



Research Article

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Revamping the Nigerian Manufacturing Sub-Sector as a Panacea for Economic Progress: Lessons from South Korea

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Abstract

The study focuses on repositioning the manufacturing sub-sector in order to revive Nigeria from the problem of "growthelessness". The expository study examined the situation of the Nigerian economy and overview of the industrial policies employed to encourage development since after independence. Many challenges such as lack of indigenous technology, excessive reliance on foreign raw materials and manpower, inconsistency regarding policies and programmes, lack of linkages of production with domestic inputs among others were articulated to be responsible for the inability of the country to establish a reliable manufacturing sub-sector that is capable of harnessing idle resources, reduce unemployment and develop the economy. The study also examined an overview of industrial policies employed by South Korea which gave the country its success story. Lessons considered to play significant role to change Nigerian manufacturing sub-sector were drawn there from, among which include: reviving the economic environment with infrastructure and public service system so as to make the country industrial production compliance; consistent, persistent and perseverance on the part of resource controllers in spite of all odds toward goal attainment, adoption of appropriate indigenous technology, monitoring, evaluation and re-strategising to improve the sector. This study has shown that Nigerian situation is capable of changing for better if what worked in South Korea manufacturing sub-sector is applied in Nigeria.

Keywords: Development, Economic, Lessons, Manufacturing, Revamping

1. Introduction

Nigeria is located in Western Africa, surrounded by Cameroon to the east, Chad to the northeast, Niger to the north, Benin to the west and the Atlantic Ocean to the south. The country has estimated land area of 923,773km² with varied vegetation and soil types that are suitable for a variety of agricultural purposes. It has large reserve of crude petroleum and natural gas that are well over 27 billion barrels and 120 trillion standard cubic feet, respectively. The country is also bestowed with large solid mineral deposit. It has a federal form of government and is divided into 36 states, 774 local government areas and a federal capital territory, Abuja. Nigeria has the largest population in Africa, over 170 million people. Its many ethnic groups with diverse dialects give the country a rich culture but also pose major challenges to nation building. The economy is dominated by the production of petroleum, which lies in large reserves below the Niger Delta region. The

country was rated one of the world largest producer of crude oil. Its oil wealth has financed major investments in the country's infrastructure. Yet the country remains among the world's poorest countries in terms of per capita income and other indicators. It has been estimated that over 70% of Nigerians are poor, which means above 70 million people, and the average growth rate of 3.5% per annum of the country's gross domestic product is not enough to revive this ugly situation (Torty, 2004; Okonjo-Iweala & Osafo-Kwaako, 2004; Obasanjo, 2000; Microsoft Encarta, 2005).

Since after independence in 1960 the country has been interested in improving ways of harnessing of natural and mineral resources with a view to reposition the economy. Industrialization have been pursued in various ways but the major output of the country has remain raw materials which earns her relatively low income vis-a-vis other countries with strong manufacturing sub-sector. Developing country like Nigeria needs to establish enough industry in view of her endowed resources. Industrial policy is essential as it guides goal attainment. Every economy sees industrialisation policy and the role of the manufacturing sub-sector as indispensable in harnessing the existing resources of the economy and repositioning the state to raise the living standard. Countries like Singapore, Hong Kong, South Korea among others transform their economy through persistent efforts in industrialization.

The positive change of an economy depends so much on diverse manufacturing of suitable economic goods and services. Many challenges confront Nigerian manufacturing sector simply because of inability to inwardly come up with suitable machines and technology needed for production, over dependence on foreign technology, and lack of capital to acquire them, consequently the technology base of the country is so weak owing to insufficient investment in research, innovation and development. Machines and technology suitable to the nature of Nigerian resources and inputs are often lacking giving room for excessive importation of manufactured goods and export of mainly raw materials (Ayodele and Falokun, 2003). It was further pointed that manufacturing is conscious efforts and sustained application requiring the integration of appropriate technology, management techniques and relevant resources to change an economy from traditional and crude production methods to a more automated and efficient system of large scale production of goods and services.

The real growth rate recorded in 2010 and 2011 were respectively 7.6 per cent and 7.4 percent (World Bank 2014). Yet the economy has continuously experienced economic, social and political bottleneck. Chete et al (2014); Newman et al (2018) asserted that in 2011 and 2012 in Nigeria, the primary sector, mainly the oil and gas have a giant share of the total gross domestic product (GDP), accounting for over 95 percent of total export earnings. Whereas economic activity of the industrial sector accounts a paltry 6 percent while manufacturing sub-sector contributes only 4 percent to gross domestic product in 2011. This depicts less attention to this important sub-sector. Incessant crisis, high degree of corruption and nepotism at the moment has not been favourable to the people. Besides, the harsh socio-economic environment compelled many investors to withdraw invested funds, closure of firms, hence giving rise to low aggregate output, unemployment, inflation and fall in living standard.

Over the years, the extent of attention given to the manufacturing sub-sector has not been sufficient to harness and raise the value of the numerous endowed natural resources. Besides, production is dominantly food yet at a level not sufficient to feed the teeming population. Nigeria has remained more of a consumption economy relying so much on imported goods and self-power generation for internal production because of the government inability to produce sufficient national power. So, in spite of the fact that the index of manufacturing productivity has been increasing as shown by CBN (1989) thus: 284.8 in 1984, 336.5 in 1985, 323.4 in 1986, 432.2 in 1987, 505.3 in 1988 and 516.4 in 1989. CBN (1995) points out that between 1991-1995, manufacturing index was quite unstable. It also showed the index of manufacturing production thus: in 1991 it stood at 178.1, it fell to 169.5 in 1992, by 1993, it further fell to 145.5, then 144.2 in 1994 and then 136.3 in 1995. The trend of index of manufacturing and the level of economic activity in the sector is very low considering its large population and natural resources. Sadly, the major items of need are not produced in Nigeria and the country has to import virtually everything. Disgustingly, the taste of Nigerians was sharpened by the colonial master with foreign made goods and as such home-made goods are not experiencing high demand which is associated with unemployment problem. This attitude of Nigerians adversely affects and discourages manufacturing production.

