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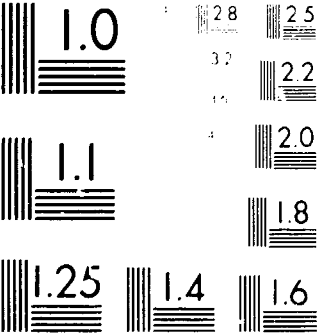
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CHANGING ROLE AND FUNCTION OF THE PUBLIC INDUSTRIAL SECTOR IN DEVELOPING COUNTRIES*

A Comparative Survey

by

UNIDO secretariat

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I. THE SETTING

Public - Private ownership in perspective

The role of the state in economic and industrial development enlarged considerably in both developed and developing countries during the nineteen - seventies. In the developed market economies active state intervention has resulted from a combination of factors: monetary instability, inflation, rapid technological developments, adjustments in prices of energy, shifts in comparative advantages, growing unemployment and resistence or slow pace of required structural changes. Not only has the state assisted the private sector in a positive manner in research and development, but it has also taken "defensive" and "offensive" measures to prop up inefficient private enterprises through protectionism quotas, non-tariff barriers and cartelization In the developing countries, on the other hand, while the role of the state has continued to expand during the 1970s for well-known political, economical and social reasons, viz. need for maximum investments in infrastructure, need for control over basic and strategic industries (in the context of insufficient private entrepreneurship and capital), need for access by the poor and disadvantaged to resources for industrialization, etc., there has been in many countries a perceptible attempt to move towards efficiency, define more adequately the respective roles of the private and public sector and wherever an entreprenuerial class has developed, to encourage positively private ownership and management. Thus in some developing countries the role of the public industrial sector has remained limited and confined to certain specific areas of industrial activities.

The varying use of public industries as a policy instrument has resulted in greater interplay of public and private forces and blending of the role and function of public, semi-public and private manufacturing enterprises. This trend may no doubt be attributed to the fact that public manufacturing enterprises are inter-locked in a network of relationships that are both complementary and competitive to private industry. At one extreme public manufacturing enterprises merge entirely into government, both in terms of ownership and operations. At the other extreme they merge imperceptibly into private industries in the form of mixed ownership, where Government may hold majority or minority shareholding either directly through government acquisition and investment; or indirectly through investment or credit by public financial institutions. In some cases Governments may exercise effective control of an enterprises with minority shareholding or with no equity at all. Moreover on the demand side private industrial enterprises may exclusively serve public demand under monopsony market conditions where the government is the sole buyer, a market form which exists in certain market economies. Thus the demarcation of boundaries between public and private industrial enterprises is not always clear rather their roles and functions are blended in a variety of ownership structures, operational patterns, and interlinkages.

Public industrial enterprise: definition, function, characteristics

In this survey the public industrial sector is viewed as composed of enterprises that are predominantly owned or controlled by the state (including partial ownership if this is sufficient to give effective control) and that produce and market manufactured goods. Wherever reference is made to national data or trends however, the national definition of the public manufacturing sector/enterprise has been used for pragmatic reasons. Public industrial enterprises are commonly characterised by large size, technologically compledx operations, large investments, long gestation periods and economies of scale. They often operate in natural resource based industries, mostly in imperfect markets of monopoly or oligopoly. Moreover they usually enjoy a certain degree of protection from domestic and international competition and have generally preferential access to government services and finance.

Aim and Scope of Survey

The aim of this survey is to provide a synoptic overview of the emerging role and function of the public manufacturing sector in industrialization of developing countries and to highlight key aspects of their motivations; strategies and policies; their contribution to industrial growth development, and to national goals. An attempt is made to analyse the public industrial sector as an integral part of the economy with extensive linkages and interrelationships with other "productive agents" of industrialization.

The undertaking of a comparative inter-country survey of this nature is severely hampered by scarcity and inadequacy of statistical data, information and documentation. Where data and information do exist, it is seldom in a form that allows international comparisons on a consistent and uniform basis, let alone generalizations valid for public industries in developing countries. Yet an attempt has been made to collect statistical data and information from a number of developing countries, partly through questionnaire syrveys of selected countries, and partly through secondary sources. These limitations warrant a cautious interpretation of the survey. There is undoubtedly a need to improve the information base for analysing the role of the public industrial sector.

II. MOTIVES FOR ESTABLISHMENT OF PUBLIC INDUSTRIAL ENTERPRISES

Taxonomy of Motives

An assessment of the role of public industries in development requires an understanding of the circumstances surrounding their birth. Such an analysis facilitates understanding of their objectives, behaviour, policies and performance. The genesis of public industrial enterprises has been from a combination of historical, economic, social and political motivations. The original motivates may assume changing relevance and importance in the process of development as objectives are being fulfilled, introducing a dynamic perspective into their operations.

For the purpose of this survey, the motives are analyzed and illustrated by selected country experience within the following framework, the ranking not being intended to indicate relative importance: i) private sector inadequacies ii) monopoly, government revenue, price stabilization iii) savings mobilization, foreign exchange and aid iv) commanding height, natural resource, self-reliance v) specific socio-political model of development and vi) employment, income distribution and regional development.

Private sector inadequacies

Many industrial investment projects in developing countries, especially large-scale, capital intensive, resource based projects in the fields of petrochemicals, iron and steel, fertilizers etc., require investment, technology, management and entrepreneurship beyond the capability or willingness of existing national private industrialists.

Private entrepreneurs often refrain from investing in such industrial projects due to the magnitude of the investment required, the extent of risk involved, the long gestation period and the impossibility of quick returns private entrepreneurship is also chary of possible nationalization of anti-monopoly measures Moreover, in many developing countries the domestic capital market is inadequately developed to provide the capital required, at any rate without government guarantee. If for some reason foreign investment is excluded or assigned low priority in the national development strategy, the state emerges as the sole entrepreneur capable of mobilizing the resources required and willing to assume the risk associated with largeness. The emergence of public industrial enterprises due to entrepreneurial, managerial or financial inadequacies in the private sector has been a common motive in most developing countries including i.a. Bangladesh, Bolivia, Brazil, Egypt, India, Panama, Sri Lanka and Sudan. In other cases the state has taken over ailing, sick, troubled, bankrupt, indebted, or even abandoned industries, (Bangladesh, India) in an effort to preserve employment and mitigate social consequences of closing down large industrial units.

<u>Monopoly, government revenue, price stabilization</u>

One of the most common reasons for public ownership in industry is that of "natural" and"fiscal" monopoly. Where economies of scale are important, due to the size of the market and technological conditions, a situation may exist where only one enterprise can operate efficiently. Since profit maximization policy under monopoly implies restriction of output and/or high product pricing, there is justification for public ownership to maximize output and charge a reasonable price, while ensuring normal levels of return on capital invested. This argument is given added weight where commercial costs and benefits diverge from social costs and benefits, due to external linkages within the economy. Thus, if marginal costs are lower than average costs, notably in industries with high capital costs or if external effects are present, a monopoly thus created is best owned by the public. The Korean fertilizer industry is one example of natural monopoly owned by the government where the Planning Board determines both the distribution price to the farmers and the transfer price from producer to distributor as part of over-all agricultural development strategy.

Under monopoly and oligopoly market forms, a producer can make substantial profits due to high prices charged for goods which exhibit inelastic demand. Rather than allowing monopoly or oligopoly profits in private hands, many governments find it convenient to operate "fiscal" monopolies in fields of inelastic consumer goods such as tobacco, alcohol, salt, sugar, etc. The alternative would be private monopoly or oligopoly regulated through taxation. There is thus a clear revenue motive for operating government enterprises. For example, in Thailand, a state monopoly operates in cigarette and alcoholic beverages production.

A related motive is that government, through the price policy of state monopolies, may stabilize prices in an effort to contain inflation with associated implications for income distribution and purchasing power. For example, throughout the industrial and developing world, many governments used their state industries to dampen inflation by restricting their prices.[1/]

1/ The Economist, 30 December 1978, page 39.

Saving mobilization, foreign exchange and aid

In many developing countries public industrial enterprises have been established in the hope that they would make a contribution to mobilization of domestic savings, generation of surpluses for reinvestment and transfer of funds as public savings, generation of foreign exchange earnings through exports of procesed natural resources, and attracting foreign investment. Moreover, in many of these countries the tax administrative system may not have been in a position to mobilize the financial resources required for industrialization through taxation or investment incentives. A case in point is Sri Lanka where public industries were created i.a. to generate resources for achieving the goal of national economic development. In Bangladesh public enterprises were viewed as a potent tool for generating surplus and for mobilizing resources for socio-economic development.

A related motive has been suggested by Malcolm Gillis[1/], viz., "Lending activities of major donors of foreign aid and technical assistance have been a significant factor in the creation of public industries in a number of countries particularly in Africa and Latin America. The World Bank and regional multilateral development banks (the Asian, African and Latin American Development Banks) have preferred to channel large portions of their resources through state owned enterprises rather than through ordinary government agencies or private enterprises. The World Bank began to fund public industries in a major way in 1967 primarily because governments were reluctant to guarantee loans to private enterprises and the Bank insisted on such guarantees". It is also to be noted that a substantial proportion

1/ The Role of State Enterprises in Economic Development, By Malcolm Gillis, Social Research, Summer 1980, Page 64 of UNIDO's technical assistance activities to developing countries is being provided to the public sector either directly or indirectly.[1/] Moreover, bilateral assistance, particularly from socialist developed countries, has also been a contributory factor to the development of public industrial enterprises. Thus, for example, in Nepal and also to some extent in Sri Lanka many public industries were created with assistance of foreign aid programmes.

Commanding heights, natural resources, self-reliance

Certain branches of industries, especially those connected with the processing of natural resources play a crucial role in national development and are of strategic importance. Many governments prefer to gain and exercise direct control of these key industrial sectors in order to use them for directing the economic and social development of the society rather than allowing private ownership in these areas. The commanding height justification has been a major motivation for public sector involvement in India and in certain periods also in Sri Lanka and Pakistan by means of nationalization of domestic interests; in the Zaire and Zambia through nationalization of foreign interests.

The quest for enhancement of national self-reliance following decolonization and independence in the late 1950s and 1960s motivated many developing countries to nationalize foreign interests. Since private domestic capital and skills seldom existed, the government became the sole entrepreneur prepared to take over or undertake large industrial investment.

1/ UNIDO, Industrial Development Board: The Public Sector and the Industrial Development of the Developing Countries, Report by the Executive Director, ID/B/238, 28 February 1980, para 28.

This motive contributed to the establishment of public industries in Indonesia (1957), Egypt (1957/1961), Algeria, Brazil, Ghana and others. More recently, some developing countries (Peru, Mexico) have nationalized foreign interests to gain more control over natural resource exploitation.

Specific socio-political model of development

An important motive for creation of public industries has been the ideology of socialism where the state is assigned ownership of factors of production. This argument holds true for some developing countries. Yet in most of these developing countries, industrial cooperatives, private small-scale industry and foreign investment are not negligible.

Changes in government have often led to changes, at times fluctuations, in the role and fuction of public industries. These have assumed varying importance at different periods depending upon the social philosophy of the prevailing government. At periods the enthusiasm for public industry was gradually substituted by pragmatism, and public industries inherited from a previous regime were at times divested.

In other countries the birth of public industries bears little or no relationship to ideological considerations. Otherwise it would be difficult to explain the existence of large public sector industries in economies like Brazil, or the Republic of Korea. In these countries other motives, especially economic, and pragmatism have contributed to the establishment of public industries. This point may conveniently be illustrated by comparing the official ideologies of the Republic of Korea and India, which assign diametrically opposing roles to public ownership and control.

Leroy Jones[1/] states that "In Korea, public ownership is viewed as a necessary evil: a role attributed to private enterprises in India. The public enterprise share in non-agricultural GDP is quite similar, if not identical, in the two countries". It is further stated that[2/] the Korean public enterprise sector has been shown to be surprisingly large considering the government's ideological orientation. The historical antecedent can explain only a fraction of the paradox; much more can be explained in terms of devotion to economic growth and the role of public ownership and control in overcoming various forms of private market imperfection.

