

**THE NIGERIAN DERAILED
INDUSTRIALISATION:
CAUSES, CONSEQUENCES AND CURES**

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THE NIGERIAN DERAILED INDUSTRIALISATION: CAUSES, CONSEQUENCES AND CURES

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INTRODUCTION

Industrialisation means the application of mechanical power to production and transport (Streeten, 1975:1). It describes the process of harnessing human and material resources through rapidly increasing application of science and technology to boost production (Adejogbe, 2004:11); it involves the mechanisation and automation of tasks that were previously manually performed. It is concerned with specialisation, mass production and mass movement of goods and services. The need for transport development, particularly transportation modes that are most suitable for masses of people and goods, is crucial and indispensable. The developments of the railway and waterways are of far greater importance than any other system. In a nascent developing economy, sustainable industrialisation must converge on domestic resources or skills, while industrial production must largely converge on popular domestic needs. Industrialisation is narrowly defined as the manufacturing sector, excluding construction and mining.

Industrialisation constitutes the pivot, around which economic development revolves. The overriding factor in economic growth centres on the use of continually advancing technology in the production of increasing proportion of the nation's manufactures, so that economic growth is internally generated. This is in contradistinction to such economic growth that is attained through the sale of "fortuitous gifts" of nature (Kuznets, 1973:247). To wit, the export of crude oil, gold, or other minerals will not pass for economic growth or development. These are changes in the economy that are thrust upon it from the outside world and which are incapable of generating economic development (Schumpeter, 1949:63).

Industrialisation requires the acquisition of new skills, the development of new techniques, new and more efficient ways of performing existing tasks, the discovery of new uses for existing products and the development of new products to meet emerging

needs. Industrialisation gives rise to the factory system with the congregation of many people and of industrial conurbations. It produces rural-urban drifts that may result in burst cities and ghost villages, largely owing to asymmetric and uneven distribution of infrastructure, including transportation network.

Existing social, political and economic structures are forced to undergo changes. Communalism gradually disintegrates and gives way to individualism; there are shifts from personal enterprises to more and more impersonal enterprises. The emergent industrialisation and urbanisation engender social changes, social conflicts and political unrest. Norms and laws are therefore required to change in congruence with socio-economic changes.

Rostow drew a graphic picture of the necessary attitudinal changes that are required for successful industrialisation. They consist of:

... “how to persuade the peasant to change his methods and shift to producing for wider markets; how to build up a corps of technicians, capable of manipulating the new techniques, how to create a corps of entrepreneurs, oriented not towards large profit margins at existing levels of output and technique, but to expand output, under a regime of technological change and obsolescence; how to create a modern professional civil and military service, reasonably content with their salaries, oriented to the welfare of the nation and to standards of efficient performance, rather than to graft and to ties of family, clan or region” (Rostow, 1960:140).

Stages in the industrialisation process can be easily identified, the nomenclature matters only a little: whether the starting point

is referred to as traditional or feudalistic stage. Resources are important but such resources must be products of internal steam rather than fortuitous proceeds from windfall gain. Abundant windfall resources may provide the fund for industrialising, but the extent of industrialisation or de-industrialisation depends upon the constructive or destructive purposes for which the available fund is employed.

Adejogbe (1982:64) observed that the upsurge of crude oil production and the increasing oil revenue had some destabilising effect on inflation in Nigeria through rapidly increasing money supply. Wijnbergen (1984:41) also observed that many Third World oil producers had encountered serious problems in building up diversified export base; similarly Western European oil and gas producers had suffered a decline in their manufacturing sector as a result of real wage pressures. These problems have since been christened as "Dutch Disease".

Specifically, the Dutch Disease describes the co-existence within the traded goods sector of progressing and declining, or booming and lagging sub-sectors. The phenomenon reflects the effects of asymmetric growth on resource allocation and income distribution (Corden and Meary, 1982:825). However, Ishola (2004) has shown that the cause of Nigerian de-industrialisation is not only the effect of the crude oil booming sub-sector but also the result of the manner the Nigerian Structural Adjustment Programme had been implemented. The Nigerian phenomenon can be summed up as a case of cheap fund, corruption and mismanagement.

Availability of fund is not sufficient for prosecuting industrialisation, the necessary domestic technological capability; the necessary managerial ability, good governance and strong institutions are the crucial factors. The rule of law, law enforcement institutions, the control of corruption and crime and the quality of infrastructure (power, water, transport and communication) are *sine qua non* (Stern, 2002:13)

It is the thesis of this discourse that industrialisation in Nigeria had run off course for decades apart from suffering from the Dutch Disease, that is, it has long been derailed.

In the next section an adventure is made into the theory of economic growth, and a review of the experience of industrialisation in Britain, Russia and Japan is made. After all, the proper study of man is mankind. In section three the Nigerian industrialisation process is assessed; the structural changes, in respect of spread in space and over time that have occurred in the last three decades are x-rayed. Section four examines ownership and control, technological capability, utilisation of domestic materials and employment generation. Section five deals with the causes and consequences of derailment and suggests the way to realignment.

Theoretical Adventure

Industrialisation is an integral part of economic growth and development; it enables a country to graduate from the traditional economic system to a capitalist stage, at which mass production through the use of machinery and technology plays a vital role. In other words, industrialisation is an essential part of economic growth. The severity of the post Second World War economic crises that featured massive unemployment, problems of economic fluctuations and the appalling economic conditions of the "underdeveloped countries", as well as the rivalry between capitalism and communism in the sphere of science and technology compelled serious enquiries into the forces and factors that determine long term economic growth and development (Musson, 1972:9).

The early theories of economic growth were based upon Keynes' theory that injects the dichotomy to economics in terms of microeconomics and macroeconomics. Macroeconomics deals with the aggregates, including aggregate income determination, consumption and savings, and saving and investment nexus. The

level of output at a period depends on accumulated capital and labour employed. The periodic changes in output depend upon the periodic change in investment. The level of investment depends upon the level of saving at any period. Income is split into consumption and savings.

Roy Harrod (1939, 1949) and Evsey Domar (1946) formulated independently the earliest economic growth model, which has been described as the simplest and most rigid (Allen, 1967: 197). Production in the model consists of one good, the output of which is split into consumption and saving. Saving is a constant proportion of income or output. The saving of each period is invested in that period. The level of output depends upon capital and labour. Capital (K) consists of accumulated investment. The labour force (L) is assumed to grow at some exogenously determined rate, n . That is

$$L = L_0 e^{nt} \dots\dots\dots (1)$$

The capital stock grows at the rate of I/K , that is, the ratio of current investment stock to the capital stock; this ratio must always be equal to the rate of growth of income. This is the so-called *warranted rate of growth* (G_w)

$$G_w = (1/Y_t) (dY/dt) = s/v \dots\dots\dots (2)$$

v is the capital – output ratio

$$v(dY/dt) = sY_t \Rightarrow \text{saving function} \dots\dots\dots (3)$$

At the equilibrium the natural rate of growth (n) must always be equal to the warranted rate of growth (g_w). This is the so-called *knife-edge situation*.

$$G_w = I/K = (I/Y) (Y/K) \dots\dots\dots (4)$$

$$K = S/V.$$

I represents planned investment. The variables s , n and v are independently determined with the consequence that solution can only be possible in a special case. The growth rate of capacity to produce output must be matched by an equivalent growth rate in aggregate demand to avoid excess capacity. The growth rate of labour must be matched by the growth rate of capacity; otherwise there will be unemployment or shortage of labour.

The Harrod–Domar growth model underlines, in a perverted manner, the conflict between labour availability and capital accumulation in the development process. It postulates that capital and labour are combined in a unique ratio and thereby rules out factor substitution. The neo-classical model as postulated by Solow (1956, 1970), Meade (1961) and others attempted to remove the rigidity in the Harrod-Domar model by specifying as a variable the capital labour ratio (K/L). Output per head (Y/L) is therefore dependent upon capital per head. That is,

$$Y/L = f(K/L) \dots\dots\dots (5)$$

The Harrod-Domar models as well as the other variants of it are highly abstract. These models are based on the economic setting of the industrially advanced economies. Capital is amorphous. It is a collection of the tangibles and intangibles. It consists of machineries, technologies, systems and raw materials. Capital is not based on the resource configuration of the developing countries, or their technological capability with the consequence that the relevance of these growth models is of little validity.