Succinctly, manufacturing has to do with production of goods through the use of various instruments of production. It involves the production of goods for use or for sale and requires labour, machines, tools, organic and inorganic materials with the sole aim of transforming raw materials into finished products on a large quantity (Adofu, et al, 2015).

Besides, the numerous extracted products of agriculture, solid and liquid mineral need sufficient manufacturing facilities to add value to them. Consequently, the major export of Nigeria is unprocessed primary products, especially crude oil, which earns her foreign exchange but its management even at the period of oil boom could not bring about desired level of capital acquisition for development of the large economy. But many countries of the world are progressing socially and economically with much attention to manufacturing. Zalk (2014) points out a widely accepted view that industrialization is no longer the major basis for development rather a major focus on manufacturing. This view of manufacturing-led growth is based on the report of World Bank and Commission on Growth and Development (2008) that showed evidence of persistent growth of some economies since after the second world war which includes: Brazil, China, Japan, Malaysia, Singapore, Republic of Korea, Taiwan, Thailand among others. In his view, South Africa's fundamental gross domestic product (GDP) growth and employment remain the function of the manufacturing sector. He also noted the tendency of many services sectors experiencing employment and effective demands emanating from the growth of gross domestic product (GDP) due to manufacturing. This implies some direct and indirect linkages that expands the economy via conscious diversified manufacturing growth and associated positive impacts. Since Nigeria lacks the requisite infrastructure to industrialize, it becomes imperative that efforts should be centred on the manufacturing sector that has the ability to bring expansionary and multiplier effects capable of harnessing the resources of the country and change the economic trend for better.

However, Onuba (2017) posits that the manufacturing sector experienced decline of N80billion contribution to gross domestic product in the 2016 fiscal year due to unfavourable environment and scarcity of foreign exchange. The fall in its contribution from N8.97 trillion in 2015 to N8.89 trillion in December 2016 is a thing of worry. A relative expansion was recorded in the nine subsectors out of the thirteen subsectors. The subsectors are oil and refining, textile apparel and footwear, wood and wood product, pulps and paper products, chemical and pharmaceuticals, non-metallic products, plastic and rubber products, electrical and electronics, basic metal, iron and steel. In his view, the National Bureau of Statistics report showed a fall in economic activities in cement which made it drop from N749.93 billion in 2015 to N649.6 billion in 2016; food, beverages and tobacco also declined from N4.29 trillion to N4.1 trillion; motor vehicle and assembly dived from N70.05billion to N52.79 billion and so on.

Although the Central Bank of Nigeria (CBN) reported that the growth of Manufacturing Purchasing Manager's Index (MPMI) over the years but specifically between April to December, 2017, considering the growth of the five major indicators: new orders, inventory levels, production, suppliers deliveries and the employment environment. The Apex bank in December 2017 pointed out the desirable and appreciable increase in all the parameters, excluding one, hence, the MPMI in December, 2017 stood at 59.3 index points. This value is above 50 which showed expansion. It further reported the positive changes witnessed in 15 of the 16 sub-sectors of the Nigerian economy such as textile, apparel, leather and footwear, petroleum and coal products, cement, transportation equipment, paper product, food, beverage and tobacco products, furniture and related products, plastic and rubber products, non-metallic mineral products among others (CBN, 2017). But many of the products have low local content. The linkage effect of manufacturing and other sectors is the basis for improved economic activity capable of revamping a depressed economy like Nigeria. This linkage is yet to be adequately synergized or integrated.

The growth experienced in some subsectors of the manufacturing which is considerably being driven by private sector in Nigeria. But has never satisfactorily played the role of economic revival expected in relation with most other economies of the world, simply because of the inability to properly reposition it in such a way as to absorb sufficient capacity utilization and creating linkages capable of stimulating economic activities in other sectors. In addition, the level of unemployment of resources in Nigeria is worrisome considering the low-level of manufacturing activities that is commensurate to the population. The required environments and infrastructure deficiency have not

been favourable to the manufacturing sector over the years. Again, the bulk of manufacturing establishment in Nigeria is located in the urban areas with epileptic national power supply whereas, the source of the raw materials which is the rural areas are devoid of essential facilities and poor road net-work for easy conveyance of raw materials to the urban centres. All these deter to the operations and desirable intention of having sufficient manufacturing centres.

Nigerian government has made a lot of efforts to change the trend in the manufacturing sub-sector. A look at the National Development Plans of 1962-68, 1970-75, 1975-80, the Rolling Plan of 1990-1992 and the most recent ones which are National Economic Empowerment Development Strategy (NEEDS), State Economic Empowerment Development Strategy (SEEDS) amongst others have shown positive aspiration in the right direction. But disgustingly, the required pursuit and persistent focus and actions toward the attainment and realisation of the beautiful motives have not been feasible. Consequently, the country has not been able to address the major macroeconomic problems of the society such as unemployment and poverty that is adequate to propel the economy to enviable height like South Korea.

The situation in the manufacturing is reflected in the pattern of the economy. The challenge of unemployment is quite worrisome. For instance, the NBS (2011), CBN (2012, & 2014) showed unemployment rate to be 5.4 in 1990, 7.5 in 1995, in 2000, it stood at 13.1 while in 2005, it was 11.9, then 21.1 in 2010 and 7.8 in 2014; and inflation rate was 18.5 in 1990, 13.5 in 1995, 13 in 2000, in 2010, it came to 6.13 while in 2014 it stood at 12.5 in the country. Worthy to mention is the low income of the people which is reflected by low investment and low productivity; hence, there is the compelling need for revamping the manufacturing sector.