Employment, income distribution, regional development

Many governments of developing countries have regarded employment objectives as a major motive for establishing public industries with a view to creating new employment opportunities commensurate with economic growth or to preserving employment by means of taking over ailing private industries. In Sri Lanka, for example, public industries have been expected to generate greater and better employment and training opportunities while in Bangladesh they were expected to facilitate employment creation. The employment motive has been relevant in cases ranging from textile companies in India to cement plants and bicycle manufacturing in Bolivia.[3/]

1/ Leroy Jones: Public Enterprises and Economic Development, The Korean Case, Korea Development Institute, Seoul, Korea, 1975, page 129. It is noted that this statement refers to the share of public enterprises in non-agricultural GDP. However, the share of the public sector in manufacturing GDP (Korea 15.1) and output (India 19.0) is quite similar in the two countries.

2/ Op. cit., page 139.

3/ Malcolm Gillis, Op. cit. page 261.

Many developing countries have also entrusted public industries with special responsibilities in terms of contributing to improved income distribution in an effort to rectify imbalances between regions of a country or between social groups. This motive has been relevant in both Malaysia and Indonesia. In Bangladesh public ownership was considered a means of reducing inter-regional inequality of income and interpersonal inequality as well as promoting growth with equity and employment and helping to reduce poverty. In general, however, these motivations have been of secondary importance to most public industries which often been established for other reasons in the expectation of meeting social objectives as well. Only in a few countries is there any evidence of policies which consciously subordinate growth to egalitarian objectives.

III. REVIEW OF CONTRIBUTION OF PUBLIC INDUSTRIAL SECTOR TO INDUSTRIAL DEVELOPMENT

Comparative cross-country analysis of relative importance of public industrial sector

a) Importance of public industry in different developing countries.

In developing countries, officially designated as "centrally planned economies Asia", which include People's Republic of China, The Korean Democratic People's Republic, Laos, Democratic Kampuchea, Mongolia and Vietnam, the public sector identifies itself almost entirely with national industry. Thus in Mongolia, the public sector accounts for 97.4 per cent of total manufacturing output, the balance originating in the small scale co-operative sector. The public sector plays a predominant role in Syria, Iraq, Egypt, Bangladesh, Somalia and Pakistan accounting for more than two thirds of total manufacturing investment. In both Syria and Iraq, manufacturing investment is almost entirely in the public sector (Table I).

Public industrial enterprises play an intermediate role in Mexico, Algeria, India, Venezuela, Yemen Arab Republic, Sri Lanka, Tunisia, Ze[illegible], Turkey, El Salvador and Morocco. The share of the public sector in t[illegible] manufacturing investment in these developing countries lies between one-third and two-thirds.

A limited role is assigned to public industries in Peru, Brazil, Ivory Coast, Nigeria, Panama, Thailand, and the Philippines, listed in descending order of public sector importance. In these developing countries the public sector accounted for less than one-third of manufacturing investment.

	[illegible]	[illegible]	[illegible]	Turkey (25.[illegible])
	[illegible]	[illegible]	India (32.[illegible])	[illegible]
No. of countries	22	12	[illegible]	3

Source: Annex I

Table I: Share of Public Manufacturing Sector in total manufacturing investment, value added, output and employment in selected countries

	Share of Public Sector in total manufacturing			
[illegible]	Investment	Value added	Output	Employment
[illegible]	[illegible]			
	[illegible]			
[illegible]			[illegible]	
		[illegible]		
	[illegible]	[illegible]		
	Bangladesh [illegible]			
	[illegible]			
			[illegible]	
[illegible]				[illegible]
	[illegible]			
[illegible]				[illegible]
	[illegible]	[illegible]		
	[illegible]			
	[illegible]			
	[illegible]			
				[illegible]

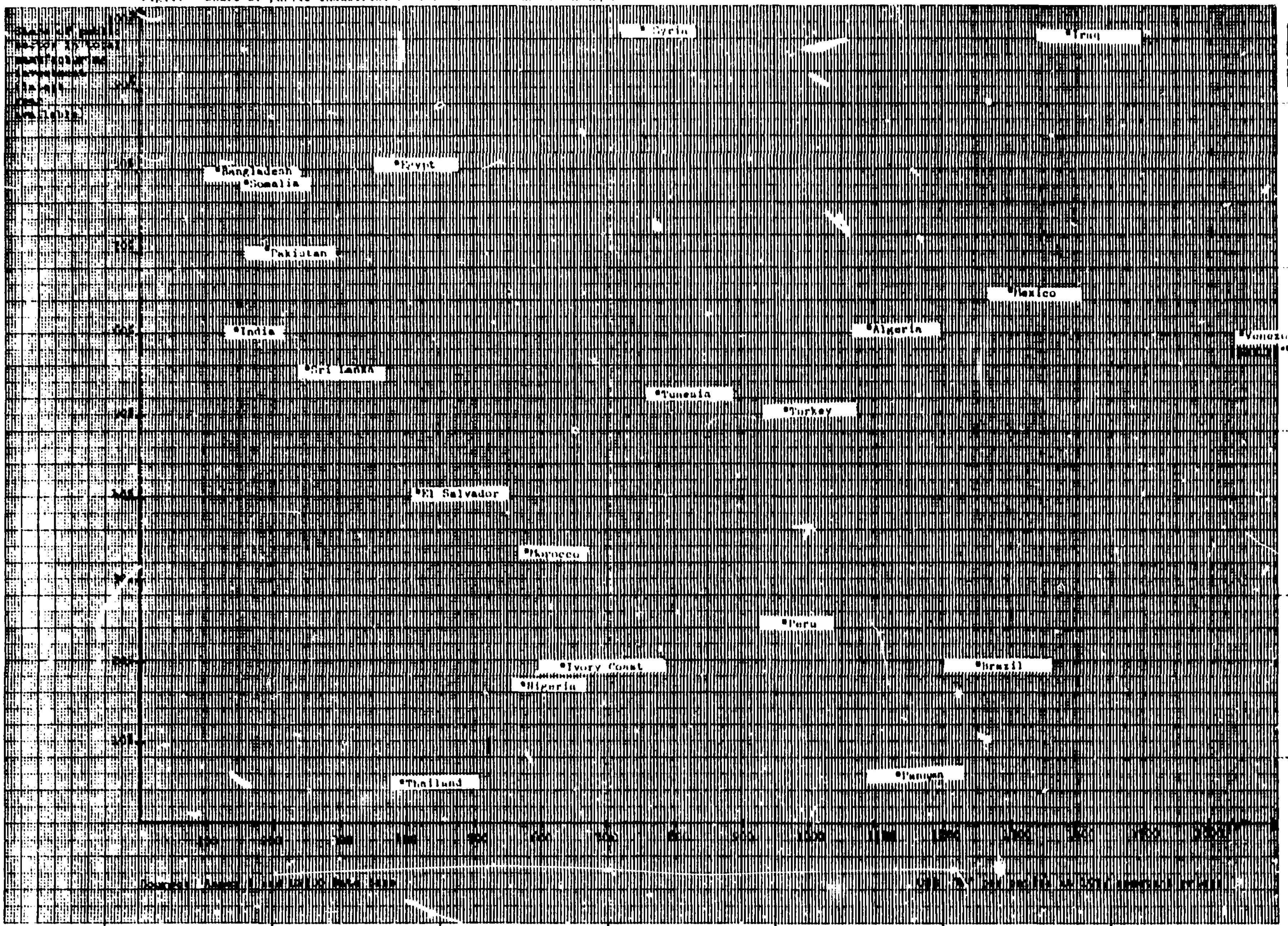
The public manufacturing sector plays a predominant role in a greater number of developing countries in South and South-east Asia, West Asia, and Africa than in Latin America. It is also noteworthy that the public sector seems to play a relatively important role in oil-producing developing countries. This holds true for some developing countries like Iraq, Mexico, Algeria and Venezuela, but to a lesser extent for Nigeria, Indonesia and a number of other oil producing developing countries, especially West Asia.

b) Dynamic role of public industrial sector

Public ownership in industry is a relatively new phenomenon in the developing world. In Turkey and Mexico public industries were established in the 1930s; in China during the 1940s; in Bolivia, Indonesia and Egypt in the 1950s, and in most other developing countries during the 1960s and 1970s. In many of these developing countries, especially in Africa, industry itself is of recent origin.

In the course of this relatively short period, the role and function of the public industrial sector has been subject to significant change. In countries where investment figures were available for more than one year, mainly from 1970 onwards the analysis in Annex II reveals that the role of public industry has been increasing in oil-producing developing countries like Iraq, Mexico, Venezuela, possibly in Algeria and also in Pakistan. In contrast, the importance of public industry has been decreasing in Bangladesh, Egypt and Yemen Arab Republic, all developing countries where the proportion of public sector in total manufacturing investment previously exceeded 90 per cent. In other developing countries such as Syria, Tunisia and Sri Lanka the role of the public manufacturing sector

Fig.1: Share of public industrial sector in total manufacturing investment by stage of development - selected countries



has been fluctuating with no clear trend. For example, in Sri Lanka the strategic role assigned to the public manufacturing sector has changed practically with every new government elected over the last decade.

The relationship between the role of the public industrial sector and the stage of development may be illustrated by using as indicators the share of public sector in total manufacturing investment and GDP per capita. For non-oil producing developing countries, there seems to be an inverse relationship between the share of the public sector in total manufacturing investment and GDP per capita. Thus, apart from oil-producing developing countries, the role of the public industrial sector is predominant in countries with low per capita GDP and the role is generally lower in countries with higher per capita GDP, figure I. (except in the case of Syria).

Significance of public industrial enterprises in different branches of industry

a) Capital goods industries

Table II provides information on the significance of the public sector in various branches of industry in selected developing countries. Information is provided on manufacturing value added, output, investment, employment as well as size structure, covering consumer, intermediate and capital goods industries.

The importance of the public sector in capital goods industries is pronounced in most developing countries. In Algeria and Egypt, the share of public sector in total manufacturing output in capital goods industries was 92.7 per cent and 30 per cent respectively. The public sector plays a relatively important role in iron and steel industries.

and a moderate role in various machinery industries. There is thus some evidence that emphasis upon capital goods industrialization based upon backward linkages to the mining sector usually entails an emphasis upon public sector, but that its role generally decreases with higher stages of industrial processing.

b) Intermediate goods industries

As a result of deliberate government policy public industrial enterprises tend to be concentrated in intermediate goods industries particularly petroleum refineries, petroleum products and chemical industries. For example, petroleum industries were all state owned in countries where such information was available (Table II). In Egypt, 79 per cent of total value added in intermediate goods industries originated in the public sector. This tends to point towards the fact that resource based industrialization usually entails an expanded role of the public sector both in terms of domestic demand and export oriented industrialization. This is most clearly evidenced by the crucial role which the public sector plays in the oil-producing developing countries. Further, as the Korean experience indicates, the public industrial enterprise typically exhibit high forward and high backward linkages with other industries.

c) Consumer goods industries

In general, the public sector does not seem to play a similar role in the production of industrial consumer goods apart from certain food products (sugar, salt,etc.) tobacco, beverages (alcohol), textiles and others. For example, in Egypt the public sector produced around half of the total manufacturing value added in the consumer goods sector. In

Table II - Relative weight of Public Industrial Sector in various branches of industry selected countries (latest year available)

Branch	Share of public sector in each branch
Mainly consumer goods	
Food products	[illegible]
Beverages	[illegible]
Tobacco	[illegible]
Textiles	[illegible]
Wearing apparel	[illegible]
Leather and fur products	[illegible]
Footwear	[illegible]
Wood and cork products	[illegible]
Furniture and fixtures	[illegible]
Printing and publishing	[illegible]
Prof. and scientific, photo and optical goods	[illegible]
Other manufacturing	[illegible]
Mainly intermediate goods	
Paper	[illegible]
Industrial chemicals	[illegible]
Other chemicals	[illegible]
Petroleum refineries	[illegible]
Misc. products of petrol and coal	[illegible]
Rubber products	[illegible]
Plastic products	[illegible]
Pottery, china and earthenware	[illegible]
Glass	[illegible]
Other non-metallic mineral products	[illegible]
Mainly capital goods	
Iron and steel	[illegible]
Non-ferrous metals	[illegible]
Metal products	[illegible]
Non-electrical machinery	[illegible]
Electrical machinery	[illegible]
Transport equipment	[illegible]

Source: Same as for Annex I

Table II. (cont[illegible])

Branch		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Mainly consumer durables:						
Food products	311+12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Beverages	313	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Tobacco	314	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Textiles	321	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Wearing apparel	322	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Leather and fur products	323	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Footwear	324	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Wood and cork products	331	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Furniture and fixtures	332	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Printing and publishing	342	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Prof. and scientific equip., photo and optical goods	385	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Other manufactures	390	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Mainly intermediate goods:						
Paper	341	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Industrial chemicals	351	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Other chemicals	352	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Petroleum refineries	353	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Misc. prod. of petro and coal	354	0-24	0-24	0-2[illegible]	0-2[illegible]	[illegible]
Rubber products	355	[illegible]-24	0-24	0-2[illegible]	0-2[illegible]	[illegible]
Plastic products	356	25-49	25-4[illegible]	[illegible]5-4[illegible]	[illegible]-4[illegible]	[illegible]
Pottery, China and E.ware	361	[illegible]-24	0-24	0-2[illegible]	0-2[illegible]	[illegible]
Glass	362	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Other non metallic mineral products	369	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Mainly capital goods: 1/						
Iron and steel	371	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Non-ferrous metals	372	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Metal prod. inc. machinery	381	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Non-electrical machinery	382	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Electrical machinery	383	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Transport equipment	384	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Source: Same as for Annex I

Algeria, the share was higher. However, in Pakistan, Sri Lanka, Syria and Venezuela the role of public industry in consumer goods is moderate. Thus, it appears that in most developing countries included in the sample the consumer goods industries is primarily the domaine of private or co-operative industry, particularly small and medium scale industry. Concern with the provision of basic needs for industrial goods has not led to any major expansion of public industry. Rather, it seems that these have been established for the purpose of extracting government revenue in monopoly industries.

