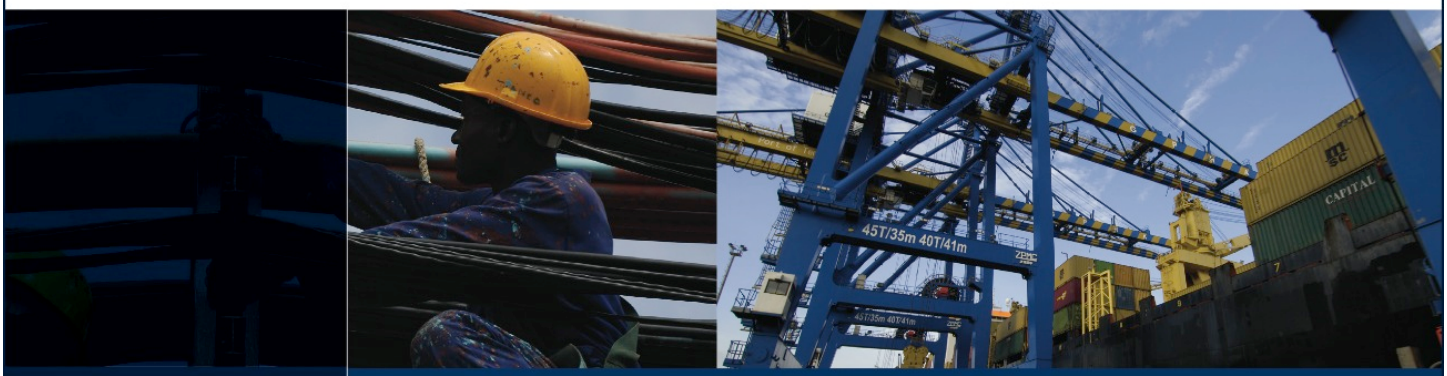
Africa Growth Initiative at BROOKINGS

AFRICAN DEVELOPMENT BANK GROUP

UNITED NATIONS UNIVERSITY
UNU-WIDER
World Institute for Development

LEARNING TO COMPETE

Working Paper No. 8



Industrial development and growth in Nigeria: Lessons and challenges

L. N. Chete, J. O. Adeoti, F. M. Adeyinka, and O. Ogundele*

Abstract

The structure of the Nigerian economy is typical of an underdeveloped country. The primary sector, in particular, the oil and gas sector, dominates the gross domestic product accounting for over 95 per cent of export earnings and about 85 per cent of government revenue between 2011 and 2012. The industrial sector accounts for 6 per cent of economic activity while the manufacturing sector contributed only 4 per cent to GDP in 2011. The economic transformation agenda, otherwise known as Nigeria Vision 20: 2020, sets the direction for the current industrial policy in Nigeria. The industrialization strategy aims at achieving greater global competitiveness in the production of processed and manufactured goods by linking industrial activity with primary sector activity, domestic and foreign trade, and service activity.

Keywords: industrialization, mixed economy, cooperative, garment sector, Cambodia
JEL classification: L2, L52

*Nigerian Institute of Social and Economic Research (NISER), Ibadan, corresponding author email: Lnchete@yahoo.com

Learning to Compete (L2C) is a collaborative research program of the Africa Growth Initiative at Brookings (AGI), the African Development Bank, (AfDB), and the United Nations University World Institute for Development Economics Research (UNU-WIDER) on industrial development in Africa. Outputs in this Working Paper Series have been supported by all three institutions.

AGI-Brookings is grateful for the contribution of an anonymous donor for funding its work under the collaborative research program.

1 Background and context

The structure of the Nigerian economy is typical of an underdeveloped country. Over half of the gross domestic product (GDP) is accounted for by the primary sector with agriculture continuing to play an important role. The oil and gas sector, in particular, continues to be a major driver of the economy, accounting for over 95 per cent of export earnings and about 85 per cent of government revenue between 2011 and 2012. The sector contributed 14.8 and 13.8 per cent to GDP in 2011 and 2012, respectively. It also recorded an increase in reserves from 37.119 billion barrels (bbs) in 2012 from 36.042 bbs in 2011. In contrast, the industrial sector in Nigeria (comprising manufacturing, mining, and utilities) accounts for a tiny proportion of economic activity (6 per cent) while the manufacturing sector contributed only 4 per cent to GDP in 2011. This is despite policy efforts, over the last 50 years, and, in particular, more recently, that have attempted to facilitate the industrialization process. In this paper we explore the evolution of the industrial sector in Nigeria over the last 50 years. To set the context we begin by providing an overview of the policy framework for industrial development from the 1960s to the present day.

At independence in 1960 and for much of that decade, agriculture was the mainstay of the Nigerian economy providing food and employment for the populace, raw materials for the nascent industrial sector, and generating the bulk of government revenue and foreign exchange earnings. Following the discovery of oil and its exploration and exportation in commercial quantities, the fortunes of agriculture gradually diminished while crude petroleum replaced it as the dominant source of revenue and export earnings. This is despite a drive for industrial development[1] in Nigeria dating back to the early 1960s with the first National Development Plan for the period 1962-68.[2] Under the First Plan the country embraced import-substituting industrialization (ISI)[3] with the objective of mobilizing national economic resources and deploying them on a cost/benefit basis among contending projects as a systematic attempt at industrial development. The period of this plan witnessed the commissioning of energy projects such as the Kanji dam and the Ughelli thermal plants, which provided a vital infrastructural backbone for the nascent industrial sector. Other important industrial infrastructure developed during this period, which was considered crucial for catalyzing industrial take-off in Nigeria; included an oil refinery, a development bank, and a mint and security company. Even though, the main objective of the ISI strategy was to stimulate the start-up and growth of industries as well as enhance indigenous participation by altering the ownership structure and management of industries, it was characterized by a high degree of technological dependence on foreign know-how to the extent that the domestic factor endowments of the country were grossly neglected. The focus on an ISI strategy as the cornerstone of industrial development efforts during the period of the First Plan therefore seemed to have neglected many of the factors required for

---

[1] A deliberate and sustained application and combination of suitable technology, management techniques, and other resources to move an economy from a traditional low level of production to a more efficient system of production. Industrial development is one of the best training grounds for skill development, and it can increase the flexibility of the economy and reduce dependence on external forces. Industrial development provides employment, foreign exchange, and domestic earnings.

[2] An industrial policy matrix outlining the distinct phases in Nigeria's industrial evolution is presented in Appendix Table A1.

[3] The ISI strategy defined the frame for industrial policy in the immediate post-independence period. The main objective of this policy was to lessen dependence on foreign trade and conserve foreign exchange by producing locally products that were previously imported.

managing the emergent industrial sector and in particular, the management of technologies transferred or acquired.

The Second National Development Plan (1970-74), attempted to address the limitations of the ISI strategy, and placed emphasis on 'the upgrading of local production of intermediate and capital goods for sale to other industries'. This was the first systematic effort to create an industrial structure linked to agriculture, transport, mining, and quarrying. The Second Plan coincided with Nigeria's newly acquired status as a major petroleum producing country. As the economy benefited heavily from enormous foreign exchange inflows, the government embraced ambitious and costly industrial projects in sectors such as iron and steel, cement, salt, sugar, fertilizer, pulp and paper, among others.[4] According to the plan, the establishment of industrial projects during this period was inspired by the need to increase the earning power of the populace; to minimize social tension by generating more employment; to make essential goods easily available; and to lay the foundation for a self-sustaining economy. The shallow nature of Nigeria's technological capacity, however, prevented the economy from moving beyond the elementary phases of these projects, and indeed, virtually all of these projects have today either been shut down or operate at very low capacity.

The period of the 1970-74 Plan also witnessed a dramatic shift in policy from private to public sector-led industrialization. Industrial planning took place in the public sector which also executed most of the industrial projects as the government invested directly in productive activities. It was clear at this time that Nigerian entrepreneurs did not have the money or the techno-managerial capacity to establish and manage such enterprises and so the government had to lead the way. On balance, a critical appraisal of the nature of the industrial development challenge of the 1970s reveals that the limitation was not so much that of finance but dearth of human capital including techno-managerial capabilities and skills required for initiating, implementing, and managing industrial projects. This was all the more evident by the fact that project preparation, feasibility studies, engineering drawings and designs including construction, erection, and commissioning, relied greatly on foreign technical skills and services. The 1972 Act on Indigenization of Enterprises Operating in Nigeria resulted in an indigenization policy which was subsequently amended, repealed, and replaced by the Nigerian Enterprises Promotion Act of 1977. The objectives of the policy were to:

- Transfer ownership and control to Nigerians in respect of those enterprises formerly owned (wholly or partly) and controlled by foreigners;
- Foster widespread ownership of enterprises among Nigerian citizens;
- Create opportunities for Nigerian indigenous businessmen;
- Encourage foreign businessmen and investors to move from the unsophisticated spheres of the economy to domains where large investments are required.

The Third National Development Plan (1975-80) was launched at the height of the oil boom. Despite a lack of executive capacity in the country, the plan envisaged an investment outlay of 42 billion NGN (up from 3.2 billion NGN of the Second Plan).Emphasis remained on public sector investment in industry, especially heavy industries. With easy access to foreign exchange, private firms opted for investments in the light, low technology consumer industries which were heavily dependent on imported machinery and raw materials. It became apparent that the country had entered into industrial project agreements with very little concern for the country's

4 These industrial projects were from the core sectors of the economy and it was expected that their development would spinoff firms of the Hirschman–type through backward and forward linkages leading to a generation of enterprises, including small firms in response to the ISI strategy (Oyelaran-Oyeyinka 1997).

capabilities for technology acquisition. While by their nature each of these projects required the acquisition of key sector-specific skills, the agreements made by the Nigerian planners were for the turnkey transplantation of technology. Attendant to the fact that during the same period, the nation's oil sector had become vibrant and prosperous, and the gates of the economy had been opened up to all sorts of imports. This had a debilitating effect on real industrial growth. In effect, the period of the Third National Development Plan failed to advance the course of industrial development in Nigeria in a significantly positive way.

The Fourth National Development Plan (1981-85) coincided with the inception of a global economic recession which sparked declining foreign exchange earnings, balance of payment disequilibrium and unemployment in the Nigerian economy. As a result, the hugely import-based manufacturing sector was severely hit. Plummeting world oil prices and dwindling foreign exchange earnings left industries in need of foreign exchange to import new materials and parts. Indeed, this global recession exposed profound weaknesses in Nigeria's industrial structure and planning. It was evident at the end of the fourth development decade in Nigeria that existing strategies targeted at industrial development could neither solve the problem of economic underdevelopment nor the social ones created by mass poverty, unemployment, and insecurity of life and property. As a result, the pressure to seek alternative development paradigms had been triggered, not just by technical and economic imperatives, but also by social considerations.

The structural adjustment programme (SAP) was adopted in 1986, as an alternative framework for addressing the weaknesses and ineffectiveness of previous development planning efforts. The objectives of SAP included promoting investment, stimulating non-oil exports and providing a base for private sector-led development; promoting the efficiency of Nigeria's industrial sector; privatizing and commercializing state-owned enterprises to promote industrial efficiency; developing and utilizing domestic technology by encouraging accelerated development and use of local raw materials and intermediate inputs rather than imported ones.

A national science and technology (S&T) policy was formulated and launched in 1986.The objectives of this policy were to increase public awareness in S&T and their vital role in national development and well-being; direct S&T efforts along identified national goals; promote the translation of S&T results into actual goods and services, and to create, increase and motivate output in the S&T community. The S&T policy marked the beginning of the recognition of S&T efforts as a vehicle for successful industrial development in Nigeria. To facilitate the achievement of the 'self-reliance' aspiration of the S&T policy, the Raw Materials Research and Development Council, was established by Decree No. 39 in 1987. The Standards Organisation of Nigeria (SON) was also established for the purpose of ensuring standardization and adequate quality control in industrial production. The S&T policy emphasized the transfer of foreign technology to local firms, via the licensing and registration of patents, trademarks, technical assistance arrangements, research and development, training, and operations. There is little evidence that the S&T policy was successful. Bamiro (1994) and Oyeyinka (1997) among other authors identified some of the plausible reasons for the non-performance of the S&T policy to include fact that:

- S&T Institutions were operating independently of each other, with little or no interactions, leading to duplication of efforts and wastages;
- Narrow base of S&T research which concentrated on R&D;
- Isolation of the manufacturing sector from R&D activities and therefore non-commercialization of ideas; and
- Insufficient funding for the S&T sector.