The usefulness of each piece of machinery, developed in the industrially advanced countries, and based on their factor endowment is atrophied in the less developed countries, except such machinery is adapted to the prevailing local conditions of the importing country and except technologically skilled personnel are available to operate it. Such personnel must also be orientated towards factory life. The failure of developing countries to obtain optimum efficiency in the operation of many industries even when such industries are based on essential raw materials availability can be traced to absence of technological adaptation, technologically efficient and suitable personnel. The failure of Nigeria to attain efficiency and self-sufficiency in such industries like cement, sugar refinery, crude oil refinery or paper manufacture derives from these factors. The situation explains the reason why Adejuge (2004:329) argued that the Harrod-Domar model and other variants of it bear very little relevance for the development

of underdeveloped countries. Nonetheless, economic development plans in the developing countries continue to be largely based on those models. For the economic plans to attain the target set, the drawbacks of these growth models must be recognised and the necessary remedies must be incorporated.

The stage theory of economic development provides an alternative approach for visualising the process of economic growth and development. And those of Karl Marx and Rostow give the polar points of the left and right approaches.

Unidirectional Growth Models

The works of Karl Marx (1867) and Walt W. Rostow (1960) are the most popular of the stage theory of long-term economic change. Adam Smith had earlier sketched stages of economic growth as hunting, pastoral, agricultural, commercial and manufacturing stages. Rostow's stage theory of growth, which he christened "a non-communist manifesto" was an attempt to debunk Marxist stage analysis.

Marx, in an attempt to explain and expatiate upon Hegel's thesis, antithesis and synthesis had set out the stages of development as feudalism, bourgeois capitalism, socialism and communism. The Marxian stage of feudalism, which corresponds to Rostow's traditional economic stage, is mainly aquarian stage of development. Capitalism is concerned with private property and private ownership of the means of production. Under capitalism, decisions of what to produce, how to produce and for whom to produce rest with individual private operators. Marx argued that there were inherent contradictions within capitalism, which would eventually lead to its collapse. He described capitalism as:

"accumulation of wealth at one pole accompanied by accumulation of misery, agony of toil, slavery, ignorance, brutality, mental degradation at the opposite pole" (Marx, 1867: 644-45)

He concluded that the escape from mass misery and human degradation could only be achieved through communism, which Marx described as a graduation from socialism. Marx also predicted that socialism could only be achieved through a revolution by the proletariat. Under socialism, the means of production and decisions about what to produce and for whom to produce would be controlled by the state. But Marx calculated that socialism would easily degenerate into state dictatorship, exploitation and abuse. Whereas under communism, the means of production and the management of resources would devolve on the social and functional communes. Collective ownership of assets and distribution of goods and services would be according to individual needs irrespective of individual contribution! But as events would turn out, particularly with the collapse of the Eastern European system in 1989, that dream fizzled out like air in a balloon.

Between the time of the publication of *Das Kapital* and the publication of Rostow's Stages of Economic Growth, there was almost a century during which enormous water had flowed under the bridge. The policy of *laissez faire* of the early period of industrialisation of the nineteenth century had changed to one of active government intervention during the twentieth century.

The basic social and economic problems, class conflicts, exploitation and social stresses that capitalism threw up had largely disappeared by the middle of the twentieth century in Europe. Albeit, developing countries of Africa and Asia are still bedevilled by these social and economic problems. Rostow believed that the developing countries of Africa and Asia would thread the European path of development, and would eventually overcome these social problems of development. Rostow's "sweep of modern economic history" schematised into five stages: the process of industrialisation and development including, traditional economy, the pre-conditions for a take-off for economic development: the take-off, the drive to maturity,

and the age of mass consumption.

The take-off stage was described as a "decisive transition in a society's history" at which "the scale of productive activity reaches far-reaching changes, including a massive and progressive structural transformation in economies and in the societies" (Rostow, 1960:37)

Rostow enumerated a number of pre-conditions without which a take-off would be impossible. The pre-conditions include agricultural revolution, the emergence of an influential modern elite, the provision of social capital overhead, the existence of a value system that is compatible with economic progress, and the availability of effective entrepreneurial groups. In addition Rostow argued that the take-off stage is at the point of time when a country's saving rises in excess of 10 percent of her income. The take-off stage and the proposition that the development process of all countries could be reduced to a similar pattern had however been a subject of heated debate.

As Meier (1984:93) observed:

"to maintain that every economy always follows the same course of development with a common past and the same future is to overschematize the complex forces of development."

Undoubtedly, there would be similarities among the developing countries; there would also be individual peculiarities. Two concepts of take-off had been identified. The first concept deals with the different rates of growth among the sectors of the economy; the leading and the lagging sectors. The leading sectors generate backward, forward and spreading effects on the "slumbering" sectors of the economy. The other take-off concept deals with the highly aggregative entities and resembles the Harrod-Domar model in which the rate of growth of income

depends upon the national rate of saving and the output capital ratio. In both models, rate of investment and capital accumulation play a crucial role in the development process. *The planners in the developing countries have so far failed to grasp the details and demands of the nature of capital.* They have always seen capital in terms of money and machinery rather than seeing it as accumulated knowledge and experience for fashioning out appliances and mechanical tools for promoting production of goods and services that are being manually produced. They fail to recognise the need to thoroughly adapt imported technologies to local skills and other local conditions. The consequence has been stunted agricultural growth and decline in the manufacturing sector.

Industrialisation Experience and Experiments

The process of industrialisation in Britain is worth reviewing briefly because Britain pioneered industrialisation of which the process remained instructive. The human suffering, which appeared appalling during the nineteenth century turned out to be moderate compared with the experience in other countries, particularly in Russia during the twentieth century. In Britain legal processes were employed to dispossess the peasants of "common lands" whereas in Russia, Kulaks were forcefully and arbitrarily dispossessed of their lands.

Britain pioneered industrialisation with agricultural revolution serving as the precursor. Changes in the practice of agriculture began during the second half of the seventeenth century; by 1759, modernisation of agriculture had started with the introduction of mechanisation. The feudal vestiges had been shaken off. Farms were managed as commercial and profit-oriented businesses. British farms became relatively larger than farms in Europe, such farm holdings had been enlarged through consolidation and appropriation of "common pastures" or common lands that were formally available freely to peasants for tillage. Commercialisation was possible by hiring labourers on modern contractual system.

In the feudal and semi-feudal system that previously existed, labourers were hired on annual basis and were paid both in kind and in cash; they formed virtually part and parcel of the farmers' households; but with the new system of hiring labour on weekly basis, and only when work was available, the traditional social security was virtually destroyed. In winter, work was hardly available. Most of the labourers were therefore unemployed. The threshing machines considerably reduced the work that could be manually performed, with dire consequences. With the introduction of innovation and mechanisation in the 1840s the pauperisation of the peasants was sealed.

Between 1750 and 1830, increasing agricultural output and productivity were achieved through improved farm management, through increases in sizes of farms that were effected through privatisation of common lands, and through changes in crops and greater spread of crop rotation (Hobsbawn, 1968). Mechanisation and the use of fertilizers started about 1840. Demand for agricultural products was buoyed up by rising population and rapid growth of agro-allied industries. Rising population and rising industrialisation, therefore, stimulated increasing demand for agricultural products.

Privatisation of common land concluded the British land reform (Hobsbawn, 1968:78). The reform had been accomplished with relative ease; the necessary laws were passed in the Parliament because landed interests dominated British politics during the eighteenth century. The squires dominated the House of Commons; the landed notables dominated the House of Lords (Hobsbawn, 1968:93). The new aristocratic class created by business and industry during the eighteenth century was yet to make its impact in parliament.

