable income. This implies a free flow of wealth among citizens; it will reduce inflation and economic recession tentacles and eliminate the high unemployment rate. When Africa can get into industrialization (the take-off stage of economic growth), every socioeconomic and political index will automate itself into massive development (Stephen, 2018).

Thus, redirect our preferences and thoughts of an average African to want to create, initiate, explore, and discover to invent new frontiers that will proudly compete in the globe. In addition, the environment will attract foreign investors and eliminate imperialist capital flight to other continents. Industrialization drive in Nigeria will enhance modern challenges such as a change in lifestyle, educational improvement, improvement in medical services, and urbanized transportation system, as well as improve the living standard and energizes small and medium scale enterprises (SMEs), which is the hallmark for socioeconomic advancement (Stephen, 2018).

**Industrialization Policies in Nigeria**

At the apex of Nigeria's economic policy-making architecture is the National Economic Council (NEC). The NEC has the vice president of the country as chairman and the National Planning Commission as its secretariat. Membership in this body includes the governors of Nigeria's thirty-six states, the governor of the Central Bank of Nigeria (CBN), the ministers of
national planning and finance, the attorney general of the federation, the minister of justice, and the chief economic adviser to the president. The three tiers of government—federal, state, and local—implement, monitor, and evaluate policies approved by the body through their respective executive councils, which meet monthly.

There is also a twenty-four-member National Economic Management Team headed by the president and a fifteen-member Economic Implementation Team headed by the finance minister. The mandate of these teams includes achieving macroeconomic stability and developing critical sectors such as infrastructure, agriculture, manufacturing, education, health, and housing. The Federal Ministry of Industry, Trade, and Investment has the operational mandate of promoting increased production and exports of non-oil and gas products, fostering industrialization, attracting investment, and developing enterprise.

Other agencies play important roles in the trade and industrial sectors in Nigeria. For instance, the Bank of Industry (BoI), the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), NEPZA, the Nigeria Export Promotion Council, and the Nigerian Investment Promotion Commission (NIPC) are parastatals of the Federal Ministry of Industry, Trade, and Investment. The RMRDC is an agency of the Federal Ministry of Science and Technology, and the Nigerian Customs Service is a parastatal of the Federal Ministry of Finance. The setting up of these teams and the designation of the finance minister as coordinator of economic policy have improved the implementation of economic policy in the country. It is typical for private sector groups such as the National Association of Small-Scale Industrialists to be invited to talks on draft policies.

The NV20:2020 industrialization strategy aims at achieving greater global competitiveness in the production of manufactured goods by linking industrial activity with primary sector activity, domestic and foreign trade, and service activity. A key component is the promotion of a comprehensive policy of cluster development in the manufacturing and processing industries. This includes the development of industrial parks, industrial clusters, enterprise zones, and incubator facilities. Industrial parks, aimed at large manufacturers, are expected to cover areas of more than 3,050 km². The parks will be based on the comparative and competitive advantages of each geographical zone. The following business activities have been identified for each of the zones (Nigeria Vision 2020).

1. North East: agriculture and solid minerals, e.g., gypsum, biomass, ethanol, biodiesel, tropical fruits, etc.;
2. North West: gum arabic, livestock and meat processing, tanneries, biofuel, etc.;
3. North Central: fruit processing, cotton, quarries, furniture, minerals, boards, plastic processing, leather goods, garments, etc.;
4. South East: palm oil refining and palm tree processing into biomass particle boards, plastic processing, leather goods, and garments;
5. South West: manufacturing (especially garments, methanol, etc.), distributive trade, general goods, plastic, etc.;
6. South Central: petrochemicals, manufacturing (plastic, fertilizer, fabrications, etc.), oil services, and distributive trade (TINAPA) (Louis, John, Foluso, and Femi, 2016).
The industrial clusters, which will be established with the participation and assistance of states and local governments, will cover areas of between 100 and 1,000 hectares. They will be exclusively devoted to the organized private sector. The location of the clusters will consider access to roads, railways, seaports, cargo airports, and proximity to a city, and management will be through a private cluster company. Industrial incentives like those in industrial parks will also be provided, while each cluster will have a skill acquisition and training center. Enterprise zones are platforms of 5–30 ha targeted at incorporating the informal sector into the organized private sector. Located in state capitals and local government areas, they will enable farmers and SMEs to feed their products into the value chain of large-scale industries. These centers will accommodate mechanics, block makers, small-scale furniture manufacturers, timber merchants, and other vocational workers who constitute over 70 percent of Nigeria's private sector. Skills acquisition and training centers will also be in each enterprise zone, while management will be handled by the private sector. The incubators will be start-up centers for new and inexperienced entrepreneurs, graduates of tertiary institutions, investors, and vocational workers wishing to set up their businesses. In these centers, prospective start-up companies will be equipped with entrepreneurial skills and resources aimed at nurturing them from formation to maturity (Louis, John, Foluso, & Femi, 2016).