It could therefore be argued that innovation[5] was absent in this era of industrial development, to the extent that although the role of S&T was peremptorily acknowledged, its deeper implications were not grasped and fully appreciated. The important issues which the era of S&T policy in Nigeria missed were how S&T translates or influences the broad process of industrial development and how such influences may be improved upon, i.e., a recognition of the need to transit from S&T to science, technology, and innovation (STI).

In 1989, the trade and financial liberalization policy was enacted. A key aim was to stimulate competition among domestic firms and between domestic import-competing firms and foreign firms with the objective of promoting efficiency. The aim was to achieve this through a reduction in both tariff and non-tariff barriers, scrapping the commodity marketing boards and market determination of the exchange rate as well as the deregulation of interest rates, meant to foster financial efficiency and industrial productivity. The National Economic Reconstruction Fund (NERFUND) was set up in the same year as a complement to industrial policy. The objective of the industrial policy was to reverse some of the provisions of the Nigerian indigenization policy, and open up the economy for foreign investors. NERFUND sought to address the medium- and long-term financial constraints experienced by small- and medium-scale entrepreneurs, provide the required financial resources to participating merchant and commercial banks to lend to small- and medium-scale firms and provide naira or foreign denominated loans to participating firms for a period of five to ten years with a grace period of one to three years.

In 1990, the need to link the science, engineering and technology sectors to fit within industrial and economic development endeavours became a key issue among the S&T community in Nigeria. As would be expected, the undue pampering of the manufacturing sector in the import substitution era through liberal and anti-competitive policies in the form of low interest rates, low wages, tariffs on imported inputs, an overvalued exchange rate, and high tariffs on imported substitutes, led to the sector's inability to evolve a consistent growth dynamic or chart an autonomous growth trajectory in such a way as to rival the industrialization rate of some other developing countries. The S&T policy document was consequently revised in 1992 and incorporated the broad objective of vigorously pursuing an S&T infrastructure development programme targeted at accelerating the emergence of endogenous capacity.

The role of S&T and its translation to 'innovation' as an engine of development started to feature prominently in the economic reform agenda between 1999 and 2007 especially within the rubric of the National Economic Empowerment and Development Strategy (NEEDS). The NEEDS framework identified STI as a cross-cutting issue that should be promoted in order to achieve economic development objectives (NPC 2007). Similarly, the current economic policy blueprint – Nigeria Vision 20: 2020 embraces elements of STI aimed at addressing challenges in critical areas such as biotechnology, nanotechnology, institutional linkages, capacity building, renewable energy, ventures capital, space research, small- and medium-scale industry targeted research, knowledge-intensive new and advanced materials, STI information management, information and communication technology[6]; intellectual property rights, traditional medicine, and indigenous knowledge.

---

5 Innovation is defined as the application of the knowledge acquired through S&T investment to achieve production. It must be noted that this knowledge might be acquired through learning, research, or experience, but until it is applied in the production of goods or services and translated to development, it cannot be considered as innovation.

6 The fields of new technologies, especially ICTs and biotechnologies have been amply shown to present new windows of opportunities for catch-up in technological and economic development (Perez and Soete 1988).

The Bank of Industry (BOI) established in 2000, was introduced as a development institution to accelerate industrial development through the provision of long-term loans, equity finances and technical assistance to industrial enterprises. The bank combined the following institutions: the Nigerian Industrial Development Bank (NIDB), the Nigerian Bank for Commerce and Industry, Industrial and Insurance Brokers, and the Leasing Company of Nigeria Limited. The objectives of this bank included providing long- term loans, assisting in employment generation and promoting industrial dispersal of indigenous entrepreneurship. As a complement to the BOI, small and medium industries equity investment scheme (SMIEIS) was also set up in 2000. The objective was to assist in the co-ordination of the scheme with a guideline that 60 per cent of the SMIEIS fund should go to the core real sector.

The remainder of this paper is structured as follows. Section 2 documents the performance of the Nigerian economy focussing on the structure of economic activity on aggregate over time and comparatively with other economies. Focus is then placed on the manufacturing sector. Special attention is also placed on economic zones given their emphasis in the current industrial policy debate in Nigeria. In Section 3, the industrial policy framework is described in detail. Focus is placed on macroeconomics policy, trade policy, and the institutional and regulatory framework for industrial development. Sector-specific policies are also discussed. Section 4 focuses on policy management and co-ordination efforts and Section 5 concludes with a discussion of emerging industrial policy issues.

2 Performance and structure of industry

This section analyses the performance of the industrial sector in Nigeria over the last 50 years and describes the structure of the sector. The analysis utilizes data from the World Bank Investment Climate Survey 2006 and Nigeria's National Bureau of Statistics.

2.1 Aggregate economic performance

The Nigerian economy experienced respectable growth in the first decade of political independence. In the period 1960-70, real gross domestic product (GDP) recorded 3.1 per cent annual growth. Similarly, real GDP grew by 6.2 per cent annually between 1970 and 1978. Negative growth, however, surfaced in the early 1980s, but this was reversed with the introduction of SAP with real GDP registering annual growth of 4 per cent in the period 1988-97. Overall, annual growth averaged less than 3 per cent for most of the three decades following the discovery and exploitation of oil (NPC 2004). More recently, the Nigerian economy has recorded considerable acceleration in growth as real GDP grew by 6.27 per cent, 7.57 per cent, and 7.38 per cent, in 2009, 2010, and 2011, respectively. Correspondingly, growth in real per capita income was 2.78 per cent, 3.76 per cent, and 4.78 per cent in 2008, 2009, and 2010, respectively.

The structure of GDP in Nigeria during the last five decades is presented in Table 1. It shows the dominance of the primary sector, comprising agriculture and mining and quarrying (including crude oil and gas). At independence, the contribution of the primary sector to GDP was about 70 per cent. This share, however, dwindled in subsequent years to 62.10 per cent and 55.68 per cent in 1977 and 1990, respectively; indicating a sluggish transition from primary production to secondary and tertiary activities. Although the primary sector's contribution to GDP climbed in 2003 to 68 per cent, it declined progressively to 55.3 per cent in 2011, revealing that more than half of Nigeria's output is still generated by the primary sector. The secondary sector comprising manufacturing, building, and construction contributes least to the GDP in Nigeria. Table 1

highlights the extreme dominance of agriculture in GDP in Nigeria and the small contribution of the manufacturing sector over the period.

To place this in context Table 2 shows the structure of GDP for selected countries. In comparison with the tiny contribution of manufacturing to GDP in Nigeria, the share of manufacturing in GDP stands at 27 per cent in Indonesia and Korea, 32.1 per cent in China, 17.5 per cent in Egypt and 17.7 per cent in South Africa for the period 2000-10.

2.2 Manufacturing sector performance

The source of data used for analysing manufacturing sector performance is the investment climate survey of Nigeria conducted by the World Bank in 2006. The broad survey covered manufacturing firms, micro-enterprises, retail, and residual businesses. The manufacturing survey addressed a wide range of issues pertinent to the industrial sector. The survey instrument was partitioned into 12 major modules, with each module focusing on a broad theme under which specific issues were investigated. The 12 modules are:

- Control information
- General information about firms
- Sales and export
- Supplies and import
- Capacity and innovation
- Investment climate constraints
- Infrastructure and services
- Conflict resolution and legal environment
- Business-government relations
- Labour relations
- Finance
- Productivity

Among all the 2,387 firms surveyed only 42 per cent of fell within the six sub-sectoral classifications of the industrial sector viz., textile, garment, food, wood and furniture, other manufacturing, and construction.

The distribution of firms captured by the investment climate survey data in terms of age and size is presented in Tables 3 and 4, respectively. The tables further show the classification by ownership and export.

Table 1: Percentage distribution of real GDP by sectoral group, 1961-2011

Sectoral group	1961	1966	1970	1977	1981	1987	1990	2003	2007	2009	2011
Primary sector	70.54	69.68	66.99	62.10	58.40	60.25	55.68	68.36	61.92	58.44	55.30
Agriculture	68.88	66.95	49.45	30.10	28.37	29.24	22.99	34.62	42.02	41.69	40.2
Mining &quarrying	1.66	2.73	17.54	32.00	30.03	31.02	32.69	33.74	19.90	16.75	15.1
Secondary sector	9.67	12.55	16.15	13.05	12.14	12.60	9.04	10.51	9.24	9.05	6.2
Manufacturing	4.73	7.00	7.66	6.30	5.60	5.95	5.12	4.32	4.03	3.72	4.2
Building &construction	3.30	4.95	7.77	2.90	2.83	2.87	1.78	2.70	1.72	2.01	6.2
Utilities	1.63	0.60	0.60	3.85	3.71	3.78	2.14	3.49	3.49	3.32	3.0
Tertiary sector	19.79	17.77	16.86	24.85	29.46	27.16	35.28	21.13	28.84	32.51	39.0
Wholesale &retail	19.36	15.40	13.56	14.21	14.17	14.19	8.68	12.92	16.16	18.14	19.4
Other service activities	0.43	2.37	3.29	14.64	15.29	14.97	26.60	8.21	12.68	14.37	
Total(GDP)	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.0

Source: Underlying data from National Bureau of Statistics, National Accounts Statistics of Nigeria (various years).

Table 2: Structure of GDP in selected countries (%)

	Agriculture					Manufacturing					Services				
	1960s	1970s	1980s	1990s	2000s	1960s	1970s	1980s	1990s	2000s	1960s	1970s	1980s	1990s	2000s
Botswana	39.52	23.74	8.70	4.25	2.24	9.72	6.84	6.00	5.17	3.91	46.98	37.36	33.82	40.90	46.79
Brazil	16.83	12.69	10.45	6.87	6.09	28.16	30.00	32.72	20.28	16.96	46.96	47.98	45.01	60.49	66.12
China	37.16	32.35	29.39	20.50	12.23	29.02	37.22	36.04	32.93	32.12	27.69	23.17	26.27	34.11	41.30
Egypt	28.88	28.15	19.75	17.25	15.02		15.73	14.40	17.54	17.25	44.05	44.09	49.70	50.95	49.02
Ghana	44.90	56.46	52.54	42.57	35.71	12.83	12.27	8.67	9.93	9.11	29.69	24.56	33.62	32.89	40.05
India	42.53	38.91	31.99	27.64	19.74	14.25	15.75	16.57	16.29	15.30	37.28	38.45	42.08	45.92	53.02
Indonesia	51.52	34.02	23.18	17.91	14.62	9.00	10.42	15.35	23.72	27.53	34.02	35.91	38.70	40.32	39.17
Korea	33.78	26.16	13.43	6.64	3.44	15.57	21.61	27.51	27.14	27.52	42.96	44.02	47.37	51.98	59.27
Malaysia	31.21	27.39	20.30	13.15	9.25	9.48	16.82	20.42	27.05	28.57	43.76	39.52	40.70	44.31	43.67
Mexico	12.21	11.60	8.97	6.20	3.88	20.14	22.74	23.07	20.54	18.61	59.73	56.23	57.03	65.78	63.57
Nigeria	56.96	30.01	31.17	33.87	41.14	6.53	6.90	6.63	5.07	3.95	14.97	17.06	10.32	11.31	15.86
South Africa	10.03	7.26	5.46	4.11	3.19	21.68	21.82	22.84	20.96	17.73	51.63	52.33	50.77	60.91	65.18

Source: World Bank (2012).