Review of public sector's contribution to industrial investment, value added and employment

The available data do not permit an elaborate analysis of capital/output and labour productivity coefficients. The data presented in Table I seem to indicate that public industries generally contribute more to manufacturing investment than to manufacturing value added (except Algeria and Pakistan)/ to manufacturing output (except Somalia and Algeria)/ to manufacturing employment (no exceptions). The difference is striking in the case of Iraq, where the contribution of the public sector to manufacturing investment was 96.7 per cent while its contribution to manufacturing value added was limited to 41.5 per cent; in the case of Pakistan its contribution to investment was 70.7 per cent as against a contribution of 22.0 per cent to total manufacturing employment. Judging from the figures, the public sector would seem to have made a modest contribution to employment creation in industry.

The data confirm that a high degree of capital intensity, i.e. high capital/output raio, exist in the public industrial sector. This capital output pattern has been observed in a number of developing countries including i.a. Bolivia, Brazil, Colombia, Ghana, India, Indonesia, Pakistan, Bangladesh and Sri Lanka. In the Republic of Korea the capital intensity in public manufacturing enterprises is more than double that of Korean manufacturing as a whole. The paradigm is epitomized in India and Brazil to the extent that[1/] "it is almost as if industries were divided between public and private enterprises according to their capital intensity".

The tendency towards capital intensive bias in public industries be attributed primarily to the circumstance that a significant proportion of investment in public industry is concentrated in industrial sectors which would tend to be capital-intensive in any case regardless of ownership. Secondly, public industries tend to operate more in monopolistic and oligopolistic markets (than their private counterparts), where pressures for cost minimization is weaker than under competitive market forms. Thirdly, there may be a built-in inclination for public officials and managers to favour capital-intensive projects partly due to the conditions whereby foreign aid is channelled into industry. Moreover, the attractiveness of capital intensive investments in public industry is given added weight, due to the preferential treatment they receive, especially in countries where the finance sector is dominated by public financial institutions.

Table II shows that most enterprises fall within the category of large scale enterprises. The public industrial sector consists exclusively of large scale enterprises (more than 50 employees) in Pakistan, Sri Lanka and Egypt. In Venezuela and Nicaragua there is a small proportion of

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1/ John B. Sheahan "Public Enterprise in Developing Countries" in W.G. Shepherd ed. Public Enterprise: Economic Analysis of Theory and Practice (Lexington books) 1976, page 221.

medium scale enterprises, in the former country mainly in the consumer goods industry sector. In Algeria, the situation is somewhat different with more medium sized industries than large scale industries and a limited number of small scale industries operating primarily in consumer goods industries.

Role of manufacturing within the public sector

The role of manufacturing in relation to other public sector activities in the fields of finance, transport, electricity, trade etc. is illustrated in Annex III. A steady increase in the importance of the manufacturing sector within the public sector has been observed in India, Republic of Korea, Pakistan and Sri Lanka while fluctuations occurred in Bangladesh and an actual decline occurred in both Nepal and Thailand. In some countries the public manufacturing sector has become a dominant force within the public sector, notably in Bangladesh and the Republic of Korea with more than 46 per cent of all public sector activities and also Sri Lanka with 34.4 per cent. In other countries, the share lies between 14.9 per cent and 22.4 per cent. In Bangladesh, the Republic of Korea and Sri Lanka, manufacturing is the most important public sector activity; in India it ranks second; in Thailand and Nepal third; and in Pakistan fourth after transport, electricity and finance.

IV. PUBLIC INDUSTRIAL SECTOR AS INSTRUMENT OF INDUSTRIAL POLICY AND STRATEGY

International development strategies for public industrial sector

In recent years various intergovernmental fora at the global level, industry sector level and regional levels have increasingly been concerned with the role that different ownership forms play in national development of developing countries, following the widespread attention devoted to transnational corporations, private foreign investment, and joint ventures in the 1970's. The recommendations emanating from these international bodies have implications for national policies and strategies for promotion of public industries.

At the global level, the International Development Strategy for the Third United Nations Development Decade[1/] emphasized that "due account should be taken of the positive role of the public sector in mobilizing internal resources, formulating and implementing overall national development plans and establishing national priorities".

At the industry sector level, the Lima Declaration and Plan of Action on Industrial Development and Co-operation[2/] recognized inter alia the importance of ensuring an adequate role for the public sector in the expansion of industrial development of developing countries. The General Assembly

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1/ Resolution 35/36 adopted by the General Assembly, 5 December 1980, (para. 31)

2/ Adopted by the Second General Conference of UNIDO, 12-26 March 1975 of the United Nations recommended[1/] to take into account *inter alia*, the role of the public sector in implementing the long-term strategy of industrialization. The Industrial Development Board of UNIDO adopted resolution 48(XII)[2/] on the role of the public sector in promoting the industrialization of developing countries. Subsequently the New Delhi Declaration and Plan of Action on Industrialization of Developing Countries and International Co-operation for their Industrial Development[3/] referred to the significance of the public sector in the redeployment of industries from developed to developing countries (para. 62). The Declaration and Plan of Action also referred to the right to nationalization in accordance with national legislation (para. 147).

At the regional level the Asian and Pacific Regional Development Strategy for the 1980's adopted by the thirty-fifth session of the Economic and Social Commission for Asia and the Pacific[4/] (March 1980) stated *inter alia* that the relative role of the state sector, the private sector and various people's organizations in each country would naturally vary according to the politico-socio economic system followed (para. 17). State enterprises had multiplied and diversified within the region and their role in development would continue to grow. The Commission recommended that substantial autonomy for such enterprises was necessary and feasible and stressed the need for them to have an adequate and efficient cadre of highly qualified managers (para 19).

In Africa, the Lagos Plan of Action specified the requirements for the achievement of industrial development. The Plan of Action emphasized

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1/ Resolution 32/179 on the role of the public sector in promoting the economic development of developing countries, 19 December 1977.

2/ Adopted by the Industrial Development Board at its twelfth session, 26 May 1973.

3/ Adopted by the Third General Conference of UNIDO(21 January-9 February 1980).

4/ Economic and Social Commission for Asia and the Pacific: *Annual Report*, 17 March, 1979-29 March 1980). Economic and Social Council. *Official Records 1980*, Supplement No.6, United Nations, New York 1980, E/1980/[illegible].

that industrial development in each African country will depend on determination of the role of private, semi-public as well as public enterprises as instruments for the implementation of the Plan1/. In implementing the Lagos Plan of Action the role of the public industrial sector is primarily viewed as interpreter and a manager of socio-economic change: as a planner, as an entrepreneur: and as a negotiator2/.

Outline of national strategies, policies and objectives related to the public industrial sector and other "productive agents" of industrialization

a) General characteristics of national strategies, policies and objectives.

There is a great diversity and multiplicity of strategies, policies and objectives for development of public industry in developing countries. Ideally the objectives should be defined at the national level commensurate with national strategies and plans: at the sectoral level to ensure harmonization, and at the enterprise level to guide management decisions. However often they are vaguely defined with weak relationship to the motives for their establishment. The problem of multiple, diverse and vaguely defined objectives is compounded by the complexity involved in choosing between them within the context of the national policy framework. However as long as objectives are ranked and weighed to facilitate reconciliation of commercial and socio- political objectives, management theory provides sufficient tools to pursue multiple goals with managerial efficiency.

1/ Plan of Action for the Implementation of the Monrovia strategy for the Economic Development of Africa; Organization of African Unity, ECM/ECO-9 (XIV) Rev. I, April 1980. page 26.

2/ Economic Commission for Africa: The Public Sector and the Implementation of the Lagos Plan of Action, April 1981, E/CN-14/807: E/CN.14ds/TPCW.11/2[illegible].

Policies pursued by governments for acquiring public industrial enterprises include transfer of ownership through nationalization and direct capital investment leading to full, majority or minority ownership. Governments of many developing countries have also acquired indirect ownership or multiple indirect ownership through investment by one or several public financial institutions or public industries. Further, governments have exercised effective control over enterprises even with minority shareholding or with no equity at all, through influencing the decision making process, either by factors internal to the firm, or by the external economic environment in which the firm operates. Thus due to the existence of a variety of mixed public-private enterprise forms and linkages it is difficult to gauge the real involvement of government in the industrial sector.

The indirect government ownership form in industry may be quite significant. Indeed in many developing countries, governments have acquired substantial interest in financial institutions. For example the share of public enterprises in the finance sector (measured in terms of proportion of value added in GDP) was as high as 94.5 per cent in Sri Lanka (1974): 85.9 per cent in Bangladesh (1974); 67.5 per cent in Pakistan (1974): 48.7 per cent in Korea(1975); 25.4 per cent in India(1972) and 14.2 per cent in Thailand (1973)[1/]. Since financial institutions may have substantial shareholdings or rendered significant credit to private or semi-private industrial enterprises, the real involvement of government in overall industry may be very substantial. For example, in Trinidad and Tobago the Government owned 33 commercial enterprises: 13 majority owned enterprises and 13 minority interest companies in 1981[2/]. In Malaysia the government owned 32 public industrial enterprises with 65 wholly-owned subsidiaries and 135 joint ventures.

1/ Il Sakong: Macro-economic Aspects of Public Enterprises in Asia, A Comparative Study. Korea Development Institute, 1973, p. 47-50.

2/ Includes both industrial and non-industrial commercial enterprises.

There are important areas of convergance in the objectives and operational patterns of public, private and foreign enterprises, which are all interlocked in a network of interrelationships that are both complementary and competitive. The delineation of industrial strategies and policies between public, private and foreign enterprises has been a crucial component of industrial development strategies of a few developing countries. Annex V exhibits an indicative list of various industrial branches "reserved" for the public sector and other "productive agents" of industrialization (private domestic, foreign, cooperatives, joint-ventures) in Bangladesh, Pakistan, Sri Lanka and Venezuela.

There is significant evidence that changing economic, social and political factors have led to modifications in development strategies and policies and substantially affected the role, function and organizational structure of public industrial enterprise development and their relationship to other "productive agents" of industrialization. This changing strategic role and function of the public industrial sector may be illustrated by the experience of Bangladesh, where the role previously assigned to the public industrial sector in 1974 was almost entirely reversed in favour of the private sector in 1976. (Annex V).

The following synoptic review of selected country experience attempts to clarify the varying roles assigned to the public industrial sector in national development strategies of developing countries with different socio-economic background. For this purpose the countries have been classified into countries that are predominantly public sector oriented; mixed public-private sector oriented and predominantly private sector oriented, referring to countries respectively with a share of public sector in total manufacturing investment of more than two-thirds, between one-third and two-thirds and less than one-third. This is a somewhat arbitrary but convenient criterium. However, it should be noted that if manufacturing value added was used as criterium instead of investment, more countries would fall into the latter country groups. The investment criterium has been chosen simply because it is available for a greater number of countries. A summary review of major objectives and strategies for the public sector for selected countries is presented in Table III.

b) Developing countries with predominantly public industry environment

This group of developing countries encompasses i.a. Syria, Irac, Egypt, Bangladesh, Pakistan and Tanzania. A common feature is that the emergence of public industry was primarily based upon non-economic motives with a view to promoting a socialist pattern of development. The function of the public industrial sector is primarily in the nature of entrepreneurial and managerial substitution. The enterprises were mainly acquired by means of nationalization of domestic and/or foreign enterprise. The cooperative and small scale industry sector remained important in terms of value added and especially employment but not in regard to investment. In countries where public industries have come of age, it appears that policies and strategies are gradually being enunciated in a more specific manner to take account of the potential role of private industry, domestic as well as foreign.