Recent economic policy reforms (from NEEDS to date) have sought to reduce the unpredictability of the trade policy regime, establish a schedule to adopt the ECOWAS common external tariff (CET), and respect obligations under multilateral trading systems (Adenikinju, 2005). According to Louis, John, Foluso, and Femi (2016), there are also elaborate export incentives, including the Manufacture-in-Bond Scheme, which allows exporting manufacturers to import intermediate products duty-free; the Duty Drawback Scheme, which provides refunds for duties or surcharges on raw materials; the Export Development Fund Scheme, which provides financial assistance to exporting companies to cover part of their initial expenses; and the Trade Liberalization Scheme of ECOWAS, which involves the removal of barriers to trade in goods originating from ECOWAS countries. In addition, the government has established the Oil and Gas Export Free Zone (1996) and Export Processing Zones (EPZs), which offer preferential tax treatment and other incentives for firms. Moreover, foreign investors are free to repatriate their profits and dividends net of taxes. The government, through the NIPC Act, has guaranteed that no enterprise shall be nationalized or expropriated.

**Nigerian Industrial Revolution Plan (2014)**

The Nigerian Industrial Revolution Plan (NIRP) is designed as a 5-year plan to accelerate the build-up of industrial capacity within Nigeria. The plan aims to increase manufacturing's contribution to GDP from 4 percent today to 6 percent by 2015, and finally above 10 percent by 2017. The Nigeria Industrial Revolution Plan is based on the desire to drive a process of intense industrialization based on sectors where Nigeria has a comparative advantage, such as the agro-allied sectors, metals and solid minerals-related sectors, oil, and gas-related industries, as well as construction, light manufacturing, and services. The NIRP is expected to drive the following outcomes:

1. Job Creation
2. Economic and Revenue Diversification
3. Import Substitution
4. Export Diversification
5. The broadened government tax base

Why is the NIRP Different?
The Nigeria Industrial Revolution Plan (NIRP), developed by the Federal Ministry of Industry, Trade, and Investment (MITI) is our nation's first strategic, comprehensive, and integrated roadmap to industrialization. The plan focuses on developing sectors, where Nigeria has a natural comparative advantage, and ensuring that industry, in general, becomes competitive. The NIRP is unique because:

(i) It is Strategic - The NIRP has identified industry groups where Nigeria has a global and regional comparative advantage. These groups are expected to serve as “anchor sectors” to drive Nigeria’s industrialization. The industry groups identified are agribusiness/agro allied sectors; solid minerals & metals; oil & gas related manufacturing; and construction, light manufacturing, and services.

(ii) It is Holistic - The NIRP uses a coherent and comprehensive framework in assessing the needs of the industrial sector. This framework emphasizes putting in place supporting structures and enablers to make the industry successful and competitive in Nigeria. In addition, the NIRP framework adopts the 'Cluster approach' to ensure all requirements for the industry to succeed are considered. The elements of each industry’s “Cluster” are the group of interconnected firms, suppliers, demand drivers, market channels, related industries, government agencies, underlying infrastructure, policies, and conditions to make each industry successful.