The effects of commercialisation of agriculture and the breakdown of social and economic system pauperised a large proportion of the people as from the latter half of the eighteenth century and continued into the nineteenth century. Conditions of living

deteriorated not only in the villages but also among urban skilled workers of many professions, including skilled men who had been rendered redundant by machines. The human catastrophe of industrialisation in Britain was exposed by the Great Famine of 1846-47 in which over a million people starved to death (Hobsbawm, 1968:73). The social security programme put up in form of the Poor Law failed to avert that human disaster. But improvements in living conditions subsequently came through rising wages and reduction in unemployment level as a result of progress in industrialisation.

Just as the agricultural revolution appeared to have been concluded, the industrial revolution came on board with the ceaseless stream of inventions and technological breakthroughs. The British agricultural revolution had been virtually completed in 1760; the industrial revolution began about that period. "George Eliot" (Mary A. Evans) (1860) gave a vivid description of the state of technology in Britain in her novel *The Mill on the Floss*.

"The rush of the water, and the booming of the mill, brings a dreamy deafness, which seems to heighten the peacefulness of the scene. They are like a great curtain of sound shutting one out from the world beyond. And now there is the thunder of the huge covered wagon coming home with sacks of grain. The honest waggoner is thinking of his dinner . . . but he will not touch it till he has fed his horses. . . Now I can turn my head towards the mill again, and watch the unresting wheel sending out its diamond jets of water."

It was the period of horse-drawn carts and horse-drawn wagons; it was also the era of water powered looms."

Technological Breakthroughs

Almost all the crucial technologies to launch Britain into full industrialisation were developed between 1760 and 1850,

although they were yet to be diffused. The steam engine had been fully developed by 1763; the steam power had been applied to power looms in 1789. Watt invention with respect to rotative motion in 1781 converted the steam pump into an engine that was capable of general applicability. Further improvements in steam engine by Watt and Boulton facilitated its applications to coal mining, cotton mills, iron and steel works and other industries.

The development of the railways between 1821 and 1844 revolutionised the whole industrial system. Developments in the iron and steel industries facilitated the building of powerful sea-faring ships. Mass production of steel also considerably fostered the capital goods industries, railways and steam engines. These developments in turn promoted engineering industries. With the development of internal combustion engine in 1884, the transportation sector was revolutionised. The development of alternative fuel to coal in the form of petroleum products and the development of electrical and chemical industries launched British industrialisation into a state of permanent growth. The development of engineering industries and the railways created enormous demand for labour, unskilled labour, skilled labour including technological and engineering skills. The wage rate in both rural and urban areas rose phenomenally. Rural surplus labour in Britain was absorbed in the factories. Hobsbawn, (1968:97) claimed that through the railways, Britain entered the era of full industrialisation; "its economy no longer dangerously poised on the narrow platform of two or three pioneer sectors".

Cotton and textile industries had always been the leading sector of the British economy before the industrial revolution. It was therefore not surprising that the initial set of technological breakthroughs were developed in the spinning and weaving industries. These included Kay's Flying Shuttle of 1733; Hargreaves' Spinning Jenny of 1764, Arkwright Water Frame of 1768 and Crompton's "Mule" of 1775. In 1789, as mentioned above, Cart-Wright applied steam power to looms. These events

in themselves clarify the meaning of industrialisation as defined at the beginning of this paper, *mechanisation of tasks manually performed*. The fact that Britain pioneered those inventions put her in the position of supremacy in respect of textile manufacture in the whole world by 1800. Textiles accounted for 67 percent of British exports in 1820.

The nineteenth century was the golden era of industrialisation in Britain. Her output of manufacturing increased by fourteen folds (Dunning and Thomas, 1961). The structure of her economy underwent a profound restructuring by which light industries ceased to dominate, and capital goods industries assumed important prominence. At the beginning of the nineteenth century, about 34 percent of the working population in England and Wales were engaged in agriculture and fishing; the percentage dropped to 8% at the end of the century (Dunning and Thomas, 1961; 13 – 14). Britain entered the twentieth century with a well-balanced and interwoven industrial structure, she possessed an economy that was based on the capital goods industries, on coal, iron and steel, and well-served by an enviable network of roads, rail and water ways. She pioneered industrialisation and led the industrial world for about a century. Was this by accident or was it by design?

Britain had in the eighteenth century the necessary congenial political environment for experimentation and invention, for activities of well-enlightened men with the instinct of contrivance, men who easily blend theory with practice. There were ample evidences of existence of close links between industrialists and scientists in Britain in the eighteenth century (Musson, 1972:18). It is also necessary to add that although the natural philosophy of the seventeenth and eighteenth centuries in Britain had no immediate practical application, they were ultimately to have revolutionary industrial consequences during the nineteenth and twentieth centuries (Musson, 1972:114). All these buttressed Kuznets' assertion of the supremacy of human capital, scientific

and technical, resulting from improved education and training over physical capital accumulation. The pioneering role of Britain in industry was therefore, a result of design, not by accident.

At the beginning of the twentieth century, Russia was still struggling to free herself from the shackles of feudalism, she was one of the backward European countries during the nineteenth century, but she had started to get into grips with the demands of industrialisation, including the modernisation of her transportation system, particularly the construction of a railway system. However, serious socio-economic problems made the Russian political situation fragile. The Russian land settlement of 1861, which shared the land between the landlords and the peasants, embittered the latter because the land settlement virtually kept them in bondage. The settlement required the peasants to pay land redemption fees and taxes; they were deprived of the freedom to directly utilise the land; it remained under the control of the community.

There is some parallel situation with the Nigerian situation, substantial part of the land in Nigeria today is communally owned and controlled with the consequence that a serious obstacle is placed in the way of individualism and capitalism. The difference is that there are no fees or taxes paid on the land nor is there any restriction on the movement of any class. The Russian situation at the beginning of the twentieth century constituted a clog in the wheel of economic development. Social mobility was hampered by restrictions on the movement of peasants. Widespread discontent grew into a crescendo by 1905 triggering off riots and land seizure across the whole country. Far reaching land reforms were undertaken between 1906 – 11 (Nove, 1969 :22). These reforms freed the peasants from bondage, allowed them to move freely and to engage in land transactions or enter into any business. Many peasants became entrepreneurs. The pursuit of industrialisation also became a major public policy. Gerschenkron saw industrialisation at that time as a threat to political stability

(Nove, 1969:11). Albeit, the foundation of capitalism was laid; even though the political sky remained ominously stormy. The outbreak of the First World War stretched and strained the Russian economic and political fragile fabric; shortage of food and ammunition demoralised the army; the civilians engaged in widespread rioting as a result of food shortages and social discontent. And the empire fell.

The Marxists under the leadership of Lenin seized the reins of power and decided to impose socialism, fully convinced that the stage of capitalism could be skipped. The Russian Bolshevik Party thus presented the world with an alternative experiment to capitalism and democracy. Between the two world wars, a period of two decades, Russia made giant strides in economic development; it emerged as a world power by the end of the Second World War. But the human and material cost was colossal, far higher than the one Marx had viciously condemned in Britain, France and Germany. Executions and murders were politically motivated. Many of the highly intelligent economists that expressed original ideas in the 1920s died in prison in the 1930s (Nove, 1972:132). The state waged full-scale war on the Kulaks class and all those who expressed dissenting views. At the end, the system collapsed in 1989. Some of Marx's presumptions about human behaviour were unrealistic. *The command economy proved to be unsustainable in respect of governance and industrialisation.* The failure of the socialist experiment also shows that a central authority cannot correctly discern everything about what to produce, how to produce, and for whom and at what price. Even then, the grand failure of the socialist experiment did not confirm the *laissez faire* economic policy of the twentieth century as the correct ideological *persuasion for promoting industrialisation.* Rather, it poses the question of what is the appropriate role of government in the process of economic development (Stiglitz, 1996:12). Since industrialisation is almost synonymous with economic development, this question can be recast: What is the best approach to the management of

industrialisation in a country so as to achieve optimum welfare benefit to all classes of citizens, while reducing to the barest minimum, the human and the material resources' cost? What roles should government play in the industrialisation process?