In Syria the manufacturing sector was largely dominated by the private sector until 1964. In accordance with the new socialist policy the major means of production in the country were nationalized in 1964/65. As the public industrial sector grew, its organization also changed. In an attempt

Table III. Synoptic review of objectives and strategies for public industrial sector - selected countries

Major motive	General and Socio-political motives 1	Commanding heights strategic industries natural resource exploitation, self-reliance 2	Employment, Income distribution and general welfare 3	Government revenue savings mobilization foreign exchange 4	Industrial growth efficiency, performance and technology 5	Relation to private sector domestic and foreign 6
Botswana		Public participation in major industries of strategic importance to the nation				
Brazil		To preserve Brazilian control of public and politically sensitive sectors				To engage in activities that private enterprises are either unwilling to tackle or unable to finance.
India		To control commanding heights of the economic and strategic areas which by their very nature cannot be entrusted to private hands	-To remove regional imbalances -To remove sectoral imbalances			-To countervail power of large enterprises in the private sector and reduce concentration of economic power -To build-up the necessary infra structure for the growth of industries specially where private capital is shy of heavy investment -To engage in activities that that private interests are either unwilling to tackle or unable to finance
Malaysia	To restructure the pattern of ownership in industry state enterprises will be turned over to Malay and other indigenous ownership and management as soon as possible		To promote economic development in the less developed areas and thus help redress regional economic imbalances			To provide training and ensure that viable progress are made available to prospective private indegenous enterpreneurs
Mexico		To protect national sovereignity and propitiate the rational exploitation of natural resources	-To promote regional development and industrial decentralization -To improve the standards of living of the rural sector through the regional exploitation of natural resources and job creation -To protect the populations acquisitive power offering basic foods at lower prices	-To improve the country's commercial balance	-Promotion of scientific and technological development -To provide basic inputs for industrial development at lower prices -To promote the development of capital goods industries and to carry on with the process of import substitution	To rehabilitate private enterprises which are poorly managed and in bankruptcy

Table III (contd.)

	1	2	3	4	5	6
Mozambique, Republic of	Establish appropriate economic order, priority and structures as well as establish economic development and management as a centrally planned economy					Semi-official enterprises or joint ventures between public private sectors
Pakistan	Making the controllers of the means of production accountable to the Government	Exploitation of natural economic resources for the maximum advantage of the common man	-Broad basing the benefits of economic development and administration -Equitable distribution of wealth and economic power -Safeguarding the interest of small investors			
Senegal		To establish national control over key sectors especially those involving important national resources	-To create high quality job opportunities for senegalese in the modern sector of economy	-To maximise foreign currency earnings for reinvestment within Senegal by taking large positions in major export enterprises	-To acquire new technology and managerial expertise from abroad and from the domestic private sector -To develop an organizational structure which is more flexible than governments administrative services	-To promote development in promising areas where private initiative has proven insufficient -To promote faster economic development especially in partnership with the private sector -To attract foreign financing which sometimes prefers to channel its funds through para public institutions rather than through the public administration
Sri-Lanka	To discourage concentration of economic power	To utilize the economic resources of the country	-To provide maximum employment opportunities -To advance the regional development of the country		Paying critical attention to the improvement of the management functions Viability of the public industrial sector	-To commerciali ze activities that have been run by the Government -To undertake tasks beyond the capacity of the private sector and other enterprises -To take over the management of ailing private sector firms

Table III (contd.)

	1	2	3	4	5	6
Sri Lanka (contd.)						-Removing protection and state monopolies -Encouraging foreign collaboration investment and partici-pation
Thailand		To support state enterprises which are strategically important				-To support state enter-prises involving large invest-ment or high level of technology in which private enterprises are reluctant to enter.
The Somali Democratic Republic	Establishing new publicly owned industrial enterprises				Increasing the efficiency and profitability of existing public enterprises	Promoting industrial co-operation. industrial estates and establishing industrial joint ventures with foreigners
Yemen, A.R						Emphasis on the organisation of mixed ownership companies
Yemen, P.D.R	Increased involvement of the public sector in the process of industrialization and emergence of public and mixed sector industries					
Zambia	To ensure reali-sation of Industrial Participatory Democracy in all public sector undertakings		to institute com-prehensive train-ing programmes for their man-power development thereby increasing operational efficiency. to expand and diversify their operations so as to satisfy the ever increasing needs of the people through local production, and thereby create more employment oppor-tunities for the local labour force.	To generate adequate surpluses for future expansion and new investments: To contribute to foreign exchange earnings by actively participating in export promotion and import substitution industries:	To further strengthen the position of the public sector in the national economy by impro-ving the sector's overall economic performance To encourage agro-industries, create industrial and manufacturing opportunities and make full use of local raw materials in their existing and future production opera-tions.	

to restore confidence by the private sector, having been largely shaken by nationalization in the mid-1960s and to encourage private investments, an indicative list was issued in 1971 by the Government, identifing the particular branches in which the public, private and mixed sectors were to operate. Industries which are exclusively restricted to the operations of the public sector included those which i) rely on mineral resources, ii) require large scale production facilities, and where the products are largely standardized in nature, iii) produce basic goods for local consumption and those which produce strategic products. Furthermore the indicative list specified 110 industrial commodities which the private sector can engage in manufacturing.

In Iraq government ownership in manufacturing was rather small until 1964 and mainly confined to oil refineries and a few large establishments. The far reaching nationalization measures in 1964 placed all large manufacturing enterprises under government control. Public ownership became a dominant feature of the Iraqi economy. The private sector remained active in small establishments and small workshops. Changes have reportedly occurred in the governments attitude over the last two years more favourable to the private sector.[1]

In Egypt the public sector emerged through nationalization in 1957 and dominated the manufacturing sector until the mid-seventies. The introduction of the "open-door" policy in the late 1970s was aimed at rationalizing the market pricing system and the enhancement of the roles of the private and foreign sectors. The public sector is gradually being reorganized to enable it to function on a commercial basis. Its role will gradually be confined to those activities which would not be attractive

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1/ The Economist, 6 June 1981 page 17 (Survey) to private and foreign investors. Main emphasis will be placed on enhancing the efficiency of the public sector. Thus the major component of the policy and strategy of the industrial programme 1980-84 is to restrict the participation of the public sector, and to strengthen and deepen the policy of an "open-door" economy. This implies concentrating mainly on the expansion of joint projects with foreign partners which is considered the best means of renovating industry and for reducing the deficit in the balance of payments.

In Bangladesh the establishment of a socialist economy implied that public enterprises were to perform an entrepreneurial function previously assumed by the private sector. The public sector became the dominant sector in industry after nationalization in 1972. A limit was set on the size of individual units in the private sector, which was not allowed to collaborate with foreign private enterprises. Later the ceiling on private sector units was increased and collaboration with foreign private sector allowed. The areas of investment reserved for the public industrial sector was originally set at 18 sectors but later reduced to 8 sectors, while other sectors were opened for joint ventures between private and public sectors. Under the influence of private interest groups and political factors, the previous policy has been further modified by allowing private enterprises majority holding in joint ventures and lifting the ceilings on private industry units on a case by case basis.

In Pakistan the manufacturing sector was predominantly private until 1971. With mass nationalization in 1972 for reasons of distributive justice and socialism the manufacturing sector came to be dominated by public industries. The emphasis on the public industrial sector was reversed in 1977 when measures were taken to decentralize and return public industries to private ownership. At the same time major efforts were made to invigorate the private sector as an instrument of industrialization and economic progress. This new policy is reflected in the Fifth Five Year Development Plan 1978-83 which seeks to achieve inter-alia restriction of public investment to ongoing projects and a substantially increased role of the private sector in industrial development. In the current Plan the role of public sector industry will generally be confined to modernization and balancing of capacity. Notwithstanding the new sentiment in favour of private industry, the public industrial sector has retained its role as a major vehicle of industrial development.

In Tanzania, the Arusha Declaration of 1967 emphasized socialism and self-reliance and placed increased responsibility on the public sector to engage in productive investment in industry. Industrial development was to be based on four ownership patterns: i) industries which were to be wholly owned by the government including strategic industries: ii)industries which were to be controlled by the government by having more than 50 per cent of the voting shares (mainly parastatals); iii) industries which were to operate on partnership or joint venture basis where the government was not necessarily to have majority share and iv) open industries, which were to deal with small and medium scale economic activities; undertaken by local, foreign and government institutions. A National Development Corporation was established as a government investor to consolidate the institutional foundation for socialistic development. A number of firms in the industrial sector were nationalized or majority shares acquired compulsorily with compensation. Yet the National Development Corporation has encouraged partnership with private firms both local and foreign, of up to 50 per cent of equity.

Since 1963 the state sector in Burma was intended to become the dominant force in manufacturing: private industry has been allowed only under various limitations and controls. The public sector is overwhelmingly represented in the heavy industry and capital goods sector and is therefore able to control the pattern of accumulation and the provision of inputs to the private sector. Basically the public sector is reserved for industries using imported raw materials while private enterprises operate in industries using local inputs.

c) Developing countries with mixed public and private industry environment

These countries include i.a. Sri Lanka, India, Korea and Mexico. The salient feature of policies and strategies is that the roles of public, private and foreign industry are usually enunciated with greater clarity than in other countries, and that greater emphasis is given to viability and efficiency of the public industrial enterprises.

Sri Lanka is perhaps unique among developing countries. In that the role of the public industrial sector has undergone significant fluctuations with every change of government since 1956. By the mid-seventies every important facet of the economy came to be dominated by the public sector while the private sector was assigned an ever diminishing role except for small and medium industries. In 1977 the government propounded a rapid expansion and a dominant role for the private sector and a drastic curtailment of the public sector. A rapid privatization of the public sector was expected.

According to the national economic development plan, the public industrial enterprise is expected to show an adequate return on capital invested in order to make a contribution to the exchequer. The development strategy also emphasised improved resource utilization, managerial efficiency and to this end encouraged foreign collaboration agreements. According to the plan public industrial enterprises will not be expected to cover any new areas.

Historically the public industrial enterprise in Sri Lanka evolved by superseding the governmental institutions in order to ensure much needed commercial flexibility to conduct certain industrial activities where the private sector could not come in. However, rigorous controls were being imposed on public industries leading to irrational interference in pricing, production and employment policies. This led to the deterioration of the efficiency of the public industrial enterprise. To remedy the situation government introduced certain major reforms in late 1977. All public industries were instructed to amend their operational methods so that they carried certain levels of financial viability and ceased to be a drain on the exchequer.

Public industrial enterprises were also required to compete on equal and non-discriminatory terms with the private sector and monopoly power of public industrial enterprises was dismantled. They were also made to face a fair degree of import competition. Thus public sector efficiency was sought to be enhanced by creating competitive conditions and not by effecting bureaucratic controls.

Public industries in Sri Lanka were also encouraged to engage the services of professional managers, instead of depending on persons with limited or no commercial experience. To bring about more harmonious labour relations, worker representation in the Boards of Management was brought about by appointing worker Directors in most enterprises. The problems related to inadequacy of skilled personnel were partly expected to be reduced through emphasis on training aspects in collaboration agreements between public and foreign enterprises.

Finally the performance of enterprises incurring recurrent losses are being closely examined with a view to improving their efficiency and financial viability. The Government has decided on a policy to close down those industries that are continuing to be a burden on the exchequer.