(iii) It is Integrated - The NIRP facilitates links to related policies and other development plans within Nigeria. Firstly, the NIRP ensures that Nigeria's Industrial Policy has linked with Nigeria's Trade Policy; a link that has been lacking for decades. Secondly, the NIRP integrates with all other Ministerial plans of the Federal Government, including but not limited to, the Gas Master Plan, the Infrastructure Master Plan, the Agriculture Transformation Agenda, The National Aviation Strategy, the Mining Strategy, the Science & Technology Plan, and the Transportation Strategy. The fundamental nature of the industry is that it pulls together multiple aspects of a nation's resources, which the NIRP has recognized and built into its execution model.

(iv) It is Execution Focused - The NIRP defines clear goals, sets accountabilities, and identifies quick wins for immediate implementation. The key priority of this plan is to execute initiatives. The NIRP operating model is therefore to develop early ideas/thesis and commence execution. Prior industrialization plans in Nigeria have failed because they were not accompanied by adequate implementation and governance structures. The NIRP incorporates the regular measurement of results into its work programme, to ensure that decision-makers can evaluate the results of policy choices and decide when to modify or continue with recommendations.
It Builds Institutions - At the very heart of the NIRP is the drive to develop strong institutions to sustain industrialization in the medium to long term. Industrialization requires transparency and continuity which well-resourced institutions have typically provided in developed and emerging markets. Institutional development can also not be done selectively and must be done broadly as the weakest link in the “institutional chain” is enough to drag down the overall effort of others. NIRP will therefore involve the reform of some major industry-linked institutions in Nigeria.

NIRP Sectoral Priorities
The NIRP has evaluated areas where Nigeria has some level of regional or international comparative advantage. The criteria used for selecting the focus sector groups are:

(i) Existing Skills and Installed Capacity
(ii) Natural Endowments
(iii) Competitive Cost Base
(iv) Labor Intensity
(v) Potential for linkages with other industries
(vi) Local and regional demand
(vii) Ability to export to developed markets. In addition, all sectors have also been evaluated based on their potential for economic impact, job creation, and opening up of new non-oil export markets for Nigeria.

A publication by the Federal Ministry of Trade and Investment (2014) emphasizes that the Nigerian Industrial Revolution Plan (NIRP) was conceived as a governance model to achieve an inclusive structure, bringing in other government agencies such as the Ministry of Mines and Steel, Agriculture, Petroleum, Power, Transport, Finance, Works, ICT, Science & Technology, and the private sector to ensure adequate policy synergy and consistency in the industrial sector. The NIRP’s underlying philosophy is to build Nigeria’s competitive advantage, broaden the scope of the industry, and accelerate the expansion of the manufacturing sector. The NIRP adopts both a direct and an indirect approach to promoting industrialization. The direct approach identifies sectors where Nigeria can truly win and dominate, based on an assessment of our country’s comparative advantage. The plan proposes specific initiatives and interventions to improve productivity in those target sectors and increase production output. The NIRP also adopts an indirect approach in tandem, thereby acknowledging that it is sometimes difficult to predict where free market forces will lead the industry and which sectors will be transformational winners. As such, the NIRP establishes cross-cutting interventions that address the competitiveness of the entire manufacturing sector in Nigeria (i.e., regardless of the sector). These indirect interventions create a broad "Nigerian platform" for manufacturing to thrive, while private capital determines which sectors will grow.

