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Okune I. Ojong

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THE IMPACT OF PUBLIC CAPITAL EXPENDITURE ON THE DEVELOPMENT OF THE MANUFACTURING SECTOR OF SUB-SAHARAN AFRICAN STATES: THE CASE OF NIGERIA

By

Okune I. Ojong

A DISSERTATION

Submitted to Michigan State University in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Department of Resource Development

1988

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ABSTRACT

THE IMPACT OF PUBLIC CAPITAL EXPENDITURE ON THE DEVELOPMENT OF THE MANUFACTURING SECTOR OF SUB-SAHARAN AFRICAN STATES: THE CASE OF NIGERIA

By

Okune I. Ojong

The aim of this study is to evaluate two policy objectives of development in Nigeria, viz.: (1) to promote growth, and (2) to distribute equitably the profits of the growth in the manufacturing sector. These policy objectives constitute the essential components of development, and are widely pursued in the national government development plans of Sub-Saharan African (SSA) states. In more specific terms, the evaluation is centered around the impact of expenditure on: (a) growth of public capital the manufacturing sector; and (b) equitable distribution of selected variables associated with the manufacturing sector of Nigeria. Nigeria is used as the case study of SSA states.

Overall, a high positive correlation (r = .8) was found between public capital expenditure and the contribution of the manufacturing sector output to the GDP of Nigeria. Further evaluation indicated that the contribution of the manufacturing sector output to the GDP of Nigeria was very low compared to developed countries and some developing countries, especially of non-SSA-countries. The evaluation of the impact of public capital expenditures on the distributional equity (across the regions of Nigeria) of six variables associated with the manufacturing sector showed a very high and increasing disparity among three of the variables. Several reasons were offered to explain these findings.

Based on the findings of the study recommendations for policy and strategy changes were made. The recommendations included a shift in emphasis in public capital expenditure to:

- 1. Greater dependence on local sources for capital qoods. raw materials inputs. contractors. In other words, a managers, and technicians. shift to greater self-reliance in industrial establishment and production through the promotion local of managerial and technological capabilities.
- The establishment of extensive research and development centers, industries consistent with local talent, promotion of practical work, experiential training (i.e. learning by doing),

and commercialization or dissemination of research products.

- 3. The creation of new or reconstituted Public Development Administration (P.D.A.) to promote and coordinate all development efforts.
- 4. Government incentives and infusion of capital in the form of grants and loans into the private sector to encourage research, to offset the low investment capital in the private sector, and the inefficient management associated with government ownership of the factors of production.

Recommendations are also made for further studies.

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CHAPTER ONE

INTRODUCTION

Purpose of the Study

The purpose of this study is to investigate the impact of public (i.e. government) capital expenditures on the development of the manufacturing sector of Sub-Saharan African (SSA) states. The Public Development Administration (P.D.A.) has been viewed as a key factor in facilitating the development of SSA states (Nti, 1978; Hyden, 1983). In the role as facilitator, the primary functions of P.D.A. are to:

- Integrate and conduct development processes such as: development planning, plans implementation, and evaluation; and
- Guide, induce, manage, and coordinate different systems, such as government ministries, departments, corporations, and local organizations associated with development processes in SSA states.

Although the structural orientation (i.e. centralized and/or decentralized system) of P.D.A. is equally important in facilitating the development of SSA states, the focus of this study is on the functions of the P.D.A. of Nigeria. A more detailed definition and conceptual clarification of

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terms and functions of P.D.A. is presented in the literature review in chapter two.

The term "SSA States," as used in this study, refers to formerly colonized Sub-Saharan African countries which attained political independence since the 1950s (World Bank, 1981). These countries are commonly included among "third world countries," "underdeveloped countries," or "developing countries."

The Scope and Nature of the Problem

The Scope of the Problem

The problems associated with the <u>underdevelopment</u> of SSA states are innumerable and difficult to discuss in a single study of this scope, since they are rooted in political, economic, technical, cultural, and the social history of the SSA states themselves.

The Nature of the Problem

While the position of industrialized countries, with regards to development, has continued to improve in a geometric progression, the development of SSA states after independence, has either improved only in arithmetic progression, remained the same or declined. This situation has been documented by Bates (1981); Shaw and Aluko (1985); Ghai and Radwan (1983); and Fransman (1982). After more than 25 years of independence a number of critical factors still dominate several of the SSA states. These include: a lack of technological break throughs, low productivity in the agricultural and manufacturing sectors, massive poverty and starvation, the inequitable distribution of resources, and the lack of the basic necessities of life.

In this light, this study seeks to contribute to the literature searching for methods to facilitate the rapid development of SSA states. According to Hyden (1983):

Controversial questions have to be raised concerning the nature of the African economy, the role of the [government] state in development, accountability of public officials, contributions by the private and voluntary sectors, building local organizational, technological, and management capacity, and the way donors and assistants can assist these technical efforts. A11 these have a bearing on what we mean by and how it can be promoted and development managed (Hyden, 1983:xiv).

To paraphrase Emezi (1979:10), the development of SSA states raises questions that focus on technological (manpower) capabilities and the ways in which we can create administrative structures, functions, and managerial capabilities that can cope with issues of policy-making, goal-determination, policy choices and policy attainment. In his words:

. . . Two interrelated sets of problems in contemporary African politics and government

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[include] . . . the concern for development at: (1) the national (state) and rural level, and (2) administering development at these levels (Emezi, 1979:11).

This study will examine two key problems associated with growth and distributional equity of the manufacturing sector, widely recognized as government development policy objectives in SSA states. This examination will investigate the problems associated with the slow development of Nigeria, and for that matter other similar SSA states, and recommend possible solutions to the problem.

A crucial factor in the development process of SSA states is the Public Development Administration (P.D.A.). The extent to which P.D.A. is effective in manipulating the machinery of development is an important key to the development. As noted by Fransman (1982:9), significant government intervention and radical changes within SSA states themselves will be required in order to bring about the necessary planned build-up of capital and intermediate goods industries.

Government intervention involves planning, programs implementation, research, budgeting and financing of programs, management, etc. Nti (1978) and others have recommended changes in P.D.A. centered on the creation and/or re-orientation and study of the role (structure and functions) of P.D.A. to facilitate the development of SSA states.

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The Assumptions of the Study

The problems associated with the slow development in SSA states are assumed to be related to:

- Flaws associated with the <u>centralized nature of</u> <u>the P.D.A.</u>, of SSA states, and the associated ineffectiveness in performing development tasks.
- 2. Flaws in the development policies of SSA states, stemming from the <u>inappropriate_allocation</u> viz., public capital expenditure, to promote local research and development efforts.
- 3. Inappropriate development models and/or strategies.

Policy Objectives

To investigate the above assumptions, two key P.D.A. development policy objectives of the SSA states were evaluated: (1) the policy designed to increase the growth of productivity of the manufacturing sector of SSA states, and (2) the policy designed to achieve an equitable distribution of resources, particularly, the profit from the growth of the manufacturing sector in the SSA states.

Significance of the Study

The success achieved in the implementation of development plan policies must be apprised periodically so that necessary recommended adjustments can be made. This study involves an intensive evaluation of the extent to which the P.D.A. of Nigeria has achieved its development policy objectives.

Development policies are rarely evaluated in many SSA states to determine their effectiveness, but this study evaluates in depth the development policies of an SSA state. Idrissa (1981) noted that, the evaluation of the success of policies and programs is a missing element in SSA states, but is important to assure that they actually meet the needs of the society.

Evaluation also offers the opportunity to change the strategies that are failing to facilitate the development of SSA states, and/or to reinforce development strategies that are very effective.

To effectively address the policy objectives of development mentioned above, the manufacturing sector of Nigeria was used as a case study.

Reasons for Using Nigeria as a Case Study

Nigeria was selected as a case study because it is typical of the SSA states. Like many of the developing countries, Nigeria exports large amounts of raw materials (including crude petroleum), has a rapidly growing population, and a significant proportion of them are poor. Nigeria is now in a stage of pre-industrial "take-off": the economy is (with the exception of oil) predominantly agricultural, with low productivity in both the agricultural and manufacturing sectors; the government is unstable; resources are poorly distributed; and the country lacks technological and managerial expertise.

Reasons for Studying the Manufacturing Sector

The modern manufacturing sector, as in most of the SSA states, is acknowledged to be an important (and critical) element of economic development. As noted by Fransman (1982):

Industrialization is [unequivocally] a necessary condition for rising productivity and standards of living and this is true regardless of the 'political hue' of SSA states (Fransman, 1982:3).

As a result, the governments of SSA states have established policies to stimulate growth of the manufacturing industrial sector in anticipation that they will impact social development (Abiodum, 1980, p. 115). The SSA states, in effect, perceive the manufacturing and industrial sectors to be the thrust of development and associate them with productivity, employment, and higher income. The experience of the industrial world is seen as living testimony to this assertion, and the strong claim of modern industrial manufacturing as a determinant of development.

Questions to be Answered

To investigate the two <u>development</u> policy objectives mentioned earlier, two questions were posed:

- To what extent was the policy objective of <u>growth</u> of the manufacturing sector, stipulated in the central development plans of Nigeria, achieved?
- 2. To what extent was the policy objective of <u>distribution equity</u> of manufacturing activities across the regions of Nigeria achieved?

The concepts underlined above are assumed to constitute development, while discussion of the difficulties in defining development is presented in the literature review in chapter two.

<u>Definition_of_Development</u> <u>Relating_to_This_Study</u>

The term development, as used throughout this study, is defined as comprising a combination of three components:

- 1. Increasing local technological capability.
- 2. Increasing productivity of the manufacturing sector as a conduit to economic growth.
- 3. Increasing equity in the distribution of the profits of the growth of the manufacturing sector.

schematic representation of these three components Α 1.1) with P.D.A. at the center with the ability to (Figure the other components is a key factor manipulate in facilitation. The problem confronting the P.D.A. of SSA the attainment and balance of the states 15 three components. The three components are inter-related and interdependent in the sense that local technological



Figure 1.1 Essential Components of Development

capability and management skills are quite essential for promoting economic growth and distributional equity of the manufacturing sector.

There is a "trade off" in the relationship between economic growth and distributional equity in the sense that: on the one hand, the access to factors of production is necessary to increase productivity; while, on the other hand, increased productivity is necessary in order to have enough to distribute (Mabogunje, 1973).

Theories associated with distributional equity include equilibrium theories, location and allocation theories, etc. Those theories associated with economic growth include investment, expenditure, consumption, labor and industrial relations, and management. A popular theory of development associated with growth and distribution of resources is the "growth and trickle down" theory, whose underlying tenet, inherited from colonialism by SSA states, was to concentrate on economic growth, (i.e. growth in GNP, at the initial stages of development), with the expectation that the accumulated wealth will eventually "trickle down." Writers like Case and Niehoff (1976) have condemned both the growth and trickle down theories on the grounds that wealth tends to accumulate at the center without "trickling down," particularly in the absence of government intervention to redistribute the wealth. (The tendency for wealth to accumulate at the center rather than "trickle down" has been referred to as the "backwash" effect resulting from economy of scale by Myrdal (1957).)

It is not surprising, therefore, that Rogers (1976) and Seers (1977) advocated the involvement of P.D.A. in development and the concomitant promotion of economic growth and equitable distribution of the profits from the growth. Seers (1977), for example, defined development as the acceleration of: (1) economic growth; (2) the reduction of inequitable distribution of resources (income, industries, etc.); and (3) the eradication of unemployment and poverty. In his later writings (Myrdal, 1968), he added (4) selfreliance and self-determinism, through the acquisition of local technological capability and industrialization.

A crucial factor in the definition of development is the acquisition of technological and managerial expertise as a prerequisite for:

- 1. The growth and increased productivity of the agricultural and manufacturing sector; and
- The ability to establish industries and development programs throughout the country to eradicate distributional inequity in industries, employment and income among regions.

According to Seers (1977), development is said to occur when economic growth increases and when distributional inequity, unemployment, and poverty become less and less severe. The definition of development in this study is also in line with the contemporary definition of development in the literature. For example, according to Teriba et al. (1981:5), studies in SSA states should design measures of industrial development which throw light on:

The degree to which growth is promoted, to whom the benefits are accruing, how far the process of economic growth is proceeding, and how well the scarce resources (capital) of the economy are being utilized to the benefits of the country and its citizens.

An argument will be made in here to the effect that the functions of the P.D.A. of Nigeria have not been adequate to facilitate development.

The Objectives of the Study

The objectives are twofold:

- The first is to examine the extent to which the policy objectives of development outlined earlier were achieved by the P.D.A. of Nigeria.
- The second is to recommend a new strategy and/or policies, based on the results obtained from evaluating the first objective, for facilitating the development of SSA states.

To determine the extent to which the P.D.A. of Nigeria was facilitating the development of Nigeria, two key development related concepts and associated variables were evaluated.

<u>Concepts and Variables</u> Evaluated in the Study

The two key concepts evaluated were: (1) growth, and (2) <u>distributional equity</u> of the manufacturing sector of Nigeria.

- The variables associated with <u>growth</u> of the manufacturing sector were:
 - a. public_capital_expenditure, and
 - b. <u>total_output</u> (in naira), i.e., the value of the manufacturing sector in the GDP of Nigeria.
- 2. Variables associated with <u>distributional_equity</u> of the manufacturing sector included:
 - a. distribution of public capital expenditure across the regions of Nigeria;
 - b. distribution of manufacturing industrial
 establishments across the regions of Nigeria;
 - c. distribution of output of the manufacturing sector across the regions of Nigeria;
 - d. distribution of value added by the manufacturing sector across the regions of Nigeria;
 - e. distribution of manufacturing sector employees across the regions of Nigeria; and

f. distribution of manufacturing sector employees wages across the regions of Nigeria.

Organization of the Study

The remainder of the study is divided into five chapters.

<u>Chapter two</u> is devoted to the review of the related literature concerned with the role of P.D.A. as an agency charged with the function of development; related theories associated with some development models for SSA states such as UST, NET, and ST (See Pages 27-28) are also explored, in addition to the development approaches adopted in Nigeria over the years. The development of Nigeria has shifted emphasis from preoccupation with economic growth only prior to 1970, to include deliberate government intervention to promote distributional equity after 1970.

<u>Chapter three</u> describes the procedures and methods used to evaluate the questions posed in the study. Specifically, the sources of data, the limitations of the data, and the techniques adopted to compute growth rates and distributional equity are discussed in this chapter.

<u>Chapter_four</u> is devoted to the presentation of data and its evaluation. The evaluation associated with economic growth and distributional equity of the modern manufacturing sector of Nigeria are performed in this chapter. <u>Chapter_five</u> is devoted to discussion and explanation of the findings of the study. The findings associated with economic growth and distributional equity of six variables relevant to the modern manufacturing sector of Nigeria presented in chapter four are analyzed.

<u>Chapter_six</u> includes the summary, conclusions, recommendations for policy and strategy changes, and recommendations for further studies.

CHAPTER TWO

A REVIEW OF RELATED LITERATURE AND THEORETICAL CONSIDERATION

Chapter Focus

The focus of this chapter is: (1) to provide a conceptual clarification of the role of the P.D.A. as an organization charged with the function of achieving the development policy objectives stipulated in the national development plans of Nigeria; and (2) to explore related theories associated with the development of the manufacturing sector of SSA states.

Chapter_Organization

Specifically, the chapter will examine in tandem:

- A brief historical statement about the involvement of the P.D.A. in the modern manufacturing sector and development of Nigeria;
- The necessity for the P.D.A.'s involvement in promoting the development of Nigeria;
- 3. A conceptual and theoretical clarification of the role of P.D.A. in facilitating the development of SSA states;
- 4. The origin of planning in Nigeria;

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- 5. A statement about the policy objectives of development stipulated in the national development plans of Nigeria; and
- The contribution of earlier studies and this study to the subject of the development of Nigeria.

<u>A Brief Historical Statement About the</u> <u>Involvement of the P.D.A. in the Modern</u> <u>Manufacturing Sector and Development of Nigeria</u>

The British adopted a system of indirect rule that involved a combination of British administrators and Nigerian rulers but under this colonialist system, the function of the Nigerian rulers was primarily limited to maintaining law and order and collecting taxes, (Nti, 1978:19) rather than to development tasks. The British interest was with commerce and not with permanent residence in Nigeria, so they were not concerned with developing the country.

At independence, Nigeria was relatively underdeveloped and this led to the intervention of the P.D.A. and the creation of agencies such as the National Economic Planning Committee, to facilitate the development of Nigeria.

After the independence of Nigeria, the power and responsibility for development was transferred to elitist groups with backgrounds in Western education and neoclassical economic ideologies. Therefore, the role of the P.D.A. of Nigeria transcended maintenance of law and order and tax collection, to include proprietory and developmentrelated functions.

Garkvich (1985) identified three typical functions of any government, small or large, as comprising: <u>regulatory</u> <u>functions</u> -- pertaining to ordinances, taxing and other local aspects; <u>proprietory functions</u> -- pertaining to the delivery of services and programs; <u>development functions</u> -pertaining to the determination of policy relative to the regulatory functions and proprietory functions and action. In more general terms, we can classify the functions of the P.D.A. of Nigeria under: (a) regulatory functions, (b) delivery functions, and (c) stimulation functions.

<u>Regulatory functions</u>: Includes law enforcement, the maintenance of law and order and ensuring social justice and local control. For example, the regulatory functions ensure that: loans get to the target group, loans are repaid, distributional equity is promoted, growth rate of the population is monitored, proper location and allocation of the nation's wealth is ensured, monopoly regulation, and any other negative socio-economic externalities (i.e. overpopulation, corruption, pollution, etc.) are eradicated.

<u>Delivery functions</u>: Involves the establishment, production and provision of: (1) capital goods, such as machines, tools, and equipments; (2) facilities, such as the necessary infrastructure; (3) services, such as financial aid and loans; (4) extension services, such as training,

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technical assistance, etc.; and (5) research to design and invent new products, and to innovate and improve on old products.

Stimulation functions: The P.D.A. functions to induce and stimulate the human potential to promote: increased productivity through research, local technological acquisition and technological know-how through extension practical work and experiential services, learning; technical assistance to proprietors, managers and workers; the provision of technical and managerial training; the provision of incentives to motivate hard work. In playing this role, the P.D.A. agency attempts to bring about desired changes in the attitudes towards work, and the adoption of new and better production techniques.

Since one of the primary functions of the P.D.A. is to induce change, its efforts must be directed at organizing, mobilizing, educating, training, and/or developing the target of change (Nti, 1968). In addition, it must be designed to stimulate the development of the manufacturing sector of Nigeria just as India's engineering consultancy firms (Lall, 1984) are doing.

In India the development agencies comprise both consultancy and task force agencies ranging from the National Research Development Corporation, (a metallurgical engineering, technical and management consultancy), to Indian export organizations. According to Lall (1984):

India has a large number of organizations offering consultancy services from equipment manufacturers, product manufacturers and specialized industrial consultants to general engineering cum-economic consultants (Lall, 1984:544-59).

The decentralized structure, funding commitment, consultancy and task force functions, and the government's role in promoting local technological capabilities and competence have earned India the reputation of being a technologically self-reliant country that exports technology to SSA states (Lall, 1984).

The public development agencies in many SSA states, such as Nigeria, do not offer training to private enterprises due perhaps to governmental neglect or the lack The Nigerian P.D.A. organizations, unlike the of funds. Indian P.D.A.s, are under-funded and un-coordinated. For the National Research Development Corporation example. of India is the commercial arm of government known as the "Council of Scientific and Industrial Research and Development Network" and comprises 34 national laboratories and is spending an enormous amount of money on both research and development (Lall, 1984). India also stresses production management, and strong local technological technology, acquisition through experiential learning. As noted by Lall (1984):

The strength of Indian enterprises lies in production technology and management with strong local technological acquisition-learning by doing. . . . heavy emphasis on self-reliance in the production of capital goods has forced the growth of

industries and indigenous technological capability along lines it may not otherwise have followed (Lall, 1984:559).

But unlike India, the P.D.A. of Nigeria is neither structurally nor functionally oriented to provide services such as consultancy, training, technological adaptation, and learning by doing. There are minimal indigenous industrial bases or "task forces" in Nigeria responsible for the manufacture of modern industrial capital goods and research These rarely perform the function of and development. industries with stimulating indigenous instruction. training, indoctrination, advice, motivation, innovation and change, education, information, enlightenment, edification, or direction.

The effective implementation of planned projects and require training, technological acquisition, programs investment capital, technological know-how, and/or skills development in such areas as entrepreneurship and business management techniques. Although these functions are entrusted to the P.D.A. of Nigeria, most of these functions are not performed in Nigeria or in many SSA states because of the preoccupation with heavy capital-intensive import substitution industrialization. For example, as noted by Eziakor (1983), after independence, the thinking of early development planners and policy makers in SSA states focused, basically, on Marxian socialist and/or neoclassical economic development models with roots in heavy capital-intensive import substitution industrialization.