In India, the adoption of a socialistic pattern of society in 1954 further enlarged the role of the public sector in the mixed economy framework. Commensurate with industrial progress, the role of the public industrial sector has increased continuously. The Industrial Policy Resolution of 1956 classified industries in three categories: 1) Industries which would be the exclusive responsibility of the State (17): 2) Industries which would be progressively state owned but in which private industries would be expected to supplement the efforts of the public sector (12): and 3) other industries. Emphasis has been placed on complementarity of the public and private industrial sectors on the assumption that the private sector accepts the broad principles implied in the national development plans. An important emphasis is given to the inter-relationship between small-scale and large-scale enterprises. The new Industrial Policy Resolution adopted in December 1977 refers to the role of the public industrial sector as follows:

"The public sector in India has today come of age. Apart from socialising the means of production in strategic areas, public sector provides a countervailing power to the growth of large houses and large enterprises in the private sector. There will be an expanding role for the public sector in several fields. Not only will it be producer of important and strategic goods of basic nature but it will also be used effectively as a stabilizing force for maintaining essential supplies for the consumer. The public sector will be charged with the responsibility of encouraging and developing of a wide range of ancillary industries, and contribute to the growth of decentralized production by making available its expertise in technology and management to small-scale and cottage industries sectors. It will also be the endeavour of Government to operate public sector enterprises on profitable and efficient lines in order to ensure that investment in these industries pay an adequate return to society".

This is a statement of policy adopted after public sector undertakings have come of age. It signifies a reorientation of its role after the role earlier assigned to the public industrial sector has been more or less fulfilled.

A paradox in development of the Republic of Korea[1/] is that notwithstanding a policy commitment to private enterprise development, public sector has been used to a degree that parallels that of many developing countries advocating a socialist pattern of development. This would tend to point to the economic justification of public industrial enterprises. In fact, during the period of rapid economic growth, public enterprises constituted a "leading sector" in the sense that they grew substantially more rapidly than the economy as a whole and indentifiable linkages existed whereby growth was transmitted to other sectors. Public enterprises are characterised by output market concentration, high forward linkages, high capital intensity, large scale operations and production for import substitution rather than exports. The rise and growth of the public sector in the Republic of Korea is explainable in terms of the Government's growth

1/ This review is based upon: Government, Business and Entrepreneurship in Economic Development: The Korean Case by Leroy Jones and Il Sakong, Cambridge 1980. p. 297-298.

oriented pragmatic approach to overcoming some of the market imperfections in the course of development. Public enterprise is viewed as a tool for dealing with these problems and is generally considered more efficient than its counterpart in other developing countries albeit less efficient than its private counterpart in the Republic of Korea.

In Mexico, the industrialization strategy is bas upon the long-term goal of shared development among public, private and labour sectors and vitalization of the mixed economy system. The public industrial sector is strong in some strategic branches. Mexico is a good example of a developing country seeking a resource based industrialization which is in the process of switching from a domestic demand based to an export oriented development strategy. The public industrial sector co-ordinates its activities with the private sector which has a major role in national industrial production. The present strategy of shared development is to establish a new set of relations and ways of co-operation between private and public sectors.

Developing countries with predominantly private industrial environment

Included in this group are developing countries like Indonesia, Nepal, Thailand, Saudi Arabia,and the Philippines. The salient feature of strategic framework is the devotion to the system of free market economy and inherent inclination to limit the role of the public industrial sector. However, the existance of public industries in most of these countries points to the economic justification for public sector involvement due to free market imperfections. Public industries in these countries are primarily established due to private sector inadequacies, due to strategic considerations. and as a means of extracting surplus government revenue in monopoly industries. As will be discussed later there is a tendency towards denationalization and divestiture of public industries to the private sector. The strategic framework for the role of the public sector is commonly vague, and usually governed by the rule of exception. The role of the public industrial sector is mainly of an entrepreneurial supportive nature rather than that of entrepreneurial or managerial substitution.

In Indonesia, the Government enunciated its policy towards the public industrial sector in the Third Five-Year Plan, 1979-1984, (Repelita III). The Plan stipulates that public resources will be used to assist the implementation of programmes emphasizing the objective equity, covering industries which are labour intensive and fulfill basic human needs (textiles, buildings materials for low-cost housing construction, pharmaceuticals, paper, small-scale, village and home industries). On the other hand, programmes emphasising growth objectives which are in general capital intensive (chemical, steel, transport equipment etc.) will have to rely on private domestic and foreign sources. For this purpose state enterprises are now encouraged to form joint-venture enterprises with foreign partners in the expansion and further development of their enterprises.

In Nepal, the Fifth Plan (1975-1980) stipulated the policy towards the public sector which was expected to play a predominant role to accelerate production while the private sector was made complementary to the public sector. The driving force behind the establishment of public industries has been bilateral aid for turn-key projects. The Government has partly played an entrepreneurial support role to private sector (tea processing), partly an entrepreneurial substitution role (pharmaceutical industry), while in others (jute and cement) the motive was to gain control in order to generate greater social welfare. In the Sixth Plan (1980-85) the main emphasis of the industrial strategy has shifted towards the development of cottage and small industries.

In Thailand, the Government policy specifies certain industries which are preferred for operation under government ownership or equity participation. These include inter-alia: i) industries related to national security, price stability, anti-monopoly or natural resource preservation: ii) certain competitive industries which may be a means of implementing government policies; iii) industries which have a significant impact upon the economy (e.g. petroleum) and iv) industries which require specific technology, know-how and large capital investment beyond the capability of domestic private enterprises.

In Saudi Arabia, it is the policy of the Government to establish public industrial enterprises, when the private sector is unwilling or incapable of investing in certain enterprises. It is the declared policy of the Government to sell to the public shares it owns in industries other than those relating to national security. In all cases the Government conducts its policies in a manner that establishes its position as a partner rather than a competitor to producers in the private sector.

The Philippines economy is mostly in private hands. State direct involvement has traditionally been very limited not only in the industrial sector but also in sectors which are usually mostly public such as infrastructure and utilities.

Co-operation among public and private industrial enterprises

There has been significant growth in co-operation between public and private industrial enterprises at the national or international level in the form of joint ventures towards the achievement of national and commercial objectives in a number of important industrial areas. This new development underlines the growing inter-play of public and private industrial enterprises which are becoming increasingly interdependant The reasons for this increasing interest are fourfold[1/]:

a) Governmental participation through subscriptions to equity capital is intended to activate local entrepreneurship, by creating confidence among the investors in the prospects for success of the enterprises concerned;

b) the Government wishes to invite private investment in public enterprises in order to acquire the management skills characteristic of private enterprises. In this way, public purpose, as represented by governmental investments, can be combined with private managerial initiative;

c) the Government may desire to spread its limited investment resources over a large number of enterprises by subscribing to their equity on a partial basis instead of owning them in full:

d) where an enterprise has to be sponsored in the national interest but is not likely to stay in the public sector over a long period of time, the Government may wish to invite private investment on a joint basis, so that, in the course of time, full transfer of governmental share capital may be effected in a smooth manner.

This new breed of public industrial enterprises reflects a new pattern of relationship between the State, domestic private industry, foreign investors and transnational corporations. Due to disenchantment in earlier

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1/ Survey of Changes and Trends in Public Administration and Finance for Development, 1975-77, United Nations 1978 (E.78.II.H.7), p. 67

years with joint ventures between foreign and domestic private enterprises and in an effort to counter the influence of transnational corporations, governments of many developing countries increasingly favour new forms of co-operation whereby the state itself becomes an active partner in industrial activities. This new form of public enterprise has emerged in a number of developing countries such as Brazil, Egypt, Ghana, Indonesia, Kuwait, Mexico, Nigeria, Senegal, Sudan, Tanzania, Thailand, Venezuela, and several Arab countries. The mechanism provides significant benefits to government in terms of access to foreign technology, capital, management skill, export markets, without relinquising management influence. It is a way of protecting national interests from potential damage by commercially oriented foreign investors. From the point of view of the transnational corporation or foreign investor this form of co-operation is attractive since it involves partnership with a partner who influences the economic climate in which the enterprise operates (taxes, import quotas, competition, etc.) and which is perceived as a means of reducing the political risk of operating in a foreign country. The increasing trend towards joint-ventures has been reflected in national policies and strategies and may be illustrated by the experience of selected developing countries.

The petrochemical industry in Brazil is illustrative of a special joint venture form where the State entered as an entrepreneur with sufficient resources to co-operate as an effective partner with domestic private industry and transnational corporations in promoting an industry that required large capital resources and advanced technology. The industry is characterized by a unique trilogy of state capital, domestic private capital and transnational corporations that are bound together to form a single interdependent corporate system. The public sector initially entered the industry in the 1960s not because it was anxious to take over the petrochemical industry but because private industry was anxious to gain its participation. The preferred investment formula has been one third government, one third local capital, and one third foreign investment. In several cases, however, the inability of local private partners to meet expansion needs has led to the emergence of the government in a majority role.

In Mexico, the Administration formulated a strategy of shared development which defines responsibilities and gives confidence and security to private sector investments. The Alliance for Production Programme is a planning effort where the Government has endeavoured to establish a new set of relations and ways of co-operation between private and public sectors.

In Egypt, the open door policy introduced in the 1970s increased the autonomy of public industries and led a significant number of public sector companies to strive for negotiating joint venture agreements. In fact joint venture projects have been given particular priority in the industrial programme of the Ministry of Industry and Mines and represents a sizeable portion of the total capital investment of the Ministry's industrial programme for 1980-1984.

A similar trend has been observed in Tanzania where joint ventures between Tanzania public sector industry and private foreign investment is regarded as being of particular value in facilitating the transfer of technology and in training Tanzanian personnel.

Another version of the joint-venture approach is co-operation between a public industrial enterprise of one developing country with its counterpart(s) in another (others) within the framework of regional co-operation.

Under this form the public industrial enterprise itself would become transnational in nature. The role of public industrial enterprise in the context of ASEAN regional industrial co-operation scheme is a case in point. The governments of various ASEAN countries have committed themselves to a programme of industrial co-operation among its member countries. A first set of joint venture projects were negotiated at the Bali Summit in 1976. Subsequently other projects have been identified. The projects were envisaged to be set up as public enterprises in view of their scale of operation, capital intensity and high risk element. As far as the first round of joint ventures is concerned, two countries, Malaysia and Indonesia have decided to proceed with their regional projects, - both urea fertilizer projects as public enterprises. While these industrial projects are expected to provide an important impetus in the long-term, it is envisaged that the greater portion of the ASEAN Industrial Programme would be implemented by the direct efforts of the private sector in the member countries through the ASEAN Industrial Complementation Programme(AIC). 1/

Divestiture of public industrial enterprises

A number of developing countries including Argentina, Bangladesh, Brazil, Bolivia, Chile, Ghana, Malaysia, Nepal, the Republic of Korea, Saudi Arabia Senegal, Singapore, Sri Lanka,and Thailand have pursued a policy or expressed desire to sell public industrial enterprises to the private sector once the pioneering role of the government has been discharged. This policy enables the government to use its limited financial, managerial and other resources to pioneer new ventures or pursue other government priorities in the economy, infrastructure or social services.

1/ ASEAN Co-operation in the Field of Industry - A Background Study on Past and Present Activities,UNIDO/IS 204 6 February, 1981, page 21.

In Thailand, public industries are being divested because they have fared poorly. The Government has repeatedly indicated its intention to close down or sell state industries which were originally established to introduce a new industry as well as those now operating inefficiently. In Malaysia, the eventual sale of public industrial enterprises is a foregone conclusion since they are being held in "trust" for the Malays until such a time as they are able to buy them from the State.1/ In Pakistan, measures were taken to divest public industries to the private sector in 1977. Under the "Transfer of Management Establishment Order 1978" powers were vested in government to decentralize and return public industrial enterprise taken over by the previous regime to their original private owners. A similar policy has been adopted in Trinidad and Tobago, where the Government, in an effort to hasten "localization" has stated "that it considers its shareholdings as a trust held on behalf of the people and that it would release these holdings to the national public as circumstances permit". In Bolivia, the Government has expressed intention to sell off viable operations to the private sector and in Chile the Government began to sell its companies and to return nationalized industries. In Sri Lanka a drastic curtailment of the public sector was propounded in 1977 and it was expected that rapid privatization would take place. However, the public sector has not diminished drastically. The textile industry which was dominated by the public sector was handed over to private companies to manage; but this was more in the nature of a management contract rather than privatization.

1/ Public Enterprise in the East and South-East Asian Region - A comparative study by R. Thillainathan. ESCAP Second Meeting of the South-East and East Asia Group of Consultants in connection with implementation of ESCAP Resolution 180(XXXIV): Strategies for the 1980s, 16-21 April 1981, DP/STR(2)/3, p. 24-25.