In view of the above, it is the intention of the authors to examine the South Korea success story and draw the lessons for Nigeria to adopt in its manufacturing sector development. One of the main reason for the choice of South Korea is because, it was a third world country like Nigeria, experienced civil crisis like Nigeria amongst others. Hence, it is pertinent to assert that revamping the manufacturing sector by employing the lessons from South Korea as an indispensable factor for the solution of enabling economic advancement of Nigeria. On this basis, the paper is stream-lined thus: section two centres on theoretical and empirical literature, section three is an overview of industrial policy in Nigeria and an overview of industrial policy in South Korea, section four focuses on required actions for improving manufacturing sector in Nigeria while the last section five is the recommendations and conclusion.

2. Theoretical issue and Literature Review

Economic development in a developing economy requires sufficient investment capable of efficient harnessing of the naturally endowed resources. Investment in capital over-head and manufacturing industries is essential for the desired development and growth in developing countries. Hence, Nurkse (1957) stressed on the need for under developed countries to aspire to raise their rate of capital formation by increasing motivations and inclinations to save and invest. This is expected to play a role in taking care of the problem of vicious circle of poverty which is a reoccurring factor inhibiting economic growth. Besides, the role of the government regarding policies and environmental restructuring is indispensable in moving the economy forward.

The Big Push theory, stressed on balanced growth through the devotion of certain critical minimum level of investment of capital in the economy if there is the desire to propel the economy to sustainable development. The Big Push theory calls for a simultaneous establishment of technically inter-dependent industries as a necessary requirement for development (Ozoh, 2006; Rosenstein-Rodan, 1947). In other words, this theory implies designing manufacturing industries in which each can engages in different specific production that has interdependence with other industries with respect to input/output use which can overcome some problems of demand and supply. On the contrary, considering the lack of resources by developing countries, Hirschman (1964) advocated investment in strategically selected sectors of an economy that can gradually give rise to further investment opportunities in other sectors. This theory has to do with investment in leading sector with high level positive externalities and comparative advantages joined with associated actions and reactions of the economic activities which can gradually induce growth.

Romer (1986 & 1990) asserted that capital accumulation is essential factor for technological progress. This is because technology depends on capital. The more a country raises its capital stock especially human capital the more the tendency to have and use new technologies. Research sector requires a major human factor, which support the generation of new ideas, which is essential for technological progress. He asserted that countries with stock of human capital experience increased growth rate of new goods leading to faster growth. This implies that capital grow where there is abundance of capital. Nigeria had serious problem in her first National Development Plan execution due to lack of sufficient manpower. Even in the area of production and administration after independence, physical and human capital were inadequate. But Romer articulated that capital, research and development which involves man is a necessary factor for the emergence of new ideas and better ways of doing economic, political and social activities.

Lucas (1988) in his own view pointed the role of human capital in the process of economic growth. Human capital increases productivity of labour. The growth of physical and human capital is indispensable for revamping an economy. In a related view, Barro (1990) added the need for efficient government role regarding public spending for public investment (infrastructure, schools, health, sanitations among others, which are required for private investment. Clearly public investment which is funded from various taxes complements private investment. The enormous role of public investment in road network, training institutions, power supply, environmental restructuring among other things are needed by private investors. This implies that good governance is essential for growth. A developing economy like Nigeria needs to invest sufficiently in both physical and human capital. Specifically, investment in manufacturing sector requires much in order to achieve goals. Hence, this study is anchored on the views of endogenous growth theory, specifically as articulated by Romer (1986 & 1990). The reason for this is because required manufacturing revival given the Nigeria situation necessitates sufficient physical and human capital, adequate and relevant macroeconomic policies.

2.1 Literature Review

Many scholars have delved into both theoretical and empirical analysis of the influence of the manufacturing in the growth of an economy in both developed and developing countries. The results vary due to the nature, roles of the government and economic environment of the country. For instance, Adofu et al (2015) empirically investigated the relationship between manufacturing sector and economic growth in Nigeria from 1990 to 2013 using ordinary least square method. The dependent variable was real gross domestic product while the explanatory variables were manufacturing output, average manufacturing capacity utilization, exchange rate, interest rate, inflation rate and government expenditure. The study found the following among others: output of manufacturing contributed negatively and showed insignificant relationship with real gross domestic product but found a positive and significant relationship between the average manufacturing capacity utilization and real gross domestic product; government spending was seen to significantly impact on the real gross domestic product in spite of improper management. Among the way forward made by the authors includes reduction of interest rate to encourage investment, exchange rate moderation and upgrading of manufacturing technology.

Sola et al (2013) studied the manufacturing performance for sustainable development in Nigeria from 1980 2008 using panel data analysis approach. The study stated that manufacturing performance is a function of investment, capacity utilization, exchange rate, export and import. The study found a positive relationship between manufacturing performance and capacity utilization and import and a negative relationship between manufacturing and investment, exchange rate and export. On the basis of the finding, the researchers concluded that in order to reverse the poor performance of the manufacturing, incentives should be provided for firms to encourage them engage in exports.

Naude and Szirmai (2012) investigated the importance of manufacturing in economic development in the past, present and future perspectives. They were concerned about structural change of traditional economy dominated by primary activities, moving into modern economy with high-productivity involving manufacturing taking a very significant role in economic development. In their argument, it was asserted that the structural transformation of developing countries needs a type of manufacturing sector development that is capable of delivering high level employment

among others and industrial policy is expected to impact significantly if the past lessons and future challenges are adequately given attention.

Ekpo (2012) studied Nigeria's industrial policies and industrial sector performance using expository and descriptive approach. He found that most of the industrial policies employed since after independence have not helped Nigeria to attain the required level of industrialisation required to give rise to befitting economic structure of the country and good industrial performance, especially the manufacturing which has performed below expectation. Among the recommendations for a change are: suitable outset and execution of industrial policies, human capital development in science and technology, acquisition of suitable technology and so on.

Westphal (1990) in his study of industrial policy in an export-propelled economy: lessons from South Korea expressed the importance of state intervention in economic development which was a landmark of Korean's economic revitalization. To him, government selective intervention with the motive of influencing allocation of resources among economic activities using policies such as taxes, subsidies, credit rationing, issue of licenses and creation of public enterprises among others helped greatly in radical transformation of Korea to become an export-led industrialised economy. Hence, the rapid growth and equitable distribution of the benefits of industrialisation is worthy of emulation.