The Japanese Industrialisation

The industrialisation process in Japan was unique for several reasons: Japan was the first country to industrialise outside the countries of European origin; her industrialisation took the form of a subtle mixture of structures and systems; she also industrialised without compromising her identity or culture. Japanese industrialisation strategy could be discerned from the eighteenth century advice to Tokugawa administration :

“to conclude friendly alliances, to send ships to foreign countries everywhere to conduct trade, to copy the foreigners where they are at their best, and to repair our own shortcomings”
(Prestowitz Jr., 1988:217).

Japan industrialised by relying heavily upon her internal steam, skill and culture, including the “familistic groupism”. She utilised to the best, her indigenous skills and those techniques she acquired from foreign countries for the purpose of accelerating her industrialisation. The Japanese culture stressed the importance of leadership, teamwork and imitation; it also encouraged personal initiative. The Japanese industrialisation occurred within capitalism even though the state role at the beginning was pervasive and catalistic.

Japan was virtually isolated from the rest of the world until 1853 when the US forcefully entered Japan and brought into disrepute the ruling class, the *Tokugawa Shogunate*. The landless ‘Samurai’ class revolted, terminated the oligarchic rule of the Tokugawa and restored the emperor to a constitutional rule in 1868. The

Meiji administration established law and order; the government considerably raised the level of infrastructure. A high priority was accorded to education. The country was also opened up to foreign technologies. Between 1868 and 1930, foreign capital made a critical contribution to the complex process of Japanese industrialisation. Regional specialisation and interregional trade were considerably fostered by the rapid development of transport and communication during the era. Construction of railway was accorded a high priority; construction of large ocean vessels was also actively encouraged. The railways and steamship dominated the Japanese transport system at the turn of the nineteenth century.

There were two classes of the *Samurai*, the upper class owned the land, the lower class belonged to the ruling class but they had no land; but it occupied a higher social class than the peasants. It was this group that spearheaded the revolt against the *Tokugawa* regime. Sweeping reforms in respect of land, law and order and development in respect of administration, transport, communication, and the economy accompanied the change of government. The ruling elites during the Meiji era were composed of the bureaucrats and businessmen. The bureaucrats were mercantilist in philosophy, regarding the creation of wealth and pursuit of national power as co-ordinate objectives. At the outset, the regime was oligarchic but became progressively democratic. The Japanese parliament was established in 1890. *Emphasis shifted gradually from national power to wealth creation and welfare of the citizens*, particularly as the business class gradually gained political influence, and vestiges of feudalism disappeared. This situation was similar to the growing influence of the businessmen at the turn of the eighteenth century in Britain. The bastion of feudalism was destroyed with the paying off of the landowners, by bonds in 1873. The Meiji administration thus divested the Samurai class of its feudal rights and effected the necessary land reform to bring about agricultural revolution.

The Japanese agricultural output expanded between 1873 and 1920 through expansion in cultivated land; thereafter the farmers adopted intensive land cultivation with the application of scientific methods. The Meiji era released latent energies and ingenuities. Animal power gradually replaced human power in land cultivation. The use of animal power facilitated rapid expansion of cultivated area. Crop rotation was also rapidly adopted. Consolidation of scattered fields was fostered. The introduction of land tax accorded the farmers the private property right. There were parallels between the Japanese land consolidation and the British land enclosures mentioned above. Until the 1930s, Japanese agricultural output kept pace with population growth. Japanese population in 1868 was thirty million of which 80 percent were peasants.

The source of fund for industrialisation has always featured as an important issue of development. It is therefore pertinent to state that agriculture contributed to the substantial proportion of the fund by which industrialisation was launched in Japan. The land tax introduced in 1873 constituted 80 percent of government revenue until the outbreak of the First World War. A substantial proportion of this revenue was expended on building infrastructure and on government involvement in heavy industries. The foreign exchange requirement for industrialisation was largely obtained from silk and cotton textile. For about half a century, silk accounted for about 33 percent of the value of Japanese export. By 1900, cotton spinning assumed the first internationally competitive industry. As productivity increased in agriculture, growing surplus fund and surplus labour from the agricultural sector were transferred to the manufacturing sector. And of course, growing farmers' income provided a growing market for the growing domestic manufactures.

Agro-based industries constituted the bedrock of the Japanese industrialisation in which silk and cotton textile featured prominently. These industries grew out of the traditional practice

and were characterised by high labour intensity. Before the Sino – Japanese war in 1894, more than 50 percent of silk output was manually reeled. Women and children labour was widely employed. Reeling machines were introduced during the last decade of the nineteenth century when supply fell drastically below demand.

Small Scale Enterprises (SSEs) that were family-based dominated the Japanese industrial landscape. They engaged in light industries such as rubber, shoes, silk, cotton, textile, watches, radio sets, bicycles, etc. There were about three million SSEs that employed less than five persons before the outbreak of the First World War (Lockwood, 1964). In 1930, thirty percent of total Japanese manufactures emanated from the SSEs. Contrasting with the SSEs was a small number of Large Scale Enterprises (LSEs) owned and controlled by four companies: Mitsui, Mitsubishi, Sumitomo and Yasuda. They co-operated, colluded or competed among themselves; the situation presented a clear case of monopolistic capitalism. Around 1930, these companies were the largest in the world. It is pertinent to add that the SSEs competed effectively with these LSEs whenever the two groups operated in the same industry. They competed for market share and for growth through improvements in production processes.

Efficient, conscientious and committed employees supported both the SSEs and the LSEs. Japan had a long tradition and culture of innovative and artistic workers, all through its rank and file. The Western commentators referred to Japanese workers as “workaholics in rabbits’ hutches” (Rosser Jr. & Rosser, 1996). Another unique feature of Japanese capitalism is the exceptionally high rate of savings. The savings were translated into productive investment. Income distribution in Japan was highly skewed in favour of property owners; rent, interest and profit combined constituted about 28 percent of total national income during the 1930s. The owners of property and businesses constituted less than two percent of the population. Nevertheless, the quality of

Japanese workers' life steadily improved. There were positive improvements in real wages during the critical years of Japanese industrialisation, particularly between 1937 and 1997. Food consumption increased substantially; clothing also improved; modern products replaced archaic commodities, for instance kerosene lamps were replaced by electric lamps. Japanese worker – compensation ranked among the best in the world; lifetime employment, seniority-based wages, bonus payments and flexible compensation schemes were common features of Japanese remuneration (Roser Jr. and Roser, 1996:132). This feature of Japanese worker – compensation confuted the Marxian hypothesis. And it occurred without government direct intervention. Nevertheless, the government role in the Japanese industrialisation process was pervasive. The ruling Japanese elites were keenly interested in the development of Japan. Monetary and fiscal policies were geared towards rapid industrialisation. Infrastructure was vastly developed as from the inception of the Meiji era. The heavy industries were spearheaded by government initiatives, but such factories constructed were later privatised.

Government policies and programmes in respect of education were decisive. Japan based her educational system on the French model. Higher technical schools were organised in medicine, military science, navigation, agriculture, fishery and commerce. The government embarked on a massive campaign against illiteracy. Thousands of students were also sent to foreign institutions. But emphasis continued to be placed on nationalism. The Japanese pioneered the use of education for enforcing social discipline within the established order. This policy was fundamental to Japanese industrial expansion and advancement. Similarly Japan absorbed foreign capital without being swallowed up by foreign industrial practices. The inflow of foreign capital between 1868 and the 1930s played a critical role in the Japanese industrialisation process. But the type of foreign capital and timing of importation were appropriate for efficient domestic absorption.

It is also instructive to note that Japanese inflow of foreign capital took mainly the form of government borrowing from private foreign investors. Japan's dependence upon foreign investment was moderate.