As observed by Fransman (1982:339-340):

State intervention generally favored large-scale foreign enterprises and increase dependency on the structure of incentive tends to favor low value added, assembly-type activities . . . In the absence of oil, the process of import substitution would have been stifled by severe external imbalances and by inflationary pressures from the agricultural sector.

As noted by Were (1983):

Apart from a handful of cases where the Socialist system has been tried, the overwhelming majority of independent Africa states have attempted to achieve their development objectives within the wider framework of the capitalist economic which they inherited at independence (Were, 1983:6).

inappropriateness of the socialist and capitalist The and/or development strategies development models is SSA reflected in low or declining economic growth among This economic stagnation and decline of real states. per capita income among sub-sahara African states was noted by Shaw and Aluko (1985:3). On the whole, even the economic growth experience in oil exporting SSA states such as Nigeria was not accompanied by a widespread improvement in the living standard of the great mass of the rural population (Ghai & Radwan, 1983). The economic growth was accompanied by the uneven distribution of the benefits (Shaw, 1982:3) and although Nigeria experienced an overall

economic growth (growth in per capita GNP) as a result of oil, there was an absolute decline of agricultural production in both the 1960s and the 1970s.

In terms of the general picture, as noted by Ghai and Radwan (1983), between 1960-1978 countries like Botswana, the Ivory Coast, Kenya, Malawi and Nigeria, recorded an annual growth rate of income per head in excess of two percent. By global standards, this was a very low growth rate and SSA states like Mozambigue and Zambia only had an annual growth rate of zero to two percent or experienced a moderate growth while the overall economic growth of SSA states like Ghana and Somalia, with a zero to negative growth rate in income per head, experienced a stagnation or decline (Ghai & Radwan, 1983:3).

The problems associated with rural poverty and distributional inequity, for example, are assumed to be based in poor terms of trade, urban bourgeoisie and poor policies with a biased expenditure in favor of urban activities. As noted by Ghai and Radwan (1983:23), the concentration of public expenditure on social and economic infrastructure in urban centers laid the foundation for inequality between urban-rural areas, and rural impoverishment.

The dismal economic situation of many SSA states is often referred to as a "crisis" Adedeji (1977), Barker (1984), and the World Bank (1981). Based on established

trends, Adedeji (1977) prognosed a troubled future for the whole African continent. The April, 1980 OAU Summit in Lagos was an attempt to lay the groundwork for African Economic Community by the year 2000 (Shaw, 1982:5-8), in response to the economic crisis of Africa. The major topic of the Economic Community for Africa (ECA) centered on: а restructuring of global economic order, self-reliance, and Africa's economic cooperation. In the same light, Adedeji (1977) argued that a restructuring of the global economic order will only bring about marginal benefits, if at all, unless there is a corresponding restructuring of the economic order at the continental and states levels in Africa.

In reference to the gloomy statistics of Africa's future, Adedeji noted that, they should generate a predisposition to engage in a fundamental re-examination and re-direction of Africa's economic development strategy. Dependency on the industrialized world, he noted, was responsible for the inability of Africa's leaders and development agents to respond effectively to the problems of underdevelopment and advocated a plan of action (Lagos Plan of Action, O.A.U., 1980) based on greater self-reliance, and economic cooperation among African states (Shaw, 1982:2).

Both external and internal problems have been blamed for the poor economic performance and underdevelopment of SSA states. For example, Shaw (1982) asserted that the

attainment of basic human needs and/or power in SSA states is difficult to achieve because "it involves difficult choices for and considerable resistance from both internal and external forces" (Shaw, 1982:4).

With respect to external problems, Shaw contended that the underdevelopment of SSA states and the inability of SSA states to sustain themselves with food is a result of their incorporation into the world system. According to Shaw (1982):

Africa's involvement in the international division of labor means that it produces primary products for exports and imports basic commodities (p. 4). . . continued incorporation within the world system had led to neither growth nor redistribution for the majority of Africa's states and people (Shaw, 1982:7).

Regarding the internal problems, Shaw also noted (p. 2) that. Africa "cannot yet determine its present role or direction of development, let alone its future progress" or path while Were (1983:6) contends that, "Africa has been independent long enough to be judged in her own right by her own performance." Poor leadership, dishonest officials, social lack discipline, corruption, of economic mismanagement, and exploitation of public responsibilities for individual gain are the contributing reasons for the underdevelopment of SSA states (Were, 1983; Myrdal, 1972). According to Were (1983):

. . Africa leadership is a major, perhaps the principal, contributory factor for independent Africa socioeconomic backwardness in the period since independence. In this particular respect, there is no visible distinction between the socialist and capitalist African system (Were, 1983:6).

As noted by Myrdal (1972), the underdeveloped countries perceived as "soft states" have:

Deficiencies in their legislation, providing loopholes, and in particular, in law observance and enforcement leading to widespread Public officials on all arbitrariness. levels disregard rules and directives which they should follow. Often they act in collusion with powerful persons and groups of persons whose conduct they should negate (Myrdal, 1972:116).

All these deficiencies contribute to a weak development effort.

Theories_Associated_with_Models_of_Development of_SSA_States

Several models and theories have been associated with the development of SSA states and Kassam and Mustafa (1982) identified three such theories: (1) the Underdevelopment School of Theorists (UST); (2) the Neo-Classical Economic Theories (NET); and (3) the Socialist Theories (ST) to which can be added (4) the Mixed-Economic Theories (MET).

1. <u>The Underdevelopment School of Theorists (UST)</u>

The tenets of UST assumes that underdeveloped countries should plan for development, that indeed they should be helped to succeed by the developed countries; and that if aid is realistic, developed countries should cheaply provide underdeveloped countries with technical assistance and capital with low (below 3%) interest rates (Myrdal, 1972:76-79).

Viewed from a different perspective, the UST focuses on the "center and periphery" theory and is based on the principle of comparative advantage and dependency (Fransman, 1982; Shaw, 1982). According to the opinion held by this author and other writers like Shaw (1982), and Oni and Onimode (1975), the inability to set up a capital goods manufacturing industrial base in SSA states is because of:

- a. The monopoly of technology held by the giant transnational corporations;
- b. The provision of "package-deal" technology, based on the transplantation of capital intensive plants and management contracts rather than technological "know-how."
- c. Unequal terms of trade and the associated foreign exchange deficit and/or exploitation stemming from the incorporation of SSA states into the world economic system to function as cheap primary commodities producers in exchange for expensive finished commodities from the developed world.

The development literature on SSA states is replete with claims of dependency as the culprit of the underdevelopment of SSA states. It is argued that dependency based on import substitution industrialization is what is preventing SSA states from accumulating the necessary capital and technological "know-how" to achieve the take-off into sustained capitalist development (Shaw, 1982).

According to opponents of import substitution industrialization of SSA states:

Import substitution industries has led to а growing dependence on a largely imported capital intensive technology and has thus not created extensive employment opportunities or indigenous technological development; the process has been heavily dependent on foreign capital and has emphasized the establishment of consumer goods industries at the expense of investment on capital goods industries: it has led to what many would as an undersirable redistribution regard of income; and in general it has failed to generate a sustained process of economic growth (Fransman, 1982:9).

As a result, several writers, for example, Oni and Onimode (1975), have, in light with UST, proposed that:

The only way out is for third world countries to disengage from the world capitalist system and to opt for self-centered socialist development (Kassam & Mustafa, 1982:17).

Proponents of import substitution industrialization argue that without import substitution industrialization, SSA states would not have been able to attain their present level of industrialization and that capital accumulation cannot be understood by an examination of dependency alone but must include a look at the structure of indigenous social classes, production forces, and indigenous class power based on the accumulation of capital achieved prior to and after independence (Fransman, 1982:5-8). In essence, while the proponents of UST opt for import substitution industrialization (ISI), opponents of UST define development in terms of self-autonomy, self-reliance, self-determinism, or self-centered economy. The position held by the proponents of UST is that, unless checked, the predatory character of indigenous social class, i.e. the elitist group, vis-a-vis the periphery or the poor in SSA states, is also exploitative.

2. Neo-Classical Economic Theories (NET)

The theories of the neo-classical economic growth ideology were inherited from the west by SSA states at least during the early stage of independence. The approach to the development of Nigeria, up through the early 1970s was patterned after the neo-classical economic model. This model was based on economic growth first and equity second (Groe. 1984). Using this model, disparity was thought to incentives for hard work and competition and provide economic growth was seen as the basic strategy for bringing about the development of Nigeria. Hence, heavy, capitalintensive import substitution industrialization and

sophisticated technologies stemming from the industrial revolution of Euro-America were seen as a primary rationale for the socioeconomic development of Nigeria (Eziakor, 1983). This approach is referred to by Baltran (1974:11) as the "classical materialistic" model of national development; while Kassam and Mustafa (1982:13-19) refer to the group of theories using this approach as the "orthodox bourgeois economic theories (OBET)" and summarize the main theories of development according to OBET as comprising the allocation of scarce resources based on the laws of supply and demand, and private ownership of property (laissez-faire or free play of market forces). Under the OBET: the theory of growth views the ratio between savings and investment (capital accumulation and expenditure) as determinants; the factors of production (land, labor, capital, technology) establishes the objective conditions for the generation of income and profit; and injection of capital (external loans in the case of SSA states' investment) is required to bring about development.

The principal drawbacks of the neo-classical economic growth model as argued from the perspective of SSA states, and include:

a. The duality of the economy, that is, the rich visa-vis the poor as a result of distributional inequity emanating from the continuous accumulation of wealth at the center, rather than a "trickle down" effect; and

b. The spiralling interest rates and debt burdens constituting capital outflows at the end of the economic cycle instead of profit to be reinvested to expand the economy (Kassam & Mustafa, 1982).

The principal advantages of the neo-classical model are: (1) rapid growth in GNP; (2) hidden incentives resulting from private ownership of the factors of production; and (3) quantitative empiricism or welldeveloped empirically verifiable theories.

In the SSA states, prior to independence and during the early independence periods, it was believed that the industrialization of SSA states could be brought about through the infusion of public expenditure bolstered by foreign aid for use in constructing the physical infrastructure or foundation for industrial "take off," and distributional equity (Ruddle & Rondinelli, 1983:7). Foreign loans and the export of natural resources were relied on to generate a flow of foreign capital needed for investment in the industrial sector (Ruddle & Rondinelli, 1983:7) but the role of external loans in the promotion of the industrial "take off" of developing countries has been criticized and often viewed with mixed feeling in the It is argued, for example, that although literature. foreign loans help to increase agricultural production and

services in developing countries and social viewed positively, they are also associated with wide Income disparities since funds often go into projects that benefit the rich rather than the poor (Myrdal, 1972:98-127). According to Ruddle and Rondinelli (1983:10), "studies have found that foreign aid in the form of loans had little direct impact on increasing the levels of GNP in less developed countries" and foreign loans, especially loans tied to the procurement of the goods of the donors, prevent the recipients from developing their local technological capability (Fransman, 1982). Tied loans often prevent the governments of developing countries from using the funds for high-priority needs such as investing in a local capital goods manufacturing industrial base (Oni & Onimode, 1975).

The lack of industrial "take off" in SSA states can also be attributed to the onerous debt associated with tied loans and loans with high interest rates. The debt prevents capital formation for technological breakthrough and industrial "take-off" and for these reasons, during the 1980s, many developing countries, such as Nigeria, started to de-emphasize the outward-looking approach, based on foreign loans. as an important component in their development process (Shaw, 1982). For example, while supporting the concept of foreign aid, Friedman (In Bienen and Diejomoah, 1981:10) challenged the proposition that foreign source of capital (loans) was the key to economic

development. Economic development, he contended, "is a process of changing old ways of doing things, of venturing into the unknown, or taking risk" (Bienen & Diejomoah, 1981).

Leaders like Nyerere (1979) of Tanzania have also argued that emphasis in the development of developing countries should be redirected at acquiring local technological capability rather than on acquiring money. In essence, the preoccupation of governments of SSA states should be with acquiring technical assistance to promote the acquisition of local technological capability.

The importance of foreign loans in the development process has been seriously questioned by Olaloku (1979) who states that recent studies of growth and distributional equity of industries have greatly removed emphasis from physical (loans) capital while giving pre-eminence to human capital. In the same vein, the belief here is that investment in human capital should be considered а sine_qua_non to the development of the manufacturing sector of developing countries. Evidently, Nigeria has not come to grips with this notion because it continues to emphasize heavy. capital-intensive import substitution industrialization, and the importation of heavy, capitalintensive and sophisticated machines. These are accorded despite the differences in technological. precedence economic, social and political problems associated with such

technologies and between developing countries and the industrialized countries.

The explanation of these problems centers on the fact that after independence it was believed that the outwardlooking approach (misconstrued as an inward-looking approach among SSA states) was thought to promote economic growth and modernize developing countries (Ruddle & Rondinelli, 1983), or that developing countries could develop by transplanting the industries of the industrialized world into their countries (Rogers, 1976; Seer, 1977) without knowledge of the technology.

In developing countries attention was not given to the development of local technological skills, local capital goods manufacturing industries, research, administrative and workers organizations, leadership, and distributional equity. Planners simply believed that developing countries could be developed by transplanting heavy, capital-intensive technology from the industrialized countries to developing countries, and/or that the benefits of economic growth would trickle-down to the masses through automatic market mechanisms (Ruddle & Rondinelli, 1983; Gore, 1984; Myrdal, 1957; Hirschman, 1966).

The approach to development in SSA states focused on heavy investment in capital-intensive manufacturing industries and growth centers to increase output and the demand for manufactured industrial goods. Among the proponents of this growth centers approach were Perroux's (1955) propulsive growth centers, Hirschman's (1958) polarization and trickling down effects, Friedman's (1966) core and periphery model, and Myrdal's (1957) backwash and spread effects.

According to Abiodum (1981), Perroux contends that growth does not appear everywhere at the same time, but it becomes manifest at sectors and poles of growth with varying intensity and spreads to different channels with variable terminal effects on the whole of the economy. While Hirschman (1958), on the other hand, holds that disequilibrium is concomitant with growth itself, Kuznets (1966) maintains that polarization is a characteristic of early stages of development.

During the earlier periods after indepedence, less concern was devoted to distributional equity since the mechanism to spread economic growth was thought to be automatic and as industrial output grew, it was asserted that:

It would generate more employment and high income which in turn would raise the level of demand for both agricultural and industrial goods, increase savings, allow for expanded capital formation, and generate new investment (Ruddle & Rondinelli, 1983:7).

The focus on economic growth assumed that the distributional equality would naturally follow, so economic

growth and the trickle-down theory dominated the economic scene of SSA states during this period (Rogers, 1976). During the latter half of the 1960s, it became increasingly clear that the economic growth and trickle-down theory resulted in (1) a backwash effect or in the concentration of income in the hands of a few elite groups; (2) a lack of local technological capability; and (3) the lack of capital goods on a manufacturing basis.

The Civil War in Nigeria (from 1967 to 1970) was a direct result of the failure of the approach to equitably distribute the nation's resources among the regions of the country and to bring about development. Mabogunje (1981) notes that the war was fomented by various concerns related to ethnic dominance, inequality in the political arena, and distribution of the national wealth. The flaws in this approach are reflected in its failure to bring about the development of SSA states.

Basically, the neo-classical approach to development is based on heavy import substitution industrialization and the associated dependence on foreign goods and loans to finance projects; discourages local efforts to raise development funds; and to promote local manpower development, industries, technological know-how and breakthroughs and research (Fransman, 1982).

3. <u>The Socialist Theories (ST)</u>

During the latter half of the 1970s, some aspects of Marxian socialist doctrines associated with equitable distribution of resource (income, industries, etc.), began to gain recognition in Nigeria.

The reasons for this resulted from the failure of:

The early (neo-classical economic growth) model of development to generate the expected increases in rate of growth and development of many SSA states. It was also observed that rather then bridge the gap between the rich and the poor, this model of development appeared to ignore the equity concerns associated with growth and development . . . Even where there were recorded increases in GDP, there were no observable improvement in the welfare and livelihood of the poor majority in newly independent SSA states (Eziakor, 1983:18).

The early emphasis of development in Nigeria centered on: (1) heavy, import substitution industrialization, and (2) the neo-classical (economic growth; then distribution) approach to development. Later the approach shifted to include Marxian Socialist (distribution and economic growth) approach to development, but the system has always been a mixed-economy (both public and private ownership of the factors of production).

As noted by Rogers (1976), and Ruddle and Rondinelli (1983), throughout the late 1970s, a dominant paradigm (neoclassical economic growth theories associated with quantitative empiricism) grew out of the industrial

revolution of Europe and the United States and ruled intellectual definitions and discussion of development, guided national development planning, programming, and budgeting in SSA states: this paradigm focused on economic growth or growth in the G.D.P.

After independence, some SSA states (for example, Tanzania) adopted the socialist approach to development centered also "modern" import, substitution on industrialization. The term "modern" is used here to distinguish foreign induced industries from the traditional industries and production techniques since modern industries are usually very sophisticated and heavilv capital intensive, import substitution industries.

The idea of import substitution industrialization in SSA states is very recent starting during the 1940s, after the end of the Second World War. During this period, parent industries overseas sought new markets and profits and decided to locate raw material processing industries near sources of cheap labor and raw materials to save labor and transportation costs. Industrial plants (machines, equipment, and tools in their finished form), contractors, and expatriates were transported into SSA states to perform these operations.

This type of "project transplantation" misconstrued as "technological transfer" was welcomed by SSA states, without questioning its drawbacks since it appeared to offer the SSA

the opportunity to manufacture locally, states: (1)hitherto. imported goods. (2) the allusion of industrialization, and (3) a means for improving foreign exchange deficits. However, the built-in dependency on capital goods, machines and parts, loans, and intermediate raw materials from abroad gave rise to huge foreign exchange Report, Second and Third National deficits (Progress Development Plan, 1970-80) and, in addition, the citizens were unfamiliar with the technology, the management, or the operation of machinery associated with the technology. For example, some of the machinery associated with the efficient effective operation of the technology and requires: partnerships, large corporations, assembly lines with mass production, advertising, large markets, non-frugality, mass consumption, profits, investment and reinvestment, loans, stable interest rates, growth and expansion, research, applied sciences and technology, etc. The majority of these concepts are foreign to the average Nigerian, (or for that matter, the average citizen) in most of the SSA states. For in Table 2.1, partnerships are shown to be example: the lowest form of ownership (8.2%) in Nigeria, far below sole (20.6%), and government ownership of firms ownership (71.2%).

Ownership Form	Number	Percent
Private sole proprietors	158	20.6
Private partnership	63	8.2
Government	566	71.2
Total	766	100.0

Table 2.1. Distribution of firms in Nigeria by forms of ownership.

Source: Adapted from Teriba et al. (1981:87) from the Federal Office of Statistics, 1979.

In the 1970s, an alternative paradigm (stemming from Marxian socialism theories) began to dominate the development of SSA states (Rogers, 1976): now the concern in alternative development approaches were focused on the elimination of poverty, inequity, unemployment, and meeting basic human needs. The primary reason for seeking an alternative development approach was due to the fact that the "old" approach promoted only economic growth and not distributional equity which was also seen as an important component of development. Bryant and White (1982) note that, no matter how developed an economy is, if only a small segment of the population benefits from development, the country is <u>not</u> developed.

The distinguishing features and doctrines underlying ST are: (1) public ownership and control of the factors of production; (2) the reduction in class struggle and fierce competition; and (3) egalitarian society or distributional equity. However, the ideologies of ST are utopian, given the presence of a ruling class, and given that by their nature they constitute drawbacks inherent in disincentive to work hard in government enterprises.

In Nigeria, by the beginning of the 1970s following the Civil War, the emphasis on the outward-looking approach, based on heavy, import substitution indutrailization was not having the expected wide-ranging effects on the levels and conditions of living of the majority of the regions and ethnic groups (Mabogunje, 1981).

The creation of states in Nigeria (12 states in 1967, 7 in 1975, and 2 more in 1987) was seen as an avenue for equalizing and promoting rapid and equitable development throughout the country. As Onyejekwe (1981) noted, the creation of semi-autonomous states in Nigeria was encouraged to reduce the hegemony of the stronger and wealthier majority groups and regions and their domination of parliament seats vis-a-vis minority backward groups and regions.

The question of industrial distribution also became an issue of concern and for this reasons the architects of development planning and policy making began to pursue strategies of both economic growth and distributional equity through fiscal budget allocation to regions. Ruddle and Rondinelli (1983) note a dissatisfaction with the pace and direction of economic growth and the severe problems of social inequity led planners to re-examine strategies that emphasized: captial-intensive development and the export of primary products; and to seek alternative development approach based on equitable distribution of resources.