3. An Overview of Manufacturing Policies in Nigeria

After her independence, due to the insignificant number of existing industries in Nigeria based on the colonial administration focus on their own home industries in Britain. Owing to the colonial administration policy of protecting her home industries, Britain, established very few industries. These industries engaged in production of light industrial goods such as detergents, soft drinks, leatherwork, textile and confectionary. As a result, Nigeria after independence was really concerned with adopting of industrial policies capable of increasing the use of endowed natural resources. This concern guided Nigeria first National Development Planning of 1962-1968 whose major focus was Import Substitution Strategy. This involved local manufacturers producing similar goods initially imported with the motive of reducing over reliance on foreign goods (Igwemma andNwoko, 2007).Nyor and Chinge (2014)articulated that the major objectives of adopting import-substitution industrialisation (ISI) policy was mainly because of the nature of the agrarian economy that targeted at reducing the excessive burden on exchange rate and enabling Nigerian to have the prototype of foreign made goods locally. So, the ISI policy intended to achieve industrialisation through establishing foreign technology in Nigeria, create employment opportunity, encourage export and accelerate economic development.

However, the policy helped greatly to promote local entrepreneurs that focused on production of consumer and intermediate goods. Efforts were also made by the then government to encourage and sensitize indigenous ownership and management of industries. Other essential supporting industries such as power supply among others were also established. Low tariffs for imported input of production were among the action to support producers while there were high tariffs for importation of finished products. Consequently, small, medium and large scaled enterprises that concentrated on production of textiles, clothes, beverages, rubber, plastics, soap, detergents amongst others emerged. This gave rise to a major focus of consumer goods vis-à-vis manufacturing activities. The positive effect of the policy was an increase in medium and large-scaled industrial plants from 150 at independence to 380 in 1965 and raising manufacturing contribution to gross domestic product from 4.2 per cent to 6.1 percent in 1964 (Dagogo, 2014, Iwuagwu, 2011).

Ukaegbu (1991) asserted that the established industries based on ISI policy was characterized by inability to revolutionized production, lack of backward linkage in the economy, prevalence of highly-packaged technology, minor operation performance, lack of auxiliary industries, and little or non-existence of research and development activities amongst others. Disgustingly, most of the input of production and quality manpower were imported and plants and machinery were not used to its full capacity coupled with delay in repairs due to waiting for spare-parts to be imported (Chete et al (2014). Besides, the policy was adversely affected by the crisis of civil war in 1966.

The civil war disrupted activities and so in 1970, the drive for industrial revival was contained in the Second National Development Plan of 1970-75 which includes: diversification of the economy, balanced development, indigenisation of economic activity amongst others (Osuka, 2006). The National Development Plan was aimed at amending the Import Substitution Strategy and improving

domestic production of intermediate goods and capital goods required by emerging industries. It was at this period the industrial structure was linked to agriculture which has been the main stay of Nigeria economy before the discovery of oil. The acquired wealth from oil was very helpful to the country in the acquisition of expensive industrial projects such as iron and steel, cement, salt, sugar, fertilizer, pulp, paper among others. The intention of the government was to empower the people but was seriously constrained due to lack of indigenous technology (Chete, et al, 2015)

In the country's quest for developing its industrial base, she inculcated relevant policies in the second National Development Plan of 1970-1975 which focused on public sector-led industrialisation among other intentions. This gave rise to direct government investment considering the fact that majority of the populace lack the required resources to embark on enterprises. The country's economy skewed more to public sector dominance in economic activities. However, the country was still recovering from the shocks and devastation of civil war. Besides, insufficient manpower retarded the possibility or aspiration to organize productive ventures. The major and minor economic activities were in the hands of foreign expatriates. In the quest to enable more Nigerians to be part and parcel of economic activities led to the promulgation of the 1972 Indigenisation Act. This policy was later amended and replaced with the Nigerian Enterprises Promotion Act of 1977 which brought about Nigerian citizens wholly or partly ownership and control of foreign businesses; give opportunities for Nigerian domestic entrepreneurs amongst others. However, it can be stated that this policy was not completely favourable to Nigerians with regard to manufacturing sub-sector development because the required skills that was supposed to be acquired from the foreign controllers of large scale investment projects were missed. In order words, the technology of foreign operators in Nigeria has not been fully imparted to Nigeria before the emergence of indigenisation policy.

A follow up to the above is the increased generation of foreign earned income from oil boom which led to the intensification of public sector investment in heavy industries while private firms hand-picked light and low technology consumer industries. Nevertheless, majority of the investment relied heavily on foreign technology, raw materials and manpower requirement. The oil boom brought prosperity to the country and so raised her consumption of imported goods. This period in actual fact could not bring about a significant aspired industrialisation intention of the country.

The fourth National Development Plan also targeted on revamping the Nigerian industrial sector. But this period was when there was the world economic crisis that affected many countries adversely. However, it can be inferred that all efforts targeted at improving industrialisation in Nigeria over the years could not achieve positive significant results, hence the situation intensified unemployment, low production and high importation, poverty and low living standard. At different times in the country leadership has not been consistent due to frequent coup resulting in a new military regime. Nevertheless, the country did not relent in its efforts to do something better. Hence, Structural Adjustment Programme (SAP) came in 1986 as a way of overcoming most of the debilities and development bottleneck. Among the targets of SAP was encouraging investment, diversification of the economy through stimulating non-oil export, inward looking regarding the use of domestic raw materials and the use of local technology; promoting private sector-led development which gave rise to privatization and commercialization of state-owned enterprises (Newman et al, 2018). Export incentives were also made through Export Development Fund which was to financially assist the private sector exporting companies. The fund covered spending on training, seminars, advertising/publicity, export research among others. Inducement was also given to exporters who exported N500,000 worth of processed product through Export Expansion Grant (Igwemma,2007). Nevertheless, the progress made over the years was not significantly satisfactory in view of the population of the country and the low contribution to the gross domestic product showed insufficient activity in the sector.