Public industries in the Republic of Korea are being sold off to the private sector because of the underlying commitment of the Government to free enterprise. The divestiture of public industries must be viewed against a situation firstly where these enterprises have performed remarkably well by international standards and secondly where divestiture includes some of the most successful enterprises. The Republic of Korea is the only developing country in Asia which has gone some distance in divesting public industries, both enterprises directly owned by the Government as well as enterprises indirectly owned, for instance, by the Korea Development Bank. Its divestiture programme has been carried out by three methods: firstly open market operations by listing the shares of public industries at the stock exchange (Korea Fertilizer Company); secondly competitive bidding for the shares of the enterprise (Sea Han Motor Company); and thirdly through negotiation with potential buyers for the shares of the enterprise as a whole.

The process of divestiture is associated with certain historical and bureaucratic inertia. Since bureaucratic power is often irreversible and public sector self-interest tends to predominate there is a certain complexity associated with the political and economic transaction costs of divestiture. In this context Leroy Jones observes[1/] that "divestiture, and also nationalization, involves real economic costs as a result of the disruption which accompanies any change in status. The magnitude of these costs varies with the organizational form of the enterprise: e.g. a departmental enterprise staffed by civil servants would be far more affected by a shift to private ownership than a joint stock company directed by independent managers. Political costs are also incurred. Divestiture means a shift of power and status away from bureaucrats, who may be expected to object vociferously". Thus in considering the question of divestiture it would be useful to evaluate the benefits of improved efficiency against the social and economic cost of divestiture.

1/ Op. cit. p. 131

V. BRIEF ASSESSMENT OF CONTRIBUTION OF PUBLIC INDUSTRIAL SECTOR TO SELECTED NATIONAL GOALS-SOME TENTATIVE EVIDENCE

Scope of assessment

Much attention has been devoted to the justification and motivation for establishment of public industrial enterprises and their objectives in developing countries by policy makers, administrators, researchers and others. Limited concern however has been focussed upon their quantitative and qualitative impact upon national development and on performance constraints. This is no doubt due to their recent appearance at the development scene; to the inadequacies of underlying data base; and to methodological problems associated with complex goal structures. The purpose of this assessment is merely to review and highlight major findings of the scarce literature which exist on the subject, rather than attempt a separate study, which has been undertaken elsewhere[1/]. Generally speaking the few systematic studies that have been undertaken on the impact of public industries upon development are either partial in nature, descriptive in character and carry an element of speculation. They seldom focus exclusively on the manufacturing sector but, rather deal with the public enterprise sector as a whole[2/]. A common feature is that they tend to view the public sector in isolation, detached from the performance of the private sector; the implication being that no valid conclusions may be inferred as to the relative merit of each sector.

1/ Comparative Study of Impact of Public and Private Manufacturing Sectors in Selected Developing Countries by Javed Ansarri, UNIDO ID/WG 343/10, 13 September 1981.

2/ Part of the analysis in this chapter refers to public enterprises in general wherever possible however an attempt has been made to focus exclusively on public manufacturing enterprises.

General achievements

Public industrial enterprises have demonstrated significant achievements in a number of crucial areas. Some of these do not easily lend themselves to being evaluated in traditional economic terms. In many developing countries the emergence of public industries occurred in response to pressures often of a non-economic nature which no government could seriously afford to overlook. This is particularly true in regard to enhancement of self-reliance and "indigenization" following independence in the 1950's and 1960's in many developing countries, especially in Africa. The quest for controlling national destiny, directing and guiding the pattern of national development was sought to be fulfilled through the establishment of public industries. They have made substantial achievements in discharging responsibilities towards exploitation of natural resources, basic and strategic industries. In many developing countries large scale industrial projects have been established by the public sector,which were beyond both the capability and/or willingness of the private sector. Their presense has been a counterweight to excessive concentration of private economic power and transnational corporations. They have made a pivotal contribution in some countries to the establishment of domestic capital goods industries and a professional cadre of industrial managers, for example, in India . They have also played a key role in the development of internationally competitive fertilizer, iron and steel industries in the Republic of Korea.1/ Further, public managers in industry have often proved more "development concious" than their private counterparts in negotiations involving joint-ventures with foreign firms and transfer of technology especially in petroleum processing and non-fuel minerals. Thus, their role

1/ See World Development Report 1979, World Bank, Washington, 1980,page 61.

as a vehicle for negotiating the purchase and import of technology have been quite important. While all these achievements are considered significant, the associated costs have rarely been assessed in the context of national, financial, humna and other resources; moreover their impact upon investment in the private sector is unknown.

The following review reveals that the contribution of public industrial enterprises to employment; income distribution and anti-poverty goals: savings mobilization government revenue and macro-economic stability; agriculture; small-scale industry; industrial decentralization; and basic needs,has been rather mixed, in a few cases significant, but in most cases weak. This does not imply that they have been detrimental to society or inferior to private sector. In fact, there is very little scientific basis for generalizations in this regard.

Employment, income distribution and anti-poverty goals

The establishment of public industries has often been motivated by a desire to create employment opportunities or to preserve jobs in ailing private industries. The comparison of employment and investment co-efficients analyzed in Chapter III suggests that the contribution of public industries to employment creation has been limited due to the marked capital intensive nature of investment in branches where they operate. There appears to be widespread consensus on this point. Leroy Jones and Il Salong conclude[1/] that the public enterprise sector is "a most inefficient means of employment creation". Malcolm Gillis observes[2/] that "whatever the intention, state owned enterprises have not had a remarkable success in creating new jobs in the past decade or so. Their performance seems all

1/ Op. Cit., page 154

2/ Op. Cit., page 274

the more perplexing in the light of the pervasive tendency towards overstaffing of labour in state industries".

Malcolm Gillis further observes that public industries may have had a more significant impact in preserving industrial employment by taking over terminally ill private industries, by means of government subsidies, but usually at a substantial cost to the exchequer in the form of subsidies to keep enterprises going.1/ Very few governments - and not only in developing countries - allow private industries to pass away due to genuine concern over the social implications of unemployment in the wake of bankrupcies in the private sector. Ailing private firms are then usually absorbed into the sphere of the public sector. Cases in point are cement plants in Bolivia and much of the Indian textile industry. In other cases government has been reluctant to let their equity or credit in ailing firms vanish entirely. Such cases have been observed in Turkey, Argentina, Indonesia, Tanzania and Nepal. Further, under Bolivian law and tradition it is virtually impossible to go out of business. Malcolm Gillis notes that as a result perhaps half of the over 50 firms owned by the Bolivian state belongs to the "sinking sands" category, as do the majority of Indian state owned textiles industries.2/

In regard to income distribution the experience of Singapore and the Republic of Korea shows that to grow rapidly is a safe way to reduce income inequalities. An examination3/ of the impact of increased state participation in the economy on the distribution of income in Brazil and Peru indicated that there is considerable evidence that behaviour of state enterprises has not contributed to generate equality in the distribution of income and

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1/ Op. Cit., page 280

2/ Op. Cit., page 281

3/ The Impact of increased State Participation in the Economy on the Distribution of income: Some Reflections Based on the Cases of Brazil and Peru, by Werner Baer and Adolfo Figueroa prepared for the Second BAPEG Conference on Public Enterprises in Mixed Economy LDC's, April 3-5, 1980 might even, as some evidence suggests have contributed to an increase in the concentration of income. In the case of Brazil, the principal reason is that the administrative hierarchies of state enterprises are primarily concerned with the efficient functioning and rapid growth of their entities which usually works counter to egalitarian distributive goals of the central government. In the case of Peru the inefficiency of state industries caused large deficits funded mainly by the state which had a regressive impact on the distribution of income: state resources could have been used for projects with much greater social impact.

In examining public enterprises as an instrument of policy in anti-poverty strategies in South Asia, Rehman Sobhan1/ concludes that they have not been conspicously successful as an anti-poverty instrument; they have had some success in achieving an element of regional dispersal of public investment in backward areas and to a limited extent benefitted some elements of the working class. They have to some extent increased the earnings of the farm sector. The investment strategy of public enterprises has not made any significant contribution to employment and meeting the basic needs of the poor. The particular choice of sectors under public enterprise has tended to be both aid intensive and capital-intensive and concentrated on capital and intermediate goods. However, these investments have had an important secondary impact on both employment and meeting of basic needs which have contributed both to growth and improvement in conditions of life. Rehman Sobhan further concludes that public enterprise as an instrument designed to reduce the role of the

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1/ Public Enterprise as an Instrument of Policy in Anti-poverty Strategies South Asia, by Rehman Sobhan. Economic and Social Council for Asia and Pacific; Second Meeting of the South Asia Group of Consultants in connexion with the implementation of ESCAP resolution 180 (XXXIX): Strategies for the 1980's. This study refers to industrial and non-industrial public enterprises.

private sector has met with mixed results. Moreover the South Asian experience appears to confirm the view that the nature of the state is a critical factor in determining the growth of public enterprise, the interest it will serve, its viability and its distributive regime.

Savings mobilization, government revenue, macro-economic stability

Public enterprises have often been established in the expectation that they would contribute to resource mobilization, government revenue and price stability. The previous analysis revealed that public industries require large capital resources for their establishment and expansion and that their share of investment in each country is usually higher than their share of value added, output and employment. The question is whether they generate sufficient savings to finance their own capital requirements and contribute to capital requirements of other sectors as well.

The experience of some Asian Countries has shown that public industries in general (including non-manufacturing public enterprises) perform a relatively more important function as investment agents than as resource mobilizers.1/ Public enterprises in general do not mobilize sufficient resources for their own development needs and require external financial resources. The absolute surplus generated by these enterprises (including retained earnings, taxes and dividends) has grown into a sizeable magnitude mainly in the form of taxes. Since the bulk of these government revenues has been spent on current consumption rather than investment, it would appear that in South Asia public enterprise has not realized its potential as a source of growth for the economy or as an instrument for distributing

1/ Il Sakong: Macro-economic Aspects of Public Enterprises in Asia: A Comparative Study, Korea Development Institute, 1979, p. 72

income towards the poor[1/]. In other countries such as Argentina, Egypt, Guyana, Nicaragua and Panama the net savings of the consolidated state enterprise sector was typically negative (1970-73)[2/]. In Ghana most of the public enterprises made either big losses or meagre profits[3/].

Public enterprises in the Republic of Korea, Singapore and Pakistan enjoy a relatively good reputation for generating positive accounting results. Malcolm Gillis observes that[4/] in the Republic of Korea, Uruguay (1975-76), India (1970-72), Pakistan (1972-74) and Indonesia (1976-78) state enterprises savings generated as much as 10-15 per cent of gross domestic investment. However in each of the first three countries the state enterprise sector was unable to generate enough savings to finance its own investment requirements. In countries like Bangladesh, Thailand, Bolivia, Chile and Uruguay before 1973 as well as Somalia, Jamaica and Colombia the savings of state enterprises (1970-73) accounted for less than five per cent of investment. In other countries such as Brazil, Indonesia, Chile, Uruguay and Thailand there are more enterprises that show positive accounting profits than losses.

In certain countries and specific periods, public industries persistently ran deficits that required substantial subsidies from the government e.g. Tanzania, Ghana, Turkey, Sri Lanka and Indonesia. At other periods individual state enterprises accumulated losses and deficits sufficiently large to thwart development efforts in various fields of

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1/ Committee for Development Planning: Consultants' Report on Development strategies for the 1980's in South Asia; Expert Group on Development Priorities and Policy Needs of South and East Asia, 20-24 October 1980, Bangkok, Conference Room Paper No. 3, p.44.

2/ Malcolm Gillis page 267

3/ Ghana, Report on Domestic Resource Mobilization Feb 18, 1981 World Bank para 55

4/ Op. Cit., 266-270

government. This was the case in Bolivia (1957) Indonesia (1972-76) Zaire and Zambia (1974-78). In Indonesia for example PERTAMINA accumulated losses and liquidity deficits of such a magnitude that economic development prospects and government supported sectoral programmes were temporarily jeopardized as was the balance of payments position.

In Mali and Turkey the funding of losses in the public industry sector as a whole by the banking system has been a significant source of inflation and macro-economic instability[1/]. For example the Turkish economy culminated in 1979 with massive devaluation and debt rescheduling largely due to problems of debt-ridden public industries long heavily subsidized by the treasury. In these and other countries the cumulative losses financed by the exchecquer preempted finance or credit which could otherwise have been put into more productive or social use.