Mabogunje (1977) argues that the question of justice cannot be considered or resolved independently of the **mechanis**ms governing productivity and prevailing distribution. Samonte (1979) argues that any development strategy that is not based on this notion and conceptual framework is sure to be self-defeating and if resources are distributed equitably in a country and augmented with an opportunities--research. appropriate mix of educational local technical skills and access to the means of production--an investment in the poor can produce benefits in the form of higher productivity and self-reliance. According to Mabogunje (1977), in order to have enough of the national "cake" (GDP) to share, one must also be concerned with how to bake the cake. This points to the dual importance of economic growth and distributional equity which is linked to indigenous technological capacity and investment capital.

Fortunately, the availability of investment capital did not pose a problem in Nigeria during the 1970s because of the oil boom which shifted the emphasis from agricultural exports to crude oil exports. Money from this boom was used to invest in import substitution industries (Third National Development Plan, 1975), although (as argued in chapter five, pages 136-139), investment in local research and indigenous technological development was nealected. the realization and recognition of Apparently, the importance of local research and technology in improving industrial output, and self-reliance has eluded Nigeria.

4. <u>Mixed-Economic_Theories_(MET)</u>

MET is comprehensive in the sense that it incorporates all three groups of theories previously discussed, given the underdevelopment of SSA states; the nature of their ownership of the factors of production (both private and public); and that MET welcomes planning as an enlightened approach to facilitating development. MET favors economic growth, social justice, the decentralization of the P.D.A., the democratic participation of citizens to promote development, provision of basic human needs, the undertaking of integrated regional and community development, animation rurale, self-reliance, and self-determinism.

Presently, the economic environment in SSA states is basically a mixed economy and this is true even in socialist

African states which tolerate some form of private ownership of the factors of production. This treatise advocates a mixed economy reasoning that while the neo-classical economic growth theories are important, development should also embrace the Marxian socialist theories. The center of development must be on acquiring leverage for the poor, through the location and re-allocation of the nation's wealth, and the decentralization of public development administrative power to the local polity.

Nti (1978:21) notes that rather than delegate duties, quite often senior administrators in Nigeria are saddled with development tasks that might be conveniently performed at the lower level. According to Slater (1975), real development is recorded in countries that have been able to decentralize their economy.

The Necessity for P.D.A. Involvement to Facilitate the Development of SSA States

It is evident from Table 2.1 (page 40) that the majority of the modern manufacturing firms in Nigeria (over 70%) are government firms.

As a result of low partnership in the private sector of Nigeria, this sector is dominated by small, family-size firms with minimal investments or profits to reinvest. Under these conditions, it is difficult to invest in research to achieve technological breakthroughs and large scale projects or to expand.

The Reasons for P.D.A. Involvement to Facilitate the Development of SSA States

There are several reasons for the large proportion of government ownership of enterprises in Nigeria. Some of the reasons are related to: the low capital formation in the private sector, lack of know-how, risk aversion, illiteracy, and lack of capital in the private sector (Progress Report, Second and Third National Development Plans, Nigeria, 1970-80).

It is my opinion that because of low capital formation in the private sector and low literacy rates, the (governments) P.D.A. of SSA states must function as initiators, funders, managers, and/or sellers and renters of industrial projects to private entrepreneurs. This is the crux of technical assistance in an underdeveloped economy with a technologically deficient private sector since, if left alone the private sector cannot start such projects.

[Because] development does not just happen but deliberate policies entails some that are sustained by those in power, [government should intervene] . . . The idea of development stems from the vision of society in terms of planned intervention, which stresses the utilization of knowledge and technology to help solve the problems of society (Christenson & Robinson, 1980:5-6).

Given the ubiquitous illiteracy, risk aversion, lack of capital, ignorance, and lack of "know-how" among the masses in the private sector of SSA states, it rests on the P.D.A. to induce development (Emezi, 1979; Nti, 1978). In this regard, national development plans become the mechanism through which the governments of SSA states, embarked upon the facilitation of more rapid and equitable development. The formulation and implementation of development plan policies call for the active involvement of the P.D.A., and according to Hirschmann (1958), the best development strategy is for the P.D.A. to set up pressures which elicit and mobilize the larger amount of human and natural resources to influence development: a view ascribed to by many writers concerned with the development of SSA states. The plethora of reasons for the P.D.A. intervention in the development of SSA states are discussed below under the stage of their development, and the poor distributional equity of resources.

The Stage of Development of SSA States

Several SSA states are still in the pre-industrial stage of development with: economies predominantly based on agricultural and/or crude mineral exploitation; a majority of their populace is illiterate; markets poorly structured and inefficient. In short, SSA states have yet to be developed. Myrdal (1957) argues that the reliance on the free working of the market or of the private sector alone in backward regions acts against the development of the regions due to several obstacles, such as: a high illiteracy rate; ignorance; a lack of infrastructure; inadequate access to information and communication; the high cost of transporting goods, and other transaction costs; the lack of the free flow of goods; and poverty. The free operation of the market, (i.e. the free play of the market) works better when the obstacles mentioned above are minimized.

The presence of these obstacles in SSA states favor "backwash" effects and inhibit the "spread" effects (Myrdal, 1957), therefore, laisez-faire is not seen as a better alternative for the rapid development of SSA states. Mvrdal (1957) asserts that the free play of the market in a poor country will work powerfully to create forces regional inequalities and to widen those which already exist, while preventing regional equilibrium. In line with Myrdal, Friedmann (1966) rejects the view that the invisible hand of the market will ensure the attainment of spatial equilibrium without the P.D.A. involvement.

The Poor Distributional Equity of Resources

The general development perspective adopted in this study assumes that development cannot be viewed purely in terms of economic terms, economic growth, or concentration of economic activities in urban centers, but must be considered also in the equitable distribution of resources. The question of how equilibrium could be attained continues to remain obscure to economic planners and developers alike.

This problem is based on the trade-offs between economic growth and equality; in other words, equality and economic growth are difficult to simultaneously promote.

Another dilemma confronting SSA states centers on how to promote the growth of the manufacturing sectors as conduits to socio-economic growth and distribution of resources, when there is a lack of technologically skilled personnel and limited resources in the SSA states. The precarious nature of this situation stems from the fact that resource accumulation (or capital formation) is assumed to be necessary for investment to promote economic growth, but the limited resources in SSA states limits capital formation, especially in the private sector, and pressures the government to increase recurrent and consumption expenditures rather than capital formation.

Without government intervention, it is difficult to envision the development of SSA states and efforts undertaken by the SSA states to resolve the situation have focused on direct government intervention. Several writers support direct government intervention as an appropriate strategy for promoting local manpower development, selfreliance. growth in manufacturing, and equitable distribution of profit from the growth. According to Odufalu (1983):

In order to bring about some social optimum, there is a strong economic justification for government to intervene in the economy either through regulation, controls, taxes, and subsidies and/or direct public consumption and investment expenditures (in Bienen & Diejomaoh, 1981:455).

Abiodum (1980) assert, for example, "that regional inequality in the level of both social and economic activities tend to persist unless deliberate efforts are made by P.D.A. to reverse the trend" (Abiodum, 1980:114) because wealth frequently fails to "trickle down" on its own, (as a result of either sheer greed, economy of scale and/or other flaws [monopoly, profit motives, etc.]) in an unregulated market, this calls for intervention by the P.D.A. to regulate these anomalies and facilitate development.

The question is: What is the role of the P.D.A. or to what extent has the P.D.A. of Nigeria succeeded in achieving the development policy objectives stipulated in Nigerian national development plans? To provide a better understanding of the role of the P.D.A. in facilitating the development of SSA states such as Nigeria, each term is defined separately.

<u>A Theoretical Definition and Conceptual Clarification</u> of the Concept "P.D.A." and the <u>Role_of_P.D.A. in Facilitating the</u> <u>Development of SSA States</u>

Public:

The term "public", as used in this study, is synonymous with government, a political <u>organization</u>, institution, a body of high ranking officials administering the affairs of a nation or a political unit. The word "government" is derived from the Latin word meaning "to steer" (ldrissa, 1982) implying that the national government officials are entrusted with the power and authority to steer (or plan) the course of the country.

The organizational or institutional organization of governments include: a legislature which makes laws; the executive which enforce and administer laws: and the judiciary which interpret the laws by deciding cases and controversies. The functions of the executive branch of governments of SSA states evolved from regulatory functions (maintaining law and order, promoting justice, providing defense, and ensuring the welfare of citizens) to include the functions associated with development. The P.D.A. must respond to increased citizens' demands for social services and manufactured goods. As an institution, a government has set rules and an established administrative structure. The branch of the government responsible for development is commonly referred to as a "development administration" to distinguish it from a public administration. To provide a better perspective of "<u>development</u> <u>administration</u>," a conceptual clarification and definition of the terms is in order.

Development:

Ideally, development is a progressive and dynamic process fluctuating according to what is needed, what is possible, what is expected, what is desired, and what is feasible at a particular time. Development is also а subjective and relative term meaning that the term has many meanings, is normative, and is based on value judgement. For example, development is a term commonly used loosely and synonymously with modernization, economic growth, and industrialization but, in fact, development involves all of the above and more. In development, modernization is an accelerated tempo of change in a society which previously was economically stagnant and socially tradition-bound. Development involves not only economic change, but social fundamental attitudinal changes; changes change: in perceptions, and the expectations of the target of the change.

The word development is used both as an adjective and a noun. As an adjective: development administration and developing countries; and when used as a noun, development takes another form, such as: industrial development,

community development, rural development, economic development, resource development, regional development, and national development. These uses complicate the task of defining development, since all uses mean something different. For example, administrative development might mean the creation or reconstitution of an administrative system, while socioeconomic development is a change in the condition of people in a given region (Gant, 1979).

As a result of the normative nature of the term "development," it is difficult to specify a general definition of development.

Development has been defined as a series of stages by which a given people progress from a lower to a higher level of human development as quickly and cheaply as possible (Idrissa, 1982:10).

Or:

Development involves progression, movement, and advancement toward something better. It is in the material improvement and non-material aspects of life It involves action, reaction, productive work at the community level, the creation or strengthening of the necessary foundation for higher changes in the economy; investment in social services, science and mobilization technological acquisition, and involvement of citizens, and the creation of administrative organization capable of attaining development policies (Emezi, 1979:1-10).

Both definitions leave room for interpretation. In fact, development can only be defined on the basis of a particular purpose and an objective function, although the concept "development" is usually used in the social sciences with minimal definition to provide an understanding of the context under which it is used.

The same vagueness and problems occur in the indicators used to measure development. The national per capita income and GNP are frequently used to determine the relative levels of development among countries, but the GNP does not depict the living conditions of the poor masses, nor does it depict their needs or production problems. Some writers (e.g. Myrdal, 1972), have observed that economic growth alone does not constitute development and Nigeria is a case in point, with massive unemployment, malnutrition, sickness. illiteracy, ethnic group friction, political instability, and other social problems and tensions in the presence of rising GDP from oil. Eziakor (1983) observes that, even in presence of rising trends of GNP and per capita income, the the welfare and quality of life of the masses may continue to deteriorate.

to Maboqunje (1979), the According concept of development is ambiguous and in the literature, he continued, the primary role of economic forces in bringing about the development of a society has often been taken as axiomatic, so that development and economic development have come to be regarded as synonymous, although the development is a far more complex issue than its oxiomatic concept definition. To understand the concept of development

requires an indepth study of all the associated ramifications. The definition of development can be envisaged as relative, as economic growth, as social growth, as political growth, or as a process.

In the relative sense, e.g., socio-economic development entails comparing demographic statistics (Smith, 1979), such as death rates, infant mortality, per capita income, employment and levels of unemployment, income distribution, etc., between social groupings within or between nations. According to Gant (1979:7), "the relative condition of development is comparative and ever changing." This means that development process is continuing in both the developed and developing countries (Estman, 1974). The difference is in the degree of development pace. For example, development may be slow if it is not based on solid local technology. In terms of relativity, the pace of development of SSA states vis-a-vis developed countries is so insignificant in many SSA states and declining in others that it has been referred to as a crisis by Shaw (1982); World Bank, (1981). This calls for a reassessment of P.D.A. strategies and a new strategies to facilitate the recommendation of development process of SSA states.

Administration:

The term administration means to direct, care for, and manage the affairs of people (Avasthi & Mahashwari, 1966:4).
It might be of interest to distinguish between Public Administration (P.A.) and P.D.A.: two separate but related concepts. According to Bryant and White (1982), P.D.A. differs from its parent field P.A. in that the P.D.A. is set aside exclusively to facilitate development. Unlike P.A. whose primary function is nation building, the primary function of P.D.A. is development. This requires special skills, approaches and knowledge to perform development tasks, provide extension services, and implement development plans and projects.

The concept of the P.D.A. came into being in the 1950s to represent those aspects of the P.A. and those changes in P.A. which were needed to carry out the policies, projects, and programs to improve social and economic conditions (Gant, 1979). External funding agencies insisted on dealing well structured and organized development with а administrative system of the recipient countries. As the functions of P.A. shifted from maintaining law and order, and collecting taxes, to development plans (four, five, etc. year development plans), and projects implementation, it was necessary to adjust the P.A. bureaucracy to include development functions (Nti, 1978). To effectively handle new functions, the concept "P.D.A." came into these existence.

A distinction is made between the P.D.A. and the P.A. based on their differing functions and purposes. The

functions of the P.D.A. include: specific policies relating to the development of programs and projects; specific development goals and objectives; specific skills. knowledge, and creativity; effective and approaches, efficient programs; extension services; appropriate technology, research, planning, training, reforms, tax revenue collection, etc. The functions of P.A., however, include: foreign and national policies and particularly the coordination of local agencies, such as ministries. Basically, the purpose of P.D.A. centers on integrated development; while P.A. centers on building the institutions of P.D.A. (Blase, 1973).

Institution building refers to the process of developing new agencies or organizations (such as P.D.A.) or reconstituting existing (P.D.A.) organizations, fully equipped to carry out development programs. The role of the P.D.A. in facilitating the development of SSA states can, therefore, be viewed from the perspective of its: (1)functions, and (2) structure. The new or reconstituted P.D.A. should be structurally and functionally designed to perform planning, programming, budgeting, leadership, guidance, and coordination of development processes (Nti, 1978; Blase, 1973).

1. The Functions of the P.D.A.

A review of various functions of P.D.A. centers on integrated development. Integrated development has been defined and/or perceived by Strehten (1977), Samonte (1977), Idrissa (1982), and others as being composed of:

- Diversified programs and projects;
- Involvement by both government and the private sector;
- Aiding people's awareness and adoption of improved appropriate technology;
- Increasing the employment, productivity, and income opportunities;
- The active participation of citizens in the social,
 political and economic life of the nation;
- The collective actions (work) of individuals;
- A well-structured, organized, and decentralized P.D.A.
 cadre;
- A strong administrative commitment to support and promote politically the education, health, industrial complex, increase employment opportunities; and assure equity in the distribution of wealth;
- Efficient acquisition and delivery system to alleviate poverty;
- Development of problem-solving approach involving the concerned population in the process of decision making;
- The liberation of the spirit and energy of the local populace so they can realize their full potential to

develop, organize, and govern themselves, and control their affairs to attain a higher quality of life;

- The mobilization of human and material resources; and
- The provision of a minimum standard of living, which includes the provision of a profitable employment opportunity, nutrition, health, education, clean water, transportation, electricity, roads, sewage, and simple household goods. The non-material basic needs include: the encouragement of grass roots citizens to participate in decision making and development duties, self-help in identifying development programs and selfreliance.

The relevance of P.D.A. in SSA states cannot be overemphasized since it is through the P.D.A. that the government carries out its development policies. P.D.A. is designed, therefore to carry out development programs, and just to enforce or to implement not laws. rules. and is that in SSA states, regulations. The rational the P.D.A. is responsible for initiating and stimulating development even in the private sector (Eaton, 1972:21-34). These responsibilities must be based on an acceptable pattern of purpose which implies acceptable development policies by citizens. These policies involve citizen participation in the process of plan formulation and implementation: a bottom-up approach with citizens' control

rather than a top-down approach with the supervision and directing approach.

2. <u>The Structure of the P.D.A.</u>

The structure of the P.D.A. is equally important in facilitating the development of SSA states and it might be of interest to treat the subject briefly here.

Nti (1978:26) notes that decentralization of the P.D.A. can ensure improvement in action, accountability, and management of development processes. This decentralization. he continues, can also check the abuses of power which are facilitated by the over-centralization of power bv developing a pluralistic society. Decentralization of the P.D.A. facilitates the local participation in the preparation and implementation of development plan policies, and thus ensures a better distribution of a nation's resources.

The key phrase is "action," and "organized action" implying that the <u>structural</u> organization and <u>functions</u> of the P.D.A. of Nigeria must be designed to carry out development tasks. To effectively accomplish development, the structure of the P.D.A. must be decentralized rather than centralized and each level of the decentralization must be charged with planning, programming, budgeting and financing of programs with a minimum of reliance on external resources (Gant, 1979).

The strategy adopted to facilitate the development of most SSA states has focused on centralized development planning and administration (Emezi, 1979).

As Emezi (1977:10) notes:

[There is] overcentralization of authority, powers, equipment, and stores at headquarters located some 50-100 miles or more away from rural communities being served.

Planning incorporates programming and budgeting (Axinn, 1978), or the allocation of new investments into the development of local manpower (technological capacity) and planned programs, according to stipulated criteria or development policy objectives.

According to Nti (1978:20), planning is a two-way process, with the bottom feeding the top and the top deciding the priority. In line with writers like Axinn (1978) and Nti (1978), it can be argued that effective planning involves: recognition of the need for action; investigation and analysis; proposals for action, decisionmaking and resource allocation consistent with the planning decision. The extent to which the goals of any development program will be achieved tends to be directly related to the extent to which various social, economic, and cultural factors are taken into consideration in planning programs: this has not been the case in Nigeria.

The Origin and Case of Planning in Nigeria

The concept of planned development was unheard of in Nigeria until the mid-1940s when the acceptance of public responsibility for economic development in Nigeria emerged from a ten-year development plan (1946-56 extended to 1962) and a development grant proposed by Britain toward the end of its colonialism to prepare Nigeria for self-government (Rimmer, in Bienen & Diejomaoh, 1981). The grant was based on an extension of a new philosophy with the sole objective of establishing alliance after independence. The terms of the grant were seen in Nigeria as an opportunity to: mobilize its assets; develop the country's infrastructure; develop the private sector; promote secondary industries; organize internal markets; and regulate production to stabilize prices (earnings) from export commodities (Ten Year Development Plan, 1946).

The ten-year plan (with a budget of 50 million pounds) was to be financed partly by grants from the colonial development and welfare funds and partly by revenues (about 78%) raised by the Nigerian government (Rimmer, 1981). Planning was the sole responsibility of the federal government but rather than allocate the funds to develop endogenous industries, the funds were allocated to provide social services in major cities, especially Lagos, the federal capital of Nigeria, and to pay the salaries of civil servants (Rimmer, 1981).

The plan was revised in 1955 (1955-60 plan extended to 1962) to include regional (West, Midwest, North and East) but the development merely shifted from the governments federal capital of Lagos to regional capitals of Enugu, Ibadan, Benin, Kano, Kaduna and a few port cities like Port Harcourt, Onitsha, Calabar, and Aba. Development planning, to a greater extent, completely neglected the rural areas which produced the bulk of the export cash-crops for the badly needed capital and foreign exchange. The policy objectives of the Plan (1945-62) focused on providing basic social services such as communication, education, health, supplies and infrastructure in the federal water and regional capitals (Federal Republic of Nigeria, Guidelines to the Second National Development Plan (1979-74).

The first national development plan (1962-72) following independence was not significantly different from the preindependent plans (1945-60) and was primarily focused on the allocation of funds to ministries to pay salaries. to provide social services in urban areas, to purchase foreign machines and tools, and to hire foreign expatriates. The preoccupation of the government was to promote economic foreign exchange receipts, growth through: savings, monetary expansion, trade, and public spending (Rimmer, 1981). Allocation focused on the funds allocated for government functions and consumption expenditures and the planning during this period was basically centralized and

centered on promoting economic growth (Emezi, 1979). This strategy involved heavy allocation to capital intensive projects, the dependence on finished products imported from abroad, and the neglect of local technology and research. The focus continued to be a rapid increase in the productivity of the industrial sector as a conduit to rapid economic growth (Stolper, 1966).

Industrialization was perceived as the panacea to bring about rapid socio-economic and industrial development and targets were centered on surpassing the hitherto, dismally low average economic growth rate of four percent (Federal Government Development Programs, 1962). It was realized that only through a high growth rate in the economy would it be possible to raise the country's average level of living, to increase employment, and to improve education and health standards. The "question of how to increase production was not perceived to be factually separate from the questions of who was to benefit; the stakes were too high" (Rimmer, 1981).

During this period, planning was based on foreign loans, as a means of financing economic progress (Ruddle & Rondinelli, 1983) and the country's development was charged to government agencies such as the National Economic Planning Board, the marketing boards, the regional production development boards, loan development boards, and other similar bodies and corporations (Revised Plan, 1955).