The Minister of Trade and Investment, Mr. Olusegun, reiterated that the success of Nigeria is the success of Africa. The key to sustaining our future is the economy, and the Nigerian government has made this the heart of our national agenda. I believe a remarkable transformation has commenced in our country under the strong leadership of Mr. President.
The steps we take today will leave a strong legacy for generations of future Nigerians. With the NIRP, we have begun to shape a new economic direction for Nigeria, and with strong conviction, an eye on the future, and hard work, we will sustain this journey of transformation and attain the goals of industrialization (Olusegun, 2014). He added that the NIRP adopts the following guiding principles in promoting Nigeria's industrialization:

1. A focus on labor-intensive, low- and medium-technology manufacturing
2. Building up core base industries that are essential for other, more advanced industries to thrive later.
3. Using the large Nigerian market demand to deepen the industrial capacity of local firms is a first step before going regional and global.
4. Strategically using key manufacturing sectors as technology drivers of the economy

He maintained that "NIRP is our national roadmap for real industrialization. It is already a living vision, as many elements of its implementation have since commenced". He stated clearly that the goal is simple: to add about NGN 5 trillion to annual manufacturing revenues in the next three to five years. This will create jobs, generate wealth, diversify our economy, substitute imports, boost exports, and broaden our tax base. The NIRP has a limited timeframe within which we will accelerate industrial capacity expansions and reforms. All developed and emerging economies have used industry as the key driver of modernization. The industry is what creates the platform that attracts capital and technology. Without industry, a country's economy cannot evolve, sufficient jobs will not be created, and wages may not grow. The vision for the industry in Nigeria is to make it the dominant job creator and income generator over the next 5 years. The NIRP will ensure that Nigeria becomes:

1. The preferred manufacturing hub in West Africa.
2. One of the top 2 manufacturing hubs in West Africa.
3. The preferred source for supplying low- and medium-technology consumer and industrial goods domestically and regionally.

Nigeria seeks to become a top-10 player in at least 10 key manufacturing categories within the next 5–10 years. The national policy aims to promote capacity expansions within existing Nigerian manufacturers, hasten their growth, and bring in new investors into Nigeria. NIRP will increase the level of Nigeria's industrial output from 4% to 10% of GDP. This will create wealth, create jobs, improve the country's trade balance, and increase the government's tax revenues.

Challenges with achieving Industrialization Policies in Nigeria
Like previous policies, the implementation of the NIRP in Nigeria is faced with certain challenges. Some of them are identified and summarized in Table 2. Electricity outages, transport bottlenecks, crime, and corruption are all key factors. Nigerian manufacturers suffer acute shortages of infrastructure such as good roads, piped water, and power supply. Electricity outages and voltage fluctuations are commonplace, causing damage to machinery and equipment (Louis, John, Foluso, & Femi, 2016). Consequently, most firms rely on self-supply of electricity by using generators, escalating production costs, and eroding their competitiveness relative to foreign firms. Some of the constraints are shown base in percentages in Table 2 below,
**Table 2:** Constraints to firm growth in Nigeria

<table>
<thead>
<tr>
<th>Sector</th>
<th>Telecomm.</th>
<th>Transport</th>
<th>Electricity</th>
<th>Crime</th>
<th>Corruption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textiles</td>
<td>0.57</td>
<td>1.43</td>
<td>3.36</td>
<td>1.57</td>
<td>1.64</td>
</tr>
<tr>
<td>Garments</td>
<td>0.60</td>
<td>1.60</td>
<td>3.45</td>
<td>1.40</td>
<td>1.49</td>
</tr>
<tr>
<td>Food</td>
<td>0.63</td>
<td>1.97</td>
<td>3.17</td>
<td>1.47</td>
<td>1.42</td>
</tr>
<tr>
<td>Wood and furniture</td>
<td>0.62</td>
<td>2.10</td>
<td>3.15</td>
<td>1.29</td>
<td>1.46</td>
</tr>
<tr>
<td>Other man.</td>
<td>0.58</td>
<td>2.02</td>
<td>3</td>
<td>1.45</td>
<td>1.35</td>
</tr>
<tr>
<td>Construction</td>
<td>0.94</td>
<td>1.94</td>
<td>1.72</td>
<td>2.53</td>
<td>2.13</td>
</tr>
<tr>
<td>All sectors</td>
<td>0.62</td>
<td>1.91</td>
<td>3.11</td>
<td>1.50</td>
<td>1.46</td>
</tr>
<tr>
<td>N</td>
<td>1,001</td>
<td>1,001</td>
<td>1,001</td>
<td>1,001</td>
<td>1,001</td>
</tr>
</tbody>
</table>