The Nigerian Early Industrialisation and De-Industrialisation

By 1914, Frederick Luggard had concluded the amalgamation of different parts of Nigeria, which started in 1906 (Tamuno, 1980:394). The British government's goal for making incursion to Nigeria was economic: it was to provide market for the thriving British industries and to create sources of raw materials for her factories. Within the spatial dimensions of the new country, there were different nations and small ethnic groups with differing levels of economic, social, cultural and political development. These peoples had existed for many centuries and had been virtually isolated from the rest of the world by the Atlantic Ocean and the Sahara desert. Substantial parts of their social, economic and political history had been lost because they failed to invent writing or copy any of the writings developed elsewhere. Economic progress had also been considerably hampered by inter-tribal perennial wars, slave raiding and trading. Even then, amazing economic development was achieved. Unfortunately, these people failed to invent the "wheel" hence failed to mechanise any of their operations in producing goods, their embryonic industrial shoots could not appreciably grow. Most of the industries were exterminated when confronted with hostile colonial policies and imported goods. Those budding industries included iron, brass and tin smelting, production of salt, bricks, weaving of textiles, reeling of silk, distillation of spirits, beer-brewing from corn and millet, strong wine from kola nut, etc.

Iron smelting had started in Nigeria by the tenth century A.D. The industry had been established in many parts of the country, long before the British colonisation. There were iron-smelting sites at Ajilete in Egbado area, Ilorin, Eleta near Ibadan; there were iron-smelting furnaces in Fausa near Katsina. Blacksmithing was widely

diffused in the Western and Eastern parts of Nigeria, particularly in Awka, Abiriba, Nkwerre, Abeokuta, Oyo, Ibadan, Ilesha, etc. Iron ore was obtained in Agulu-Umana in Udi Hills (Isichei, 1983 :48). The quarries were usually some fifteen metres deep and some two and a half metres in diameter. Charcoal and palm-nut shells were used to generate the necessary heat to fire the furnaces. High quality iron was usually produced, but the process was tedious and sweltering, and the output was usually low. The iron produced served as raw materials for making farm and allied tools: hoes, cutlasses, knives, animal traps, etc; iron was also fashioned into household utensils and ornamental articles. Little progress was made in respect of process innovation. The people involved in the industry were more inclined to religious activities than to scientific enquiries. The importation of cheap iron and steel eventually destroyed the industry.

Salt was another commodity that was domestically extracted and processed. Three types of salt existed: mineral, sea and vegetable salt. Production was widely spread across the country. The process of production was manual with the consequence that output was low in relation to demand. The quality was, however, generally high with the effect that there was higher preference for the domestically produced salt when imported salt was introduced into the Nigerian market. The failure to improve the process of production meant relatively high selling price per unit of measure, and falling demand as a result of cheap imported salt. The industry thus withered.

In both Britain and Japan, the textile industry served as springboard for industrialisation. Indigenous textile industry had thrived in many parts of Nigeria for over ten centuries before the British colonisation. Cloths were beautifully dyed into different colours such as black, green, red, yellow, etc. Cloths produced were of high quality that large quantities were exported to Ghana, Gabon and Angola through European middlemen. Many Yoruba towns, and northern cities such as Bida, Kano, etc were famous

cloth producing centres. The British Consul, William Baikie was highly impressed by the quality of domestic textiles he saw at Lokoja in the 1860s, (Adejogbe, 2003:326) "Aso Oke" and "Adire" remain highly esteemed till date, they have succeeded without government protection or support in form of technological succour for mechanisation of its processes. The industry has not been completely displaced, albeit it has not been able to serve as springboard for the Nigerian industrialisation. The modern textile industry continues to plod on behind high tariff wall.

The silk industry suffered a worst fate. Silk was produced in Nigeria before the colonial rule. The raw material was obtained from silk worms that were collected from *tamarind* trees, which were prevalent in Kano and Katsina areas. Production was manual just as it was in the early industrialisation stages in Japan. The product could not be used as major foreign exchange earner in line with the Japanese experience. The industry also withered under colonialism; it was neither revived nor encouraged after independence.

There is no space to unravel the travails of each industry that could have been mechanised to accelerate the Nigerian industrialisation. But tin smelting merits some attention because it demonstrated direct efforts of the colonial administration to de-industrialise Nigeria. Tin mining in Nigeria was localised around Jos; it was confined to the area of River Delimi. The river runs through the present site of University of Jos. Mining and smelting of tin was well-established by the beginning of the nineteenth century in Jos. The colonial government outlawed tin mining and smelting by indigenous firms in order to prevent competition with the British expatriate companies. The indigenous furnace owners were compensated with an annual rent of ten pounds a year (Isichei, 1983:52). Not only was the indigenous industry destroyed, the other industries that utilised the output of the local industry as raw materials were also destroyed. There were appreciable advances in the field of medicine and health care including crude

surgery. Although a lot of the discoveries were shrouded in fetishness. The development of modern medical care was used to discredit and destroy the indigenous system rather than modernise it.

In summary, the Nigerian elites during the pre-colonial era were pre-occupied with political hegemony and they were constantly at war, and prisoners of war were sold into slavery. And peace was rare. Many industrial discoveries could not be upgraded. The failure to invent writing deprived the nations of accurate records. Processes of producing many goods were shrouded in secrecy. In spite of myriads of odds, impressive achievements were however made in the production of various goods. All that remained was mechanisation of the processes of making such goods. The colonial administration brought peace. The inhabitants were able to concentrate more on economic matters. Improved transport and communication fostered inter-regional trade. The railway system brought the Southern and Northern parts of the country closer. But the metropolis saw the colonies as markets for their products and sources of raw materials for their factories. Colonial government policies deliberately destroyed the indigenous budding industries. This phenomenon represented the first phase of de-industrialisation in Nigeria, a process by which the slow but steady indigenous industrialisation was derailed. Would the train be realigned by a sovereign Nigerian Government?

Industrialisation in Sovereign Nigeria

Nigeria became politically independent in 1960. However, political and economic matters gradually culminated into that event in 1960. The attainment of independence by India in 1947 blazed the trail; the Gold Coast followed in 1957. The struggle for political independence began immediately after the Second World War. Visible changes began in 1949 with a newly created Ministry of Commerce and Industry, the goal of which was "to develop secondary industries on the widest possible scale by methods that will ensure the maximum participation by Nigerians

themselves in industrial enterprise" (Schatz, 1977:4) Schatz referred to the period of 1949 to 1966 as Nurture Capitalism. Before 1960 many public corporations were established that engaged directly in many productive enterprises on profit basis. All the regional governments had various public corporations; this resort to public corporation blended with the socialist ideology of the era which was prevalent in many parts of the world. Nigerianisation also began in the 1950s. It therefore must be borne in mind that although the British withdrew physically in 1960, they left behind mental and psychological domination of the indigenes. The nationalists also realised that after gaining political independence, they had neo-colonialism to contend with. Nigeria was mentally and culturally colonised. In contrast, the Japanese resisted foreign culture, but Nigerians were unable to resist the British ways of life. The English pattern of consumption, family life, dressing mode, etc continued to thrive with most of the elites after independence. In the development process, it is the ruling class that matters. In Nigeria, the educated elites and the military rulers ruled the roost. This easily brings to mind T. M. Aluko's "One Man One Matchet". These aspects of behaviour have far-reaching implications for the Nigerian economic development. Indeed, many members of the elitist group regarded Britain as their alternative home, with the consequence of a dilemma. This dilemma was underlined by Mabogunje (1977:443) when he put forward the two choices open to developing countries in the development process. The first choice is for the people to continue along the development path based on the notion of achieving a pattern and style of consumption similar to that of the developed countries. The alternative is to accept the non-viability of this course of action and to settle down to design a new developmental goal consistent with their local resource endowment and socio-cultural reality.

The choice of development pattern is always made by the ruling elites, those who wield power and influence. During the industrial revolution in Britain, the landed gentry and the squires and later

the successful businessmen formed the ruling elites. In Russia, the communist party leaders: Lenin, Leon Trotsky, Stalin and the communist party intelligentsia formed the ruling elites at the initial stage of development. In the later years, Stalin turned a brutal dictator. During the initial stages of development, particularly 1949 – 1966, the leading nationalists: Nnamdi Azikiwe, Obafemi Awolowo, Ahmadu Bello, Aminu Kano among others and the traditional rulers were the ruling elites. After the coup d'etat of January 1966, the military officers seized the rein of power. Apart from the military officers' general deficiency in education, they were also mentally colonised. Many of them were trained Sandhurst in Britain, they were also culturally colonised and could not find fault with the British way of life.