Colonial grants were a source of funds for internal loans, furnished partly by surpluses from the sale of export raw materials. As observed by Rimmer (1981), marketing board revenues increased from 14.2 million pounds in 1946-47 to 81.3 million pounds in 1957-58, and out of the 81.3 million pounds raised between 1957-58, more than sixty-two percent was contributed by export and import duties, products sales tax charged on agricultural export crops, mining royalties from tin, coal, columbite, corporate profits tax, and other export trade. This trend continued until the oil era in the 1970s.

To control resources and income, and wield power, (Bates, 1981:4-6), the National Economic Planning Committee (N.E.P.C.), (an integral part of the P.D.A. of Nigeria), was heavily centralized and politicized (Emezi, 1979) and the government was entrusted with absolute power over federal strategic national resources, specifically oil exploitation and other revenue sources such as import taxes, in order to harness the development processes (Rimmer, 1981). In addition, the separation of development planning and difficult "because development was understood politics was to be the main business of government" (Rimmer, 1981).

Following the end of the civil war (1967-70), the Second National Development Plan (1970-74) was instituted with the primary objective to reconstruct and rehabilitate the ruined areas. At the beginning of the plan, the

resources available for development in Nigeria suddenly and increased as a result of increased unexpectedly oil extraction and higher 011 prices (Rimmer. 1981). Approximately a two-fold increase in oil prices, as shown in Table 2.2, contributed over 90% of the total annual export value to the GNP of Nigeria and on the average, over 80% of the total revenue was obtained from petroleum profit tax, and mining royalties (Rimmer, 1981).

With this newly found oil wealth, the emphasis of the Third Plan (1975-80), shifted from agricultural production to oil exploration and ambitious projects. Given the huge oil wealth, bold development policy objectives were sought, and for the first time in Nigeria, finances did not constitute an obstacle to development: the only obstacle now was executive capacity. Rimmer (1981) notes, the Third Plan (1975-80) was very ambitious, large, and more comprehensive with a total investment (published in September 1974) envisaged to be N 10.7 billion with N 4.3 billion of this to come from the public sector. By 1975, the plan projected a total investment at N 30 billion, of which the share of the public sector, after allowing for slippage (resulting from shortage of executive capacity) would be N 20 billion or two-thirds of the total investment. The planned budget was revised in 1976 to N 26 (Guideline for the Third Plan, 1975-80). This magnification and

Year	Million	As % of Values of all Exports
1966*	86.0	46.7
1970*	253.2	49.6
1975*	5,192.9	96.8

Table 2.2 Contribution of oil export to GNP and to balance of payments (1966-76): Oil companies payments to the Nigerian government.

Source: *Central Bank of Nigeria, Annual Reports, in Bienen & Diejomach, 1981.

amplification of ambition during the oil boom was described as "euphoria" by Schalz in 1977.

Flaws in planning usually prevent the implementation of good policy objectives formulated in development plans and the Third National Plan had its share. For example, one of the policy objectives behind the Third National Plan was to the oil revenue to develop the productive capacity of use the economy and thus to achieve self-sustaining growth in shortest possible time (Guidelines to Fourth National the Development Plan, 1981-85). To achieve this growth at the earliest possible time, the oil revenue was used to purchase gigantic machines, viz., sophisticated, capital intensive industrial machinery and to hire foreign contractors to carry out projects, such as skyscrapers, hydroelectric plants, road and ports, and heavy constructions: power

expenditures inappropriate for the country given the low level of local technology in the country.

During the Fourth Development Plan (1981-85), it became clear that a solid development foundation had not been achieved and oil was fast becoming a depleted resource due to the fact the oil money was used to purchase finished products from abroad rather than to establish a strong industrial base locally. According to the Guidelines to the Fourth National Development Plan (1981-85), the tariff rates that existed before 1980 tended to encourage the importation of manufactured goods and to discourage research into manufacturing the goods locally. It was proposed that in the Fourth Plan period, fiscal and monetary policies would be desianed to achieve increased production and distributional equity of domestic industry.

In summary, the policy objectives of Nigerian development plans may be classified under: (1) economic growth; (2) equitable distribution of resources; and (3) acquisition of technological capability and industrialization. But what is a policy?

The term policy is often used loosely in the literature. The term is commonly associated with prefixes such as institutional policies, government policies, economic policies, industrial policies, agricultural policies, and so forth. This notwithstanding, the term is still very oblique. This term is used in the literature

without a concise definition of the context and purpose for which is is used. In judicial parlance, the word policy is used in relation to regulation, laws, rules, and control while in political science, economics, and sociology, the term is used in relation to administration, responsibility, management, organization and behavioral processes. Economics has given special meaning to the term as applied to the school of economics thought, designated as "economic policy."

The term "policy" is both a noun (e.g. public policy) and an adjective (e.g. policy analysis, political development) and again, all this makes the search for a precise definition of policy very difficult. Idrissa (1982:13) conceived of political development as:

The capability of a political system to act effectively to mobilize people and to build institutional and democratic framework within which development programs can be conceived, implemented, and evaluated.

_Public_Development_Policies_(P.D.P.)

Webster (1976) defined policy as a principal plan or scheme for doing something. Using Webster's (1969) definition, the P.D.P. may be defined as an organized (definite) course or method of action selected by a government from among alternatives to guide and determine present and future decisions; a specific decision or set of decisions designed to carry out such a chosen course of action; a projected program consisting of desired objective and the means to achieve them. With these definitions in mind, the desired goals and functions of the P.D.A. of Nigeria is to achieve the policy objectives of development stipulated in Nigerian development plans.

Public policy and policy analysis may be distinguished as follows: public policy involves decisions directed towards defined goals; goals are measured by performance, therefore, public policy constitutes government decisions directed at solving public problems, and in this regard, policies are equated with action and not symbols.

Symbolic policies are policies with no real goals or actions taken to execute them. Frequently development policies are stipulated in Nigeria without a follow-up action to implement them and are labeled in this study as "symbolic policies" and is a call for "policy analysis."

<u>Policy analysis</u>: is a tool used to guide, value or evaluate government actions. Policy analysis as defined in the literature is an applied science that uses a multitude of methods from different disciplines to investigate the outcomes of specific government response to problems. It focuses on resolving policy problems, examining the cause and source of the problems, tries to explicate the range of alternatives and recommendations to the problems, and suggest that all actions on the part of the governmental authorities should be measured to assess goal attainment, or to provide value-free analysis for social problems.

In summary, P.D.P. (policies) are directed toward achieving development and for a policy to be called a <u>development policy</u>, it must convey policy objectives directed toward attaining development. The task here, then, is to examine the extent to which the development policy objectives prescribed in the development plans of Nigeria are being met.

<u>Contribution of Past Studies and the Present Study</u> <u>to the Subject of Development of the</u> <u>Modern Manufacturing Sector of Nigeria</u>

Contribution of Past Studies

In line with past studies, this study examines the structure of the manufacturing sector. Past studies examine modern import substitution manufacturing center on: the structure of manufacturing, and the problems associated with concentration. the establishment. growth, Income distribution, and the distribution of the activities of the manufacturing sector. A few examples include: "Problems of Industrial Planning and Management in Nigeria" (Onyemelukwe, 1966); "The Establishment of Manufacturing in Nigeria" (Sokolski, 1965); "The Wealth of Nigeria" (Stapleton, 1967); "Planning Without Facts" (Stolper, 1966); "The Political Economy of Income Distribution in Nigeria" (Bienen 8 Diejomoah, 1981); "Nigerian Capitalism" (Schatz, 1977); and "The Structure of Manufacturing Industry in Nigeria" (Teriba et al., 1981).

Contribution of the Present Study

The nearest study to this one, in the sense that it deals with the impact of public capital expenditure in Nigeria, is by Odufalu (in Bienen & Diejomaoh, 1981). Whereas, Odufalu's study focuses on income distribution, recurring expenditure, employment, and inter-sectoral capital expenditure, this study focuses on the impact of public capital expenditures on growth and distributional equity of the profit in manufacturing. The work by Teriba et al. (1981) focuses on indigenization and the structure of public and private ownership and control of industries in Nigeria, while the work here is on the impact of public capital expenditure on the development of the manufacturing sector and the functions, and role of the P.D.A. in the development of the manufacturing sector of Nigeria as a conduit for facilitating socio-economic growth.

CHAPTER THREE PROCEDURE AND METHODOLOGY

The Aim of the Chapter

This chapter explores the procedures and methods for evaluating the policy objectives of: (1) growth, and (2) distributional equity of the manufacturing sector of Nigeria. In addition, it examines and reviews the sources of data, the questions evaluated, and the procedures and methodology used to evaluate the questions.

The Sources of Data

The data utilized in this study were gathered from secondary sources, i.e., from existing official records and previous studies with contributions from: Schatzl (1973); Zartman (1983); Tims (1974); West Africa (August, 1979); Bienen & Diejomoah (1981); First, Second, Third and Fourth National Development Plans and Progress Reports (1945-1985); and Federal Office of Statistics, Annual Abstracts (1970-73). All industries considered in the above sources were those with more than ten employees found in The Federal Registrar of Industries.

Limitations. Limitations of the evaluation in this study stem from general dearth of adequate data in the desired

form. Several writers, for example, Teriba et al. (1981) expressed discontent concerning the lack of data in Nigeria and/or the way in which the data was gathered. The reasons for the discontent were the fact that data were gathered to accommodate diverse rather than specific interests related to the problems confronting Nigeria.

Questions_Evaluated

The questions posed for evaluation centered on the extent to which the policy objectives of: (1) growth of the manufacturing sector, and (2) the distributional equity of six variables associated with the manufacturing sector were achieved.

The machinery for the development of SSA states focuses on planning at the national government level for programming, budgeting, expenditure, and distributional equity. Since planning involves the allocation and location of capital expenditures to develop programs/projects, the strategy of development adopted by the national governments of SSA states such as Nigeria have developed a series of four-tofive year national development plans, and planned fiscal budget (consisting of recurring expenditures and capital allocations to state and federal governments expenditures) parastatal. The concern here is with the capital expenditures, i.e., with the impact of public capital expenditure on the growth of the manufacturing sector, and equitable distribution of six variables associated with the modern manufacturing sector of Nigeria.

Procedure and Methodology

To effectively address the questions posed for the study, they will be reviewed in tandem with the procedure and method for evaluating the first question and subquestion, before dealing with the procedure and method for evaluating the second question posed for the study.

<u>The Procedure and Method for Evaluating the First</u> <u>Question and Sub-Question Posed for the Study</u>

Specifically, the first question posed is: To what extent was the policy objective to achieve growth of the manufacturing sector stipulated in the national development plans of Nigeria attained?

The key concept evaluated in question one is growth of the manufacturing sector.

Operational Definition of Growth

Growth (usually expressed as a percent, viz., growth rate) is an increment in form, number, or size from a minimal state to an expanded state of being (e.g. an expansion of the manufacturing sector of SSA states from the processing of primary goods to the production of heavy capital goods, or an increase in value added of the manufacturing sector from, say, 10 units to 20 units is an indication of growth.

Computation of Growth Rate and Average Annual Rates of Change

Barclay (1958:28) provides two methods of measuring growth rate and the average annual rate of growth. One method is to find the difference between two figures obtained at two different dates (an absolute number) from which "an annual rate of change during the intervening period (a relative number)" is obtained. The second method is "to reckon the rate of change from the records of attributes such as output, GDP, individual capital formation, etc., as they occur. The technique used here to compute the percentage of total growth rate or average annual growth rate was adapted from Barclay (1958). The percentage of total growth is computed using the formula:

where:

f₁ = the figure at the initial date
f₂ = the figure at the later date
r = "percent change" or "degree of growth."

This simple ratio or index can be added and divided by the number of years computed to obtain an average annual percent change. According to Barclay (1958:22-30):

The simple ratio of change is fully adequate as an index and no further steps are needed. Particularly, when percentages of change are being compared among several subdivisions of the same [universe] and they are all computed from the same [universe at two or more similar time periods], the ratios are already comparable in this form, and nothing is gained by transforming them.

A similar but more convenient formula for computing the average annual percentage rate of change (U.N. Demographic Yearbook, 1978) is provided in Appendix E.

Pearson_Product_Moment_Correlation_Coefficient

To evaluate the impact of public capital expenditure on the value of the manufacturing sector in the GDP of Nigeria, a Pearson Product Moment Correlation was used. The application of this correlation involves two variables: (a) public capital expenditure, and (b) value of the manufacturing sector to the GDP of Nigeria.

(a) <u>Public Capital Expenditure</u>: as previously mentioned, is part of a planned budget allocation or capital investment in non-consumptive goods, development projects, or income generating investments.

(b) <u>Contribution of Manufacturing to the GDP of Nigeria</u> The GDP is the total production and services of economic activities, in monetary terms, over one year, in a country.

Computation of Pearson Product Moment Correlation Coefficient

The formula used in this study to compute Pearson Product Moment Correlation Coefficient is given as:

 $r = \frac{S_{xy}}{S_x} \frac{S_x}{S_y}$

where:

$$Sxy = \frac{(x-\bar{x}) (y-\bar{y})/n-1}{Sx}$$

$$Sx = \sqrt{\sum (x-\bar{x})^2/n-1}$$

$$Sy = \sqrt{\sum (y-\bar{y})^2/n-1}$$

A similar alternative but more convenient formula for computing r is as follows:

$$r = \frac{x y - n \bar{x} \bar{y}}{\sqrt{(\Sigma x^2 - n\bar{x}^2) (\Sigma y^2 - n\bar{y}^2)}}$$

This formula is less vulnerable to computational errors and takes less time (Kenneth & Glass, 1978:124).

Computed value of r for this study is provided in Appendix A.

The Pearson Product Moment Correlation Coefficient (r) is a viable measure of the direction and strength of associations. The direction of the coefficient of association range from -1 to +1. Specifically, -1 implies perfect negative or an inverse relationship; i.e., as one measure (public capital expenditure) increases, the other measure (growth or value of manufacturing in GDP) decreases. A coefficient of +1 implied perfect positive correlation, i.e., as one measure increase, the other measure also increases. The strength of association may be tested, for example, using the 95 percent ($\alpha = .05$) confidence level. Values of zero indicate no systematic association between the two measures. Intermediate values of r are interpreted in terms of relative magnitudes between +1 and -1. The percentage of the dependent variable explained by the independent variable is represented by r^2 .

The Procedure and Method for Evaluating the Second Question Posed for the Study

The question of the impact of public capital expenditure on equitable distribution of six variables associated with the manufacturing sector across the regions of Nigeria is examined here. The assumption is that since public capital expenditure is non-consumptive, it is used to generate products, employment, and income through investments in industrial activities. The question of equitable distribution involves the extent to which the policy objective to achieve equitable distribution of six variables of the manufacturing sector of Nigeria are attained.

The key concept evaluated here is <u>distributional</u> equity. Operational_Definition_of_Distributional_Equity

Distribution may be defined as a measure of the degree of spread or shares, while equity involves fairness, or the relative share of things. Two types of equity are identified as: (1) arithmetic equity, and (2) proportional equity. Arithmetic equity means that every individual gets the same share, while proportional equity means that the shares are weighted based on a particular circumstance, i.e., the population of regions, the backwardness of regions. and revenues generated among regions. In equity is more practical than proportional actuality. arithmetic equity and is used to determine the degree of fairness.

Distributional justice or equity has received increased attention in recent years in the development literature, and is identified as an important aspect of development and of a civilized society (Bryant & White, 1982). The practice and conceptualization of distributional equity is not without problems, however, for what may be considered just and fair by one group of individuals may be considered unjust and unfair by another group of individuals. The problem is perjorated by the fact that people are naturally different in terms of aspirations, age, sex, geographic location, health, birth rights or inheritance, and so forth.

The achievement of distributional equity requires a method of measuring inequality to provide a benchmark for

resource redistribution. This is not an easy task because of the intricacies and dilemma associated with the concept of "equity." As noted by Smith (1977):

To achieve equality in results may require inequality in resource allocation, whether the objects are people or places. Equal allocation of resources can produce inequalities in living standards. This suggests two alternative views to equality: (1) perfect equality of treatment (i.e., arithmetic equality), involving the same quantity of benefits and penalties going to all, and (2) proportional equality of treatment based on given circumstances where the circumstances justifies differential treatment (Smith, 1977:133).

Smith (1977) provided us with a method of computing both the arithmetic equality and proportional equality. The formula for computing arithmetic equality is:

 $S_j = \overline{x}$ (for all j = 1, 2 . . . n) where:

 S_j is, for example, the output of manufacturing in a j region measured with either an interval or ratio indicator.

 $\bar{\mathbf{x}}$ = the average output of manufacturing in all the regions.

n = the number of regions.

 $S_j = \bar{x}$ implies perfect equality, i.e. each region receives or produces the same average output.

where:

 $s_j \neq \bar{x}$, then the difference between s_j and x is a measure of the level of inequality.

Proportional equality would be:

 $S_{j} = PxD$ (for all J = 1, 2 . . . n).

In the proportional equity case, it is assumed that there are differential weights or circumstances D attached to the region, so that the share must now be proportional to P multiplied by D ($P \times D$) (Smith, 1977:134).

This is schematically illustrated in Table 3.1 for the computeration of gini coefficients.

	Arithmetic Equality			Proportional Equality		
Region Pop.	% distri- bution of attribute y	% distri- bution of popula- tion y *	Diff- erence y-y _p *	Wt. (D) (D)	% distri- bution propor- tion to (PxD)	Differ- ence (+ or -) y - PxD
North	15	10	5	1	5	10
South	30	20	10	2	20	10
East	30	30	0	1	15	15
West	25	40	15	1	60	35
Total			30		<u></u>	70
Arithm	etic Equali	ty	Pr	oport	ional Equa	lity
G = 1/	2 Σ S -	$y_{p}^{*} = 15$	G	= 1/2	Σ 5 - Ρ	×D = 35

Table 3.1 Computation of arithmetic and proportional equality: Hypothetical Illustration.

<u>Note</u>: Higher weight (D) are assigned to depressed regions to upgrade their status.

Computation_of_Distributional_Equity

In order to equitably allocate resources, we must devise a method of measuring inequality. The methods used to assess inequality range from mere observation of ranked information to the use of more complex techniques such as gini coefficients and location quotients.

Computations of Gini Coefficient (G)

The formula for computing G from percentages is:

$$G = 1/2 \sum_{i} S_{i} - S_{j}^{*}$$

Where:

 s_{j}^{*} = the proportion of the population of the region.

That is, the absolute value of the difference between each region's proportion of income from its proportion of population are calculated, summed, and halfed to obtain G. The coefficient G has a range from 0 to 100. The larger the value, the more the inequality. Gini may also be calculated from raw scores using the formula:

$$G = 1/2 \sum_{y_t} \frac{100y_j}{y_t} - \frac{100P_j}{P_t}$$

Where:

 y_j = the attribute (e.g. income) accruing to region j y_t = the total income of all the regions P_j = population in region j P_t = total population of all the regions. Computation of Location Quotient (LQ)

Location quotient is computed using the formula:

amount of x in a state amount of x in a country LO =

state population the whole country's population

where:

x = the variable or attribute of interest under investigation.

location quotients greater than 1.00 In general. indicate that a region has more than its relative national share of a given attribute per its share of population. Location quotients of 1.00 imply equal share; and location quotients less than 1.00 imply that the region has less than its share. A discussion of how the gini coefficient and LQ are used in this study is presented in chapter four. Suffice to state here that these indicators are used to assess the degree of disparities (among the original 12 regions of Nigeria created in 1967) of six variables associated with the manufacturing sector and the extent to which the gap is closing over the years. The application of Coefficient. Pearson Correlation growth rate. gini coefficient and location quotient are also carried out in chapter four.

CHAPTER FOUR

EVALUATION

Empirical Questions and Data Presentation

This chapter addresses the first question and subquestion concerned with growth, before addressing the second question dealing with distributional equity. The aim is to evaluate the impact of public capital expenditures on: (1) the (growth) contribution of the manufacturing sector to GDP, and (2) distributional equity across the regions of Nigeria of six variables associated with the manufacturing sector.

For illustrative purpose, the percentage contribution of value of manufacturing and craft (compared to the other sectors) in the GDP of Nigeria is shown in Table 4.1.

Question one:

To what extent was public capital expenditures related to the growth (increase the contribution) of manufacturing and craft in the GDP of Nigeria?