**Source:** World Bank Investment Climate Survey (WB 2006).

**Strengthening Institutional and Regulatory Framework for Industrialization in Nigeria**

Some of the institutions that must support the functionality of industrialization in Nigeria include the Central Bank of Nigeria (CBN), the Bank of Industry (BoI), formed through the merger of the former Nigerian Industrial Development Bank and the Nigerian Bank for Commerce and Industry; the Nigerian Agricultural, Cooperatives, and Rural Development Bank, formed through the merger of the former Nigerian Agricultural and Cooperative Bank and the Peoples Bank; SMEDAN; the National Information Technology Development Agency (NITDA); the Economic and Financial Crimes Commission (EFCC); and the Independent Corrupt Practices and Other Related Offenses Commission, among others. These institutions must be efficient in the discharge of their responsibilities. For instance,

1. The CBN must initiate major reforms in the banking sector, to complement the already existing consolidation of the Nigerian banking institutions, which reduced the number of banks from eighty-nine to twenty-five by the end of 2005; the banks are arguably considerably stronger and able to provide better financial services. The reforms should be directed at strengthening access to loans by small and medium-scale businesses in the country.

2. In the agro-industry, incentives must be provided, like a 100 percent tax-free period for five years in processing, favourable duties, and capital allowances, and an Agricultural Credit Guarantee Scheme Fund (ACGSF), where the CBN provides a partial guarantee for all loans granted by commercial banks. This will encourage indigenous investors.

3. There must be a disproportionate range of incentives in also manufacturing sectors. Firms must be subject to a low-income tax rate of between 20 and 30 percent, royalty payments deferred, and holders of a mining lease should be entitled to a range of capital allowances and tax reliefs. In the oil and gas industry, significant incentives
should be granted to joint ventures with the Nigerian National Petroleum Corporation.

4. The National Directorate of Employment (NDE) must initiate programmes to train skilled manpower for industrial needs. Over a million Nigerian Youths graduate from various tertiary institutions every year, which provides a huge supply of potential “trainable” talent. If the skills of workers do not match the needs of the industry, unemployment rises, which has been the situation in Nigeria. The lack of reliable and timely information on the labor market adds to the rigidity of the market. Often, small firms are financially and technically not capable of providing in-firm skills development in the same way large-scale firms are able. Technical and Vocational Education and Training (TVET) must be focused on meeting the needs of the industry.

5. The Customs and Excise Department must improve its infrastructure, especially in Information and Communication Technology (ICT).

6. The Bureau of Public Enterprises (BPE) must increase the pace of privatization of publicly owned enterprises.

7. The National Communication Commission must liberalize the telecommunications sector.

8. The National Agency for Food, Drug Administration and Control must do more by improving Nigeria’s food and drug products, while the Standard Organisation of Nigeria (SON) must improve the standardization of industrial products. “Made in Nigeria goods” must not be patronized by both the private sector and public sectors. Existing government laws and policies on leveraging public procurement to drive industry will need to be enforced.

9. The Nigerian Export Promotion Council must improve the implementation of export incentives.

Conclusion
The industrialization has been identified as a driver of economic growth the world over. In Nigeria, past policy efforts aimed at improving the performance of the sector have failed, and the focus has shifted towards more targeted policies aimed at specific sectors, as set out in the Nigerian Industrial Revolution Plan. A key aim is an economic diversification, with a focus on stimulating the manufacturing sector and strengthening its linkages with the agricultural and services sectors. With an enabling institutional and regulatory framework, Nigeria will experience sustained economic growth and sustainable development.

To complement to institutional viability, the problem of a lack of enough infrastructural facilities, such as good roads, railways, a constant supply of water and electricity, etc., must be significantly addressed. Industrial factories need electricity to run 24 hours a day. They need a constant supply of water, especially those of them who depend on it. The factories need a good road network to be able to transport their raw materials and finished goods efficiently.
References