Table 3: Structure of industry by age of firms

Sector		0-5 yrs	6-10 yrs	11-20 yrs	20+ yrs	Foreign-owned	Exports
Textiles	1.40	28.57	28.57	21.43	21.43	0.00	14.29
Garments	22.28	24.22	43.95	26.01	5.83	0.00	4.93
Food	30.17	27.15	43.71	20.20	8.94	0.99	0.66
Wood &furn.	13.59	22.79	32.35	33.82	11.03	0.00	1.47
Other man.	27.27	20.51	42.12	28.21	9.16	1.47	5.13
Construction	5.29	24.53	26.42	28.30	20.75	0.00	1.89
All sectors	100.00	23.98	40.66	25.97	9.39	0.70	3.20

Note: n = 1,001.
Source: World Bank (2006).

As revealed in Table 3, the Nigerian manufacturing sector is dominated by firms in the food (30.17 per cent) and garment (22.28 per cent) sub-sectors. Other manufacturing, as well as wood and furniture products also constitute a significant proportion of industry representing 27 and 13 per cent, respectively. The construction industry represented only 5 per cent of the survey firms while an insignificant proportion of 1.40 per cent was reported for the textile industry. In terms of age, there is an even spread of firms in the textiles and construction industries, while firms in the remaining sub-sectors have a relatively smaller proportion of firms that are over 20 years older, highlighting the young nature of some sub-sectors of manufacturing in Nigeria. Most of the firms were owned by domestic investors but all sectors participate in some exporting activities. The highest proportion of exporting firms is in the textiles industry, representing 14.29 per cent of firms. The proportion of sales accounted for by exporting firms is also high for the garments sector at 10.81 per cent and other manufacturing at 27.84 per cent.

The average size of firms is reported in Table 4 measured as the total number of employees engaged by the firm. Firms in the textile industry engaged the highest number of employees on average (79) followed by other manufacturing and the food industry with 34 and 31 employees on average, respectively. The smallest firms are in the garment sector with only 15 employees on average. Table 4 also reveals a positive relationship between firm size and survival as is consistent with the trend in manufacturing in other countries.

Table 4: Average firm size

Sector	All firms	0-5 yrs	6-10 yrs	11-20 yrs	20+ yrs	Foreign-owned	Exports
Textiles	70	30	18	10	254		35
Garments	15	14	13	20	12		24
Food	31	23	29	30	64	54	69
Wood &furn.	22	17	21	22	33		47
Other man.	34	23	27	28	114	84	74
Construction	29	19	39	28	29		13
All sectors	27	20	24	25	67	70	50

Note: n = 1,001.
Source: World Bank (2006).

Wages per employee (Table 5) is highest in the construction sector for all firms followed by textiles. Average wages per employee show a rising trend with years of operation for firms in the construction and food sectors, but this pattern is not as clear-cut for other sectors. Significantly, foreign-owned firms command high wages per employee compared to exporting firms.

Table 5: Wages per employee

Sector	All firms	0-5 yrs	6-10 yrs	11-20 yrs	20+ yrs	Foreign-owned	Exports
Textiles	1,691.97	1,881.54	1,319.69	2,278.50	1,349.04	-	1,693.92
Garments	934.76	972.16	885.97	960.50	1,032.41	-	1,105.17
Food	1,199.82	1,137.31	1,182.59	1,197.41	1,479.28	2,415.93	1,039.20
Wood &furn.	1,002.90	863.56	1,091.45	1,008.76	1,013.16	-	1,335.44
Other man.	1,354.82	1,098.84	1,360.93	1,307.25	2,046.63	2,606.72	2,354.94
Construction	2,420.01	1,059.84	2,217.87	3,158.54	3,277.67	-	1,609.61
All sectors	1,227.78	1,064	1,188.66	1,269.33	1,700.28	2,524.96	1,714.78

Note: n = 1,001; wages are total annual salary costs of the firm divided by the total number of employees (full time + part time).

Source: World Bank (2006).

Table 6 describes the constraints to growth as highlighted by the firms in the sample. Electricity outages, transport bottlenecks, crime and corruption are the key factors constituting impediments to firm growth. Nigerian manufacturing firms suffer acute shortages of infrastructure such as good roads, portable water, and, in particular, power supply. Electricity outages and voltage fluctuations are commonplace, causing damage to machinery and equipment. Consequently, most firms rely on self-supply of electricity by using generators, which escalates their costs of production and erodes their competitiveness relative to foreign firms.

Table 6: Constraints to firm growth

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

Source: World Bank (2006).

In relation to the technology underlying firms' production processes, capacity utilization averaged 67.5 per cent while only 22.38 per cent of firms have email facilities and only 7.58 per cent have websites (Table 7).

Table 7: Technology

Sector	Capacity utilization	Email	Website
Textiles	67.29	21.43	14.29
Garments	66.75	14.00	1.79
Food	68.99	24.50	8.29
Wood &furn.	66.14	15.44	5.15
Other man.	67.18	29.67	12.09
Construction		26.42	9.43
All sectors	67.50	22.38	7.59
N	947	1,001	1,001

Source: World Bank (2006).

Table 8: Skills

Sector	Ratio of temporary to full time staff	Number of years of experience of top manager
Textiles	0.08	12.43
Garments	0.25	11.05
Food	0.14	10.06
Wood &furn.	0.28	12.53
Other man.	0.20	11.59
Construction	0.25	12.26
All sectors	0.20	11.18
N	1,001	1,001

Source: World Bank (2006).

The ratio of temporary to full time staff averaged 0.20 per cent while the number of years of experience of managers averaged 11.18 per cent (Table 8). Only 3.7 per cent of firms surveyed have access to formal credit, a phenomenal 38.9 per cent pay bribes and the value of bribe payments as a percentage of sales averaged 1.66 per cent (Table 9). Corruption, rent-seeking and patron-client relationships impinge on the cost of doing business and contribute to a poor investment climate in Nigeria. Many firms are forced to offer gratifications to public officials for sundry purposes such as accessing public utilities, clearing goods at the ports and obtaining licenses and permits, which are usually factored into the firms' costs. The credit delivery system of the financial system circumscribes smaller and medium-sized firms. To bridge the gap, the government has applied state inspired interventions, such as providing subsidized credit to favoured sectors and firms.[7] Implementation and targeting of these initiatives are typically faulty with the result that funds still do not get to the intended beneficiaries.

Table 9: Credit and corruption

Sector	Percentage of firms with formal credit	Percentage of firms paying bribes	Value of bribe payments as percentage of sales
Textiles	0	42.86	3.82
Garments	0.09	32.29	1.26
Food	5.63	49.74	1.65
Wood &furn.	3.68	45.59	1.84
Other man.	3.30	36.26	1.60
Construction	7.55	56.60	2.62
All sectors	3.70	38.86	1.66
N	1,001	1,001	1,001

Source: World Bank (2006).

2.3 Productivity

Improving productivity performance is critical for rapid industrialization and economic growth in any economy. As a result, several policy measures in Nigeria have placed emphasis on productivity enhancement with greater emphasis since the adoption of the economic reform programme which marked the move towards a market economy. These reform efforts explicitly emphasize the need to improve the competitive performance of industry. Nevertheless, the

[7] The latest such initiative is the NGN500 billion manufacturing intervention loan fund launched by the government in 2011 with the goal of rescuing the moribund manufacturing sector of the economy from the debilitating effects of power shortages and for baseline infrastructural renewal.

question remains: have policy efforts and programmes targeted at improving industrial productivity in Nigeria yielded significant results? In this section, an analysis of the patterns of industrial productivity in Nigeria over time and across the various industrial sub-sectors is presented.

Using investment climate data a labour productivity measure is constructed by dividing the total annual sales of firms by the total number of employees (both full and part-time). Labour productivity and the disaggregation by age of firms, ownership and exports are presented in Table 10. The average across all sectors for labour productivity is NGN7,347 per worker (approximately US$45). The highest labour productivity of NGN15,058 per worker was recorded in the construction industry. Other sectors that recorded labour productivity higher than the overall average include other manufacturing and food. The least productive in terms of labour productivity with an average of NGN4,057 per worker was recorded in the garment industry.

Table 10: Labour productivity

Sector	All firms	0-5 yrs	6-10 yrs	11-20 yrs	20+ yrs	Foreign-owned	Exports
Textiles	6,875.42	5,300.88	5,804.72	12,133.06	5,144.80	-	7,750.00
Garments	4,057.15	4,332.93	3,770.24	4,203.23	4,422.74	-	7,776.41
Food	8,195.12	9,064.70	7,790.77	7,369.25	9,443.14	9,319.74	4,148.01
Wood &furn.	5,509.95	3,516.15	4,687.69	7,121.76	7,213.07	-	14,358.5
Other man.	8,547.93	6,544.65	8,251.15	9,664.62	11,290.19	22,063.1	17,745.99
Construction	15,058.42	9,969.51	19,219.17	10,636.61	21,806.84	-	30,046.15
All sectors	7,347.00	6,681.63	6,996.89	7,542.45	10,198.81	17,815.31	12,701.72

Note: n=996.
Source: World Bank (2006).

The distribution of labour productivity by age of firms reveals that an average productivity of NGN10,198 per worker is recorded among firms above 20 years of age and that labour productivity increases with the firm's age. The average labour productivity among foreign-owned firms is NGN17,815 per worker. Average labour productivity among exporting firms stood at NGN12,701 per worker.

Capital productivity is measured using total assets divided by the number of employees and is reported in Table 11 alongside value added by sector. The highest capital productivity was recorded in the food, beverages, and tobacco sector. Others sectors with high levels of capital productivity include machinery and equipment, electrical electronics, non-metallic minerals and wood, and wood products. The highest value added was recorded in the electrical and electronics sector with over NGN400 million, followed by the machinery and equipment sector. The least was recorded in the garment sector. Other sectors with significant contributions to value added include the chemical, non-metallic minerals, and wood and wood products.

Table 11: Productivity analysis in Nigerian manufacturing industry

Sectors	Value added (million)	Capital productivity
Food	21.80	75.92
Garments	5.93	28.64
Textiles	26.20	34.98
Machinery and equipment	399.00	67.70
Chemicals	91.90	22.29
Electrical	424.00	65.05
Non-metallic minerals	71.90	53.38
Wood and wood products	37.90	52.31
Metals and metal products	18.80	31.59
Others	20.00	82.89

Source: authors' calculations using World Bank (2006) data.

2.4 Special economic zones

A prominent feature of the industrial sector in Nigeria is the existence of a number of special economic zones. There are approximately 25 free trade zones licensed by the federal government. These are documented in Table 12. However, less than 13 of them are currently operational. Some are under construction and in the early phases of development. Two types of free trade arrangement operate in Nigeria – the specialized and the general-purpose trade/export zones, which are managed by two bodies – the Nigerian Export Processing Zone Authority for the general-purpose zones and the Oil & Gas Free Zone Authority for the oil and gas zone. They have the mandate to approve new zones, modify existing ones, grant permits and approvals for operators in the EPZs, and manage the zones.

Economic activity is clustered in this way to create a controlled environment for industrialization to flourish especially in the presence of chronic infrastructural deficits. This has traditionally taken the form of industrial estates or parks. The main benefit of the localization of firms in this way is that it allows for infrastructural provisions to be prioritized and to give firms a competitive edge while offering access to raw materials, skilled labour, technology and materials. Nigeria has a number of large industrial estates and complexes but has also witnessed the spontaneous development of small clusters across the country. The latter includes the computer village in Otigba, Lagos, the auto and industrial spare parts fabricators in Nnewi, the leather tannery in Kano and the footwear, leatherworks, and garment cluster in Aba (see Appendix for illustrative examples of clusters in Nigeria).