Still in the quest for industrialisation, the country also adopted trade and financial liberalization policy in 1989 after the Structural Adjustment Programme (SAP). This policy aimed at encouraging competition among domestic firms and others in order to promote efficiency; lessen tariff and non-tariff barriers amongst others (Adeoye, 2004).

Considering the problem of funding of small and medium scale enterprises, the government came up with the establishment of Bank of Industry (BOI) in 2000 during the reign of President Obasanjo which main aim was the provision of short and long-term loans, technical support to

industrial enterprises, employment creation and promotion of domestic entrepreneurs among others. In order to strengthen the ability of the Bank of Industry to function, it therefore, collaborated with the following special banks: Nigeria Industrial Development Bank (NIDB); Nigerian Bank for Commerce and Industry (NBCI); Industrial and Insurance Brokers (IDIB); and Leasing Company of Nigeria (LECON).

Chete et al (2018), in their study of industrial policy in Nigeria opportunities and challenges in a resource-rich country examined the role of various industrial policies in underdeveloped Nigeria economy and found that primary sector, mainly the oil and gas sector dominated the gross domestic product in 2011 and 2012 contributing up to 95% of export earnings and about 85% of government revenue. The contribution of the industrial sector to gross domestic product stood at 6% while that of manufacturing was 4%. The expected change is hoped in Nigeria Vision 20; 20:20 which has a conception of achieving international competitiveness in production process and manufacturing among others. But the authors' assessment, showed that the manufacturing sector remains weak notwithstanding actions and roles. Past efforts have not revamped the economy. The targeted policies focused specific sector aimed at economic diversification with a major agenda of stimulating the manufacturing sector and its robust linkage with agricultural and service sector seem not promising. This is because of the number of debilities facing it such as corruption, poor infrastructure especially power supply which is very low and it is less than 2,000MW which is about 20% of estimated national demand. Besides, is insecurity due to frequent crisis such political, religious, ethnic and economic among others. Insecurity and corruption have adversely influenced both domestic and foreign investors.

Succinctly, each of the government that has managed the resources of the country actually made different efforts to reposition the manufacturing sub-sector through industrialisation policy but could not achieve significant impact and also could not move the economy out of abysmal living standard and poverty. The failure is multidimensional. The government could not positively reposition the business environment, specifically capital overheads such as good road network, quality training centres, power and water supply among others. Specifically, power and water supply were not available and where seen, they were highly epileptic. Generation of power and water supply coupled with other macroeconomic distortions made doing business in Nigeria very expensive. Attraction of foreign investors in manufacturing was not easily achieved because of high cost of doing business cum incessant religious, social and political crises.

So, in spite of many programmes and policies aimed at establishing a befitting manufacturing subsector, Nigeria has not been able to achieve considerable and satisfactory progress capable of revamping the economy to desired economic status. Consequently, many idle resources abound because of lack of sufficient manufacturing industries to absorb them. Unemployment of factor inputs continuously increase, especially labour and land, giving rise to various types of crimes such as robbery, kidnapping, fraud, ritual killing and so on. This means that there are things that are yet to be done. This study is hoped to come up with lessons on what have been lacking in the policies and actions aimed at industrial repositioning of Nigeria Economy. Tables 1 and 2 depict the situation in Nigeria.

Table 1: Showing manufacturing contribution to real gross domestic product, average manufacturing capacity utilization and unemployment rate 1981-2015

Year	Contribution to Real GDP %	Av Manuf Capacity Utilization %	Unemployment Rate
1981	6.8	73.3	5.2
1985	6.0	38.3	6.1
1990	5.5	40.3	5.4
1995	4.9	29.3	7.5
2000	4.2	36.1	13.1
2005	3.8	54.8	11.9
2010	4.1	56.2	21.1
2015	4.2	60.5	9.0

Source: NBS (2014); CBN (2012) Statistical Bulletin vol. 23; Kneoma.com/atlas/Nigeria /Unemployment rate

The manufacturing sector contribution to the real gross domestic product has been low over the years due to inability of the country to revive the sector through putting appropriate environment to encourage production. Mostly, epileptic power supply has retarded prospective domestic and foreign investors in the manufacturing sub-sector. Consequently, the average manufacturing capacity utilization has been on decline as depicted by the figures. This has equally contributed to persistent unemployment rate over the years.

Table 2: Showing the State of Manufacturing Companies in four Geo-political Zones in 2009

Manufacturing	States Involved	Firms that shut-down
North West	Kaduna, Kano,	176
South East	Abia, Anambra, Enugu, Imo	178
South South	Rivers, Cross River, Akwa Ibom	46
South West	Oyo, Ogun, Osun, Ekiti, Kogi, Kwara	225
Lagos	Lagos	219

Source: The Manufacturing Association of Nigeria Membership Operation Audit Survey 2009.

Harsh economic environment, crises and other factors gave rise to many firms winding up their businesses in Nigeria. This played significant role in worsening the economic situation of many households. The chain effects of decline in production due to shut-down of some manufacturing firms helped to raise poverty level. House-holds' bread winners and other family members engaged in closed firms with their dependent relatives and aged parents suffered untold hardship.