Based on the findings of past studies, we may hypothesize a positive relationship between public capital expenditures and the growth of the value (contribution) of manufacturing in the GDP of Nigeria. This means that increased capital expenditure are associated with the growth

	Selected Years (%)				
Sector	1960 ¹	1965 ¹	1970 ¹	197	75 ¹ 1980 ²
Agriculture/ forest/livestock	61.9	54.9	48.8	24.5	19.0
Mining/crude petroleum	1.1	4.8	10.1	31.9	37.5
Manufacture/ craft	6.2	6.2	7.2	7.4	6.9
Electricity/water	0.5	0.6	0.7	0.4	0.7
Building/ construction	3.7	5.2	5.1	9.4	9.0
Distribution	11.1	14.0	12.7	10.0	7.3
Transport/ communication	5.3	4.4	2.8	3.2	3.2
General government	4.9	3.5	6.5	7.0	9.1
Social Services:					
Education		2.9	2.9	2.7	4.4
Health	16.3	0.7	0.8	1.0	1.4
Other services		2.6	2.4	1.6	1.5
Total	100.0	100.0	100.0	100.0	100.0

Table 4.1 Sectors contribution to the gross domestic product of Nigeria (selected years 1960-1980) (percent of total).

Sources: ¹Figures for 1960-1975 were adopted from Bienen and Diejomaoh (1981, p. 93) with data from Federal Office of Statistics, Lagos.

> ²Figures for 1980 were adopted from Second National Development Plan 1970-74, pp. 22, 48, based on 1974-75 constant prices.

of the value of the manufacturing sector in the GDP of Nigeria. Several studies, e.g. Olaloku (1979), show a high positive correlation between capital expenditure and increased productivity of the manufacturing sector.

The finding of a computation of Pearson Product Moment (See Appendix A) between public Correlation capital expenditure and growth of the manufacturing sector of Nigeria is shown in Table 4.2. This finding confirms the hypothesis stated above, which posits а positive relationship between public capital expenditures and growth of the manufacturing sector of Nigeria. The implication of the significantly high positive correlation coefficient (r =is that, increased capital expenditures are associated .8) with growth of manufacturing and craft in the GDP of Nigeria from 1962 to 1964.

The reasons for the positive correlation between public capital expenditures and growth of the manufacturing sector of Nigeria are not difficult to find. Since they are associated with huge oil revenues which provided the capital: (1)to invest in import substitution industrialization, (2) to hire expatriate skilled manpower, and (3) to import the capital goods and raw materials utilized in production. Further discussion of this assertion is presented in chapter four.

The growth of the manufacturing sector is a result of increased fiscal revenues, capital formation, and

Table 4.2	Correlation between public capital expenditure
	and value of manufacturing and craft in
	GDP (1962-1974).

	Pearson Product Moment Correlation Coefficient (r)	r2	Significance (🛛 = 0.05)
Correlation between public capital expendi ture and value of manufacturing	- .8	.64	Yes

Source: Compiled by the author from Appendix A.

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consumption stemming in oil revenues. For instance, as noted by Bienen and Diejomoah (1981), there was a 22.9 percent increase in investment associated with increased capital formation from oil, in the 1970s, compared to 6.5 percent prior to 1970. There is also a higher percentage (13.4 percent) increase in the consumption of manufactured in the country during the 1970s as a result of goods increased revenues from oil (Bienen & Diejomoah, 1981). By 1975, the amount of public capital expenditure in all the regions of Nigeria more than doubled the amount of public capital expenditure (in 1968) prior to 1970. The increase in public capital expenditure corresponded with the increase in revenues from the sale of crude petroleum (Bienen & Diejomoah, 1981).

As shown in Table 4.3, oil revenue as a percentage of total federal government revenue, rose from 8.8 percent in 1969 to 82.1 percent in 1974, and declined slightly to 79.3 percent in 1976, as a result of the phenomenal demand and rise in oil prices during the 1970s. The reflection of the growth in oil revenue in capital investment was noted by Teriba et al. (1981:23):

Before independence less than N 10 million per annum was invested in manufacturing activities . . . with a newly won freedom and a new awareness of Nigerian potentialities, investment in manufacturing shot up to a little less than N 60 million per annum in 1964.

By 1975 with the oil boom, capital investment in manufacturing activities increased more than five-fold and was apparent in growth in manufacturing activities shown in Table 4.4. A breakdown of the periods into 1960-1965 (prior to the Nigerian Civil War), 1966-1969 (during the war), and 1970-1975 (after the war), showed a slightly higher growth rate of 15 percent for manufacturing between 1960-1965 compared to 14.5 percent in 1970-1975. The trends showed a slight decline which may be attributed to the Nigerian Civil War.

Year	Federal revenue from oil (N Millions)	Total federal revenue (N Millions)	Oil Revenue as % of total federal revenue
(1)	(2)	(3)	(4)
1969	33.4	378.4	8.8
1970	166.4	633.2	26.3
1971	510.2	1,169.0	43.6
1972	764.3	1,404.8	54.4
1973	1,016.0	1,695.3	59.9
1974	3,726.7	4,537.0	82.1
1975	4,271.5	5,514.7	77.5
1976	5,365.2	6,765.9	79.3

Table 4.3 Federal government's oil revenues as percentage of total current revenue (1969-1976).

Source: Central Bank of Nigeria, Annual Reports (1979).

•
Sector		Period	
	1960-1965	1966-1969	1970-1975
Agriculture	2	-1	-1
Oil and mining	38	8	12
Manufacturing	15	6	14.5
Building and construction	10	1	21

Table 4.4 Sectoral growth rates in the Nigerian economy in constant prices (in percent).

Source: Adapted from Watts (1983, p. 470), data from Federal Office of Statistics, National Account of Nigeria (1960/61 - 1975/76), Lagos.

According to Table 4.4, the rate of growth of the manufacturing sector was disrupted during the Civil War between 1966 and 1969, but immediately after the war, the growth rate quickly picked up close to pre-war level.

A sub-question to question one is:

To what extent did the huge oil wealth boost the (growth) contribution of the manufacturing sector to the GDP of Nigeria?

To evaluate this question, the contribution of the manufacturing sector in the GDP of Nigeria over the years was assessed in addition to reference to past studies relating to the contribution of the manufacturing sector to the GDP of Nigeria and other countries. In Table 4.5, the contribution of manufacturing to the GNP of Nigeria is seen to rise from 3.6 percent in 1960 to 9.5 percent in 1970, but decline to 4.7 percent by 1975 as a result of domination of GNP by oil.

The contribution of the manufacturing sector to the GDP of Nigeria was seen earlier in Table 4.1 and although the figures in Table 4.1 differ from those in Table 4.5, both tables point to a decline in the growth of the manufacturing sector.

4.1 shows that, the contribution of Table the manufacturing sector to the GDP of Nigeria rose from 6.2 percent in 1960, to 7.4 percent in 1975, but declined to 6.9 percent by 1980. As noted by Teriba et al. (1981:22), the current contribution of less than eight percent manufacturing in the GDP of Nigeria compares unfavorably with the 15-20 percent share attained in many countries at a similar stage of economic development.

Α more detailed breakdown and analysis of the manufacturing sector is in order. According to Table 4.6. the percentage of value added in textile, footware, and leather products rose form 15 percent in 1965 to 20.5 percent in 1971 and declined to 15.0 percent in 1972. Only the percentage of value added in petroleum, coal, and chemical products experienced an increase from 7.0 percent in 1965 to 10.7 percent in 1972. Generally, the percentage of value added in all the manufacturing sector of Nigeria,

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Year	(1)	(2)	(3)
	Total GDP (N Million)	Value of manufacturing and crafts (N Million)	% of manufac- turing and crafts in GDP (%)
1960	2244.6	80.6	3.6
1961	2373.4	88.2	3.7
1962	2630.8	93.4	3.6
1963	2806.4	151.8	5.8
1964	2914.0	157.8	5.6
1965	3080.6	164.8	5.6
1966	3210.0	192.2	6.2
1967	3051.8	196.0	6.1
1968	3140.8	231.2	7.6
1969	2278.2	270.4	8.6
Average			
prior to			
1970	2837.85	176.13	5.99
1970	3485.8	311.0	9.5
1971	9442.1	475.1	5.1
1972	11177.9	460.3	4.1
1973	11993.1	570.1	4.8
1974	13135.5	626.5	4.8
1975	14410.1	683.9	4.7
Average after 1970	12031.74	563.18	4.77
Average (1960-1975) 7434.79	369.65	5.35

Table 4.5The contribution of manufacturing industriesto gross national product.

Source: Compiled from Olayide (1976, p. 54), Economic Survey of Nigeria (1960-1975), Data from Federal Office of Statistics, Annual Abstracts of Statistics, Lagos, Nigeria; Second National Development Plan (1970-1974), Lagos, Nigeria, 1970; Third National Development Plan, 1975-1980, Lagos, Nigeria, 1975.

Sector	Prior	to 1970	After	1970
	1965	1968	1971	1972
Food, soft drinks, alcoholic beverage, tobacco	57.3	44.1	37.1	34.3
Textile, footwear, leather products	15.0	19.4	20.5	15.0
Sawmilling, wood products, furniture, paper, printing	7.6	5.7	6.4	7.2
Petroleum, coal, chemical products	7.0	10.5	10.3	10.7
Rubber(type), plastic products	5.3	5.1	4.1	3.6
Pottery, glass, cement, bricks, tile products	5.0	0.1	2.8	3.0
Basic metal, hardware, utensils, etc.	0.1		0.9	0.5
Transport equipment (ship building and repair automobile				
body)	1.5	1.9	0.3	
Others	1.5	13.3	17.6	26.0
Total	100.0	100.0	100.0	100.0

Table 4.6 Percentage of value added in Nigerian manufacturing prior to 1970 and after 1970 by various sectors.

Source: Adapted and modified from Olayide (1976, p. 60, 62) data from Federal Office of Statistics and Third National Development Plan (1975-1979). except the petroleum sector and basic metals, experienced a decline. The percentage of value added in basic metal experienced a slight growth from 0.1 percent in 1965 to 0.5 percent in 1972, but the overall percentage of value added in basic metal continued to be very low.

The phenomenal low contribution of manufacturing, especially basic metals to the GDP of developing countries in general, is vividly illustrated in Figure 4.1. In Figure 4.1, machinery and equipment constituted 35.1 percent of the economy of developed countries in 1970 and 34.7 percent in 1980, compared to the 2.6 percent in 1970 and 4.9 percent in 1980 for developing countries. A detailed analysis of Figure 4.1 is self-explanatory.

This situation is worse for a majority of African countries, especially sub-sahara African countries. For example, according to Fransman (1982:1-2), the poor performance of African countries (6.9% of manufacturing value added in 1960 and 8.6% by 1975) compared unfavorably to developed market economy's 75% of manufacturing value added in 1960 and 63.7% in 1975. The average share of Africa's exports of manufacturing declined from 1.12% ín 1970/71 to 0.60% in 1975/76. From 1970 to 1976, Africa's share in third world industrial production dropped from 9.4% to 8.2%. "Africa was the only country group to record a fall in industrial manufacturing over this time period" (Fransman, 1982:1).



Figure 4.1 Structure of world trade by broad commodity groups as percentage of total trade (1970 and 1980).

Source: Statistical Yearbook, 1982, pp. 169 and (iii).

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To conclude, the discussion presented above points to the slow development of African states such as Nigeria, and the necessity of P.D.A. intervention to facilitate the development of SSA states.

Question Two

To what extent did (the oil supported) public capital expenditures achieve distributional equity of manufacturing activities across the regions of Nigeria?

Based on the greater emphasis placed on distributional equity in Nigerian development plans after the war in 1970, it can be hypothesized that distributional equity of manufacturing activities across the regions of Nigeria was greater after 1970 than prior to 1970.

The data used to evaluate this hypothesis began in 1968 when data was available and from the newly created 12 regions in 1967 in Nigeria. Available studies prior to 1968 showed a greater concentration of industrial activities in the southern regions than in the northern regions of As shown in Table 4.7, using the four old regions Nigeria. Mid-Western, Northern, and Eastern Regions) of (Western, Nigeria as units, and employment and output as indicators, Teriba et al. (1981:71) pointed out that from 1962-1965, over 72 percent of the industrial employment and 77 percent of the industrial output were in the south, even though it accounted for only 46.5 percent of Nigeria's population.

Region	E	mployment	Indicator	
	1962	1963	1964	1965
Southern:				
Total	75.7	75.7	77.7	72.9
Northern:				
Total	24.3	24.3	22.3	27.1
	C	utput Indi	cator	
	1962	1963	1964	1965
Southern:				
Total	77.7	80.4	78.7	78.7
Northern:				
Total	22.3	19.6	21.3	21.3

Table 4.7	Percent distributional pattern of Nigerian
	manufacturing industries.

Source: Adapted from Teriba et al. (1981, p. 71) with data from Federal Office of Statistics, Industrial Survey (1962-1965).

Other than political rivalry among regions to control the nation's wealth. the loosided distribution of natural resources (chiefly oil in the south). and the poor distribution of the nation's resources during this period fomented the Nigerian civil war that lasted from 1967 to 1970, and triggered the creation of states in Nigeria. After the war in 1970, a new allocation formula was designed to promote distributional equity of resources among the regions of Nigeria and became a key policy objective of government after the war. The question of whether this objective was achieved or not is the subject under investigation here.

Gini coefficients and location quotients were utilized to evaluate distributional equity.

Gini coefficients may be analyzed:

- By comparing the coefficients of two regions on a particular attribute (cross-regional analysis);
- By comparing the coefficients of one region on a particular attribute over two time periods (trend analysis); or
- 3. As an absolute measure on a scale of zero to 100 with figures below 50 representing more equity, in our case, the success of P.D.A. in attaining the policy objective of distributional equity; and figures above 50 representing high inequity or the failure of P.D.A. in attaining the policy

objective of distributional equity. This is the rational behind the evaluation of question two.

To determine the success or failure of the P.D.A. policy objective to achieve distributional equity across the regions of Nigeria, six variables associated with the manufacturing sector, outlined below, were evaluated. They include:

1. Total public capital expenditure in <u>million_of_naira</u>.

2. Total <u>number</u> of manufacturing establishments.

- 3. Total output of manufacturing in <u>million of naira</u>.
- 4. Total value added in manufacturing in <u>millions_of_naira</u>.
- 5. Total <u>number</u> of employees in manufacturing.
- 6. Total wages of manufacturing employees in <u>millions of naira</u>.

The location quotient technique, as defined in chapter three, was utilized to assess the extent of distributional inequity, across the regions of Nigeria, of the above six variables. Unlike gini coefficients, location quotients (L.Q.) provide more detailed evaluation and indexes for individual regions.

Gini coefficients are designed to provide a single index of inequality for a combination of regions, rather than for individual regions. Location quotients are more suitable indexes for comparing proportions of inequality among regions because they provide measures for individual regions.

The advantages of gini coefficients and location quotients measures are that they are standardized measures based on the population of individual regions. This means that the distribution of a given attribute is relative to a region's population.

Caution must be exercised in generalizing the data presented in this section. This is because they are based on computations for the years between 1968 and 1969 (prior to 1970) and between 1970 and 1975 (after 1970).

1. <u>Gini coefficients for public capital expenditure</u> across the regions of Nigeria.

Gini coefficients for six variables associated with the manufacturing sector of Nigeria are shown in Table 4.8. Α gini coefficient of 27 was found for public capital expenditure prior to 1970 and after 1970. This coefficient is lower than 50, a relatively low disparity in the of public capital expenditure across distribution the The same gini coefficient (G = 27) was regions of Nigeria. also found for the period after 1970, indicating a stable trend in public capital expenditure over the years across Based on these findings, the regions of Nigeria. it was concluded that, with respect to the distributional equity of public capital expenditure, this policy objective was to This success may be attributed to some extent a success.

Table 4.8 Gini Coefficients for individual variables of the manufacturing sector of Nigeria (prior to 1970 and after 1970) based on the original 12 states of Nigeria created in 1967.

Variables	Gini Coefficients (G)		
	Prior to 1970	After 1970	
Public capital expenditure	27	27	
Manufacturing establishments (number)	84	30	
Manufacturing output (total amount)	69	74	
Manufacturing value added (total amount)	64	82	
Manufacturing employees (number)	53	63	
Manufacturing wages and salar (in N)	ies 60	46	

Source: Compiled by the author with data from the same sources as Appendix B and C-1 to C-6.

the new allocation formula, but much remains to be accomplished. Further evaluation of the distribution of public capital expenditure among the regions of Nigeria with the use of location quotients is presented below.

Location Quotient for Public Capital Expenditure Among the Regions of Nigeria

The location quotient for public capital expenditure among the regions of Nigeria is shown in Table 4.9. Data

Rank	Regions	Prior to 1970*	Regions After	1970**
High***	Mid-West	3.78	Rivers	2.31
	North-West	2.73	Kwara	2.21
	Rivers	2.17	South East	1.77
	West	1.16	Mid-West	1.43
	Lagos	1.04	Lagos	1.04
	East Central	0.70	North Central	0.98
Low***	North Central	0.55	North-West	0.81
	North-East	0.54	Benue Plateau	0.80
	Kwara		East Central	0.68
	Benue Plateau		West	0.49
	Kano		North-East	0.47
	South-East		Kano	0.42

Table 4.9Location Quotients:Distribution of publiccapital expenditure by regions.

*Expenditure in 1986 and 1969.

**Expenditure in 1971 and 1972.

***The categories "high" and "low" throughout this section are abritrary, based on an even division of twelve regions and ranked data from high to low.

Source: Compiled by the author with raw data from Appendix B and Appendix C-1.

for the location quotient prior to 1970 is incomplete, but the LQ after 1970, range from 2.31 for Rivers to 0.42 for Kano, a ratio of about 1:6.

In comparison to the other five variables associated with the manufacturing sector, disparity among the regions of Nigeria, in public capital expenditure was less and this finding was consistent with the low gini coefficient found in Table 4.8 and points to some success in attaining the policy objective to achieve the goal of equitable distribution of public capital expenditure.

2. <u>Gini Coefficients for a number of manufacturing</u> <u>industrial establishments across the regions of</u> <u>Nigeria</u>.

In Table 4.8, disparities are shown across the regions Nigeria in number of manufacturing establishments to be of very high (g = 84) prior to 1970 compared to (g = 30) after Based on these findings, we can conclude that 1970. disparities across the regions of Nigeria, in a number of manufacturing establishments, were greater prior to 1970 than after 1970. The conclusion was that the policy objective to achieve distributional equity in manufacturing establishments was to a certain extent a success. A more detailed evaluation of the number of manufacturing establishments among the regions of Nigeria with the use of location quotients follows.

Location_quotients_for_a_number_of_manufacturing establishments_among_the_regions_of_Nigeria

As shown in Table 4.10, prior to 1970 variation in manufacturing establishments among the regions of Nigeria ranged from a LQ of 17.91 for Lagos, to a LQ of 0.35 for North-West, a ratio of over 1:50. During the period after 1970, the ratio decreased dramatically to 1:29. This pointed to high but reducing disparity among the regions of Nigeria after 1970, with respect to the number of

			Location Qu	otient
Rank	Regions Prior	- to 1970*	Regions Afte	r 1970**
High	Lagos East Central Rivers Kwara North Central South-East	17.91 0.82 0.82 0.82 0.82 0.82	Lagos Mid-West East-Central South-East West Kwara	4.08 1.50 1.17 1.17 0.89 0.81
Low	Benue Plateau Kano West North-East North-West Mid-West	0.35 0.35 0.35 0.00	Benue Plateau Rivers North Central North-West Kano North-East	0.80 0.60 0.57 0.44 0.37 0.14

Table 4.10 Location Quotient: Distribution of number of manufacturing establishments by regions.

*Establishments between 1968 and 1969. **Establishments between 1970 and 1975.

Source: Compiled by the author with raw data from Appendix B and Appendix C-2.

manufacturing establishments. In addition, only Lagos had a location quotient greater than one. Most of the regions had location quotients lower than one, implying that the relative share of their total manufacturing establishments in the country was below their relative share of population. The reasons for the closing gap in number of manufacturing establishments after 1970 was related to the creation of states since each state started competing for the number of manufacturing industries it could attract into its state.

3. <u>Gini Coefficients for output in manufacturing</u> across the regions of Nigeria

gini coefficients for output in manufacturing The represented in Table 4.8 shows a lower coefficient (g = 69)prior to 1970 and a higher coefficient (g = 74) after 1970. Based on these findings, it is concluded that disparities across the regions of Nigeria in manufacturing output were greater after 1970 than prior to 1970. Also. both gini coefficients for output in manufacturing (prior to 1970 and 50, after 1970) are greater than indicating high inequalities across the regions of Nigeria in the distribution of manufacturing output. It also points to the lack of success in achieving this goal. A more detailed evaluation of the distribution of output among the regions of Nigeria is presented below with the use of location quotients.