Table 12: Free trade zones

	Name	Location	Status	Ownership
1	Calabar free trade zone	Cross River State	Operational	Federal gov.
2	Kano free trade zone	Kano State	Operational	Federal gov.
3	Onne oil andgas free zone	River State	Operational	Parallel Auth.
4	Tinapa free zone and tourism resort	Cross river State	Operational	Private/public
5	Snake island integrated	Lagos	Operational	Private
6	Maigatari border free zone	Jigawa State	Operational	State
7	LADO free zone	Lagos	Operational	Private
8	Airline services export proc. zone	Lagos State	Operational	Private
9	ALSCON export processing zone	Akwa Ibon	Operational	Private
10	Ogun Guangdong free trade zone	Ogun State	Operational	Public/private
11	Sebore farms export processing zones	Adamawa State	Operational	Private
12	Ibom science and tech. park free zone	Akwa Ibom	Under construct.	Public/private
13	Living spring free zone	Osun State	Under construct.	State
14	Lekki free zone	Lagos State	Under construct.	State/private
15	Brass liquefied natural gas free zone	Bayelsa	Under construct.	Public/private
16	Abuja technological village free zone	Abuja	Under construct.	Public/private
17	Specialized railway industrial free trade zone Kajola	Ogun State	Under construct.	Public/Private
18	Imo Guangdong free trade zone	Imo State	Under construct.	Public/private
19	OK free trade zone	Ondo and Ogun	Under construct.	States/private
20	Lagos free zone	Lagos State	Under construct.	Private
21	Kwara free zone	Kwara State	Declaration	State gov.
22	Oluyole free trade zone	Oyo State	Declaration	State gov.
23	Koko free trade zone	Delta State	Declaration	State gov.
24	OILSS logistics free zone	Lagos	Declaration	Private
25	Banki border free zone	Borno State	Declaration	State

Source: NEPZA (2013).

2.5 Sunrise and sunset industries[8]

An emerging sector in Nigeria is the information and communications technology (ITC) sector. A key example is the Otigba Computer Village which started in 1995 involving over 392 SMEs, employing more than 3,000 workers.[9] The formation of this cluster has given Nigeria a foothold in skills-intensive computer repair and 'clone' production. The village is located in Lagos and covers an area of some 325 km^2. It deals with the sale, service, and repair of ICT products and components which are targeted at the Lagos industrial axis. The cluster development has been characterized by significant inter-firm co-operation and joint action.

On the other side of the spectrum, the textile industry is an example of a sunset industry and illustrates the de-industrialization process that Nigeria has experienced in the last decade which has seen over 820 companies shut down or suspended production between 2000 and 2008.[10] At its peak, the textile industry employed close to 700,000 people (making it the second largest employer after the government); operated up to 175 mills, contributed 25 per cent of the nation's

[8] Data presented in this section are taken from Oyelaran-Oyeyinka (2004).

[9] See Oyelaran-Oyeyinka (1997) for details.

[10] Data presented in this paragraph are taken from the Manufacturers Association of Nigeria (2009).

manufacturing value added and generated a turnover of over US$8.95 billion. The industry witnessed a catastrophic collapse from 175 firms in the mid-1980s to 10 factories in stable condition in 2004 while employment in the industry plunged from 350,000 direct workers to 40,000 direct workers in the same period.

3 The industrial policy framework

3.1 Macroeconomic policies

Since the mid-2000s, Nigeria has maintained a growth rate of more than 6 per cent signalling hope of economic recovery and the possibility of sustainable growth and structural change. Historically, the performance of the Nigerian economy has been unimpressive in terms of growth and other macroeconomic indicators. In a recent review of Nigeria's macroeconomic policies by Adeoti et al. (2010), the trend in the macroeconomic performance of the economy is divided into five distinct periods characterized by significant shifts in economic policy management. These periods are:

1. Immediate post-independence period starting from independence in 1960 to the advent of the first military regime in 1966;
2. Post-civil war oil economy starting from the end of the 30-month civil war in 1970 to the handover of government by the military to civilians in 1979;
3. Transition to an austere economy that emerged in the second republic and the subsequent adoption of the World Bank/IMF-led economic SAP in 1986;
4. The era of SAP and guided economic liberalization starting from 1986 to the advent of the new democratic dispensation in1999; and
5. The regime of further economic liberalization starting from 1999 and resulting in emergent macroeconomic stability in recent years.

With these periods in view, 1960 was the year of political independence; 1966 was the year of first military adventure into political governance; 1970 was the end of the Nigerian civil war; 1979 was the beginning of the second attempt at democratic governance; 1986 was the year of the introduction of the World Bank/IMF economic SAP; and 1999 was the beginning of the current democratic rule. The period from 1960 to 1979 was characterized by rapid industrial growth largely due to the inefficient ISI policy and aided by the oil economy. The decade of the 1980s was a period of industrial decline, indicative of a de-industrialization phenomenon which was widespread in Sub-Saharan Africa (Jalilian et al. 2000). In the following decade there were indications that the decline might have been halted, but improvements appeared to be only marginal. By 1999 the growth rate of manufacturing value added improved to 2.1 per cent, but its contribution to GDP declined from 4.9 per cent in 1999 to only 4 per cent in 2005 (Adeoti 2010).

The first National Development Plan (1962-68), which was Nigeria's first attempt at comprehensive and integrated planning, was launched in 1962. The plan set macroeconomic performance targets that include: an aggregate growth rate of 4 per cent per annum; an increase in the rate of investment from 11 to 15 per cent of GDP; and an increase in the 'directly productive component' of government investment Bevan et al. (1999: 30).

The immediate post-independence economy was characterized by deterioration in the terms of trade and the rise of the oil economy. The spot prices of Nigerian agricultural exports were declining though there was volume growth in exports in the early 1960s before stagnation in production in around 1962. Price decline was no longer offset by volume growth. However, oil

production which was only 17,000 barrels per day in 1960 rose to 415,000 barrels per day in 1966. The revenue from oil was thus timely in addressing the balance of payment problems. The contribution of the oil sector to total government revenue (mainly in royalties and rentals) rose to 17 per cent in 1967, and its foreign exchange contribution amounted to about 20 per cent of the total exports. Macroeconomic policy attempted to attract foreign investors with generous incentives that included import duty relief, accelerated depreciation allowances, and easy remission of profits. At independence, Nigeria was regarded as a large and rapidly growing market. The merchant firms that dominated trading in imported manufacturing goods during the colonial period suddenly found their positions threatened by new competitors. The outcome of this was that some of the trading firms switched to local manufacturing and lobbied successfully for protective tariffs. For example, the United African Company became involved in textiles, brewing, plywood, and vehicle assembly. However, domestic value added in these industries was considerably low because their products had high import content. It is also important to note that the main instrument of trade policy was the tariff, and Nigeria made very little use of quantitative restrictions (Bevan et al. 1999).

The military intervention in Nigeria's governance in 1966 subsequently culminated in a 30-month civil war from July 1967 to January 1970. The post-war economy was dominated by the oil economy arising from the unprecedented increase in the price of crude oil in the international market. The oil boom enabled expansion in infrastructure and public sector investment in large-scale manufacturing most of which were aimed at achieving import substitution of foreign consumer goods and consumer durables. Oil exports as a percentage of total exports rose from 58 per cent in 1970 to 83 per cent in 1973, and to about 90 per cent or more in subsequent years. Similarly, oil revenue as a percentage of total revenue rose from 26 per cent in 1970 to 54 per cent in 1972, and to 60 per cent or more in subsequent years. The oil economy was characterized by 'Dutch Disease' signified by the diversion of productive resources away from agriculture in particular into commercial activities that thrived on trade in imported manufacturing goods (Forrest 1993). The windfall in oil revenue affected the fiscal policy of government. Political pressures which would have improved the taxation of personal incomes, farm incomes, or property incomes were absent because everyone believed that oil revenue will always lead to surplus. Non-oil taxes were thus neglected and some taxes abolished. Added to this, rapid expansion of state expenditure took place without an adequately reasoned sense of priority in the allocation of public expenditure. The second development plan (1970-74) and the third development plan (1975-80) were launched and the main thrust of macroeconomic policy in the two plans was to achieve growth by public sector-led investment. Indigenization policy was implemented in 1972 and 1977 with the objectives of increasing the level of local managerial control, build local technological capability, and extend state ownership and control. Heavy subsidies were provided for public companies and corporations because they did not usually cover their running costs. In the 1970s only the communication (NITEL) and the power (NEPA) companies made consistent small operating surpluses (Biersteker 1987; Forrest 1993).

The advent of the second republic in 1979 was accompanied by rising oil revenues, which further accentuated the tendency of macroeconomic policy to support an over-valued naira and consequently imports. The build-up of surpluses in the external and internal accounts instigated the expansion of state expenditures and the liberalization of imports. However, by the end of 1981 oil revenue had sharply declined and the result was a policy of very high deficit financing which drained the external reserve and resulted in an unprecedented increase in the foreign debt profile. The loss of reserves and accelerating inflation prompted emergency stabilization measures in 1982. These measures included advance deposits for imports; increases in import duties; review of import licenses; a 40 per cent across the board cut in public expenditures without any priority; and an upward review of excise duties, interest rates, and prices of

petroleum products. These policies brought a lot of stress on the productive sector of the economy. In the agricultural sector, produce exports became highly constrained by the over-valued naira and production declined. The production of labour- intensive export crops (e.g. cocoa, palm oil, palm kernels, rubber, groundnuts, and cotton) which had earlier been limited by high labour costs and high opportunity costs of non-farm employment was constrained by increasingly unfavourable export prices. The decline in output was probably more apparent in the manufacturing sector with dramatic losses of production capacity resulting in gross losses in output and employment. This demonstrated the high vulnerability of the high cost, import-dependent industrialization that had been encouraged by the pattern of incentives prevailing in the 1970s. The decline in the aggregate index of manufacturing was observed to have begun in 1982. Plant closures were apparent in consumer goods sectors especially in the textiles sector where protection proved inadequate to address the challenges of smuggling. It was reported that the aggregate index of manufacturing fell by 26 per cent in 1983, with declines ranging from 13 per cent in paints to 54 per cent in the electronics assembly sectors (Forrest 1993). The economic outlook presented by Fashoyin et al. (1994) showed that average capacity utilization in industry declined from 73.3 per cent in 1981 to 38.2 per cent in 1986. The stabilization measures achieved some reduction in the volume of imports, however, the inability to effectively control the allocation of import licenses and foreign exchange were perceived to have largely aggravated the pace of industrial decline between 1979 and 1986.

The introduction of the World Bank/IMF packaged economic SAP in July 1986 was widely acknowledged as a profound economic reform aimed at addressing the inherent weaknesses of the economy. SAP, however, generated an intense debate between the proponents of a liberalized economy premised on a more private enterprise and market-oriented strategy for growth, and advocates of state-led development characterized by government playing critical roles in enterprise management and distribution of rewards to factors of production. SAP was a medium-term strategic policy programme with the twin objective of revamping an economy under persistent recession and setting it on the path of sustainable growth. It consists of the stabilization policies of the IMF and the structural adjustment policies of the World Bank. The main objective of the former is to reduce short-term disequilibrium such as budget deficits, balance of payment deficits and inflation; whereas the latter aims at the reorientation of structures of the economy towards greater efficiency in the medium-term. In practice the World Bank hardly institutes a programme without having an IMF programme already in place. The IMF programmes were usually linked with conditions to be met by the developing country concerned before obtaining the IMF economic stabilization loan. Subsequently the World Bank participates by granting the SAP loans which are more developmental oriented. The World Bank SAP loans and the IMF programmes have market-economy orientation as the basic philosophical undertones (Ihonvbere 1993). The salient features of SAP included:

- Major currency devaluations;
- Major real cuts and reorientation towards agriculture in the government budget;
- Reorientation of public expenditures in the productive sectors towards rehabilitation and maintenance;
- Increased taxes on consumer goods;
- Holding nominal wages fixed and/or raising them by significantly less than required to make up the effects of inflation;
- Liberalization of the import regime;
- Substantially raising nominal producer prices for agricultural cash crops to limit real declines;
- Reduced price controls;

- Increased competition and flexibility in agricultural marketing; and
- Privatization of government-owned assets and concentrated efforts to raise efficiency in remaining government institutions.