Table 3: showing Average Annual Growth of Industry per cent of GDP (1980-2002)

Countries	Industry			Manufacturing	
	1980-90	1990-95	1990-2002	1980-90	1990-2002
Nigeria	-1.0	-1.2	0.9	0.7	1.2
Botswana	11.4	1.4	4.3	11.4	4.0
Singapore	5.4	9.2	7.3	6.6	6.9
Malaysia	7.2	11.0	7.5	9.3	8.8
Sub-Saharan Africa	0.6	0.2	1.9	1.7	1.9

Source: Ekpo (2005)

Nigeria is far behind her contemporaries with respect to industrial development and manufacturing but refers itself as giant of Africa. The growth of industrial figures at the periods above depicts that. While other countries were having positive growth rate Nigeria was experiencing negative growth. In a similar vein, the growth of the manufacturing sub-sector considered as engine of growth showed very low contribution to gross domestic product which reflect poor economic activity and lack of realistic industrial policy capable of efficient utilization of endowed resources. This poor performance contributed to high level unemployment, poverty and the inclination of many Nigerians accepting to migrate to other economy legally and illegally. This situation was severe in Nigeria during the military regime that is before 1999 when the military was budgeting significant amount of money for defence even when there was no war at the expense of education and industrial development.

3.1 An Overview of Korean Industrial Policies

The success of a country regarding positive change and increased welfare is a function of the actions and roles of the resource managers. South Korea has undergone processes to be where they are now, unlike Nigeria that has gone similar or related processes but yet to find herself to a befitting state. Korean economy was dominated by agriculture and mining without manufacturing industries and exporting mainly primary products like herbal medications such as ginseng, seaweed and mineral resources. South Korea has an inspiring history of development and growth that is likened to a rise from a pauper to a prince. Initially, it has a very low per capita income like other

less developed economies, but with great efforts and relevant industrial and other policies in spite of obstacles, the economy gradually rose to be among the world rich economies. The major thrust of its change centred on the role of the state in selective intervention of the economic activity of the country which Nigeria attempted but yet to achieve significant effect. South Korea refused to discard economic lessons of state intervention learnt from colonial era and this played significant role in its ruggedness to revamp the economy. Besides, and very essential is the changes in domestic political processes. This implies that success in any industrial policy hinges on smooth political process commonly accepted (Westphal, 1990; Noland, 2011).

The Korean administration under the leadership of Rhee somehow set the pace which focused on ensuring low cost of stable foods, low exchange and interest rate. Although it created negative effects of excess demand for foreign loans, reduces saving and capital accumulation but played a role in promoting aggregate economic activity. Rhee was later replaced by Chang Myon.

However, in 1961, a military leader, General Chung Hee Park took over administration of the country. It was not easy for him until after two years when he made some unforgettable changes such as the unification of multiple exchange rate, devaluation of currency and raising the interest rate and other reforms. This attracted firms' industrial policy support. Prior to and during the period of Park, Korean industrial policy objectives centred on promoting export and reviving infant industries. In line with the motive of encouraging infant industries in all ramifications, government promoted vertical industrial development at national level and established local content regulation which necessitated industries to increase the share of their inputs from local sources. It provided local content for major investment projects at its establishment. Medium scale firms were occasionally nominated to ensure the supply of particular production input to manufacturers of certain goods. (Westphal 1990, Noland 2011).

The motive is to avoid disruption of production at all times. This resulted to substantial support of indigenous suppliers of capital goods and engineering services. This action has chain effects of stimulating regular production of goods and services as the market for them was available at all times. Fiscal policy was put in place to support this intention. Attention was accorded to the production of goods in which the country has comparative advantage. The country intentionally established free trade regime for export activity in such a way that capital and intermediate factors of production required in export production are imported without tariffs and other imports for other uses not minding the source. Indirect taxes were removed for tradable inputs (Luedde-Neurath, 1986). Park's internal production environment and international trade policy led to capital accumulation which gave rise to heavy technological advancement. Export-led industrialisation was the key. Worthy to note is that the industrial policy greatly looked inward. Diversification of the economy resulted to more contribution of non-fuel primary products to total export in 1963.

After some years, the country's exports were dominated by manufactured products such as textiles, electrical products, iron and steel. Now the country focused so much on motor vehicles and telecommunications equipment. Technologies were not entirely imported rather adapted, emulated from the colonial masters and also sources from other countries. The major source of capital accumulation was from savings and foreign loans from foreign private individuals and public institutions. Besides, the environment of economic activities hinges on intensive government efforts. In the view of Westphal(1990) the gain of the country was relatively evenly distributed for the benefit of the people. The government did not shy away from the motive of intensification of actions toward targeted goals realisation.

Another land mark in Korean industrial policy was in 1972 when Park instituted Heavy and Chemical Industrial Policy. At the same time interest rate was brought down to encourage preferred sector for increased economic activity and productivity. In addition, was the establishment of special financial institution to finance heavy industrial activity and directives given to private commercial banks to support in financing strategic and preferred industries. Various motivating incentives were provided to accelerate economic activities and environment was made sufficiently conducive to enable every firm to pursue production for both internal and external consumption. Worthy of note is the close monitoring by the government. Quarterly export target for economic agents were made and situation report on export were publicly shown from time to time. Major exporters were monitored from time to time and Ministers were up and doing to maintain government intentions

and aspirations. A common forum for resolving problems regarding export and import was frequently held (Westphal, 1990).

Private agents were not the focus for major industrial introduction rather public enterprises were used to launch major industries as it enabled easy management of factor inputs, negotiation with foreign suppliers and creating international competitive industry (Jones 1975). This is commendable considering the power of the state vis-à-vis private ability in relating with foreign investors and dealers. However, private industries are enabled to play other relevant roles for the main industries. The workings of the economy with virtually active economic activity did not give room to unemployment of resources inherent in most economies.

South Korea did not have all the technologies before commencing production rather it gradually metamorphosed to where it is now. At the onset, the economy was mainly on import substitution and later switched to export promotion. South Korea at this time began to put in place and strengthened her production capabilities (Fakir, 2016). This was aimed at meeting desired goals. Production capabilities involve varieties of human and material resources. In the view of Westphal Rhee and Pursell (1985) production capabilities refers to the administration of production facilities, effective control of raw materials, production planning, quality control, resolving of production problems, process and product adaptation, facilities repairing and maintenance and marketing. This foundation gave rise to other actions such as establishment of high technological industries and research and development in 1980. By 1990, the country has put in place the major productive interdependent industries with great linkages.