Location Quotients for Output in Manufacturing Among the Regions of Nigeria

location quotients (LQ) for output The the in manufacturing sector of Nigeria is shown in Table 4.11 and Lagos predominates. The LQ for output of the manufacturing sector of Nigeria prior to 1970 ranged from 18.98 for Lagos to 0.03 for South-East, a ratio of 1:633. While the LO 1970 ranged from 14.08 for Lagos to 0.01 for Northafter a ratio of 1:1408. The findings are consistent with East, earlier findings in the use of gini coefficients. The

			Location C	luotient
Rank	Regions	Prior to 1970*	Regions	After 1970**
High	Lagos	18.98	Lagos	14.08
-	Kwara	0.66	Kwara	1.49
	North-Centra	0.66	North-Central	1.47
	Kano	0.54	Kano	0.57
	East-Central	0.42	East-Central	0.30
	Mid-West	0.37	Mid-West	0.27
Low	West	0.35	Rivers	0.24
	Benue Platea	u 0.07	Benue Plateau	0.18
	North-West	0.05	South-East	0.14
	Rivers	0.05	West	0.10
	North-East	0.04	North-West	0.05
	South-East	0.03	North-East	0.01

Table 4.11 Location Quotients: Distribution of output in manufacturing by regions.

*Output between 1968 and 1970. **Output between 1971 and 1975.

Source: Compiled by the author with raw data from Appendix B and Appendix C-3.

conclusion is that variations among regions in output in manufacturing are greater after 1970 than prior to 1970. As shown in Table 4.12, other than Lagos and one or two other regions, the LQ for a majority of the regions are less than one.

The percentage distribution of manufacturing output across the regions of Nigeria is shown in Table 4.12. According to Table 4.12, from 1969 to 1975, over 50 percent of the manufacturing output in the whole of Nigeria is

Reaion				utout (1				
	1968	* 6961	1970	1971	1972	1973	1974	1975
Lagos	37.34	66.89	58.2	56.9	56.4	60.2	64.9	65.6
Benue Plateau	7.20	1.56	3.5	3.0	2.7	2.3	3.8	1.7
East-Central	8.82	5.94	6.0	3.5	6.1	6.8	4.8	3.7
Kano	13.56	7.09	9.6	8.5	8.1	8.4	7.1	5.9
Kwara	0.66	1.38	1.6	2.5	2.6	2.2	1.9	3.4
Mid-West	6.31	2.56	3.0	2.5	2.5	2.8	3.3	3.1
North-Central	8.50	5.36	13.7	12.1	6.9	6.7	7.6	10.6
North-East	1.43	0.70	0.7	0.3	0.5	0.8	0.6	0.5
Rivers	6.16	1.08	1.8	2.0	3.2	1.2	1.0	1.6
South-East	0.80	0.24	0.1	0.5	0.6	0.6	0.9	6.0
West	9.11	6.70	6.2	7.7	7.0	7.8	3.6	2.3
North-West	0.10	0.47	0.7	0.5	0.4	0.2	0.5	0.7
Total	100.00	100.00	100.0	100.0	100.0	100.0	100.0	100.0
*Compiled by the a Office of Statisti	author wi ics Econo	th data f nic Indic	rom Scha ators (1	121 (197 973-1977	13, Pol.	0); and 9-13, pr	Federal . 9-15.	

Percent of total output of the manufacturing sector by regions (1968-75). Table 4.12 108

Source: Adapted from Bienen and Diejomoah (1981, p. 120).

concentrated in Lagos. The range is from 58.3 (average) for Lagos to 0.45 (average) for North West, a ratio of about 1:130.

4. <u>Gini_coefficients_for_value_added_in_manufacturing</u> across_the_regions_of_Nigeria.

gini coefficient for value added in manufacturing The depicted in Table 4.8 shows a lower coefficient (q = 64)prior to 1970 and a higher coefficient (q = 82) after 1970. It can be concluded that the distributional inequity, across the regions of Nigeria, of value added in manufacturing is greater after 1970 than prior to 1970. Also, both gini coefficients of value added in manufacturing (prior to 1970 and after 1970) are greater than 50, indicating high inequality across the regions of Nigeria in the distribution of value added in the manufacturing sector of Nigeria. It also points to the failure to achieve the goal. A more detailed evaluation of the distribution of value added among the regions of Nigeria is presented below with the use of location quotients.

Location Quotients for Value Added in Manufacturing Among the Regions of Nigeria

Location Quotients (LQ) for value added in manufacturing is shown in Table 4.13. The location quotients prior to 1970 range from 14.86 for Lagos to 0.47 for North Central, a ratio of over 1:297, showing a wide disparity. The LQ after 1970 ranged from 16.53 for Lagos to

Rank	Region	Value Added Between 1968-1971	Region	Value Added Between 1972-1975
High	Lagos West Mid-West	14.86 1.54 1.38	Lagos Kwara North-Central Mid Woot	16.53 1.97 0.53
	North Central Kano	0.34 0.49 0.22	Benue Plateau East-Central	0.38 0.38
Low	South-East North-East Rivers North-West Kwara East-Central	0.19 0.18 0.17 0.16 0.12 0.01	Kano South-East Rivers North-West North-East West	0.27 0.21 0.08 0.07 0.02 0.01

Table 4.13 Location Quotient: Distribution of value added in manufacturing by regions.

Source: Compiled by the author with raw data from Appendix B and C-4.

0.01 for West, a ratio of over 1:1600, also showing a wide disparity. On the whole, it is concluded that variations among the regions of Nigeria, in value added of the manufacturing sector were very high, and higher after 1970 than prior to 1970. This indicates that the policy objective to close the gap of value added in manufacturing among the regions of Nigeria is not attained during the period in question.

5. <u>Gini Coefficients for a number of manufacturing</u> employees across the regions of Nigeria.

it is shown in Table 4.8, disparities across As the regions of Nigeria in the number of manufacturing employees was very high (g = 53) prior to 1970 compared to (g = 63)after 1970. Both coefficients (prior to 1970 and after 1970) are greater than 50, indicating a high degree of inequality across the regions of Nigeria, in number of manufacturing employees and the failure to achieve this A more detailed evaluation of the number qoal. of manufacturing employees among the regions of Nigeria is presented below with the use of location quotients.

Location Quotients for a Number of Manufacturing Employees Among the Regions of Nigeria

Location quotients for the number of manufacturing employees among the regions of Nigeria is shown in Table Data for the period prior to 1970 are incomplete, but 4.14. data for the period after 1970 showed that the range is from 6.82 for Lagos to 0.03 for South-East, a ratio of about 1:227 and the variation among the regions of Nigeria, in the number of manufacturing employees, is very wide. Table 4.14 also shows that during the period after 1970 only three regions have LQ greater than one, while all the other regions have LQ less than one. These findings are consistent with the finding with the gini coefficients. It also points to the lack of success to achieve this goal.

Rank	Region	Prior to 1970*	Region	After 1970**
High	Lagos	15.27	Lagos	6.82
-	North-Central	3.44	South-East	5.53
	Kwara	0.96	North-Centra	1 1.01
	North-West	0.79	Kwara	0.95
	Mid-West	0.25	Mid-West	0.85
	West	0.25	Rivers	0.64
Low	North-East	0.06	Kano	0.44
	Benue Plateau	J	East-Central	0.24
	East-Central		Benue Platea	u 0.20
	Kano		West	0.17
	Rivers		North-West	0.13
	South-East		North-East	0.03

Table 4.14 Location Quotients: Distribution of number of employees in manufacturing by regions.

Source: Compiled by the author with data from Appendix B and Appendix C-5.

Generally, the location quotients for manufacturing employees in a majority of the regions (both prior to 1970 and after 1970) are less than one, indicating that the shares of these regions' total number of manufacturing employees are less than what it should be with respect to their populations. This situation has not changed very much in the 1980s due to the concentration of industries and manufacturing employees in Lagos.

Additional evidence points to huge disparities in manufacturing employment among the regions of Nigeria is provided in Table 4.15 and Table 4.16. As portrayed in Table 4.16, from 1969 to 1975, over 40 percent of the

Region	Employment (%)							
	1968	1969	1970	1971	1972	1973	1974	1975
Lagos	35.3	46.38	45.2	46.8	43.6	47.7	48.7	42.1
Benue Plateau	0.91	2.12	2.0	2.2	1.9	2.2	2.3	2.0
East-Central	10.98		1.5	5.8	7.0	6.1	4.2	6.3
Kano	9.86	11.94	8.8	6.3	6.3	7.4	7.1	7.8
Ƙwara	1.57	1.94	3.7	3.7	3.0	3.0	1.9	3.1
Mid-West	10.51	7.94	10.3	5.9	6.5	6.2	7.6	6.9
North-Central	12.12	17.41	14.0	13.1	13.1	10.8	11.8	10.2
North-East	1.43	1.42	1.0	0.8	1.1	1.1	1.0	0.7
Rivers	6.27		0.9	1.0	2.2	1.4	1.2	3.1
South-East	1.86		1.0	3.3	5.1	4.3	5.2	9.6
West	8.53	8.20	9.9	9.6	8.8	8.2	7.3	5.4
North-West	0.19	2.65	1.7	1.5	1.4	1.4	1.7	1.8
Total	100.00	100.00	100.0	100.0	100.0	100.0	100.0	100.0

Table 4.15	Percent of	total	employment	in the	manufacturing	sector	of
	Nigeria by	regior	n.				

Sources: Computations for 1970-1975 were adapted from Bienen and Diemomoah (1981, p. 120) with data from industrial survey (Lagos: Federal Office of Statistics, 1970-75).

Computation for 1968-1969 by the author with data from Schatzl (1973, p. 214); Nigeria: Federal Office of Statistics Economic Indicators (1973-77), Vol. 9-13, pp. 9-15.

Regions	Food Beverages Alcohol Tobacco	Textile and Leather Goods	Sawmill Wood Products Paper, Printing	Petroleum Coal, Rubber, Plastic, Non-metal	Basic Metal Machinery, Fabricated Metal From Scrap Metal Work	Miscellaneous Products	
Southern:							1
Lagos	27.83	29.33	36.47	30.93	34.8	54.9	
West	17.43	1.33	15.57	2.33	7.9	6.5	
Mid-West	1.17	2.83	20.53	21.77	5.53		
Rivers	8.0	0.10	5.20	18.83	16.53	6.8	
East-Central	13.83	10.20	8.8	15.33	15.93		
South-East	3.07	0.03	3.1	7.93	0.33	8	
Northern:							
North-East	0.57	2.17	0.93	0.23	0.03	31.8	
Benue Plateau	0.60	1.3	1.63	2.00	11.10		
Kano	5.90	29.03	2.10	3.80	6.93		
North-Central	8.53	19.27	3.57	2.17	1.13		
Kwara	14.80	0.33	1.70	1.13	1	1	
North-West	0.03	4.17	0.47	0.13	0.50	8	

Table 4.16 Percentage share of total manufacturing industrial employment by regions and

Total may not add up to exactly 100 due to rounding.

Source: Computed from Teriba et al. (1981, p. 74) based on data from Federal Office of Statistics (1973/1974), Lagos.

manufacturing employees in the entire country are concentrated in Lagos, ranging from 44.5 (average) for Lagos to 1.1 (average) for North-Eastern region, a ratio of about 1:40. There is also a disparity between the other regions, excluding Lagos; although the gap is narrower, it was still remarkable. For example, the percentage of manufacturing employees in North-Central (second to Lagos) were 12.8 (average) compared to 1.1 (average) for North-Eastern region, a ratio of about 1:12.

Using employment as an indicator and the sectors and regions of Nigeria as units, Table 4.17 shows the percentage distribution of the manufacturing sector employment across the regions of Nigeria. Lagos dominates all the other regions with the greatest percentage of employees in all the manufacturing sector of Nigeria. Second to Lagos were: <u>West</u> in the manufacture of food, beverages, alcohol and tobacco products.

Kano in the manufacture of textile, wearing apparel and leather products.

<u>Mid-West</u> in the manufacture of wood products, furniture, paper and printing materials, and petroleum products closely followed by Rivers.

<u>Rivers</u> in the manufacture of basic metals, fabricated metals, and machinery.

The heavy concentration of manufacturing employment in Lagos is due to the fact that:

Sector	Total Gainful Employment				
	1965	1970	1975		
Agriculture	71.7	69.8	64.0		
Mining	<0.1	0.2	0.4		
Manufacturing	9.6	12.2	16.8		
Construction	12.9	12.6	12.2		
Electricity/gas	0.8	0.7	0.6		
Distribution/trading	3.9	3.9	5.0		
Transport/communication	0.6	0.6	0.9		
Other services	0.2	0.0	0.1		
Total	100.0	100.0	100.0		

Table 4.17 Distributionn of total gainful employment (both traditional and modern sector).

Source: Adapted from Bienen and Diejomoah (1981, p. 95), data from Second and Third National Development Plans (Lagos, Central Planning Board, and National Manpower Board.

- Lagos is a federal capital or a colonial administrative headquarters, and a center for national policy making and decisions.
- Lagos is a commercial town and attracts businesses from all over the country.
- Lagos has an international airport, and attracts foreign expatriates.

 Lagos has a principal seaport and is accessible to imports.

As mentioned earlier in this study, Nigeria is still an agricultural country. As shown in Table 4.17, in 1965, the sector provides over 70 percent employment agricultural in By 1975, the figure declined to 64 percent and the country. this situation has not changed much during the 1980s. The agricultural sector still offers employment to more than 60 percent of the Nigerian population and Table 4.17 shows that employment in the manufacturing sector of Nigeria rose from percent in 1965 to 17 percent in 1975. 10 Much of the manufacturing industry employment, shown in Table 4.16, is concentrated in the processing of import substitution products, viz., food, textile, wood, with less than two percent employment in mining and metallugical work.

6. <u>Gini Coefficients for wages of manufacturing</u> employees across the regions of Nigeria.

Disparities in employees' wages, shown earlier in Table is greater (g = 60) prior to 1970 than (g = 46) after 4.8, 1970. The Gini coefficient (g = 60) prior to 1970 is also greater than 50, while the coefficient after 1970 (g = 46) is less than 50. Based on these findings, it is concluded that with respect to employees' wages, distributional regions of inequity. across the Nigeria. of the manufacturing sector, is greater prior to 1970 than after

1970. This is consistent with Kuznets postulate that inequality in income tends to be greatest in the early stages of economic growth. It is concluded also that, in terms of manufacturing employees wages, the policy objective to achieve distribution equity is, to a certain extent, a success but much still remains to be done. A more detailed evaluation of the distribution of manufacturing employees' wages among the regions of Nigeria is provided below with the use of location quotients.

Location Quotients for Employees Wages Among the Regions of Nigeria

Variations between regions in manufacturing employees' wages is shown in Table 4.18. The range between the region with the highest manufacturing employees' wages and the region with the lowest manufacturing employees' wages prior to 1970, respectively, shows Lagos with 10.40 and South-East with 0.01, a ratio of over 1:1040: during the period after 1970, the ratio narrowed to 1:82. Based on these findings. it is concluded that although distributional inequities among the regions of Nigeria, with respect to employees wages, are greater prior to 1970 than after 1970, the gap is closing and a number of regions had location quotients greater than one during the periods prior to 1970 and after 1970, implying that the national share of the total wages of their employees is greater than what it should have been.

Rank	Region	Prior to 1970*	Region Af	ter 1970**
High	Lagos	10.40	Lagos	4.91
_	Rivers	6.90	North-Central	2.38
	North-Centra	1.74	Kwara	1.36
	Kwara	1.48	Rivers	1.34
	Mid-West	0.78	South-East	1.13
	Kano	0.59	Kano	0.79
Low	West	0.43	Mid-West	0.79
	East-Central	0.36	East-Central	0.57
	North-East	0.07	Benue Plateau	0.57
	Benue Platea	u 0.03	North-West	0.23
	North-West	0.02	West	0.21
	South-East	0.01	North-East	0.06

Table 4.18 Location Quotients: Distribution of the wages of manufacturing employees by regions.

*Employees wages between 1968 and 1970. **Employees wages between 1971 and 1975.

Source: Compiled by the author with raw data from Appendix B and C-6.

The reasons for this is due to public sector (Wage Review Commission) control of manufacturing industrial wages in Nigeria.

Wage disparities in Nigeria, especially prior to 1970, may be accounted for by the disproportionate allocation of wage increases associated with the recommendations of the Wage Review Commission of Nigeria.

To conclude, based on the gini coefficients presented in Table 4.8, the conclusion is that, with respect to the number of manufacturing establishments and employees wages, distributional inequities across the regions of Nigeria are greater prior to 1970 than after 1970. This same conclusion does not hold for output, value added, and the number of manufacturing employees. Distributional inequities across the regions of Nigeria, with respect to these variables, are very high both during the periods prior to 1970 and after 1970, and even higher during the period after 1970 indicating the lack of success in achieving these policy objectives.

A detailed evaluation of the variables using location quotients points to wide variations among the regions of Nigeria in the distribution of all the six variables. The reason for these findings may be attributed to the adoption of poor development strategies and is the subject of chapter five.

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CHAPTER FIVE

ANALYSIS

Analysis of the Findings of Chapter Four

In line with the previous two chapters, this chapter also deals first with growth of the manufacturing sector, and then with distributional equity of six variables associated with the manufacturing sector.

<u>Reasons for the Observed Low Growth</u> of the Manufacturing Sector of Nigeria

In question one, chapter four, a high correlation (r = .8) was found between public capital expenditure and growth of the manufacturing sector, indicating that increased public expenditure is associated with increased growth of the manufacturing sector of Nigeria.

Further evaluation of a sub-question to question one revealed that despite the huge oil wealth, the growth of the value of the manufacturing sector in the GDP of Nigeria was well below that of some of the other countries.

The growth of public capital expenditure and of the manufacturing sector of Nigeria was attributed to the huge oil wealth in the country and to the dependence on: import substitution industries, imported capital goods, raw materials, and foreign expatriates, rather than on self-

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reliance, local technical and managerial skills, and local research and development.

The low contribution of the manufacturing sector in the GDP of Nigeria is the primary reason for underdevelopment and calls for the P.D.A. to facilitate Nigeria's The slow development pace of the manufacturing development. sector in the presence of oil wealth may be attributed to the lack of technological and managerial skills in the country and is a key reason for the dependence of the manufacturing sector on foreign firms, capital goods, raw materials, and expatriates for industrial production, to the neglect of local research and development by the government of Nigeria.

<u>The_Over-Emphasis_on_Heavy_Capital_Intensive</u> <u>Import_Substitution_Industries</u>

To reduce the foreign exchange deficit the government of Nigeria embarked on heavy, capital-intensive import substitution industrialization to locally produce the formerly imported consumer goods. Sophisticated, heavy industries are adopted despite the differences in culture between the developed world and Nigeria and the low level of technological the capability to operate industries. Differences such as unskilled manpower, limited indigenous technological know-how, and high illiteracy in Nigeria visa-vis the vagaries of development capital are not taken into consideration.

A pivotal reason for the poor performance of the manufacturing sector of Nigeria is that the differences in cultures, values, and aspirations among the peoples of the developed countries and Nigeria are not taken into consideration in the importation of technology. As noted by Eziakor (1983), despite the obvious scarcity of capital and local high-level manpower in Nigeria, the "gospel" of economic growth ("bigger is better") continues to be enthusiastically embraced and spread by Western-trained development planners and accepted without questions by the Nigerian decision/policy makers.

It is obvious that some economic growth is recorded in Nigeria but this growth is not comparable to the growth recorded by developed countries or some of the developing countries of Asia and Latin America. The observed growth rate of the manufacturing sector of Nigeria, documented in chapter four, may be attributed to foreign imports and import substitution industrialization but the growth is low and restricted to the processing of agricultural products. However, growth alone does not constitute development since development also involves the equitable distribution of resources and local technological capability.

As a result of the deficient technological capability and lack of emphasis in promoting local technological capability in the country, development depended on: (1) foreign firms, (2) foreign expatriates, (3) foreign capital

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goods, and (4) foreign intermediate raw materials. These may have contributed to the slow growth rate of the manufacturing sector of Nigeria.

1. Dependence on Foreign Firms

As shown in Table 5.1, a greater proportion of the firms in Nigeria are either owned by foreigners or jointly owned with foreigners. Joint ownership involves expatriates on the technical side and Nigerians on the sale and public relations side (Teriba et al., 1981, p. 87) and as а consequence the business is owned and controlled by foreigners with a tendency for the management, controlling shares, and decision-making to remain in foreign hands even in the presence of qualified Nigerians (Teriba et al., 1981). Even when local managers are hired, they tend to perform non-technical functions and are often simply hired to fulfill government mandates. The Nigerian government mandate requiring foreign firms to hire a certain proportion local managers results in hiring local managers given of titles without responsibilities or authority.

The most recent study on the role of the Nigerian managers showed that the involvement of Nigerian managers in industrial manufacturing was highest in general administration and finance, and lowest in production, technical jobs, marketing, sales functions . . . and key decision making positions (Teriba et al., 1981:101).