All these policy instruments were applied in the implementation of SAP in Nigeria especially between 1986 and 1993. The implementation of SAP had controversial economic and social consequences. While the painful effects of the conditions imposed by the IMF were immediate especially as evidenced by a sharp deterioration in living standards, the developmental impacts of SAP were slow. With the introduction of the second-tier foreign exchange market (SFEM) in September 1986, the devaluation of the naira was put on course, and demand management became an important feature of the monetary and fiscal policy. In order to avoid a mutually reinforcing currency depreciation and inflation, SAP reduced liquidity in the economy and compressed consumer incomes through a wage freeze and significant cuts in public expenditure. The result of the liquidity squeeze was to cushion the inflationary effects of SAP. The impact of SAP on the productive sectors of the economy was mixed. Industry had to devise strategies to cope with the various aspects of the new regime as well as a slump in effective demand. Tariff reduction cut duties on finished goods more than on intermediate inputs and raw materials thereby reducing effective rates of protection and increasing competition with foreign producers. However, industries that were less dependent on imports and had a steady demand (e.g. textiles) were less adversely affected. Besides, there were indications of new investments in industries that relied on local raw materials like palm kernel, cotton seed, and maize milling; rubber and vegetable oil processing; tanning of hides and skins; sorghum malting; and soy milk processing. There was also evidence of a deliberate shift to local raw material sourcing by industry. It was reported by Ogun (1995) that an increase in the cost of imports and pressure by government had resulted in the rise of local raw material sourcing by industry from 38 per cent in 1985 to 50 per cent in 1988. An interesting example of local substitution of foreign raw material is the substitution of imported barley malt for malted sorghum in the Nigerian brewing industry in the late 1980s after the government banned the importation of barley in 1988 (Ogun 1995). Added to this, the beer industry, flour mills, textiles firms, and soft drink companies were all known to have invested in agro-industrial enterprises to secure a supply of raw materials from local sources. While the ban on imported wheat in 1987 led to the closure of several bakeries, it also stimulated the conversion of some flour mills to processors of local grains. The impact of SAP on the export of agricultural produce was also remarkable. Cocoa exports rose significantly as the producer prices soared from NGN3,000 per metric ton at the inception of SAP to over NGN15,000 in the 1988-89 seasons especially as export became an avenue for capital flight. It was also remarkable that the tanning industry in Kano received new export-oriented investment, and the export of rubber also increased. Moreover, small exports of textiles, beer, tiles, plastics, carpets, wood products, perfumes, and tyres were recorded.

The decade of the 1990s was mostly a period of economic and political crisis in Nigeria largely due to authoritarian military rule. As the pains of SAP deepened and with no evidence of a reversal of the economic recession, the government adopted a policy of guided deregulation in the mid-1990s. Under this programme, attempts were made to curtail the extent of liberalization under SAP. A dual exchange rate emerged (one official, which was used for government essential transactions; the other, which served as the inter-market exchange rate); and privatization and commercialization of public sector companies which was intensely debated under SAP proceeded with a measured pace.

The economic policy of guided deregulation was largely dictated by the tendency of the military rulers to intervene in the market operations in order to service their cronies. However, the return to democratic governance in 1999 introduced a new opportunity for political and economic

freedom, which enabled economic debate and planning for growth and poverty reduction. By 2003, the macroeconomic policy regime had shown a clear pattern of an accentuation of the economic liberalization and ardent commitment to private enterprise-led development. The economic development policy was packaged as 'national economic empowerment and development strategy' (NEEDS). As stated in the NEEDS document (NPC 2004), the key features of the macroeconomic policy encapsulated by NEEDS are:

- Sustain a rapid, broad-based GDP growth rate outside the oil sector that is consistent with poverty reduction, employment generation, and a sustainable environment;
- Diversify the production structure away from oil and mineral resources;
- Make the productive sector internationally competitive;
- Systematically reduce the role of the government in the direct production of goods, and strengthen its facilitating and regulatory functions;
- Adopt policies that are consistent with raising domestic savings and increasing private investments;
- Promote exports and diversify exports away from oil;
- Gradually liberalize imports, harmonize tariffs with the Economic Community of West African States's (ECOWAS) common external tariffs, and use import levies and import prohibitions to protect local industries;
- Maintain a competitive but stable exchange rate regime by establishing a market-determined nominal exchange rate regime, and avoid overvaluation of the real exchange rate;
- Maintain low real lending interest rates.

From 2003 to date these policies have been pursued and implemented. The outcome is an emerging economy with a relatively stable exchange rate, a fairly predictable macroeconomic environment, and good prospects for growth. A review of the performance of NEEDS showed that the GDP growth rate which was 3.3 per cent in 1999 was an average of 6.0 per cent in the period 2004-07 with oil and non-oil sectors having GDP growth rates of 0 per cent and 8.3 per cent, respectively; the external reserve rose from US$4 billion in 1999 to US$43 billion in 2007 with existing external debt amounting to US$34 billion; and an average inflation rate of 9.5 per cent. Furthermore, noticeable achievements were recorded in the consolidation of banks and the liberalization of the telecommunication industry. The Nigerian telecommunication industry became one of the fasted growing in the world. The privatization of publicly owned enterprises also progressed appreciably with about 110 privatization transactions effected between 2000 and 2006 (NPC 2007). However, in spite of this seemingly good performance, there is a strong concern that the micro impacts of the macroeconomic reform measures are very limited.

It is also noteworthy that the efforts under NEEDS have been complemented by the Seven Point Agenda (SPA) introduced by the current government in 2007. The SPA builds on the progress made by NEEDS and enumerated seven specific sectoral targets for which the principles of NEEDS are to be applied in a coherent development planning framework envisaged to make Nigeria one of the 20 largest economies by the year 2020 (i.e. NPC 2009). The emphasis of economic reform under the SPA focuses on the implementation of policies that are aimed at achieving Nigeria Vision 20: 2020 through accelerated economic growth with visible improvements in the well-being of the ordinary people (NPC 2009). For the SPA, the seven key areas of development are:

1. Critical infrastructure, which includes power, transportation, natural gas distribution and telecommunications;

2. Niger delta region;
3. Food security;
4. Human capital;
5. Land tenure changes and home ownership;
6. National security; and
7. Wealth creation through skills development and the facilitation of access to credit for small- and medium-sized businesses and the self-employed.

The NV20:2020 has been elaborately debated and organized into a coherent national development vision and guide for development plans and policies. As presented in NPC (2009: 22-23), the macroeconomic strategies and policy thrusts of the Nigeria Vision 20: 2020 are enunciated as follows:

- Achieving double-digit growth rates and maintaining strong economic fundamentals, including inflation, exchange rate, interest rates, and other monetary aggregates;
- Achieving significant progress in economic diversification, such as to achieve an economic structure that is robust and consistent with the goals of the NV20:2020;
- Stimulating the manufacturing sector and strengthening its linkage to the agricultural and oil and gas sectors, in order to realize its growth potential and serve effectively as a strong driver of growth;
- Raising the relative competitiveness of the real sector, to increase the demand for Nigeria's non-oil products and services;
- Deepening the financial sector and sustaining its stability to enable it finance the real sector;
- Encouraging massive investments in infrastructure and human capital and creating an enabling environment for domestic and private investment; and
- Adopting pragmatic fiscal management and implementing appropriate monetary, trade, and debt management policies to support domestic economic activities.

3.2 Trade policies

As demonstrated by Adenikinju (2005), Nigeria's trade policy has been somewhat inconsistent in the period after independence but recent economic policy reforms (from NEEDS to date) have sought to drastically reduce the unpredictability of the trade policy regime, establish a schedule to fully adopt ECOWAS common external tariff, and respect obligations under multilateral trading systems. The review of Nigeria's macroeconomic policies in the previous subsection indicates that trade policies in Nigeria can be broadly classified into pre- and post-SAP trade policy regimes. The pre-SAP economy was extremely dependent on oil exports for foreign exchange and the shocks in the oil market created considerable balance of payment deficits. Import controls through import licensing, customs tariff, and outright bans were major instruments of trade policy. Trade and industrial policies failed to achieve the expected industrialization projections under the national development plans that characterized the pre-SAP regime.

The post-SAP trade policies witnessed considerable trade liberalization, principally motivated by the neo-liberal economic policies dictated by SAP. Emphasis was on loosening controls, and allowing the market forces of demand and supply to prevail in the allocation of foreign exchange and the direction of investment in the productive sectors. The marketing boards that enable control of the marketing of agricultural commodities were scrapped, and commodity exports became directly subjected to the dictates of the international commodity markets. Import licensing was also banned, and except for the short period of a dual foreign exchange regime in the mid-1990s, foreign exchange supply and demand were carried out through diverse market

mechanisms that included SFEM, AFEM, IFEM, etc. This resulted in progressive devaluations of the national currency (naira), in a bid to make imports dearer and thus discourage excessive importation of non-essential goods and services. It is also noteworthy that the post-SAP trade policy regime allowed exporters to retain 100 per cent of their export earnings in their domiciliary accounts from which they could freely draw to meet their eligible foreign exchange transactions. The duty drawback/suspension scheme for exporters/producers was also revised to enable producers import raw materials and intermediate products free from import duty and other indirect taxes and charges. The Nigerian Export Credit Guarantee and Insurance Corporation was established in 1988, and was later renamed Nigerian Export-Import Bank (NEXIM). NEXIM provides credit and risk bearing facilities to banks in order to enable them to support exports. This notwithstanding, the pressure on balance of payment persisted, and was compounded by debt service obligations until 2005 when Nigeria was granted debt relief by the Paris Club of creditors.

As rightly observed by Bevan et al. (1999), Nigeria has made very little use of quantitative restrictions. The Nigerian trade policies have generally been short-term in nature; customs tariff for the control of imports are often short-lived or subject to frequent revisions, and the import and export prohibition lists are revised sporadically.

According to Sandrey et al. (2007), by WTO standards Nigeria's applied tariffs are relatively high, with a reported most favoured nation applied average rate of 15.6 per cent on agricultural imports and 11.4per cent on non-agricultural imports during 2006. For Nigeria, the final bound tariffs range from a minimum of 40 per cent to a maximum of 150 per cent, with an average of 118.4 per cent in 2006. There is presently no evidence that there has been significant change to this scenario. Conversely, for its exports Nigeria is eligible for non-reciprocal trade preferences under the generalized system of preferences schemes of several WTO Members, the Cotonou agreement with the European Communities (EC), and the US African Growth and Opportunity Act. Utilization of these opportunities with non-oil exports remains low, as oil still largely dominates exports from Nigeria.

Presently, Nigeria has several incentives for export promotion but still uses import prohibition to protect its manufacturing and agricultural sectors. This is understandable because the production base is relatively weak, import-dependent, and highly limited in technological capability. The import prohibition list includes a wide range of manufactured consumer goods that were often dumped in Nigeria's relatively large market. A few agricultural products (e.g., fresh fruits, pork and pork products, beef and beef products, mutton, lamb and goat meat, frozen poultry) that are produced locally in large quantities are also included in the import prohibition list to protect the local industry and encourage job creation. On the export prohibition list are either staple foods/crops that are important for food security, commodities that could serve as raw materials to local industries and living organisms that are becoming rare. Such commodities include maize, timber, raw hides and skin, scrap metals, unprocessed rubber latex and rubber lumps, artefacts and antiquities, and wildlife animals classified as endangered species and their products.

As indicated by the Nigerian Investment Promotion Commission (NIPC), the Nigerian trade policy currently has elaborate export incentives aimed at encouraging and assisting exporters to increase and diversify the total value and volume of non-oil exports from Nigeria. These incentives are designed to address the major problems of supply, demand, and price competitiveness of Nigeria's exports. Some of the incentives take the form of negotiable duty credit certificate. A few of these incentives are described below:

Manufacture-in-bond scheme: the manufacture-in-bond scheme is designed to encourage manufacturers to import raw material inputs and other intermediate products duty-free for the

production of exportable goods, backed by a bond issued by any recognized financial institution. The bond will be discharged after evidence of exportation and repatriation of foreign exchange has been produced.

Duty drawback scheme*:* the duty drawback scheme provides for refunds of duties/surcharges on raw materials including packing and packaging materials used for the manufacture of products upon effective exportation of the final products. The new duty drawback scheme gives automatic refunds (60 per cent) on initial screening by the duty drawback committee and upon the presentation of a bond from a recognized bank, insurance company or other financial institution. The bond will cover 60 per cent of the refund to be made to the exporter and will only be discharged after final processing of the application has been made. At the end of the processing of exporters claims, the duty drawback committee shall grant any balance where applicable or request for refunds for any over payment made.