Suffice it to point that South Korea's key to success hinges on the government pressing and burning desire to have a change for better and effective application of political will. The economic environment such as good road network, power supply, water supply, communication and training centres were adequately made to be functional. It is pertinent to note that the leaders ability to consistently encourages all economic agents regarding export production and the regular provision of fiscal incentives is quite commendable. Besides, is the creation of macroeconomic environment required to sustain lofty interdependent industries and boldly starting to lead in each major industrial outfit because of its capital requirement. Monitoring and evaluation of performance for expertise directives to firms and individual to sustain activities in the direction of achieving sustainable development were very relevant to avoid deviation from focus.

4. Lesson for Nigeria in Revamping its Manufacturing Subsector

The growth of a society can be by adoption and application of the success stories and actions of others, emulation of ways of life of others or exposure to new approaches of doing things. The degree of success of a developing economy is a function of the extent of sincere hearty actions of the government, application of relevant policies capable of bringing desirable change and the state of the environment with respect to peaceful co-existence of the people. South Korea success story is worthy of emulation by Nigeria since over fifty years of efforts, Nigeria has not been able to escape from high level poverty due to inability to put in place befitting manufacturing industries capable of utilizing the available inputs of production. The country remains a consumption economy because of inability to develop her industrial base and strongly being gripped by the vicious circle of poverty on both demand and supply sides.

One remarkable lesson Nigeria has to learn from South Korea is high level of acceptance to change the economy practically. This implies the government strictly, practically and sincerely wants to revive the industrial sector of the country like president Park who consciously employed societal resources towards achieving that, ensuring judicious use of funds for goal attainment, monitoring of performance of accepted selected sectors for revival. This requires active public-sector participation and avoidance of personal interest for the interest of the entire economy. It needs also to ensure continuity of programmes. Nigeria is fund of changing programmes when there is a change in government, thereby making an established investment useless.

Macroeconomic environment must be repositioned through the effective application of fiscal and monetary policies. Interest rate can be reduced for selected industrial sectors. Tariffs on imported and export must be in line with the intention to ensure continuity of production. South Korea was conscious

of the required capital overheads and fiscal policy as an indispensable factor for continuity of economic activities and other forms of investment. Nigeria needs to reposition her capital overheads such as road net-work, adequate water and power supply, well equipped training centres and institutions of learning, put to an end to insecurity which retards investment among others.

South Korea spent time to acquire her technology and persevere to develop it to the enviable height it is now. Nigeria should develop her own technology and adopt relevant technologies to suit her economy. This necessitates looking inward to see what can be obtained from the multi-national companies and the people irrespective of ethnicity. Individual's technological development, inventions or discoveries capable of increasing production should not be ignored.

Nigeria needs to start from light manufacturing interdependent industries that will make use of domestic raw materials in production of goods for export, ensure its development and sustenance before delving into another heavy industrial establishment. This requires adequate planning which has to be monitored and evaluated.

Infrastructure such as power and water supply, good road network, institutions of learning, health centres, public transportation amongst others need be consciously repositioned as was done by the South Korean. No economy can achieve much no matter how beautiful policies and programmes may be if there is insufficient public service system as it is in Nigeria.

It is also pertinent to mention that Nigeria has to overcome corruption which has led to a large proportion of public resources becoming private resources. It is highly disgusting to see the high degree of corruption in every nook and cranny of the economy, notwithstanding, the existence of bodies established to control and hinder such debilitating actions. This requires orientation, re-orientation regarding value system for the leaders and the citizens.

5. Conclusion

In this study, we have examined the situation of Nigeria regarding various efforts at establishing manufacturing subsector through industrial policies since after independence, and yet the expected and desirable level of operation and performance is still elusive. We were able to see the constraints in the application of industrial policies such as lack of indigenous technology, over reliance on imported raw materials, expatriates and lack of adequate public service system. The overview of South Korean's industrial policy revealed its consistence with the aspiration and motivation to transform the economy by regular strategizing, re-strategizing due to monitoring and evaluation. It was obvious that Nigeria has some lessons to imbibe in order to reposition and restructure her manufacturing sub-sector so as to exonerate self from economic quagmire which has imposed serious constraint in economic revival.

References

- Adofu, I., Taiga, U.U. And Tijani, Y. (2015). "Manufacturing Sector and Economic Growth in Nigeria (1990-2013)", *Donnish Journal of Economics and International Finance* 1(1): 001-006
- Adeoye, B. W (2005). Industrial Development in Nigeria in the Context of Globalization. Nigerian Institute of Social and Economic Research (NISER), Ibadan.
- Ayodele, A.I and Falokun, G. (2003). *The Nigerian Economy: Structure and Pattern of Development*. Nigeria: JODAD Publishers.
- Barro, Robert J (1989). "A Cross-Country Study of Growth, Saving, and Government, "National Bureau of Economic Research, working paper No. 2855, February
- Chete, L.N, Adeoti, J.O, Adeyinka, F.M and Ogundeke, O (2015). Industrial Development and Growth in Nigeria: Lessons and Challenges. Brookings: African Growth Initiatives, Learning to compete work paper 8
- Central Bank of Nigeria (CBN) (2012) *Statistical Bulletin Vol.23*. Abuja, Nigeria: Research Department.
- Central Bank of Nigeria (CBN,1989). Annual Report and Statement of Accounts, Lagos: CBN.
- Central Bank of Nigeria (CBN,1995). Annual Report and Statement of Accounts, Lagos: CBN.
- Central Bank of Nigeria (CBN,2017). Performance Manager's Index Survey, Abuja, Statistics Department.
- Central Bank of Nigeria (CBN,2016). Performance Manager's Index Survey, Abuja, Statistics Department.
- Dagogo, Daibi W (2014). "Nigerian Industrial Development between 1943 and 2013: Challenges and Opportunities", *International Review of Research in Emerging Markets and the Global Economy*, 1(3), 132-148
- Ekpo, U. N(2014). "Nigeria Industrial Policies and Industrial Sector Performance: Analytical Exploration", *IOSR Journal of Economics and Finance (IOSR-JEF)*. 3(4), 01-11