Industries	Ownership of Establishment					
	Number of Establish- ments	100 % Foreign Owned	Joint Venture Foreign/ Nigerian	100 % Niger- ian		
Biscuit	3	1	2			
Mattress	5	1	1	3		
Bicycle assembly	4	4				
Beer	6	4	1	1		
Cement	5	1	4			
Furniture and						
fixture	10	8	1	1		
Metal fabrication	21	9	11	1		
Motor vehicle						
assembly	5	4	1			
Paints and varnishes	s 6	5	1			
Perfumes/cosmetics	3	3				
Paper products	3	3				
Pharmaceutical	6	6				
Radio & TV set						
assembly	3	1	2			
Soft drink bottling	9	5	1	3		
Shoes	8	4	4			
Textiles	10		9	1		
Tire production	11	2	3	6		
Торассо	6	5	1			
Boat buildup	4			4		
Soap	6	6				
Timber	19	4	2	13		
Total	153	76	44	33		

Table 5.1	Ownership of indus	tries in	Nigeria b	y selected
	establishments.			

Source: Oni and Onimode (1975, p. 20), adapted from Edorien, E. (1968, p. 201). Linkages direct foreign investment and Nigerian's Economic Development (Nigerian Journal of Economic and Social Studies, Vol. 10, No. 2, July 1968).

The slow economic growth, and declining growth of the manufacturing sector of Nigeria may be attributed to the domination of these sectors by foreign firms. This is explained by the fact that foreign firms send profits out of the country rather than reinvesting them in research. The P.D.A. of Nigeria has not been effective in promoting local research and industries to encourage experiential learning among Nigerian managers and technicians. Experiential learning (or "learning by doing") through local industries is an important component of a country's development and the inability of local industries to provide this "learning by doing" give rise to the deficient technological/managerial skills and the low productivity of the manufacturing sector experienced in Nigeria.

2. <u>Dependence on foreign expatriates</u>

An examination of Table 5.2 shows that 67 percent of the contract for major projects in Nigeria are handled by foreign contractors, while 32 percent of the contracts are joint venture, and only i percent of the contracts are handled by indigenous contractors. These figures reflect the low technological manpower in Nigeria and the neglect of local contractors and an over-emphasis on foreign contractors and foreign technology.

The projects contracted to foreign expatriates are highly sophisticated, capital-intensive projects and for

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Firms	Amount (NM)*	Percentage
Foreign contractors	N 13,247.7	67
Nigerian and foreign contractors (joint venture)	N 6,410.0	32
Nigerian (indigenous) contractors only	N 92.5	01
Total	19,750.2	100

Table 5.2Distribution of selected major construction and
development projects in Nigeria as of 1985.

*Note: Not all the contract amounts were specified and/or negotiation of estimate in progress.

Source: Compiled by the author from African Economic Digest (AED, 1985, p. 98-103).

this reason the operation is not efficient in a country with low technical and managerial manpower. The inefficient production of the plants stems from the lack of spare parts and the length of time it takes to obtain technicians and to import the spare parts, repair the machines when they break down, and re-start the production processes. In addition, there is a problem of the lack of managerial skills and technical skills to take over when the expatriates are no longer available. The low production of the manufacturing sector of Nigeria is explained by the nature of the sophisticated projects which the foreign contractor was familiar with but which is too complex for efficient operation by an average Nigerian.

3. Dependence on Foreign Capital Goods

As shown in Table 5.3, prior to 1970 about 15 percent the total expenditure on imports is in agricultural of products; 5 percent in mineral products; and 80 percent in industrial products. The percentage of import of agricultural products decreased slightly from 15 percent in 1960 to 13 percent in 1974; the imports of mineral products decreased slightly from 5 percent in 1960 to 3 percent in 1974; but the percentage of import of industrial products increased from 80 percent in 1960 to 84 percent in 1974. Most of the industrial imports are capital goods (machines, transport) and raw materials. Table 5.3 showed that the importation of foreign industrial products is very high (80 percent) prior to 1970 and even higher, i.e. increasing (84 percent) after 1970 rather than decreasing. This stems from the lack of industries able to produce capital goods in Nigeria; the dependence on the outside world for such goods; the high cost of the goods, the limited availability of the qoods: and the associated low productivity of the manufacturing sector of Nigeria.

Additional support for Nigeria's increasing independence on the outside world for capital goods is provided in Table 5.4. A further breakdown of the import

Commodity	Proportions		
	Imports Prior to 1970 (1960)	Imports After 1970 (1974)	
Agricultural products	.15	.13	
Mineral products	.05	.03	
Industrial products	.80	.84	
Total	1.00	1.00	

Table 5.3 A comparison of the proportion of expenditure on the importation of products by three categories of the economic sector.

Sources: Compiled by the author from raw data provided in:

- Federal Offices of Statistics, Annual Abstract of Statistics (1979), Lagos;
- (2) Central Bank of Nigeria, Annual Report and Statements of Accounts (1965);
- (3) Second National Development Plan, 1970-1974, First Progress Report, p. 14.

	Import						
- items	1956	1964	1969	1971	1972	1973	1975
Food	10.18	9.93	8.48	7.91	9.67	10.31	7.5
Drink and tobacco	3.68	1.60	0.57	0.45	0.44	0.42	0.6
Mineral fuels/ lubricant	1.28	1.38	5.86	1.69	2.09	2.23	2.2
Crude materials	4.81	7.39	2.53	2.02	0.99	1.07	3.0
Animal/vegetable oils	0.02	0.05	0.12	0.09	0.11	0.10	0.2
Chemicals	4.82	6.60	11.14	11.48	10.34	10.70	9.1
Manufacturing goods	44.57	35.63	29.93	29.76	27.00	26.02	28.5
Machinery/trans- port equipment	19.92	26.15	30.77	38.81	39.53	40.87	42.0
Miscellaneous mfg. goods	8.90	9.85	6.74	5.90	8.39	7.97	6.7
Miscellaneous transactions	1.82	1.42	3.85	1.82	1.39	0.31	0.3
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.0

Table 5.	4	Percentage	composition	of	Nigerian	imports
		1954-1975.				

Source: Adapted from: Teriba et al. (1981, p. 21), data from Federal Office of Statistics Economic Indicators (1966-1978) Lagos. content of the Nigerian industrial sector showed, as highlighted in Table 5.4, a disproportionately high and increasing percentage importation of capital goods, viz., finished industrial machinery and transport equipment.

The dependence of the manufacturing sector of Nigeria on foreign capital goods and raw materials; the inadequacy of the products stemming in foreign exchange deficits; and delays associated with importing these essential materials and products results in a lack of full-capacity utilization and a low productivity of the manufacturing sector of Nigeria.

4. <u>Dependence on Foreign Intermediate Raw Materials</u>

As shown in Table 5.5, a study of 53 firms in Nigeria by Olahoku et al. (1979) shows that about 15 percent of the firms depend on outside sources for less than 10 percent of their raw materials; 32 percent of the firms depend on outside sources for 10-40 percent of their raw materials, and a higher percentage (52 percent) of the firms depended on external sources for a greater percentage (over 40 percent) of their raw materials. A detailed breakdown of the dependence of Nigerian firms on external raw materials is provided in Tables 5.6 and 5.7.

With reference to Table 5.6, wood products account for 13.4 percent or the lowest percentage of imported raw materials inputs, while fabricated metallic products and

Table 5.5	Extent of dependence of import substitution
	manufacturing industries on imported raw
	material.

Number of Industries Importing	Number of Firms	% of Total Firms
Less than 10% raw materials	8	15
10-40% raw materials	17	32
Over 40% raw materials	28	52

Source: Federal Republic of Nigeria. Third National Development Plan (1975-1978), in Olaloku et al. (1979).

Table 5.6 Distribution of firms by industry and proportion of foreign raw materials to total raw materials used.

Industry	Total %	
Food products	19.2	
Textile/leather products	48.1	
Wood products	13.4	
Paper/printing	58.0	
Mining/mineral	23.9	
Mon-metallic products	52.9	
Metallic products	69.9	

Source: Adapted from Teriba et al. (1981, p. 49), cited in references.

Industry	Total (N '000)	Intermediate Input (N '000)	Percentage Import of Total Input
Agriculture	6141.6	4141.2	67.4
Livestock/			
forest/fish	12197.6	9687.0	79.4
Agriculture			
processing	89230.8	4270.6	4.8
Textile	6782.6	1239.4	18.3
Clothing	31147.6	9135.8	29.3
Drink/tobacco	9990.0	7560.4	75.7
Food	31078.6	6954.6	22.4
Metal mining	2037.6	795.6	39.0
Non-metal mining	7758.8	6228.4	80.3
Chemicals	4200.6	1653.4	39.4
Transport	48435.6	23735.6	49.0
Utilities	4552.4	1476.8	32.4
Trade	11852.2	1640.0	13.8
Construction	104692.0	41346.0	39.5
Services	24652.0	6423.2	26.1
Transport			
equipment	7520.8	5119.0	68.1
Non-metallic			
metal products	2911.8	1250.8	43.0
Metal manufacturin	g 12544.2	9014.2	71.9
Wood/leather/etc.	21760.6	6954.2	32.0
Miscellaneous			
manufacturing	2248.2	1473.8	65.6
Total	441735.1	150099.8	34.0

Table 5.7 Import content of the intermediate inputs of Nigerian industries.

Source: Adapted from Teriba et al. (1981, p. 70), data from Third National Development Plan (1975-80, p. 148). machinery accounts for 69.9 percent, or the highest percentage of imported raw materials.

Nigeria, although a predominantly agricultural economy, imports agricultural materials and as shown in Table 5.7, the agricultural import content of intermediate input is about 67.4 percent. The reasons for this percentage results from the fact that many Nigerian industries are import-substitute industries or final-stage industries involving assembly and packaging, and thus depend heavily on foreign raw materials. As shown in Table 5.7, the importcontent of the manufacturing sector of Nigeria is very high and on the average, about 67.4 percent of the total value of the required intermediate material input of the agricultural sector manufacturing is imported, while technological groups such as basic industrial chemicals, glass products and madeup textiles, the import-component of raw materials is about 90 percent (Teriba et al., 1981, p. 23); this in part accounts for the low value added of Nigerian manufacturing industries, stemming in foreign exchange deficits.

Usually, agricultural raw materials are exported in a raw form for processing overseas and re-imported in an intermediate or finished form to feed the final-stages, import-substitution industries in Nigeria. The reasons for this are based in the lack of technological know-how and/or the basic industries needed to carry out the full-scale operations, from start to finish, in Nigeria. The high cost associated with purchasing adequate foreign capital goods and raw materials is, therefore, one of the reasons for the general low output and value added experienced in the manufacturing sector of Nigeria.

To conclude, it is apparent from this discussion that the growth of the manufacturing sector of Nigeria depends more on foreign imports than on local technological capacity. According to Teriba et al. (1981:22):

Alongside the [oil] boom experienced in post independence Nigeria, there has been a major shift in the orientation of the manufacturing sector from the external to the domestic. However, this orientational shift has not necessarily been accompanied by any major breakthrough in technology.

This lack of technological breakthrough is reflected in the low output and value added of the manufacturing sector of Nigeria where the emphasis is on heavy capital intensive import substitution industrialization (Fransman, 1982), rather than low cost, labor intensive, small-scale cottage industrialization, local research and development, and the enhancement of local technological capability.

The huge oil wealth in the country is utilized to import foreign products such as capital goods and raw materials, and to hire foreign expatriates to perform industrial manufacturing. In this way, the deficient technical and managerial skills in the country (Nti, 1978:111; Emezi, 1979:9) are over-shadowed and the research

development components left in the hands of foreign and contractors and foreign firms, however, recalling the key components in the definition of development in this study includes local technological and managerial skills to conduct research. and to promote the growth and equitable distribution of the profit from the growth of the manufacturing sector of Nigeria. The slow development pace of the manufacturing sector of Nigeria, is the result of the deficient technological and managerial skills in the country, investments in heavy capital intensive import substitution industrialization, and the associated dependence on foreign imports, and as noted in the following section, neglect of local research and development by the P.D.A. of Nigeria.

The Neglect of Local Research by the P.D.A. of Nigeria

By using planned public capital expenditure as an indicator and local and import substitution industrial sectors as units, the amount of emphasis placed on local research and development is assessed. In Table 5.8. approximately 90 percent of the revised planned allocation and 95 percent of actual allocation to research and is allotted to import substitution related development industries; while only 10 percent of the revised planned allocation to research and development; and 5 percent of

Sector	Revised planned allocation (% of total)	Actual allocation (% of total)
Import_Substitution Industries:		
Agriculture, forestry, fisheries, livestock	43	71
Mining (petroleum refineries) 6	3
General industries	41	21
Sub-Total	90	95
<u>Indigenous</u> Industries:		
lron and steel industry (geological survey)	9	
Aid to small-scale indigenous industries	1	5
Sub-Total	10	5
Total	100	100

Table 5.8 National Development Plan Allocation--Revised and actual allocation to research and development by sectors (1970-1971)

____ Negligible.

Source: Compiled by the author with data from Second National Development Plan, First Progress Report (1970-1974), Appendix 8, pp. 121-128.

Footnotes Relating to Table 5.8.

1. Investments in small scale businesses were mostly directed at construction of industrial layout, and provision of small-scale loans rather than research.

2. Investment in general industries were associated with feasibility studies, purchase of equipments, and so forth.

3. Investments in agriculture included surveys and feasibility studies, purchase of capital goods (tractors, equipment, etc.), purchase of land, limited research centered on maintaining the agricultural research committees.

4. Investments in iron and steel industry were the first steps to a capital goods industrial base in Nigeria, but indigenous research effort is absent. Most of the work is performed by foreign firms and foreign contractors. Many foreign firms and contractors have been contracted to carry out feasibility studies. Some iron rolling mills have been established.

actual allocation is allotted to local industries. Most of the money that goes into import substitution industries 15 used to purchase capital goods and raw materials, rather than to promote local research for the development of the the products locally. It is apparent that the proportion of allocations to promote public capital research and greater in import-substitution development is related industries than in local related industries, and that the money is not used for research.

A detailed analysis of the footnotes to Table 5.8 shows that allocations to research and development in Nigeria are centered on importing the products. Local research is not emphasized to produce capital goods locally.

According to Table 5.8, the highest percentage of total revised plan allocation (43 percent) is in agriculture; second to agriculture is general industries with 41 percent; while small-scale indigenous industries accounts for the lowest (1 percent) percent. When combined with iron and steel industry, with the argument that both are associated with the attainment of indigenous technology, the percentage of total allocation (10%) is still very low when compared to 43 percent for agriculture and 41 percent for other import substitution related general industries. It may also be argued that some of the allocations in agriculture and general industries involves local industries, but generally, as prescribed in the footnotes relating to Table 5.8, the emphasis is on purchasing finished equipments, and raw material from outside the country rather than on carrying out actual research involving design, invention, production, and/or the manufacture of the capital goods in Nigeria. This same picture is shown in relation to actual allocation where the percentage of total allocation to agricultural research and development is 71 percent; actual allocation to small-scale indigenous industries is five percent; and actual allocation to iron and steel research and development is negligible.

The lack of emphasis on research and development in Nigeria is also noted by Teriba et al. (1981:48). They contend that the heavy reliance on foreign raw materials

import could be replaced by domestic substitutes, <u>if</u> the firms concerned had initiated research into developing and using domestic raw materials.

<u>Distributional Inequity Among the Regions of Nigeria</u> <u>in Manufacturing Activities</u>

The distributional inequity among the regions of Nigeria of the manufacturing sector, documented in chapter four, can be attributed to such poorly designed development strategies as:

- The continuous concentration of investment in bequeathed colonial administrative centers, chiefly, Lagos and a few other cities.
- The domination of the manufacturing sector of Nigeria by foreign investors who prefer to locate industries in large commercial towns where profit can be made.
- 3. The limited local technological and government incentives in the country to establish new industries in the hinterland of Nigeria outside large cities.

Most of these attributes have already been discussed, therefore, efforts will concentrate on other directions.

In chapter four, it is found that disparities across the regions of Nigeria, in <u>public_capital_expenditures</u> are in relative terms low and identical prior to 1970 and after 1970. With respect to the number_of_manufacturing establishments, disparities among the regions of Nigeria are less prior to 1970 than after 1970 and the same Ís applicable for employees wages. Trends, here, point to a reduction in disparities over the years among the regions of Nigeria but much remains to be accomplished, given that the A number of reasons are associated with qap is still wide. the impressive performance observed among the regions of Nigeria: public capital expenditures; the number of new manufacturing establishments; and employees wages, a11 relate to the creation of sub-regions (states) in Nigeria, limited decentralization and relegation of power to the the states, and the associated new allocation formula. However, huge and increasing disparities are found among the regions of Nigeria with respect to output, value added, and number of manufacturing employees.

Variation Among Regions in Public Capital Expenditure and Employees Wages Among the Regions of Nigeria

The disparity, observed in chapter four, in public capital expenditure among the regions of Nigeria may be accounted for to a certain extent by flaws in the P.D.A. fiscal budget allocation formula, which was designed to attain distributional equity in manufacturing activities across the regions of Nigeria. The distribution of the nation's wealth is centered on a new allocation formula which is based on four factors:

- The contribution made by individual states to the national purse (although this by itself is a source of inequity for poorer regions);
- The region's needs (although how to determine these needs is not indicated);
- 3. The population of a region (although there is generally no accurate census figures in the country); and finally,
- 4. The available manpower to carry out development projects in a region (although many regions lack the technical manpower to carry out development).

In general, the bias in favor of coastal regions, with respect to investment in manufacturing, contributes enormously to the observed disparities in Nigeria.

Variation_Among_Regions_in_Employee_Wages

The disparity in employees' wages in Nigeria, especially prior to 1970, may be accounted for by the disproportionate recommendations of wage increases by wage investigation commissions. The most recent recommendation for wage increases, by the wage review commission in 1972, was under the Chairmanship of Chief Udoji, commonly known as "Udoji Award." The recommended wage increases comprised wage increases of almost one-third for Lagos; one-quarter for the former eastern and northern regions; and less than one-tenth for the former western and midwestern regions where wages were already high (Rimmer, 1981).

In addition to the inter-regional manufacturing disparity caused employees wage by wage revision commissions, a large wage disparity, associated with intersectoral and intra- regional grouping are also a problem. For example, wages of top level officials are considerably higher than wages of workers at the lower echelon and wages of workers in the petroleum industry are higher than wages in agriculture related industries. of workers The commission's wage increase recommendations only impacted the formal sector; while the private, informal sector wages are determined not by government, but by the free play of the market. A study by Bienen and Diejomoah (1981) documents wide disparities between the wages of farmers and traders: and between the wages of these groups of persons and the wages of formal sector workers in that order.

Variation Among Regions in Manufacturing Establishments

Several factors are responsible for the high disparity in manufacturing establishments across the regions of Nigeria, especially prior to 1970 and key among them is the low investment performance of the private sector outside Lagos. The guidelines to the Third National Development Plan (1975-1980) attribute the disparity in manufacturing establishments in the country, especially prior to 1970, to the low (less than ten percent of the GDP) private sector investments. Generally, the lack of local technological know-how to start up new projects is a limiting factor and documented earlier, most of the as manufacturing establishments in the modern sector are either solely or jointly owned with foreign expatriates and, therefore, the new establishments are determined by the expatriates based in cities rather than in the rural areas. Another important factor is associated with lack of local technology to establish a full line of manufacturing industries throughout Where most of the modern manufacturing firms the country. are foreign owned, the firms are usually concentrated in preferred colonial administrative and commercial centers such as Lagos, Port Harcourt, near the Sea Coast, and near very few major large cities in the hinterland, as a result of dependence on imported materials.

The general risk-aversion in the country, dependency, and the notion that for a business to succeed, a foreign expatriate must be included, are important factors that contribute to the low and awkward investment or manufacturing establishments in Nigeria. Other factors or barriers to entry in manufacturing establishments include:

 Lack of capital (money, machines, equipment, technological know-how).

- Scarcity of raw material suppliers resulting from import delays.
- 3. Competition with foreign products and foreign establishments in the country.
- 4. Lack of information and management skills.
- 5. High initial cost.

As noted by Teriba et al. (1981), the net effects of all these barriers stunted domestic enterprise and kept the ownership and control of the modern industrial sector largely in foreign hands.

The variations in manufacturing establishments, found in chapter three, stems from the highly disproportionate concentration of manufacturing establishments in Lagos. It is shown that, in addition to public capital expenditure and the manufacturing employees wages, Lagos accounts for over 50 percent of the manufacturing establishments, output and value added in manufacturing, and number of employees of the entire manufacturing sector of Nigeria, a phenomenon described by geographers as <u>primate city development</u> prevalent in developing countries (Mobajunje, 1973), and stems in preferred administrative and commercial centers established by colonial rulers.

Variations Among Regions in Output and Value Added in Manufacturing

Several reasons exist for the high variations among regions in output and value added in the manufacturing sector of Nigeria, after 1970 compared to prior to 1970 and are based in the concentration of manufacturing establishments in a few regions such as Lagos; and in limited manufacturing establishments due to the lack of managerial skills, and deficient technical expertise outside of Lagos.