Export expansion grant (EEG) scheme: This scheme operates the 'weighted eligibility criteria' in assessing applications for EEG. The baseline data as supplied by individual applicant companies are be used in its assessment. Thus the method of assessment is company-specific. A company's EEG assessment is conducted once yearly and the determined rate will apply throughout the year. The weighted eligibility criteria have four bands: 30 per cent, 20 per cent, 10 per cent, and 5 per cent, and there is a template for assessing the incentive rate for every EEG applicant.

Export development fund scheme: this scheme provides financial assistance to private sector exporting companies to cover part of their initial expenses in respect of export promotion activities.

Trade liberalization scheme (TLS) of ECOWAS: this is an export liberalization incentive that focuses on the ECOWAS sub-region. The scheme is an incentive primarily geared towards export activities within the ECOWAS sub-region. The objective is to significantly expand the volume of intra-community trade in the sub-region via the removal of both tariff and non-tariff barriers to trade in goods originating from ECOWAS countries. This affords preferential access to the ECOWAS market from Nigeria.

Oil and gas export free zone: the oil and gas export free zone act no. 8 of 1996 established an oil and gas free zone authority to manage, control, and co-ordinate all activities within the zone. This zone encompasses three oil and gas service centres around the ports of Onne (near Port Harcourt), Calabar, and Warri. All three ports have enhanced stacking and warehousing facilities awaiting subscribers. Incentives and fiscal measures approved by the government that favour and encourage large investments in the region include:

- No personal income tax;
- 100 per cent repatriation of capital and profit; and
- No pre-shipment inspection for goods imported into the free zone.

Nigeria export processing zones: the Federal Government of Nigeria has passed an aggressive free zone law which has created a business-friendly environment benefiting from the following incentives:

- Complete tax holiday for all federal, state, and local government taxes, rates, custom duties, and levies;
- One-stop approval for all permits, operating licences, and incorporation papers;
- Duty-free, tax-free import of raw materials for goods destined for re-export;

- Duty-free introduction of capital goods, consumer goods, components, machinery, equipment, and furniture;
- Permission to sell 100 per cent of manufactured, assembled, or imported goods into the domestic Nigerian market;
- When selling into the domestic market, the amount of import duty on goods manufactured in the free zones is calculated on the basis of the value of the raw materials or components used in assembly, not the finished product;
- 100 per cent foreign ownership of investments;
- 100 per cent repatriation of capital, profits, and dividends;
- Waiver of all import and export licenses;
- Waiver on all expatriate quotas for companies operating in the zones;
- Prohibition of strikes and lockouts; and
- Rent-free land during the first six months of construction.

Repatriation of profit: under the provisions of the foreign exchange (monitoring and miscellaneous provision act no. 17 of 1995), foreign investors are free to repatriate their profits and dividends net of taxes through an authorized dealer in freely convertible currency.

Guarantees against expropriation*: t*he Nigerian Investment Promotion Commission Act guarantees that no enterprise shall be nationalized or expropriated by any government in Nigeria.

One-Stop Investment Centre (OSIC*): OSIC was* formally commissioned by the Nigerian President on 20 March 2006. The centre was established by the Federal Government to march the growing interest of investors in our economy.

The institutional and regulatory framework: in recent years, the institutional framework for the implementation of macroeconomic and industrial policies has been strengthened or established where necessary. Some of the existing institutions that were considerably strengthened include:

- The Central Bank of Nigeria (CBN), which is now relatively more autonomous and empowered for monetary policy implementation and supervision of the financial sector. A major achievement of the CBN is the consolidation of the Nigerian banking institutions which reduced the number of banks from 89 to 25 by the end of 2005. The 25 banks are arguably considerably stronger and able to provide better financial services. Further reform is ongoing to ensure that Nigerian banks make significant investments in the real sector of the economy, and to also enable them to become strong players in international financial markets;
- The Customs and Excise Department has improved infrastructure especially in the area of ICT which has enabled better tariff collections and tracking of smuggling activities;
- The Bureau of Public Enterprises which has increased the pace of privatization of publicly owned enterprises;
- The National Communication Commission which has successfully liberalized the telecommunication sector resulting in Nigeria being one of the fastest growing telecommunication markets in the world;
- The National Agency for Food, Drug Administration and Control (NAFDAC) which has succeeded in making Nigeria's food and drug products of acceptable quality;
- The Standards Organization of Nigeria which has improved standardization of industrial products; and
- The Nigerian Export Promotion Council which has improved the awareness and implementation of export incentives for Nigerian manufacturers.

Some of the new institutions which have contributed to policy implementation include:

- The BOI formed through the merger of the former Nigerian Industrial Development Bank and the Nigerian Bank for Commerce and Industry;
- Nigerian Agricultural, Co-operatives and Rural Development Bank formed through the merger of the former Nigerian Agricultural and Co-operative Bank and the Peoples Bank;
- Small and Medium Enterprises Development Agency of Nigeria (SMEDAN);
- National Information Technology Development Agency;
- Economic and Financial Crimes Commission; and
- Independent Corrupt Practices and other related offences Commission.

In Nigeria the institutions involved in product development and marketing of industrial products are mainly regulatory agencies and professional associations. There are two major regulatory agencies that have had a profound impact on industrial policy implementation. These are the National Agency for Food and Drug Administration and Control (NAFDAC), and the Standards Organization of Nigeria (SON). NAFDAC has been successful in reducing the incidence of fake pharmaceutical and chemical products; while SON has the responsibility for standardization and regulation of the quality of all industrial products. Other regulatory institutions that relate to industrial policy implementation include:

- Nigerian Investment Promotion Commission;
- Nigerian Export Promotion Council (NEPC);
- National Environmental Standards and Regulatory Agency;
- State Federal Environmental Protection Agencies;
- The Consumer Association of Nigeria;
- National Office for Technology Acquisition and Promotion;

Sector-specific policies: with the exception of the oil and gas industry, sectoral policies are not prevalent in the Nigerian industrial policy framework. However, the NIPC provides insights on specific sectoral policies aimed at stimulating investment in areas considered to have strong potential for growth and wealth creation. These policies are in the form of incentives, and they are presented as follows:

Manufacturing

- Companies with turnover of less than NGN1 million are taxed at a low rate of 20 per cent for the first five years of operation if they are in the manufacturing sector;
- Dividends from companies in the manufacturing sector with a turnover of less than NGN1 million are tax-free for the first five years of operation;
- Dividends derived from manufacturing companies in the petrol chemical, and liquefied natural gas sub-sector are exempt from tax.

Agriculture and agro-industry

- Companies in the agro-allied business do not have their capital allowance restricted. It is granted in full i.e. 100 per cent;
- The payments of minimum tax by companies that make small or no profits at all do not apply to agro-allied business;

- Agro-allied plants and equipments enjoy enhanced capital allowances of up to 50 per cent;
- The processing of agricultural produce is a pioneer industry; consequently, there is a 100 per cent tax-free period for five years;
- All agricultural and agro-industrial machines and equipment are subject to only a 1 per cent duty;
- The agricultural credit guarantee scheme fund administered by the Central Bank of Nigeria: up to 75 per cent guarantee for all loans granted by commercial banks for agricultural production, and processing;
- Interest drawback programme fund: 60 per cent repayment of interest paid by those who borrow from banks under the ACGS, for the purpose of cassava production and processing provided such borrowers repay their loans on schedule.

Solid minerals

- Three to five years tax holiday;
- Low income tax of between 20 per cent and 30 per cent;
- Deferred royalty payments depending on the magnitude of the investment and the strategic nature of the project;
- Possible capitalization of expenditure on exploration and surveys;
- Extension of infrastructure such as roads and electricity to mining sites;
- The holder of a mining lease shall, where qualified, be entitled to:
    - Depreciation or capital allowance of 75 per cent of the certified true capital expenditure incurred in the year of investment and 50 per cent in subsequent years
    - Investment allowance of 5 per cent
    - Exemption from payment of customs and import duties
    - Expatriate quota and resident permit for approved expatriate personnel
- In addition to roll-over relief under the capital gains tax, companies replacing their plants and machinery are to enjoy a once-and-for-all 95 per cent capital allowance in the first year with 5 per cent retention value until the assets is disposed, 15 per cent will be granted for replacement of an asset.

Oil and gas industry

The incentives in this sector are granted to joint ventures with the Nigerian National Petroleum Corporation that have signed a memorandum of understanding (MOU).

For the petroleum industry development, the incentives are:

- Guaranteed minimum margin of US$2.50 billion;
- Accelerated capital allowances that can be carried forward indefinitely;
- Graduate royalty rates approved for oil companies;
- Onshore production in territorial waters and continental shelf areas beyond 100 meters;
- Investment tax allowances are granted to a company on a graduated basis in respect of any asset for the accounting period.

For the natural gas industry, the government following fiscal incentives apply:

- Applicable tax rate is the same as the company income tax which is currently at 30 per cent;
- Capital allowance at the rate of 20 per cent per annum in the first four years, 19 per cent in the fifth year and the remaining 1 per cent in the books;
- Investment tax credit at the current rate of 5 per cent;
- Royalty at the rate of 7 per cent onshore and 5 per cent offshore.

For gas transmission and distribution:

- Capital allowance as in production phase above;
- Tax rate as in production phase;
- Tax holiday under pioneer industry status.

For liquefied natural gas (LNG) projects:

- Applicable tax rate under PPT is 45 per cent;
- Capital allowance is 33 per cent per year on a straight line basis in the first three years with 1 per cent remaining in the books;
- Investment tax credit of 10 per cent;
- Royalty 7 per cent on-shore 5 per cent off-shore, tax deductible.

For gas exploitation (upstream operation), fiscal arrangements are as follows:

- All investments necessary to separate oil from gas from reserves into suitable products is considered part of the oil field development;
- Capital investment facilities to deliver associated gas in usable form at utilization or transfer points will be treated for fiscal purposes as part of the capital investment for oil development;
- Capital allowances, operating expenses and the basis for assessment will be subjected to the provisions of the PPT Act and the revised MOU.

For gas utilization (downstream operation):

- Companies engaged in gas utilization are to be subjected to the provisions of the companies income tax act (CITA);
- An initial tax free period of three years renewable for an additional two years;
- Accelerated capital allowances after the tax-free period in the form of 90 per cent with 10 per cent retention in the books;
- 15 per cent investment capital allowance, which shall not reduce the value of the asset.

In 1998, the government approved additional incentives to support the gas industry in the following areas:

- All gas developmental projects, including those engaged in power generation, liquid plants, fertilizer plants, gas distribution/transmission pipelines are taxed under the provisions of CITA and not the petroleum profit tax;

- All fiscal incentives under the gas utilization downstream operations since 1997 are to be extended to industrial projects that use gas i.e. power plants, gas to liquids plants, fertilizer plants, gas distribution/transmission plants;
- The initial tax holiday is to be extended from three years to five years;
- Gas is transferred at 0 per cent PPT 0 per cent royalty;
- Investment capital allowance is increased from 5 per cent to 15 per cent;
- Interest on loan on gas project is to be tax deductible provided that prior approval was obtained from the Federal Ministry of Finance before taking the loan; and
- All dividends distributed during the tax holiday shall not be taxed.

4 Policy management and co-ordination

At the apex of Nigeria's economic policy-making architecture is the National Economic Council (NEC) which has a constitutional responsibility for managing and co-ordinating national economic development matters. NEC has the Vice-President of the country as Chairman and the National Planning Commission as its Secretariat. Membership of this body includes the Governors of Nigeria's 36 states, the Governor of the Central Bank of Nigeria, the Minister of National Planning, the Minister of Finance, the Attorney General of the Federation and Minister of Justice, and the Chief Economic Adviser to the President (see Appendix Table A3 for details). The three tiers of government, federal, state, and local, implement, monitor, and evaluate policies approved by the body through their respective executive councils under an arrangement that fosters national integration and policy co-ordination. The council meets on a monthly basis.

There is also a 24-member national economic management team headed by the President and a 15-member economic implementation team headed by the Minister of Finance who co-ordinates economic policy issues in the country. The mandate of these teams includes achieving macroeconomic stability and developing critical sectors such as infrastructure, agriculture, manufacturing, education, health, and housing. The formulation and implementation of industrial policy is accomplished by the Federal Ministry of Industry, Trade, and Investment which has the operational mandate of promoting increased production and export of non-oil and gas products, fostering industrialization, attracting investment, and developing enterprises.