In critically analysing the Nigerian industrialisation, these factors are relevant. Even after independence, the North preferred British and Asian experts to those of the Southern parts of Nigeria. Needless to state that most of the industrial laws that continued to be employed until the 1970s were those developed during the dying days of the colonial era. The major industrial policy, the import substitution policy, was also established during the period. It is necessary to examine the Nigerian industrialisation process at the outset of independence through the remaining part of the twentieth century. A convenient starting point is the overview of the whole economy.

The government of the First Republic was anxious to promote industrialisation and development. In the pursuit of this objective, the First National Development Plan 1962 – 68 was drawn up. The cornerstone of that plan was the construction of the Kainji Hydroelectric Dam for the multipurpose of generating electricity and of irrigating the surrounding areas for agriculture round the year. It would be correct to claim that the 1962 – 1968 development plan hinged on the construction of infrastructure. But the fund for the prosecution of the projects was not available. More than 50 percent of the cost was expected to come from foreign donors

and lenders. The First Republican government was terminated by the military and the remaining part of the century could be easily passed for an era of military dictatorship, ignoring the 1979 – 83 hiatus. It is also pertinent to confirm that the military administration drew up development plans. But the philosophy of the plans as well as the implementation were a different matter.

The Second National Development Plan 1970 – 74 was well-designed and articulated. It also attempted to establish a philosophy for economic development and governance; a dynamic economy, a just and egalitarian society, a free and democratic society, a self-reliant nation (FRN, 1970:32). Aboyade could easily be discerned in the designing of such a philosophy for a country for which he tirelessly laboured. He headed the team that drew up the plan; he criticised the First National Development Plan for not having a soul (Aboyade, 1962:113). He fashioned an enviable soul, but the designers of the Second National Development Plan addressed a military dictatorship that did not share their vision. Therefore, Nigeria has had, instead of a dynamic economy, a comatose economy, a dependent economy instead of a self-reliant economy, and instead of a democratic society, Nigeria has had, in the main, autocracy and kleptocracy. These factors explained, in part, why Adejugbe (2002:94) asserted that the backwardness and retarded growth in Nigeria was not due to globalisation, but to greed and lack of patriotism among the ruling elites. How has the economy performed, given the enormous resources from crude oil?

General Performance of the Nigerian Economy

The Nigerian economy grew by 5.3 per cent per annum between 1962 and 1965 (Adejugbe 1976:197). It was an impressive performance without the advantage of petroleum revenue. The civil strife aborted economic growth during the remaining part of the decade. It is, however, better to focus on the post civil war era. By the end of the civil war, the petroleum economy had loomed large in the Nigerian economy, assuming a larger

proportion of the export earning and of the government revenue. But it remained an enclave economy, and therefore made no appreciable impact on the income of the general populace.

In a three-sector analysis, Table 1 below presents the structure of the Nigerian economy; the slowly changing structure of the economy is also depicted. Agriculture includes farming, fishing, livestock farming and forestry. The striking feature is the gradual decline of the relative contribution of agriculture to the Gross Domestic Product (GDP). This is not unexpected, but for healthy economic development the relative loss in importance must be the gain with respect to the importance of manufactured value added. Industry comprises mining, including petroleum exploitation, manufacturing utilities and construction. But the dominant component was petroleum. Services comprise banking, financial, administrative, insurance and commercial services.

The income from agriculture grew impressively between 1960 and 1965 before the growth was terminated by the civil strife of 1966 – 70. Developments in the crude oil economy also badly affected agriculture during the 1970s. The agriculture and manufacturing sectors were the lagging sector while the petroleum sector was the leading sector. However, between 1981 and 2002, agricultural income grew at an annual rate of 3.9 percent. When allowance is made for a growth rate of 2.8 percent of the population, what is left for fibre and export is 1.1 percent per annum. This partly explains the poor performance of non-oil export in Nigeria. The output in the agricultural sector leaves very little for export and for fibre.

**Table 1: The Structure of Nigeria's Economy 1960 – 2003:
Selected Years**

Year	Agriculture %	Industry %	Services %	Total
1960	62.9	11.10	26.0	100
1965	54.4	17.23	28.38	100
1970	47.94	22.40	29.66	100
1975	27.35	35.6	37.05	100
1980	22.92	40.8	36.28	100
1985	36.81	29.2	33.99	100
1990	38.25	26.97	34.78	100
1995	38.91	21.84	39.25	100
2000	35.83	38.94	25.22	100
2003	34.624	40.243	25.1	100

- Sources:*
- (i) Federal Office of Statistics (FOS) *Annual Abstract of Statistics*. Various Issues.
 - (ii) Central Bank of Nigeria (CBN) *Statistical Bulletin* Vol. 14 December 2003.
 - (iii) CBN Annual Report and Statement of Accounts December 31, 2004

Reference has been made to the agriculture-industrial nexus. The growth of agro-allied industries: vegetable oil, fruit concentrates, industrial starch, sugar refining, etc depends on a vibrant agricultural sector. In Nigeria, such agricultural vibrancy is still waiting for a progressive and realistic land use law, the construction of adequate infrastructure, including feeder roads,

rural electrification, and the introduction of appropriate machinery in agriculture. The machinery should be one that is agreeable with the socio-cultural and psychological filament and disposition of the typical Nigerian farmer.

The growth of the Nigerian GDP is still closely linked with the growth performance in agriculture. The overall growth of the GDP for the period of 1970 – 2002 was 3.13 percent¹. The Nigerian economy had its best performance during the decade of 1970 – 1979 with an annual growth rate of 6.26 percent. The worst performance of the economy was during the decade of 1980 – 1989 when the annual growth rate collapsed to a mere 0.32 percent. The annual growth rate of the economy rose to 4.07 between 2000 and 2002, as compared with 3.7 percent of the preceding decade, 1990 – 99.

The primary concern of this discourse is the industrial sector, particularly the manufacturing sector. The sector is an index of the degree of industrialisation, it is the sector into which the agricultural surplus labour, the graduates of Universities, and polytechnics are expected to pour into. If there are no growing opportunities in the manufacturing and services sectors, the economy stagnates and poverty deepens.

Aggregate performance in the manufacturing sector is partly evaluated by the growth of the Manufactured Value Added (MVA). The period of 1981 to 2002 is considered. During the period, MVA grew by 0.8 percent per annum. That is, the manufacturing sector merely stagnated for twenty-two years. It means that the prime mover of the Nigerian economy was in coma for more than two decades. The sector went comatose.

Table 2 on the next two pages shows the relative importance of the manufacturing sector in the Nigerian economy. The values shown are midpoints of the three-year moving averages of the GDP and the percentage of the GDP contributed by Manufactured

Value Added. Manufactured Value Added (MVA) as a percentage of GDP declined steadily over the two decades of the last millennium.

Performance of the Nigerian Manufacturing Sector

For a proper appraisal of the performance of local manufacturing, it is necessary to place the achievement of the sector side by side with the targeted objectives. The Nigerian Government was pre-occupied with the problem of balance of payment deficits from the mid – 1950s. It was considered that rising import bill could be curtailed by domestic manufacturing of substantial number of goods that were on importation. This practical approach was also supported by a leading development economist of the era, Hirschman (1958) who advocated industrialisation through import substitution. He also argued that industrial linkages could forge within the economy. High tariff walls were therefore erected to force importers of those imported commodities to embark upon domestic manufacturing. The company tax structure was also designed to provide incentives for foreign direct investment. Tax holidays for capital investment, approved user scheme for materials to be used in the factories, etc were established.

Table 2: The Manufacturing Sector of Nigeria in Relation to the Gross Domestic Product (GDP) (1984 Constant Price) (3-Year Moving Average).