The wide variations and relatively low output in most of the regions are also explained by the fact that new import-substitution manufacturing establishments, chiefly food processing and assembly plants in newly created regions have not yet acquired economy of scale. The impressive performance of Lagos is associated with the economy of scale, long established industries, and easy access to imported raw materials, expatriates and the fact that Lagos has the locational advantage as a seaport and federal capital.

As Teriba et al. (1981:74) notes:

Lagos is the chief port of Nigeria, imported inputs are readily available to the state in which it is located, and this accounts in part for the high proportion of Nigerian manufacturing industries situated in Lagos.

According to Teriba, Lagos exerts a locational pull due to its market size and easy access to expatriate skilled manpower and inputs. The poor performance of most of the other regions, in output and value added, is attributed to a lack of manufacturing industrial establishments, lack of access to the seaports, lack of access to raw materials, and heavy cost involved in purchasing machines the and transporting them from the seaport to the interior of Nigeria, while the favorable performance of Lagos and the other southern regions is attributed to their proximity to imported materials. The cost of purchasing and transporting capital goods and intermediate raw material from overseas to the hinterlands is considered the single most important reason for the low manufacturing establishments, low output, and low value added recorded by a majority of manufacturing industries in the hinterland of Nigeria.

Variations_Among_Regions_in_Manufacturing_Employees

In chapter three, it was shown that disparity among the regions of Nigeria, in the number of manufacturing employees, were greater prior to 1970 than after 1970. Wide ranges were also found indicating a wide variation among regions prior to 1970 than after 1970.

Lagos predominates among the other regions as explained by the fact that, Lagos is a chief commercial and administrative center and thus exerts a labor pull from all

over Nigeria; the high degree of manufacturing activities in Lagos attracts workers from all over Nigeria. In general, though, the emphasis on heavy capital-intensive industries and the petroleum sector which provides employment to less than one percent of Nigerians results in extremely high unemployment. Although most of the industrial activities (over 70 percent) in Nigeria are small family-owned firms, the entrepreneurs of this sector often abandon their farms to seek the higher paying, but limited. industrial large cities such employment in Lagos. This. as notwithstanding the agricultural sector, continues to provide employment to over 60 percent of the population while the other sectors, chiefly government (military, civil servants) and the service industry, accounts for slightly over 20 percent of the labor force. Employment in the modern manufacturing sector of Nigeria is less than five percent and has very little impact on the GDP of Nigeria, or the socioeconomic development of the country.

Due to the domination of the economic scene of Nigeria by statutory corporations which are capital intensive and concentrated in Lagos, the corporations offer limited employment opportunities to the surplus agricultural labor which migrates into cities and the hinterlands of Nigeria.

Low wages and limited employment opportunities in the hinterlands of Nigeria cause most people to abandon the agricultural sector in search of better paying jobs in the oil supported industrial sector in large cities. The oil industry, which contributes over 90 percent to GDP during the 1970s and 1980s, is dominated by expatriates and offered employment to less than one percent Nigerians (Olaloku, 1978). The indulgence in capital intensive industries in a labor-intensive environment fails to provide employment for the teeming population and school leavers. While population growth and the number of school graduates soars, job creation does not keep pace with it; school dropouts and graduates are ill-trained and thus lack the skills and/or the necessary capital to explore new avenues of employment generating industrial establishments.

The failure of the manufacturing sector to expand and to provide employment as the agricultural sector contracted also leaves Nigeria with high unemployment. In addition, massive retrenchment, in the manufacturing sector of Nigeria (AED, 1985), exacerbated the problem of unemployment in Nigeria and as noted by the Labor Congress, several companies recorded higher profits on low labor turnover (AED, 1985).

CHAPTER SIX

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Summary

This dissertation has investigated the impact of public capital expenditure on the development of the manufacturing sector of SSA states with a specific evaluation of the extent to which two development policy objectives, to: (1) stimulate growth of the manufacturing sector as a conduit to socio-economic growth; and (2) to promote an equitable distribution of the profit from the growth, were attained.

These objectives were chosen for investigation since:

- Contemporary definitions of development are now centered around them, and because
- These objectives are recognized by SSA states, as constituting development.

The underlying thesis centers on the problem of underdevelopment, the slow pace to development, and the functions of the P.D.A. as a key factor in facilitating the development of SSA states.

The remainder of this chapter is devoted to the conclusions, the recommendations for policy and strategy changes, and the recommendations for further studies.

<u>Conclusions</u>

The conclusion arrived at here is that the relative low contribution of the manufacturing sector to the GDP of Nigeria constituted a failure to attain the policy objectives of development stipulated in the national development plans and in the discussion, several reasons were advanced to explain this. For example, due to the "develop quick" attitude adopted by early planners, and deficient executive manpower in the country, the tendency has been to invest in and import heavy, capital-intensive projects which the foreign contractors and expatriates were familiar with, but which the average Nigerian was not. This was a key flaw that gave rise to the distributional inequity and low productivity of the manufacturing sector experienced in most of the regions of Nigeria outside Lagos.

Oil royalties and taxes were utilized to fund heavy, capital-intensive government projects, rather than to promote low cost cottage industries consistent with the technological ability in the country, while investment in research and development to build up a local industrial base was not emphasized. Applied reseach was not accorded full recognition as a development tool in Nigeria since like many SSA states, Nigeria depended on research findings from the industrialized world which may not be applicable to the local conditions. The limited attention paid to the aspect of industrial research in Nigeria may be related to the lack

of ability to manufacture capital goods and raw materials locally. The low percentage of SSA states' GDP allocated to research, shown in Appendix D-1, compared unfavorably to that of industrialized countries. The importance of research and development, and the implication of research and development as a core ingredient of development was not appreciated. Most of the slow development of SSA states found in this study is accounted for by:

- The low number of scientists (See Appendix D-2);
- The low proportion of GNP allocated to research;
- The small size of basic capital goods manufacturing industries;
- The low production of machines and equipment within Nigeria;
- The low productivity in the manufacturing sector;
- Deficient technological capability and management skills in SSA states; and
- The poor distribution of the factors of production.

Based on the minimal development progress recorded in this study, it is likely the P.D.A. of Nigeria is overcentralized. Further studies into the impact of a decentralized P.D.A. in the facilitation of the development of SSA states is highly recommended along with the establishment of research centers in various settings throughout the country.

Recommendations Based on the Findings of the Study

The findings of this study are followed by recommendations for policy and/or strategy changes.

The study found a high correlation (r = .8)between public capital expenditure and growth of the manufacturing sector of Nigeria with growth attributed to the spectacular growth of crude petroleum export. Further analysis showed that the contribution of the manufacturing sector to the GDP of Nigeria was declining and below that of developed and most developing countries while the petroleum sector accounted for the greatest portion of the GDP of Nigeria. During the study period, the entire focus shifted to and neglected somewhat the agriculture petroleum and manufacturing sectors, but given the vagaries of petroleum prices and the fact that petroleum is a non-renewable and exhaustible resource, it is recommended that effort should be shifted from petroleum to manufacturing as the major contribution in the GDP of Nigeria.

The discussion suggested that the low contribution of the manufacturing sector to the GDP of Nigeria was due to not only the shift in emphasis to petroleum, but also to the adoption of a heavy, capital-intensive, import substitution strategy in the presence of deficient technological and managerial capability to efficiently operate the industries, in addition to: lack of spare parts and raw materials; and

deficient technological ability to conduct research and to promote the production of capital goods, spare parts, and raw materials locally. Deficient technical skills, risk aversion, and the associated high cost of starting local industries were probable reasons for indulgence in import substitution industrialization and dependence on foreign firms, capital goods, raw materials, and expatriates. The deficient technological and managerial capabilities in the country were circumvented by hiring foreign contractors to perform highly technical jobs in the country. This form of development is labeled in this study as "apocryphal" or "superficial" since it is associated with dependency and with the local technological capacity to man the not projects, especially when the expatriate is no longer available. Other than the high cost involved, dependency and the lack of "know how" to manage such projects may have also played a key role in the low output and value added recorded in the manufacturing sector of Nigeria.

On the basis of this study, it is recommended that:

- A new and/or reconstituted P.D.A. be set up and charged specifically with the functions of coordinating and performing development.
- The government encourage local entrepreneurial partnership in the private sector so as to promote large corporations.

- 3. The new or reconsituted P.D.A. of Nigeria and other SSA states should invest the national wealth in:
 - small-scale local projects consistent а. Basic with (and that w111 promote) local and managerial skills in technological the country, with provisions made to upgrade the projects to higher levels of sophistication through hard work, experiential learning or learning by doing, research, and probable serendipitous discoveries. In other words, investment should emphasize projects that can easily adapted and innovated or modified be to suit local conditions. rather than in heavy, capital-intensive and sophisticated projects that are outside local knowledge.
 - b. In research and development to design and produce capital goods and raw materials locally, given that the lack of emphasis on applied local research in the past may have contributed to the heavy dependence on foreign capital goods, and raw materials documented in the text.
 - c. In the promotion of local manpower development, i.e., in the acquisition of local managerial and technological skills.

- d. In creating and reconstituting the P.D.A. organization to provide extension services, consultancy, financial, and technical assistance services to the myriads of entrepreneurs throughout the country.
- e. In providing loans and incentives to proprietors to encourage new business ventures, to reduce the barriers to entry into business, to encourage hard work, to encourage expansion, to encourage research into new invention, to assist in the commercialization of the products, and to encourage surplus production for export.

The general low output and value added of the manufacturing sector of Nigeria may be attributed to the under-utilization of the capacity of the manufacturing sector and the lack of capital goods and raw materials stemming from dependence on the outside world for the commodities. The huge foreign exchange deficits associated with importing products, and the accompanying import restrictions may have also been responsible for the low value added. It is recommended on the basis of this study that if SSA states desire a high output and value added in their manufacturing sector, they should de-emphasize the importation of capital goods and raw material and invest in extensive research to produce the goods locally.

The analysis also pointed out that the manufacturing sector of Nigeria was dominated by foreign investors who tend to have no psychological stake in the development of the country, since their motives and interests are profit oriented. On this basis, it is recommended that SSA states entice foreign investors to invest in the production of capital goods locally and should emphasize investment and research effort that will lead to local technological breakthrough.

A detailed analysis of distributional equity of six variables associated with the manufacturing sector showed that: distributional inequity, across the regions of Nigeria, of public capital expenditure, manufacturing establishments, and employees wages was lower after 1970 than prior to 1970. The distributional inequity, across the regions of Nigeria, of number of manufacturing employees, output and value added was very high prior to 1970, and even higher after 1970.

The disparities experienced across the regions of Nigeria, in manufacturing employees, output, and value added may be related to the adoption of heavy capital intensive industrialization stategy, the continuous concentration of investment in former colonial administrative centers such as Lagos and a few other large cities; and the centralization and concentration of industrial activities at these administrative centers. Although the focus of this study

was not directed towards the structure of the P.D.A. in facilitating the development of SSA states, it could be speculated, on the basis of the findings in this study and past studies, that a decentralized rather than a centralized P.D.A. would be more effective in facilitating the development of SSA states.

Recommendations_for_Further_Studies

This study has been limited to inter-regional distribution of the indicators of performance of the manufacturing sector of Nigeria and further studies in the future involving all 21 regions, and/or intra-regional studies to establish the basis for distributional equity are now called for.

Through further studies, depressed areas may be identified and redressed and provide a basis for equitable planned dispersion of industries. If national government policy objectives of distributional equity must be achieved, then a detailed intra-regional study is necessary to establish a basis for resource allocation and redistribution of wealth. The suggestion here is to periodically document and hence provide a better understanding of the progress, the needs, and the problems confronting developers; and to devise appropriate measures to solve the problems. especially problems associated with low production and lack of expansion of the manufacturing sector.

A more detailed study of the structure of the P.D.A. is highly recommended. Such a study might include a relative assessment of the degree of effectiveness of a centralized development administration compared to a decentralized development administration in:

- a. Facilitating the development of SSA states;
- b. Promoting the location and allocation of resources, capital expenditure, industries, etc.;
- c. Promoting growth and efficient management;
- d. Promoting public and private functions such as government and citizens' involvement in the development process; and in
- e. Delivering services.

A study of manpower development through the initiation and establishment of research centers and capital goods, (electonrics, etc.) industries throughout the country is also highly recommended and suggested that universities, colleges of science and technology, private and government corporations and agencies be studied as probable settings for such research efforts. APPENDICES

APPENDIX A

PEARSON PRODUCT MOMENT CORRELATION

APPENDIX A

PEARSON PRODUCT MOMENT CORRELATION

Table A.1	Correlation between public capital expenditure
	and value of manufacturing and crafts in GDP
	(1962-1974).

Year	Public Capital Expendi- ture (N Million)	Value of Manufac- turing and crafts (N Million)
1962	4515	93.4
1963	10619	151.8
1964	9010	157.8
1965	11212	116.4
1966	9989	192.2
1967	13357	196.0
1968	23900	231.2
1969	17802	270.4
1970	8010	311.0
1971	31310	475.1
1972	54263	460.3
1973	122497	570.1
1974	62218	626.5
	29130.9	296.3

Pearson Product Moment Correlation (r):

r = .8

Source: Compiled by the author with raw data from: (1) Olayide (1976, p. 54); (2) Federal Office of Statistics Economic Indicators, Dec. 1966, Vol. 2 No. 12; October 1971, Vol. 7, No. 10, March 1975, Vol. 11.
APPENDIX B

POPULATION OF NIGERIA

APPENDIX B

POPULATION OF NIGERIA

Region	1963	1973	
Lagos	2.127	3.6	
Western	10.032	17.0	
Bende 1	2.789	4.8	
North Eastern	8.356	14.4	
Benue Plateau	3.735	6.4	
Kano	6.074	10.4	
North Central	4.014	6.8	
Kwara	1.275	2.2	
North Western	5.628	9.6	
Rivers	1.653	2.8	
East Central	7.120	12.2	
Cross River	2.867	4.8	
Total	55.670	79.5	

Table B.1 Population (Millions) of Nigeria by Sub-regions

Source: West Africa (August 20, 1979.)

PUBLIC CAPITAL EXPENDITURE AND INDICATORS OF PERFORMANCE OF THE MANUFACTURING SECTOR

PUBLIC CAPITAL EXPENDITURE

Region	Trend	ds: Expendit	Expenditure		
	1968/69	1969/70	1970/71	1971/72	
Lagos	0.1	0.5	4.6	11.0	
West	5.0	9.6	13.5	11.5	
Bendel	3.8	6.2	9.2	12.8	
North East	0.4	3.9	9.2	12.7	
Benue Plateau	0.4	1.7	5.7	9.5	
Kano	0.7	4.0	14.2	12.6	
Kaduna	0.4	1.7	9.2	12.1	
Kwara	*	*	5.5	8.6	
North West	0.3	3.1	9.7	11.0	
Rivers	*	*	12.0	15.3	
East Central	+	*	16.5	17.5	
Cross River	~ #	11.0	12.4	14.2	

Table C.1Public Capital Expenditure by Sub-regionsof Nigeria (1968/69 - 1971/72)(N Million)

Source: Tims (1974, P. 223) Nigeria: Options for Long Term Development (cited in references).

MANUFACTURING INDUSTRIAL ESTABLISHMENT

Region	1968	1970	1971	1975
Lagos	152	165	197	346
West	42	41	50	203
Mid-West	39	39	35	108
North East	11	10	10	30
Benue Plateau	9	9	16	68
Kano	44	4	50	89
North Central	25	27	20	59
Kwara	5	7	10	28
North West	4	4	9	52
Rivers	34	36	20	37
East Central	45	47	62	207
South-East	11	11	9	66

Table C.2 Number of Manufacturing Industrial Establishments by Sub-regions of Nigeria (1968-1975)

Sources: (1) Bienen and Diejomoah (1981, p. 255)

(2) Federal Office of Statistics Economic Indicators, Dec. 1974, Vol. 10, No. 10-12.

OUTPUT IN MANUFACTURING

of Nigeria (N Million)				
Region	1968	1970	1971	1975
Lagos	71.518	801.9	419.038	1713.896
Benue Plateau	13.785	18.7	14.528	43.524
East Central	16.883	71.2	3.147	95.131
Kano	25.984	85.0	3.868	155.130
Kwara	1.273	16.6	4.852	88.794
Mid-West	12.083	30.7	47.068	80.419
North- Central	16.283	64.2	20.844	276.982
North-East	2.748	8.4	10.272	11.714
Rivers	11.797	13.2	23.708	40.485
South-East	1.525	2.9	6.347	23.740
West	17.449	80.3	19.607	61.296
North-West	0.196	5.6	6.592	19.279

Table C.3 Output in Manufacturing by Sub-regions

Sources: (1) Bienen and Diejomoah (1981, p. 255)

- (2) Schatzl (1973, p. 210).
- (3) Federal Office of Statistics Economic Indicators (1973-1977) Vols. 9-13, No. 10-12, pp. 9-15.

VALUED ADDED IN MANUFACTURING

Region	1968	1971	1972	1975
Lagos	30.225	100.806	134.524	779 .4 66
Benue Plateau	0.479	4.949	4.807	31.410
East Central	7.225	7.182	12.817	53.407
Kano	7.046	9.976	22.859	53.339
Kwara	0.852	1.198	1.331	48.356
Mid-West	5.210	13.786	14.133	35.092
North- Central	9.068	4.704	48.771	87.457
North-East	0.458	3.874	3.038	5.326
Rivers	6.983	7.610	12.196	14.556
South-East	1.069	2.228	2.822	13.966
West	11.749	46.348	25.923	14.801
North-West	0.155	2.164	1.759	9.169

Table C.4 Value Added in Manufacturing by Sub-regions of Nigeria (N Million)

Sources: Federal Office of Statistics Economic Indicators (Dec. 1974), Vol. 10, No. 10-12; Schatzl (1973, p. 211) Cited in References.

TOTAL EMPLOYMENT IN MANUFACTURING

Region	1968	1969	1971	1975
Lagos	26117	43257	19025	105086
Benue Plateau	678	1974	449	5036
East Central	8123		1682	12130
Kano	7286	11141	3233	19107
Kwara	1166	1808	251	7590
Mid-West	7775	7401	2658	16888
North- Central	8961	16239	628	24765
North-East	1057	1327	191	1782
Rivers	4638		1327	7629
South-East	1374		253	23521
West	6302	7644	2653	13054
North-West	144	2479	132	4399

Table C.5 Total Employment in Manufacturing Industries By Sub-regions of Nigeria

Sources: Schatzl (1973, p. 214), Federal Office of Statistics Economic Indicators (Dec. 1974), Vol. 10, No. 10-12; Bienen and Diejomoah (1981, p. 255), Cited in References.

WAGES OF EMPLOYEES

Region	1968	1970	1971	1975
Lagos	5984.5	7277.5	19528.0	46743.0
West	1121.6	1375.3	2260.0	7668.0
Mid-West	1559.3	1686.2	1022.0	15517.0
North East	107.2	140.1	128.0	1417.0
Benue Platea	u 141.7	147.9	344.0	5927.0
Kano	999.8	1210.6	2292.0	14930.0
North-Centra	11575.6	1984.8	650.0	25608.0
Kwara	146.0	256.7	84.0	4697.0
North West	54.9	49.4	56.0	3409.0
Rivers	1035.9	1703.2	830.0	6593.0
East Central	1429.3	1580.0	844.0	11613.0
South-East	203.8	204.3	94.0	8415.0

Table C.6Employees Wages in Manufacturing IndustriesBy Sub-regions of Nigeria (N Million)

Sources: (1) Bienen and Diejomoah (1981, p. 255).

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- (2) Federal Office of Statistics Economic Indicators (1973-1977) Vols. 9-13, No. 10-12, pp. 9-15.
- (3) Schatzl (1973, p. 209) cited in references.

APPENDIX D

PERCENTAGE DISTRIBUTION OF ECONOMIC INDICATORS BY REGIONS

PERCENTAGE DISTRIBUTION OF ECONOMIC INDICATORS BY REGIONS



- Figure D.1 Research and Development Expenditures as Percentage of GNP by Regions and Economic Groupings (1970 and 1980).
- Source: United Nations Statistical Yearbook (1982), New York.

PERCENTAGE DISTRIBUTION OF ECONOMIC INDICATORS BY REGIONS



- Figure D.2 Research, Development Scientists and Engineers in Developed and Developing Countries--Percent Distribution (1970 and 1980).
- Source: United Nations Statistical Yearbook (1982), New York (p. viii).

APPENDIX E

COMPUTATION OF AVERAGE ANNUAL PERCENTAGE RATE OF CHANGE (r)

APPENDIX E

COMPUTATION OF AVERAGE ANNUAL PERCENTAGE RATE OF CHANGE (r)

$$r = (\sqrt{\frac{f_2}{f_1}}) - (1) \times 100$$

Where:

 f_1 = the figure at the initial date f_2 = the fiture at the latter date r = average annual growth rate t = the period of time (years) between f_1 and f_2

Source: U.N. Demographic Yearbook, 1977 and 1978.

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