The conflicting performance impact of public industries in different countries is epitomised by comparison of the experience of Turkey and the Republic of Korea. In Turkey state enterprise has taken a dual personality: it represents one of the most important bases for industrial growth, yet it is at the same time by virtue of its heavy investment requirements, non-economic objectives and inefficient operations one of the principal obstacles to dynamic growth[2/]. In contrast Leroy Jones and Il Sakong observe that public enterprises in the Republic of Korea are generally considered more cost efficient than their counterparts in other developing countries, though less than their private counterparts. The relative efficiency of the public enterprise sector in the Republic of Korea may be due to the circumstance that leadership commitment to growth as administered by a competent hierachy, precludes major prolonged inefficiency.[3/]

1/ World Development Report 1971, the World Bank, August 1979 page 64
2/ State Manufacturing Enterprise in a Mixed Economy, The Turkish Case, by Bertil Wålstedt, a World Bank Research Publication 1980 page 230.
3/ Op. Cit., page 293

Contribution to agriculture, small-scale industry, industrial decentralization and basic needs

The ESCAP Meeting of Ministers of Industry in November 1977 considered that public industrial enterprises could play an important role as a policy instrument in a) strengthening of linkages between industry and agriculture b) development of small scale industries and their linkages with large-scale and modern industries c) development of industry to satisfy the basic needs of the poor and d) dispersal and location of industry away from metropolitan areas.

In reviewing the experience of public industries in Bangladesh, India, Sri Lanka and Thailand it was concluded[1/] that the contribution of public enterprises to the four policy issues had been limited. While most governments in the ESCAP region have well articulated the issues of small scale industry, balanced regional development and provision of basic needs, the role of the public sector hardly finds any mention in this context. All the studies have indicated[2/] that the emergence of public sector enterprise in the developing countries has in very few cases conformed to a deliberate plan or to a strategic perspective. On the contrary the establishment of public sector enterprises has very often been due to certain exigiencies and considerations of immediate expediency; the decisions relating to their product-mix, location, scale of production, technology, pricing etc. have rarely been influenced by a national desire to reorient the industrial sector.

1/ Public Enterprises as an Instrument of Policy, B.B. Pradhan, ESCAP July 1 1980, page 47

2/ Strengthening the Sinews of Industrialization. ESCAP Meeting of Ad-hoc Group of Ministers of Industry 1-3 July 1981, IHT/MI/AC 2/2 8 May 1981. para 75.

The studies have illustratively pinpointed the prevalence of backward linkage industries to agriculture inter alia in the fields of jute and sugar mills (Bangladesh) tobacco (Thailand) as well as forward linkage industries such as fertilizers (India, Bangladesh, Pakistan) and tractors (India). As a controller of the price for many of these products the public industrial sector plays an important role in influencing the terms of trade between industry and agriculture (e.g. fertilizer industry in the Republic of Korea).

All governments concerned are devoted to promoting small scale industry through various policy measures. The public industrial enterprise has been used as a vehicle for pormoting ancillary small scale production in India and Bangladesh. The areas of village and cottage industries, however, have remained outside the umbrella of public industries.

The public industrial enterprise has been used as an instrument for achieving dispersal of industries away from metropolitan areas. In India however its effectiveness in creating foci for industrialization has been restricted. In Bangladesh the dispersal of public industrial enterprises has not been without costs and in most cases failed to create growth poles.

The contribution of public industrial enterprises in the supply of basic consumer goods to the poor has been marginal and incidental except perhaps in the case of Sri Lanka. The production of such goods has rarely been pursued by the public sector with the express objective of meeting the needs of the poor. Textile mills in India, sugar mills in Thailand and edible oil, sugar, rice and cement in Pakistan are cases in point.

Major problems and constraints in achieving commercial and socio-economic objectives

That substantial losses are common, meagre savings seldom and high surplus exceptional in public industries can hardly be attributed to the external economic environment which is generaly favourable to the public enterprise, being concentrated in natural resource-based industries, enjoying monopoly or oligopoly power, and a certain degree of protection form external and domestic competition. Furthermore, public industries generally receive government support and services including prefrential financial terms and conditions. The reasons for unsatisfactory performance of the public industrial enterprise are therefore most likely to be found in circumstances related to the decision making process of the firm, which may in many cases be highly influenced by external pressures often of a political nature. The particular problems and constraints facing public industries in achieving commercial and socio-economic objectives may briefly be summarized as follows based upon the experience of selected developing countries:

a) The commitment to a variety of social objectives usually has cost implications. At periods state industries have been entrusted social or strategic functions which otherwise would have been undertaken by the government. While vaguely defined and conflicting social objectives are often advocated as explanation for performance results, there seems to be general consensus1/ that the discharge of social responsibilities should

1/ UNIDO, Report of the Expert Group Meeting on the Role of the Public Sector in the Industrialization of Developing Countries, UNIDO ID/WG/298/15 p.9 (1979).

not be made an excuse for inefficiency. In fact if enterprises are operated effectively their ability to discharge social responsibilities would be greatly enhanced.

b) The public sector family encompass some ailing or terminally ill industrial units of the "sinking sands" and "lame duck" category which are seldom allowed to pass away and which would long have ceased to exist in the private sector. Incentives for cost minimization therefore are generally weaker than in the private sector. The continous drain upon the exchequer and the banking system and the resultant macro-economic instability, inflation, etc. call for careful evaluation.

c) The price policy of publicly produced goods is often determined by the government rather than by the enterprise. As a result public industrial enterprises often charge lower prices than their private counterparts. This is so because government may not wish to exploit monopoly power and because prices are primarily determined upon maximization of national welfare rather than enterprise profit.

d) Public industrial enterprises are generally faced with shortages of trained managerial personnel. The appointment of non-professional managers is common. They are often overstaffed at all levels and favoured targets of labour strikes and unrest. Further the absence of an effective incentives system to reward performance within the framework of salary and wage policy has tended to discourage the retention of professionally competent managers or inhibit their operational effectiveness. As a result public industrial enterprises often operate under conditions of low capacity utilization, supply bottlenecks and other symptoms of managerial inefficiency.

e) The organizational structure of public industrial enterprises and the institutional framework established to support their operations influence the performance of public industries. Frequently management is granted little discretion in decisions relating to investment, employment, pricing, wages and salaries, incentives and other policies, which are often subject to external influence of a political nature. Experience has shown that public enterprises operating under control structures with less government intervention/supervision have generally shown better performance results than enterprises with high government control and supervision.

It would thus appear that the contraction and eventual elimination of the above constraints would be essential for improving the performance of public industrial enterprises and for increasing their ability to achieve commercial and socio-economic objectives.

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EAST AND SOUTH ASIA

Annex I
(East and South Asia)

Annex I Manufacturing value added, output, investment and employment by public and private sector, selected countries

Country	Share of public sector in total manufacturing: Value added	output	Investment	Employment	Share of private and co-operative sector in total manufacturing: Value added	output	Investment	Employment	Year	Remarks
Bangladesh	72.6		-		27.4				1972/73	
	61.8		90.8		38.2		9.2		1973/74	
	65.3		91.0		34.7		9.0		1974/75	
	70.7		89.8		29.3		10.2		1975/76	
	71.7		87.8		28.3		12.2		1976/77	
	70.6		80.8		29.4		19.2		1977/78	
	-		80.2		-		19.8		1978/79	
Burma		46.4		17.2		53.6		82.8	1977/78	
India		8.0	-			92.0			1960/61	Manufacturing sector refers to organized sector
			61.7				38.3		1966/67	
			61.0				39.0		1970/71	
			60.9				39.1		1975/76	
			-	22.7			-		1977	
		19.0	-			81.0			1979	
Republic of Korea	15.25				84.75				1963	Refers to GDP
	15.11				84.89				1972	
Pakistan	3.0	2.0		5.0	97.0	98.0		95.0	1965	
	4.5	3.0	11.4	8.0	95.5	97.0	88.6	92.0	1970	
	34.0	40.0	42.6	22.0	66.0	60.0	57.4	78.0	1975	Mass nationalization under economic reforms order 1972
			70.7				29.3		1980	
Sri Lanka			55.3				44.7		1972-76	Total manufacturing includes mining and quarrying
		23.0		6.0		77.0		94.0	1974	
	64.3	62.3			35.7	37.7			1976	
Thailand				2.2				97.8	1972	
				1.7				98.3	1974	
				2.7				97.3	1976	
	8.2	4.1		-	91.8	95.9			1977	
	7.2	3.8		2.3	92.8	96.2		97.7	1978	
	6.5	3.5			93.5	96.5			1979	

Annex I (contd.)
(West Asia)

W E S T   A S I A

Annex I Manufacturing value added, output, investment and employment, selected countries

Country	Share of public sector in total manufacturing				Share of private and co-operative sector in total manufacturing				Year	Remarks
	Value added	Output	Investment	Employment	Value added	Output	Investment	Employment		
Iraq			15.2				84.8		1960	
			45.6				54.4		1961	
				31.3				68.7	1969	
	52.1		48.3		47.9		51.7		1970	
				40.9				59.1	1972	
			94.7				5.3		1973	
	41.5		96.7	39.6	58.5		3.3	60.4	1975	
Syria	22.8			8.5	77.2			91.5	1963	
	51.3(1966)		93.0(1968)	35.6(1966)	48.7(1966)		7.0(1968)	64.4(1966)	1966/68	
	60.4		70.5	37.8	39.6		29.5	62.2	1970	
			77.6				22.4		1973	
	54.6		95.9	33.1	45.4		4.1	66.9	1975	
	57.6		97.7	33.8	42.4		2.3	66.2	1977	
Yemen, Arab Republic			96.1	78.3			3.9	21.7	1969/70	
			82.2				17.8		1972/73	
			61.2				38.8		1974/75	
			57.7				42.3		1975/76	
Yemen, Democratic		39.4				28.6			1969	Excluding mixed and co-operative sector
		44.9				31.0			1973/74	
				75.4				21.1	1973	
				80.6				14.5	1974	
				74.6				16.9	1975	

L A T I N   A M E R I C A

Annex I Manufacturing value added, output, investment and employment by public and private sector, selected countries

Country	Share of public sector in total manufacturing				Share of private and co-operative sector in total manufacturing				Year	Remarks
	Value added	Output	Investment	Employment	Value added	Output	Investment	Employment		
Brazil			20.0				30.0		1974	Refer to share of sector in asset ownership
El Salvador			40.9				59.1		1973-77	
Guatemala			15.9				84.1		1976-79	
Haiti			10.0				90.0		1976-81	All industry
Mexico	19.4			9.8	80.6			90.2	1965	
	22.9		54.0	12.1	77.1		46.0	87.9	1970	
	29.8		65.0	14.4	70.2		35.0	85.6	1975	
Nicaragua		-		-		100.0		-	1970	
		-		-		100.0		-	1975	
		34.0		59.0		66.0		41.0	1980	
Panama	9.8	3.4	6.2	1.3	90.2	96.6	93.8	98.7	1975	
	3.7	2.5			96.3	97.5			1977	
Peru			25.3				74.7		1971-75	
Venezuela			21.7				78.3		1970	
			43.7				56.3		1975	
			59.6				40.4		1976	

A F R I C A

Annex I Manufacturing value added, output, investment and employment by public and private sector, selected countries

Country	Share of public sector in total manufacturing				Share of private and co-operative sector in total manufacturing				Year	Remarks
	Value added	Output	Investment	Employment	Value added	Output	Investment	Employment		
Algeria	47.5	41.2	68.8	47.6	52.5	58.8	31.2	52.4	1969	
	46.6	41.0	61.4	64.0	53.4	59.0	38.6	36.0	1970	
	70.9	57.4		67.7	29.1	42.6		32.3	1975	
	74.9	72.5		73.6	25.1	27.5		26.4	1978	
	84.9	79.1		81.0	15.1	20.9		19.0	1984	
Egypt	68.7	65.2	90.6	59.7	31.3	34.8	9.4	40.3	1975	
	64.7	60.9	81.4	70.0	35.3	39.1	18.9	30.0	1979	
	66.7	66.7			33.3	33.3			1981-82	
Ghana		18.9				81.1			1962	Including mixed state and foreign enterprises
		32.2				67.8*			1966	
		32.9				67.1			1970	
Ivory Coast			19.3				80.7		1971-75	
Morocco			9.3				90.7		1973	Manufacturing and processing industry excluding construction and petroleum
			19.7				80.3		1974	
			24.1				75.9		1975	
			34.8				65.2		1976	
Nigeria			17.7				82.3		1970-74	All industry excluding mining
Senegal	21.1				78.9				1974	
Somalia		85.1	79.9	65.3		14.9	20.1	34.7	1973	All industry
Tanzania	14.4[a]			15.5	85.6[a]			84.5	1967	Public sector refer to industrial parastals
	25.6[a]			32.0	74.4[a]			68.0	1970	[a] Manufacturing GDP
	39.2[a]			48.[illegible]	60.8[a]			51.8	1975	
	33.6[a]			47.3	66.4[a]			52.7	1978	
Zambia				12.0				88.0	1968	INDECO enterprises only
	52.0[a]			38.0	48.0[a]			62.0	1972	
	51.0[a]			42.5	49.0[a]			57.5	1977	[a] Share of manufacturing GDP