Year	GDP in Billion Naira	Manufactured Value Added as Percentage of GDP
1982	68.86	9.86
1985	65.57	8.32
1988	73.24	8.36
1991	89.88	8.25
1994	99.19	7.49
1997	106.55	6.50
2000	117.12	5.92
2002	126.34	5.98

Source: CBN, *Statistical Bulletin* Vol. 14, December 2003 (The original data used was obtained from the above source)

In addition, both the Federal Government and the defunct regional governments entered into joint ventures with companies that set up manufacturing plants in Nigeria. The Nigerian Cement Company with its factory at Nkalagu, the West African Portland Cement Company with its plant at Ewekoro near Abeokuta, the Nigerian Breweries, brewers of the popular "Star" beer were examples of the early joint ventures. The leading importers of the period: the United African Company Ltd., John Holt, S. Raccah, Gazal Brothers, Burham Cement Company, etc redeployed their resources into domestic manufacturing. But most of the industries established were mere assembly plants, depending wholly or largely upon imported inputs and machinery. Only a few industries such as cement, asbestos, soap and detergents depended

appreciably on domestic raw materials. The situation grew worse in the 1970s with the oil boom of 1973 and 1975, which conferred a false sense of opulence on the country. Industries that relied upon 100 percent imported inputs continued to be set up. The motor assembly industry was a typical example. The military government and the supporting bureaucrats were erroneously convinced that Nigeria could no longer have foreign exchange problem. The country was prepared to engage in industrialisation without well-thought out goals that would promote economic development. They failed to link the country's past with the present. At the end, very little was gained through domestic manufacturing in terms of *domestic resource utilisation, of employment generation and of technological capability building.*

The original goal of curtailing the balance of payment deficit was not achieved. The import substituting industries merely substituted the importation of finished products for intermediate products with little or no effects upon the import structure. The situation was made worse because the need to import intermediate goods became compelling, as failure to import raw materials and machinery spare parts usually lead to factory closures, labour lay-offs and idle industrial capacity. This explains Nigeria's low industrial capacity utilisation, about 40 percent at best!

Table 3: The Structure of Nigeria's Import: End-Use Classification (Selected Years)

Year	Non-Durable Consumer Goods	Durable Consumer Goods	Capital Goods	Raw Materials	Total
1965	34.1	6.9	42.1	16.9	
1970	24.3	5.2	42.2	28.3	
1975	21.3	11.1	40.6	27.0	
1980	30.7	8.9	33.5	26.8	
1985	28.7	3.8	35.7	33.8	
1990	23.5	3.1	21.5	45.3	
2000	35.7	3.3	21.2	39.8	

Values are in percentages

Source: See Adejugbe, 2004: 339

The first round of warning about economic dependency came in 1978 when there was some decline in foreign exchange earning. Some tightening of the national economic belt was applied, but no fundamental review of the strategies and targets for the Nigerian industrialisation was undertaken. As Table 3 above shows, between 59 percent and 73 percent of Nigeria's import bill went into the importation of raw materials and machinery. In 1955, consumer goods accounted for 62 percent, machinery and intermediate goods accounted for thirty-eight percent. Import substitution strategy merely swamped the relative importance of consumer goods import with that of machinery and imported raw materials. In the end, neither the purpose of development nor that of correcting the adverse balance of payment problems was served. Of course, many developing countries that adopted the

import substitution strategy were also confronted with a similar problem. As Singer (1989:6) observed, the most important weakness of the import substituting industrialisation was that it failed to substitute for imports, as a result of lack of vertical integration with the host economy. Domestic manufacturing remained, largely, dangling in the air. Either way the economy remained dependent. This state of economic affairs favoured the internalisation strategy of the Multi-National Enterprises MNEs; it was also acceptable to the local agents of MNEs. Turner (1976) referred to them as local comprador. Both the indigenisation and the Structural Adjustment Programme failed to achieve the goals as a result of this state of affairs. Turner (1976) identified a triangular relationship among the civil servant, the Nigerian middlemen and the foreign suppliers.

Internalisation is a creation of the MNE whereby affiliates can be supplied with finished goods, inputs or machinery from the parent company or from another affiliate anywhere on the globe. Internalisation enables MNEs to substitute internally determined prices for competitive prices that arise from arm's length transactions (Dunning, 1981:28). The process confers monopoly advantages; it enables MNEs to circumvent fiscal and monetary policies of the host countries within which they operate, with dire consequences. MNEs are not keen to engage in Research and Development (R&D) outside their home bases. Substituting domestic inputs for imported inputs is therefore impeded. The development of the host country in terms of the use of domestic inputs and local personnel is also seriously impaired. The industrial structure remained asymmetric, devoid of the necessary sectoral balance. Ownership and control remained in foreign hands, notwithstanding the indigenisation programme of 1972 – 74 and that of 1977. The Structural Adjustment Programme also failed to achieve its targets. In the Nigerian industrial sector, there is very little creation of wealth but enormous piracy. The country ended up with pirate capitalism. Others refer to it as "419". The industrial landscape is replete with structural imbalances,

including spatial industrial imbalances, false business indigenisation and failed structural adjustment.

It is necessary for the manufacturing sector to be balanced with respect to consumer goods, intermediate goods and capital goods sub-sectors. These sub-sectors are supposed to be interdependent. The capital goods sub-sector is expected to produce substantial proportion of the machinery and intermediate goods required in the non-durable and durable consumer goods. The structural imbalance in the Nigerian manufacturing sector is clearly shown by the data under Table 4 on the next two pages. The manufacturing sector was dominated by consumer goods manufacture (MVA). In all the years considered, consumer goods manufacture accounted for more than 50 percent of the aggregate MVA. In 1965, consumer goods manufacture accounted for 68 percent of total MVA. This referred to the establishments covered by the Federal Office of Statistics (FOS) Industrial Survey. The survey covered establishments that employed ten persons or more. There were many establishments that employed less than ten persons, these establishments were engaged mostly in the manufacture of consumer goods, or intermediate products such as cement blocks, yarn, metal products, etc.

Within the consumer goods sub-sector, non-durable consumer goods also dominated. In 1975, non-durable consumer goods accounted for about 68 percent of total value added in the manufacturing sector. Durable consumer goods accounted for about 6 percent. The contribution of capital goods to MVA had always been less than 30 percent. An exception occurred in 1995 as a result of an upsurge in the contribution of industrial chemicals to aggregate MVA.

The lopsidedness of the manufacturing sector was exposed by the negligible contribution of machinery to MVA. It had always fallen below 5 percent of total MVA. Transport equipment is concerned mainly with motor vehicle assembly; the performance

of the industry depended upon the availability of foreign exchange for importing motor vehicle components. The crux of the manufacturing sector's problem is its inability to be self-reliant or interdependent. The explanation for the lopsidedness in structure was easily traced to the narrow objective of Nigerian domestic manufacturing that was not reviewed for more than half a century.

The same imbalances were obvious in the spatial configuration of the manufacturing establishments. Since most of the industries depended upon imported inputs, cost minimisation required the location of the factories close to seaports. The location of Peugeot Automobile Nigeria (PAN) was anomalous. It emanated from government fiat. The 1977 indigenisation decree was also expected to force many companies to locate factories in the hinterland. That did not materialise.