There are other agencies which play important roles in the trade and industrial sectors in Nigeria. For instance, BOI, SMEDAN, the Nigeria Export Processing Zone Authority (NEPZA), NEPC, and the Nigerian Investment Promotion Commission (NIPC) are parastatals of the Federal Ministry of Industry, Trade, and Investment, the Raw Materials Research and Development Council is an agency of the Federal Ministry of Science and Technology, and the Nigerian Customs Service is a parastatal of the Federal Ministry of Finance.

The setting up of the economic council and teams and designation of the Minister of Finance as co-ordinator of economic policy has heightened co-ordination of economic policy in the country including industrial policy. It is typical for private sector groups such as manufacturers association of Nigeria, the National Association of Chambers of Commerce, Industry, Mines and Agriculture, and the National Association of Small-scale Industrialists to be invited to stakeholder parleys on draft industrial/trade policy to make their input and on many occasions, have representations in committees set up to craft the policies, implement, monitor, and evaluate them.

4.1 Co-ordination with the private sector

For much of the 1970s up to the early 1980s, there was little linkage between the public and private sector perhaps due to the overwhelming dominance of the public sector and government 'commanding height' philosophy. The late 1980s marked a shift in economic thinking leading to greater reorganization of the pivotal role of the private sector in the process of development. This logically meant greater engagement in dialogue with the private sector on economic policy-making. The private sector is organized around trade groups under the umbrella of the Manufacturers Association of Nigeria (MAN) which is a national industrial association representing nearly 2000 companies in the private and public sectors. These companies are engaged in the manufacturing, construction, and service sectors of the economy. The association's role is advisory and consultative, but has also occasionally joined issues with government and other bodies on matters relating to industrial and broad economic policy. Since its establishment in 1971, MAN has gradually positioned itself as a respected organization by the government. This has led to routine consultations between the Federal Government and the association to harvest input from them and factor interests of its membership into industrial policy even from the conception stage. MAN and the more general, organized private sector (OPS), are often invited to serve on many committees set up by government and other local and international organizations. It is not atypical to find forums where the government, the private sector (MAN), and the donor community come together to discuss a series of diagnostic assessments of Nigeria's business environment and forge an agenda for reform.

Business co-ordination efforts in Nigeria have been largely successful although the fortunes of the manufacturing sector remain abysmal given its low share of GDP and recent spate of closure of firms. The exchanges between the government and the private sector are often cordial and robust. This has inspired a number of initiatives and interventions directed at improving performance in the sector, including the establishment of the BOI and Small and Medium Industries Development Agency (SMEDAN), SMIEIS, etc. Similarly, Nigeria's electricity problems are being tackled with immense vigour and commitment by the government in realization of its centrality to industrial performance and job creation. More recently, the government has provided intervention funds to critical sectors of the economy including NGN200 billion disbursed to about 518 companies across the country for the restructuring and refinancing of the manufacturing sector; NGN126 billion export expansion grant and NGN100 billion textile sector bailout fund; NGN200 billion small and medium industries guarantee scheme and NGN7.5 billion national automotive fund disbursed to 25 companies.

5 Emerging industrial policy issues

The economic transformation agenda, otherwise known as Nigeria Vision 20: 2020, sets the direction for the current industrial policy in Nigeria. The industrialization strategy aims at achieving greater global competitiveness in the production of specific processed and manufactured goods by effectively linking industrial activity with primary sector activity, domestic and foreign trade, and service activity.

Towards this end, the strategy includes the following objectives:

- Stimulate primary production to enhance the competitiveness of Nigeria's real sector;
- Significantly increase the production of processed and manufactured goods for export;
- Stimulate domestic and foreign trade in value added goods and services;
- Strengthen linkages among key sectors of the economy.

On the basis of the above objectives, the country is pursuing and promoting a comprehensive policy of cluster development in the manufacturing and processing industries. Through private-public partnerships, the strategy will promote efficient and intensive mechanisms for the processing and manufacturing of selected export materials. In pursuance of the above policy strategy, the economic transformation agenda highlights a number of issues to be addressed. These include the development of industrial parks, industrial clusters and enterprise zones and incubator facilities.

The industrial parks which will be created for large manufacturing companies to ensure high value addition in the production of finished products or raw materials is expected to cover areas not less than 3,050km^2. The parks will be created based on geographical zones to focus on the development of resources in which each zone has comparative and competitive advantage. Hence, the following business activities have been identified for each of the zones (NPC 2009).

- North east: agriculture and solid minerals e.g. gypsum, biomass, ethanol, biodiesel, tropical fruits, etc.
- North west: gum arabic, livestock and meat processing, tanneries, bio fuel etc.
- North central; fruit processing, cotton, quarries, furniture and minerals; boards. plastic processing, leather goods, garments etc.
- South east: palm oil refining and palm tree processing into biomass particle boards, plastic processing, leather goods and garments
- South west: manufacturing (especially garments, methanol, etc.), distributive trade, general goods, plastic etc., and;
- South south: petrochemicals, manufacturing(plastic, fertilizer, and fabrications, etc.), oil services and distributive trade (Tinapa)

The industrial clusters which will be established with the participation and assistance of states and local governments will form oases of industrial activities and commerce and will cover areas of between 100 and 1,000 hectares. They will be exclusively devoted to the OPS. The location of the clusters will take into cognisance access to roads, railways, sea ports, cargo airports, and proximity to a city and management will be through a private cluster company. Meanwhile, private investors, or property developers, could also establish and run industrial clusters in each state. Nevertheless, industrial incentives similar to those in industrial parks will also be provided while each cluster will have a skill acquisition/training centre for SME's providing different modules.

Enterprise zones are platforms of 5-30 hectares, targeted at incorporating the informal sector into the organized private sector. This will empower farmers and small- and medium-scale enterprises and enable them to efficiently and conveniently feed their products into the value-chain of large-scale industries. They will be located in both state capitals and local government areas. These centres will accommodate mechanics, block makers, small-scale furniture manufacturers, timber merchants, welders/metal fabricators, garment makers, and other categories of artisans and vocational workers who constitute over 70 per cent of Nigeria's private sector. Skills acquisition/training centres will also be located in each enterprise zone for skills upgrading, while management of the enterprise zones will be handled by the private sector.

The incubators will be start-up centres for new and inexperienced entrepreneurs, graduates of tertiary institutions, investors and vocational persons wishing to set up their own businesses. In these centres prospective start-up companies will be equipped with entrepreneurial skills and enterprise resources aimed at nurturing them from formation to maturity.

Although the industrial policy debate continues, a number of issues have been identified that will be critical to the success or failure of the strategy. It has been acknowledged that the attainment of these objectives will depend on the development of critical infrastructure for these clusters and leveraging private sector collaboration. This will in turn require the development of efficient, accountable, transparent, and participatory governance, the creation of strong, efficient, and effective public service institutions to engender government effectiveness, the establishment of a competitive private sector-led business environment characterized by sustained microeconomic stability and the enhancement of national security and improvements in the administration of justice.

Among these issues, three in particular top the current policy debate and these are; the development of the critical infrastructure, tackling corruption and ensuring national security.

5.1 Infrastructure

The current infrastructure base in Nigeria is grossly inadequate in terms of capacity and quality and is not capable of catering for the anticipated industrial development. Despite government investments, Nigeria still has huge infrastructure deficits, particularly with regards to power generation. The current power generation capacity is less than 2000 Megawatt, which is about 20 per cent of the estimated national demand. A key challenge for government and the private sector is to build a modern, efficient, and effective infrastructure network within the next five to ten years.

5.2 Corruption

Nigeria ranks highly in the Corruption Perception Index. This has implication for investment and FDI flows into the country. Previous anti-corruption policies implemented in Nigeria have been targeted at enforcement measures rather than addressing the root causes. The root causes of corruption in Nigeria have been identified to include social insecurity and over-centralization of resources at the centre. Even though there are suitable laws and viable institutions to fight corruption in Nigeria, the greatest challenge is in formulating a strategic plan of action to deal with the root causes.

5.3 National security

The internal security of Nigeria has become a very big challenge in recent times. Internal conflicts, including religious, ethnic and economic, have had debilitating effects on the economy, most notably by scaring investors from certain parts of the country. Even though insecurity of lives and properties had become noticeable following the civil war and the subsequent military regimes which directly intensified urban violence, the recent upsurge of violence and insurgency in the country heightens the need to comprehensively address the persistent causes of social tension as a risk factor to Nigeria as an investment destination.

6 Conclusion

The industrial sector in Nigeria (comprising manufacturing, mining, and utilities) accounts for a tiny proportion of economic activity (6 per cent) while the manufacturing sector contributed only 4 per cent to GDP in 2011. Electricity outages, transport bottlenecks, crime and corruption are the key factors constituting impediments to firm growth. Nigerian manufacturing firms suffer acute shortages of infrastructure such as good roads, portable water, and, in particular, power supply. Electricity outages and voltage fluctuations are commonplace, causing damage to

machinery and equipment. Consequently, most firms rely on self-supply of electricity by using generators, which escalates their costs of production and erodes their competitiveness relative to foreign firms.

The economic transformation agenda, otherwise known as Nigeria Vision 20: 2020, sets the direction for the current industrial policy in Nigeria. The industrialization strategy aims to achieve global competitiveness for specific processed and manufactured goods by linking industrial activity with primary sector activity, domestic and foreign trade, and service activity. Nigeria is also pursuing a cluster development strategy for manufacturing and processing industries and selected export materials. In this regard, the economic transformation document highlights a number of issues to be addressed, including the development of industrial parks, industrial clusters and enterprise zones and incubator facilities.

References

Adeoti, J. O. (2010). 'Investment in Technology and Export Potential of Firms in Southwest Nigeria'. AERC Research Paper 231. Nairobi: African Economic Research Consortium.

Adenikinju, A. F. (2005). 'African Imperatives in the New World Order: Country Case Study of the Manufacturing Sector in Nigeria', in O.E. Ogunkola A. and Bankole (eds.), *Nigeria's Imperatives in the New World Trade Order*. Nairobi. African Economic Research Consortium and Ibadan: Trade Policy Research and Training Programme.

Bamiro, O. A. (1994). 'National Technology Policy for Development: The Role of Research and Development Institutions'. Paper presented at the National Workshop on Technology Management, Policy and Planning in Nigeria, 18-21 October.

Bevan, D., P. Collier, and J. W. Gunning (1999). The Political Economy of Poverty, Equity, and Growth: Nigeria and Indonesia. Oxford: Oxford University Press and World Bank.

Biersteker, T. J. (1987). *Multinationals, the State, and Control of the Nigerian Economy*. Princeton: Princeton University Press.

Fashoyin, T., S. Matanmi, and A. Tawose (1994). 'Reform Measures, Employment and Labour Market Processes in the Nigerian Economy: Empirical Findings', in T. Fashoyin (ed.), *Economic Reform Policies and the Labour Market in Nigeria.* Lagos: Friedrich Ebert Foundation.

Forrest, T. (1993). *Politics and Economic Development in Nigeria.* Oxford: Westview Press, Inc.

Ihonvbere, J. O. (1993). *Nigeria: The Politics of Adjustment and Democracy*. New Brunswick, NJ: Transaction Publishers.

Jalilian, H., M. Tribe, and J. Weiss (eds) (2000). *Industrial Development and Policy in Africa: Issues of De-industrialisation and Development Strategy*. Cheltenham: Edward Elgar.

Manufacturers Association of Nigeria (2009). Speech by the President of the Association, Alhaji Bashir Borodo, at its 37th Annual General Meeting on 'Sustaining Nigeria's Manufacturing Sector in the Face of the Current Global Economic Recession'.

National Bureau of Statistics (NBS) (various years). National Accounts Statistics of Nigeria. Abuja: National Bureau of Statistics.

Nigeria Export Processing Zones Authority (NEPZA) (2013). Available at: http://www.nepza.gov.ng

National Planning Commission (NPC) (2004). *Nigeria: National Economic Empowerment and Development Strategy*. NPC: Abuja.