- Fakir, Aouatif El (2016). "South Korean System of Innovation: From Imitation to Frontiers of Technology, Successes and Limitations." Retrieved on May 29, 2018 from <https://hal.archives-ouvertes.fr/hal-01347728>
- Hirschman, A. O (1964). *The Strategy for Economic Development*, New Harren: Yale University Press
- Iwuagwu, O., (2011), "The Cluster Concept: Will Nigeria's New Industrial Development Strategy Jumpstart the Country's Industrial Takeoff?" *Afro Asian Journal of Social Sciences*, 2 (2).
- Igwemma, A A and Nwoko, I. A (2007)." An Evaluation of Nigerian Industrial Sector and Economy 1982-2005," *The Enterprise, International Research Journal for Development*, 9(2), 238-254.
- Jones, Leroy P. (1975). *Public Enterprise and Economic Development: The Korean Case*. Seoul: KoreaDevelopment Institute Press,
- Luedde-Neurath, Richard (1986). *Import Controls and Export-Oriented Development: A Reassessment of the South Korean Case*. Boulder: Westview Press,
- Microsoft Encarta Reference Library (2005) 'Nigeria' USA: Microsoft Corporation.
- National Bureau of Statistics (2014). *Nigerian Manufacturing Sector Summary Report 2010-2012*, Abuja: NBS
- Nolan, Marcus (2011). Korea's Growth Performance Past and Future, *East-West Centre Economic Series, No 123, 1-40*
- Nurkse, R (1957). *Problems of Capital Formation in Underdeveloped Countries*, Cambridge: Oxford University Press.
- Nyor, Gabriel A and Chinge, A Dodo (2014). "The Impacts of Industrial Policies on the Manufacturing Sector in Nigeria: An Assessment", *Research on Humanities and Social Sciences*, 4(21), 111-120
- Lucas, Robert E., Jr. (1988), "On the Mechanics of Development Planning," *Journal of Monetary Economics* 22(1), July, 3–42.
- Naude, Wim, and Szirmai, Adam (2012) *The Importance of Manufacturing in Economic Development: Past, Present and Future Perspectives*, UNU-MERIT Working Papers 041
- Newman, C, Page, J, R and, J, Shimeles, A, Söderbom, M and Tarp, F, (2018). *Manufacturing Transformation: Comparative Studies of Industrial Development in Africa and Emerging Asia*, Oxford Scholarship Online, Retrieved on May 25, 2018 from (www.oxfordscholarship.com.)
- Obasanjo, O (2000), *Economic Direction: 1999-2003*, Lagos. Dawn Functions Nigeria Limited.
- Okonjo-Iweala, N & Osafo-Kwaako, P (2007), *Nigeria's Economic Reforms: Progress and Challenges*. Washington DC. The Brookings Institute.
- Onuba, Ifeanyi (2017). *Manufacturing sector's contribution to GDP shrinks by N80bn*, retrieved on March 31, 2018 from <http://punchng.com/manufacturing-sectors-contribution-to-gdp-shrinks-by-n80bn/>
- Osuka, B.O (2016). "An Overview of the Development Planning Experience in Nigeria", in *Planning for Economic Development*, eds Onwumere, J.U.J & Ozoh, F. O, Lagos: Don-Vinton Ltd
- Ozoh, F. O (2006). 'The Vicious Circle of Poverty Thesis and the Big Push Argument' in *Economic Development and Management*, eds. Onwumere, J. U. J, Ige, C. S & Ozoh, F. O, Lagos: Don Viton Limited.
- Ozoh, F. O (2006). 'Balanced and Unbalanced Growth Models: An Appraisal' in *Economic Development and Management*, eds. Onwumere, J. U. J, Ige C. S & Ozoh, F. O, Lagos: Don Viton Limited.
- Romer, P. M (1986). "Increasing Returns and Long-Run Growth," *Journal of Political Economy* 94(5), October, 1002–1037.
- Romer, Paul M. (1990), "Endogenous Technical Change," *Journal of Political Economy* 98(5), October, Part II, 71–102.
- Rosenstein-Rodan, P (1947). 'Notes on the Theory of Big Push' in *Economic Development of Latin America*, ed. Ellis, H. S & Wassiah, W, W
- Sola, O, Obamuyi, T M, Adekunjo, F. O, & Ogunleye, E. O (2013). "Manufacturing Performance in Nigeria: Implication For Sustainable Development" *Asian Economic and Financial Review*, 3(9):1195-1213
- Torty, D (2004), *Strategy BZ. Establishing & Managing Small Business As A Strategy For Economic Empowerment And Poverty Eradication*. Lagos: Sky blue publication.
- Ukaegbu, C. C (1991)." The Structure of Nigerian Industries and the Utilization of Scientific and Technological; Manpower", *The Nigeria Journal of Economic and Social Studies*, 33(1), 22-34.
- Westphal, Larry E (1990). "Industrial Policy in An Export-Propelled Economy: Lessons from South Korea's Experience". *Journal of Economic Perspectives*. 4(3), 41-59, Retrieved on May 29, 2018 from <http://works.swarthmore.edu/fac-economics/307>
- Westphal, L.E, Rhee, W. Y and. Pursell, G (1985). Sources of Technological Capability in South Korea. In: *Technological Capability in the Third World*, eds K. King and M. Fransman., 279–300, London: Macmillan.
- World Bank, Commission on Growth and Development (2008). *The Growth Report: Strategies for Sustained Growth and Inclusive Development*
- World Bank (2014). *Nigeria Country Overview*, Retrieved on May 25 2018 from www.worldbank.org
- Zalk, N (2014). What is the Role of Manufacturing in Boosting Economic Growth & Employment in South Africa? Retrieved on March 31, 2018 from <http://www.econ3x3.org/article/what-role-manufacturing-boosting-economic-growth-and-employment-south-africa>