**Table 4: Structure of Nigeria's Manufacturing Sector
Based on Value Added Values are in Percentages**

Period	1965	1975	1985	1995
<u>Non-Durable Consumer Goods</u>				
Food, Beverage, Tobacco	39.74	27.75	28.01	25.43
Textile and Wearing Apparel	9.27	16.62	14.34	10.57
Footwear and Leather	1.74	3.41	3.15	2.02
Paper and Paper Products	3.06	6.02	5.94	1.645
Rubber and Plastics	5.75	5.01	4.91	7.34
Pottery and China	0.22	0.0	0.15	-
Pharmaceutical	-	7.92	10.81	0.09
Petroleum	-	5.82	0.33	-
Sub-Total	59.78	72.60	67.64	47.095
<u>Durable Consumer Goods</u>				
Wood Furniture	6.16	3.72	1.72	7.54
Radio & T.V.	-	0.79	1.09	0.844
Household Electrical Goods	0.82	0.61	1.0	-
Other Household Goods		0.45	0.4	0.04
Sub-Total	8.40	5.57	4.22	8.724
<u>Capital Goods</u>				
Non-metallic Mineral Products	6.95	3.92	6.93	1.12
Basic Metals	0.62	2.05	1.22	0.124
Fabricated Metals	6.29	8.49	5.49	9.42
Machinery	-	0.51	1.27	3.65
Transport Equipment	9.71	4.58	11.88	4.23
Industrial Chemicals	8.25	2.28	1.35	25.46
Sub-Total	31.82	21.85	28.14	44.00
Grand Total	100.0	100.0	100.0	100.0

Source: Computations were based upon F.O.S. Survey of Industrial Establishments. Various years.

Adejugbe (1984:587) observed that the enactment of the indigenisation laws in the 1970s was inevitable, as similar laws had been enacted in many other African countries. The expressed goals of the laws were promotion of indigenous enterprises, equity ownership of foreign companies by Nigerians and managerial and technological control of the affected companies. The laws even attempted to use the indigenisation policy of 1977 to force dispersal of the activities of the companies across the country. But how do you control a technology you know very little or nothing about. What we had in Nigeria were branch plants. The laws achieved very little with respect to the promotion of indigenous enterprises. No new opportunities or challenges were created apart from reducing the competition between foreign and indigenous companies. It was impossible to control companies in which Nigerians had majority equity shares because the basis of control was technological knowledge.

Similarly, the Structural Adjustment Programme did not achieve any of the objectives:

- (i) restructuring and diversifying the productive base of the economy;
- (ii) achieving fiscal and balance of payment viability;
- (iii) laying the basis of sustainable and non-inflationary growth.

The necessary conditions for successful restructuring were not met. This included greater inward-looking strategy, which would have fostered greater use of domestic inputs in the manufacturing sector. Greater use of domestic inputs could only be achieved if the local R and D were considerably stepped up. This could only be possible if there were greater incentives for creative activities and wealth creation as against the pirate capitalism that existed.

Adejugbe (1992:226) pointed out that the adjustment at the firm level involved costs. These costs were in terms of interest rate on loans or on company own fund, wage bill and R and D cost.

Whether at the level of household or large enterprise, Nigerians are highly sensitive to changes in interest rate. Adejugbe (1988:223) showed, in an empirical analysis, that the demand for fund in Nigeria was highly interest rate elastic. Unfortunately the rate of interest had always been buoyed up by fiscal indiscipline, and the resulting Central Bank of Nigeria's attempts to mop up excess liquidity. Excess liquidity had continually fuelled inflation. Indeed, high rate of inflation, mostly two-digit figures, had always stifled the growth of SSEs upon which meaningful economic development depended.

Concluding Remarks

The different nations and ethnic groups in Nigeria had attained the basic stage for industrialisation before the British Colonial rule. The next crucial stage was mechanisation; this was however aborted because it ran counter to the goals of British Government for colonisation. Most Nigerians, particularly the educated elites were so much excited by the perceived superiority of imported products and imported processes that the indigenous-industrialisation baby was thrown away with the bath water.

By the time the Nigerian political leaders were clamouring for domestic manufacturing, the targeted goal was restricted, it was to contain the balance of payment problems, arising from mounting import bills and dwindling foreign exchange earnings. This era coincided with the development of MNEs and the revolution in transport and communication, which paved the way for the growth of globalisation.

The import substitution strategy adopted in the early industrialisation era remained for half a century without any substantial revision. The tariff wall erected, which was justifiable on grounds of infant industry arguments, remained for an unnecessarily long time, only to harbour inefficiency and un-competitiveness of domestic industries. The affiliates of MNEs that engaged in manufacturing in Nigeria did little to forge vertical integration with the Nigerian economy.

The place of capital in the industrialisation process was misplaced. The appropriate combination of labour and capital was not seriously considered. Capital continued to be subsidised through incentives to capital investment by large firms. The country ended up with capital-intensive processes instead of labour-intensive processes. Very little was done to adapt imported machineries to local conditions. Labour was the abundant factor of production in Nigeria, but adequate skills acquisition was not provided. Employment goal was not sufficiently built into the country's industrialisation policy.

Nigeria has not been sufficiently selective in respect of foreign direct investment. The Japanese did not fling her doors open to all types of foreign investments. She was very selective. Russia industrialised in a condition of virtual isolation. These countries put enormous resources into building indigenous technological capability. The machineries developed in those countries were in consonance with their resource endowment. Britain did not have any serious competition during the crucial period of her industrialisation. Her mechanisation was in response to the exigencies of the conditions of her economy. Government direct intervention in Nigeria had been a failure. The integrated iron and steel complex at Ajaokuta, the Jebba Paper Mill, the cement plants in Okpella, Calabar and Sokoto, the Machine Tool plant at Oshogbo, etc turned out to be bad investment propositions and projects (Adejogbe, 1972:234). They therefore failed to serve the expected industrialisation leverage.

Nigeria has abundant human and material resources. For the purpose of harnessing these resources to meaningful industrialisation, creative activities must be accorded attractive returns. The war against pirate capitalism must be stepped up. Creativity and wealth creation must be wholeheartedly embraced. The raw materials used in the Nigerian manufacturing sector must be obtained largely internally. Manufacturing companies must develop vertical integration within the economy. Policies and laws

should be established to develop corporate linkages which will ensure that SSEs and MSEs supply intermediate products to LSEs. The capital goods sector must be revamped and enlarged. The economic environment must also be vastly improved. Without adequate infrastructure in terms of electricity supply, transport modes for massive movement of goods and people, modernised railways and well-developed waterways in particular, Nigerian industrialisation cannot take off. Without adequate infrastructure in the rural areas as well as meaningful land reform, agriculture cannot be revolutionised. And to that extent, industrialisation would be hampered.

The Nigerian educational system needs to be overhauled to provide quality education and industrial skills. This should start at early childhood, with appropriate toys. The primary school should be equipped to provide skills; laboratories in the secondary and tertiary institutions should be considerably improved. Process and product development require both theoretical and practical work. The research institutes need to be better funded and staffed. Nigeria can only compete in a globalising world if she can create products and processes that are peculiar to her. It will be impossible to excel with respect to processes and products imported from foreign countries. That boils down to the need for building massive technological capability through R and D. The Nigerian industrialisation can only be achieved through her internal steam, neither through petrol dollar nor external steam. The dismal growth rates of 3.3 percent of the GDP during the last two decades of the twentieth century can barely cope with the country's population growth. The manufacturing sector grew at less than 1.0 percent. It is therefore imperative to comprehensively review and revise the current policies for technological capability building.

These changes are possible, provided well-educated and visionary leaders at all levels of governments administer the country. The leaders must be democratically installed. The current

autocracy and kleptocracy must give way to transparency and genuine democracy. This will usher in an administration that is actively supported by a progressive, enlightened and public spirited ruling class that has economic development as a priority, and which will therefore formulate and implement policies that will attain that goal of meaningful economic development. The desirable administration, as far as the industrial sector is concerned, is one that will forge an organic link between the Nigerian industrial sector and the rest of the economy; it is an administration that will ensure that the bulk of the raw materials in Nigerian factories is internally sourced and produced with the result that the industrial and corporate linkages within the economy are considerably strengthened. This requires building a massive technological capability through R & D, and putting in place a highly competent human capital and appropriate physical capital. It also requires a spatially balanced distribution of infrastructure. The ultimate goal is to produce a self-reliant economy, full of opportunities for all citizens irrespective of spatial differences: irrespective of whether these citizens are located in the South or in the North, or whether they are located in the rural areas or in urban areas.

Thank you.

Notes

1. The mean growth rate is calculated as:

$$Gr = \frac{1}{n} \sum [(Y_t - Y_{t-1}) / Y_{t-1}] \times 100$$

t = 1970, 1971, ... 2002

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