NPC (2007) *Nigeria: National Economic Empowerment Development Strategy (NEEDS2)*. NPC: Abuja.

NPC (2009) *Nigeria Vision 20:2020: Economic Transformation Blueprint*. National Planning Commission, Abuja.

Ogun, O. (1995). 'Country Studies: Nigeria', in S. M. Wangwe (ed.) *Exporting Africa: Technology, Trade and Industrialisation in Sub-Saharan Africa*, UNU/INTECH Studies in New Technology and Development. Milton Park: Routledge.

Oyelaran-Oyeyinka, B. (1997). 'Industrial Technology Policy - Making and Implementation in Nigeria: An Assessment'. NISER Occasional Paper. Ibadan: NISER.

Oyelaran-Oyeyinka, B. (2004). 'Networking Technical Change and Industrialization: The Case of Small and Medium Firms in Nigeria'. ATPS Special Paper Series 20. Nairobi: African Technology Policy Studies Network.

Oyelaran-Oyeyinka, B. (2011). 'NIGERIA Yesterday and Tomorrow: an Economic Perspective of Industrial Regress, Dreams and Visions'. Invited Paper at Lead City University Ibadan.

Perez, C., and Soete, L. (1988). 'Catching up in Technology: Entry Barriers and Windows of Opportunity', in G. Dosi et al. (eds) *Technical Change and Economic Theory*. London. Pinter.

Sandrey R., H. Grinsted Jensen, and O. Oyewumi (2007). Trade Policy Options for Nigeria: A GTAP Simulation Analysis'. Tralac Working Paper No 10. Stellenbosch: Tralac.

World Bank (2006). 'Investment Climate Survey Data'. Washington, DC: World Bank.

World Bank (2012). 'World Development Indicators'. Washington, DC: World Bank.

Appendix

Table A1: Industrial policy matrix showing distinct phases and key industrial episodes

Development Policy	Objectives	Target	Industrial development Instruments	Remarks/Impact
First National Development Plan	Mobilize national economic resources Deploy them on a cost/benefit basis.	Start-up and growth of Industry Creation of an industrial structure with linkages to agriculture, transport, mining and quarrying.	Import Substitution Industrialization	Characterized by a high degree of technological dependence on foreign know-how. Adjudged to be a failed policy. Mobilization of national economic resources and deploying them on a cost/benefit basis.
Second National Development Plan	Maximization of human benefits by increasing the earning power of the populace; Minimization of social tension by generating more employment; Availability of essential goods the populace	Upgrading of local production and industry	The 1972 Act on Indigenization of enterprises This Act resulted in the indigenization policy which was amended, repealed and replaced by the Nigerian Enterprises Promotion Act, in 1977	The shallow nature of Nigeria's technological capacity prevented the economy from moving beyond the elementary phases of industrial projects. Virtually all of the projects have today either been shut down or operate at very low capacities.
Third National Development Plan (1975-80) Fourth National Development Plan (1981-85)	Transfer ownership and control of industrial enterprises to Nigerians. Foster widespread ownership of enterprises among Nigerian citizens. Encourage foreign businessmen and investors to move from the unsophisticated spheres of the economy to domains where large investments are required.	Create opportunities for Nigerian indigenous businessmen	The Nigerian Enterprises Promotion Act,(1977) which then birth The Nigerian Indigenization policy of 1977	Emphasis remained on public sector investment in industry, especially heavy industries. Private firms opted for investments in the light, low technology consumer industries which were heavily dependent on imported machinery and raw materials. It became apparent that the country had entered into industrial project agreements with very little concern for the

Development Policy	Objectives	Target	Industrial development Instruments	Remarks/Impact
				country's capabilities coinciding with the inception of a global economic recession which sparked declining foreign exchange earnings, balance of payment disequilibrium and unemployment in the Nigerian economy. This global recession exposed profound weaknesses in Nigeria's industrial structure and planning. It was evident at the end of the fourth development decade in Nigeria that existing strategies targeted at industrial development were yet to yield desired results.
SAP (1986-2000)	to promote investment, stimulate non-oil exports and provide a base for private sector-led development, privatization and commercialization of public investment, develop and utilize local technology by encouraging accelerated development; use of local raw materials and intermediate inputs rather than depend on imported ones.	Promote efficiency of Nigeria's industrial sector	A National Science and Technology (S&T) Policy was formulated and launched in 1986.The objectives of this policy were to increase public awareness in S&T and their vital role in national development and well-being The Industrial policy (1989) reversed some of the provisions of the Nigerian indigenization Policy, and opened up the economy for foreign investors The Trade and Financial	The S & T policy represented an important landmark as it marked the beginning of the recognition of S&T efforts as a vehicle for successful industrial development in Nigeria. The important issues which the era of S&T policy in Nigeria missed were how S&T translates or influences the broad process of industrial development and how such influences may be improved upon, i.e., a recognition of the need to transit from Science and

Development Policy	Objectives	Target	Industrial development Instruments	Remarks/Impact
			Liberalization Policy , The National Economic Reconstruction Fund (NERFUND) was set up as a complementary institution to the industrial policy. NERFUND seeks to address the medium- and long-term financial constraints experienced by small- and medium-scale entrepreneurs, BOI established in 2000. The objectives of this bank include providing long-term loans, assist in employment generation and promote industrial dispersal indigenous entrepreneurship SMIEIS was also set up in 2000	Technology to Science, Technology and Innovation (STI). The strategy of the industrial policy was to stimulate competition among domestic firms and between the domestic imports competing firms and foreign firms
National Economic Empowerment and Development Strategy (NEEDS).	The NEEDS framework identified STI as a cross-cutting issue that should be promoted in order to achieve economic development objectives (NPC 2007			
Nigeria Vision 20: 2020	embraces elements of STI aimed at addressing industrial challenges in critical areas such as biotechnology, nanotechnology, institutional linkages, capacity building, renewable energy, ventures capital, space research, small- and medium-scale industry targeted research, knowledge-intensive new and advanced materials, STI information management, information and communication technology[11]; intellectual property rights, traditional medicine and indigenous knowledge.			

Source: see text.

11 The fields of new technologies, especially ICTs and biotechnologies have been amply shown to present new windows of opportunities for catch-up in technological and economic development (Perez and Soete 1988).

Table A2: Examples of industrial clusters in Nigeria

The Nnewi automotive parts industrial cluster

The Nnewi Automotive Parts Industrial Cluster is a huge success story in Nigeria, and It is a very good example of how an informal cluster can survive and succeed without government support in terms of provision of essential public utilities. This industrial cluster exports automotive parts to countries in the West African sub-region as well as other international destinations. Its key critical success factors include active participation of private industry associations such as Nnewi Chamber of Commerce, Industry, Mines and Agriculture and the Nigerian Association of Small-scale Industries, a social – cultural milieu characterized by competitiveness, high entrepreneurial spirit as well as investment in training and capacity to imitate and assimilate foreign technology. Above all, the Nnewi cluster made an independent effort to provide the necessary infrastructural support when the state failed to do so.

Since the mid-1970s, local traders in Nnewi have transformed themselves into manufacturers of automobile parts through close linkages to technology suppliers in Taiwan Province of China. Seventeen firms, ranging in size from enterprises with 40 employees to those with 250, supply Nigeria and other West African markets with switch gears, roller chains for engines, auto tubes, batteries, engine seats, shock absorbers, foot rests and gaskets for motorcycles, as well as other parts. Most of these firms have the design capability to modify products and adapt the production process to the local market. Firms in Nnewi grew despite major infrastructural and credit constraints. Electricity, for example, was only supplied through private generators, water was provided through the company's boreholes, telephone service was poor and tariffs high, land was expensive and scarce, and banks were reluctant to extend the level of credit offered to companies with high inventory costs. Despite all these limitations, Nnewi firms succeeded in innovating, growing and exporting to neighbouring countries while other firms in Nigeria were failing.

Much of this success was due to the acquisition of skills by workers mainly through learning by-doing, especially during equipment installation and test run, and through inter-firm linkages with foreign technology suppliers, notably those from Taiwan. However, as in the Suame Magazine case, vulnerabilities in the production strategy of the cluster have emerged, especially because firms were not well organized within the cluster to support a continuous process of improvement. As Oyelaran-Oyeyinka (1997) pointed out, '*a weak local capital goods capability continues to slow down a full acquisition of major innovation capability*… 'Here is where policies and new support structures, notably credit facilities are critically needed.

The Otigba computer village

The Otigba Computer Village is a more recent development, dating back to 1995. It covers an area of some 325 km^2 in Ikeja, Lagos and provides for the 'sale, service and repair of ICT products and components, particularly to the Lagos industrial base, led by the oil and financial sectors. Increasingly the Otigba cluster is meeting regional West African market demand with some 392 SMEs employing more than 3000 workers'. The cluster development has been characterized by significant inter-firm co-operation and joint action.

Co-operation has been particularly noticeable in dealing with (municipal) government's treatment of the cluster, where the Computer and Allied Products Association of Nigeria (CAPDAN) has been very active. This has resulted in a supportive municipal government that has, for instance, facilitated property access and rental and licensing and refrained from heavy-handed inspection and licensing practices. Other areas of significant co-operation relate to technology and market support, security, and infrastructure maintenance.

A key factor at play in this cluster appears to be the relatively very high educational level of the workforce and the fact that many of the skilled workers have ties with one another going back to their school or college. This has

contributed to a high level of commercial trust among the firms, reflected, inter alia, in the appetite for the provision of supplier credits among firms in the cluster, as well as know-how exchange and joint warehousing. Given the cluster's dependence on imported inputs (63.5 per cent), the quality of trade facilitation services is an important determinant of cluster competitiveness.

Government policy in support of the industry includes the standard package of duty rebate and tax holidays. There is also a preferential public procurement policy in place directing government ministries, departments, and agencies (a group of public agencies widely referred to in Nigeria by the acronym MDAs) to source IT products domestically.

Onitsha plastic cluster

Onitsha is a very dynamic city and has the highest concentration of manufacturers in Eastern Nigeria with products ranging from pharmaceuticals to paints, and from plastics to chemicals. It attracts trading partners from the rest of the country and different parts of the West African sub-region. The plastic cluster in Onitsha is known as the Osakwe industrial cluster, it is situated at Awada layout in Onitsha and has about 75 industries employing over 1,800 workers. The industries are managed by the Industrial Economy Development Agency, a local group that provides planning, research and development, tools, infrastructure, security, and training to members of the cluster. The industries cover a wide range of products: plastic film extrusion, plastic pipe extrusion, plastic injection, plastic blow moulding, polythene bag making, and plastic waste recycling. There are three service workshops, and a machine development and building company.

Source: Adapted from Oyelaran-Oyeyinka (1997).

Table A3: Composition of Nigeria's national economic management

President of the Federal Republic of Nigeria	Chairman
Vice President	Vice Chairman
Finance Minister	Member
Minister of National Planning	Member
Minister of Trade and Investment	Member
Minister of Power	Member
Minister of Petroleum Resources	Member
Minister of Agriculture	Member
Minister of Works	Member
Minister of Education	Member
Minister of Health	Member
Minister of State, Finance	Member
Minister of State, Health	Member
Governor, Central Bank of Nigeria	Member
Chief Economic Adviser	Member
Special Adviser, Monitoring and Evaluation	Member
Director General, Budget	Member
Director General, Debt Management Office	Member
Director General, Bureau for Public Procurement	Member
Director General, Infrastructure Concession Regulatory Commission	Member
Director General, Bureau of Public Enterprises	Member
Honorary Adviser on Agriculture and Governor of Adamawa State	Member
Honorary Adviser on Finance and Governor of Anambra State	Member
Honorary Adviser on Economy and President, Nigerian Economic Society	Member
Chairman of the Federal Inland Revenue Service	Member
Director General, Security & Exchange Commission	Member
President – Manufacturing Association of Nigeria	Member
Four others who are frontline industrialists and bankers: Atedo Peterside, Aliko Dangote, Aigboje Aig Imoukhuede, and Femi Otedola	Members