Annex I Manufacturing value added, output, investment and employment by public and private sector, selected countries

Country	Share of public sector in total manufacturing				Share of private and co-operative sector in total manufacturing				Year	Remarks
	Value added	Output	Investment	Employment	Value added	Output	Investment	Employment		
Turkey	52.7		21.0	44.0	47.3		79.0	56.0	1963	
	62.9		37.8	43.0	37.1		62.2	57.0	1967	
	62.0		40.2	42.3	38.0		59.8	57.7	1968	
	-		42.4	-	-		57.6	-	1970	
	47.3		47.8	37.4(est)	52.7		52.2	62.6(est.)	1972	
	-		-	35.2(est)	-		-	64.6(est.)	1973	

Source of Annex I: UNIDO based upon UNIDO Questionnaire surveys, country studies, country briefs and Industrial Development Profiles except Korea and Turkey.
Korea: Public Enterprises and Economic Development; The Korean Case by Leroy Jones, Korea Development Institute, 1975.
Turkey: State Manufacturing Enterprises in a Mixed Economy; The Turkey Case by Bertil Wolstedt; A World Bank Research Publication, 1980.

Annex II Dynamic role of Public Industrial Sector

Share of Public Industrial Sector in total manufacturing investment

Country	1960	1965	1970	71	72	73	74	75	76	77	78	79	80
	- Percentage -												
Increasing role of Public Industrial Sector													
Iraq	15.2		48.3			94.7		96.7					
Pakistan			11.4					42.6					70.7
Mexico			54.0					65.0					
Venezuela			21.7					43.7	59.6				
Morocco						9.3	19.7	24.1	34.3				
Declining role of Public Industrial Sector													
Egypt								90.6				91.4	
Bangladesh						90.3	91.0	90.3	87.8	80.3	80.2		
Yemen Arab Republic			26.1 4/		32.2 5/		61.2 6/	57.[illegible] 7/					
Fluctuating role of Public Industrial Sector													
Syria		93.0	70.5			77.6		95.9		97.7			
Tunesia			53.4 1/			____	____	44.3 2/		____	____	53.[illegible] 3/	
Unchanged role of Public Industrial Sector													
India		61.7 8/	61.0 9/					60.9 10/					

1/ 1969-72 2/ 1973-76 3/ 1977-81 4/ 1969-70 5/ 1972-73 6/ 1974-75 7/ 1975-76 8/ 1966-67 9/ 1970-71 10/ 1975-76

Source: Annex I

Annex III Relative weight of manufacturing within the overall public sector in terms of value added : selected countries

(Percentage)

Country / Year	1960	1965	1970	1971	1972	1973	1974	1975
Bangladesh 1/	-	-	-	-	49.4	52.3	46.6	-
India	13.7	19.3	21.7	-	22.4	-	-	-
Korea	-	30.3 2/	39.2	-	-	42.3	-	46.6
Nepal	-	-	-	29.0	-	30.0	-	19.0
Pakistan	5.8	8.2	9.0	-	-	15.0	-	14.9
Sri Lanka	3.8 3/	12.4 4/	-	-	-	27.4	34.4	-
Thailand	-	-	23.6	-	-	19.9	-	-

1/ Includes also mining
2/ 1963
3/ 1961
4/ 1966

Source: Based on Il Sakong: *Macro-economic Aspects of Public Enterprise in Asia: A Comparative Study*, January 1979, Korea Development Institute, pages 51 to 53.

Annex III

Annex IV. Demarcation of industrial branches reserved for public and private sectors: selected countries

Country	Year	Public	Domestic private
Bangladesh	1972 Reserved:	a) Jute industry b) Cotton textiles c) Sugar d) Electricity e) Atomic energy f) Air transport, railway g) Telephone, telegraph and telecommunication h) Defence industries: arms and ammunition	Private sector was allowed to invest in any sector excepting those eight subject to the investment ceiling
		There was no sector for collaboration with local private investment.	
	1974 Reserved:	1. Arms and ammunition 2. Atomic energy 3. Jute industry (sacking, hessian and carpet backing) 4. Cotton textiles (excluding handloom and specialized textiles) 5. Sugar 6. Paper and newsprint 7. Iron and steel (excluding re-rolling) 8. Shipbuilding and heavy engineering (including machine tool and transport vehicles and agricultural heavy machinery 9. Heavy electrical 10. Mining, oil and gas 11. Cement 12. Petrochemicals 13. Heavy and basic chemicals and basic pharmaceuticals 14. Air transport 15. Shipping (including coastal shipping and tankers above 1000 DWT) 16. Telephone, telephone cables, telegraph, wireless sets (excluding radio receiving sets) 17. Generation and distribution of electricity 19. Forest extraction	Private sector was allowed to invest in all other sectors with a higher ceiling now set for them and with foreign collaboration, if found. The sectors identified were as follows: 1. Food and allied products 2. Specialized textiles, and handlooms 3. Forest products and allied industries 4. Printing, publishing, paper converting and board 5. Leather, rubber and plastic products 6. Chemicals, pharmaceuticals and allied industries 7. Glass and ceramics 8. Engineering industries including shipbuilding 9. Service industries 10. Shipping and transport 11. Iron products and steel rerolling 12. Industries not elsewhere specified
	1975 Reserved:	1. Arms and ammunition 2. Atomic energy 3. Air transport 4. Electricity 5. Telephone, telegraph (including cables) 6. Jute (hessian, sacking and carpet backing) 7. Cotton textiles 9. Sugar	Joint investment list: Private sector can invest in collaboration with the public sector. 1. Paper and newsprint 2. Iron and Steel 3. Shipbuilding and heavy engineering 4. Heavy electrical 5. Mineral, oil and gas 6. Cement 7. Petrochemicals 8. Heavy chemicals and basic pharmaceuticals 9. Shipping 10. Mechanized forest extraction Majority shareholding by government was required. By implication the 12 sectors mentioned for 1974 became the reserved sectors for private investment. The ceiling further liberalized.
	1976 Reserved Sector:	As before	Joint investment list: As before, but TEC may permit token investment by the government, i.e. almost wholly privately owned units were now permissible in these ten sectors. The 12 sectors for private investment remain intact. The ceiling was now inoperative with the permission of the government.

Country	Public	Domestic Private
Pakistan		
	Iron and Steel Industries	
	Rolling of M.S. sheets and plates (all types and sizes), plain and corrugated, block and coated.	Iron and Steel industries of all types and sizes, other than those specified above but including: (i) rolling of section including pre-stressed deformed bars; (ii) wire drawing (including high carbon steel wire drawing); (iii) baling hoops rerolling; (iv) metal structures of all sorts; (v) welded pipes, tubes and fittings thereof; (vi) fabrication of storage tanks of all types; (vii) casting of cast iron and steel; (viii) forging of all types; (ix) cast iron spun pipes.
	Basic Metal Industries	
	Manufacture of basic metals and alloys thereof such as; (i) basic production of iron and steel (pig iron, mild steel etc. based on ore); (ii) alloy steels special alloy steels (including stainless steel), tool steel and high carbon steels (iii) basic production of non-ferrous metals.	All down-stream metal product industries including (i) refining, rolling and extraction of non-ferrous metals; (ii) tinning and galvanishing.
	Heavy Engineering (Mechanical) Industries	
	(i) High speed engines (i.e. above 1600 RPM) of all types (including automobile engines); (ii) cotton textile industry; (iii) sugar mills machinery; (iv) cement machinery plant; (v) chain pulleys and cranes of all types; (vi) railway rolling stocks; (vii) mining machinery and equipment; (viii) ship-building and dry-docking repair.	Heavy engineering (mechanical) industries of all types and sizes, other than those specified above, but including: (i) slow and medium speed engines (below 1600 RPM range) of all types; (ii) general purpose machine tools and equipment; (iii) components, parts and sub-assemblies of cotton textile, sugar and cement plant machinery; (iv) road construction machinery and equipment including road rollers; (v) steam boilers; (vi) components, parts and sub-assemblies of mining machinery and equipment; (vii) barges, boats and other smallcrafts.
	Heavy Electrical Industries	
	(i) Power and distribution transformers above 33,000 volts (33 KV); (ii) circuit breakers and isolators above 33 KV; (iii) instrument transformers and capacities above 33 KV.	Heavy electrical industries of all types and sizes other than those specified above but including: (i) power and distribution transformers upto 33,000 volts (33 KV); (ii) circuit breakers and isolators upto 33 KV; (iii) instrument transformers and capacitors upto 33 KV, (iv) control and relay panels; (v) switchgears; (vi) insulated and bare cables andelectric wires, etc; (vii) electric motors.
	Assembly and Manufacturing of Motor Vehicles	
	Assembly and manufacturing of automobiles (trucks, buses, cars, pickups, vans and jeeps, etc.)	Industries of all types and sizes, other than those specified above but including: (i) assembly and manufacturing of two and three wheelers (motor cycles, scooters, and auto rickshwas); (ii) components and parts of all types of automotive vehicles (cars, buses, trucks, jeeps, pickups and motor cycles scooters), also building of bodies for truck and buses.
	Assembly and Manufacturing of Tractors and Farm Machinery	
	Assembly and manufacturing of tractors	Industries of all types and sizes, other than those specified above but including: (i) Assembly and manufacture of power tillers; (ii) self-propelled farm machinery and equipment other than tractors; (iii) tractor-drawn agricultural implements and other farm equipment; (iv) components, parts and sub-assemblies of all types of tractors.
	Heavy and Basic Chemicals	
		Industries of all types and sizes.
	Petro-Chemical Industries	
	Basic manufacturing of petro-chemicals.	(i) Down-stream industries of all types and sizes, based on use of building blocsk, secondary products of petro-chemicals as raw material; (ii) private sector investment in basic manufacture of petro-chemicals would be allowed only in collaboration with the public sector.
	Cement Industry	
		All types and sizes.

Policy towards foreign private investment:

The Government of Pakistan have consistently followed a liberal policy towards foreign private investment. A wide area of industrial activity has always been open to foreign private investors. Foreign investment is particularly encouraged in industries which require sophisticated technology or are highly capital intensive. Foreign invertors can also invest or collaborate with public sector agencies for the establishment of heavy capital goods industries.

Country	Public	Domestic Private	Foreign	Co-operative
Venezuela	Petroleum industries petro-chemicals, iron and steel, aluminium, military products, shipyards	May engage in all industrial activities except those reserved for public sector	Same as for domestic private industry with the reservation that the attitude is subject to the articles of the ANDEAN Sub-regional Co-operation Scheme	Agro-industries, food-industries, artisan (skin, wood and ceramics) Forest based industry.

Mixed Public and Private: Same as for foreign enterprises. However the major activities are concentrated in intermediate industries requiring advanced technology, and in those areas where opportunity costs are dependent upon managerial resources, technical skills and minimum scale required for achieving objectives laid down.

Country	Public	Domestic Private	Foreign	Co-operative
Sri Lanka	a. Steel industry b. Sugar industry (on a small scale by the private sector also) c. Salt d. Paper manufacture e. Manufacture of chemicals f. Manufacture of Tyres (car, bus, lorry, tractor) g. Manufacture of ceramic products h. Graphite and mineral sands i. Petroleum products j. Cement manufacture k. Plywoods manufacture l. Leather and leather products	Here no strict areas have been identified. But generally the private domestic industries dominate in the following areas: a. Manufacture of cigarettes b. Manufacture of soap c. Manufacture of rubber products, including tyre rebuilding, bicycle tyre and tube manufacture but excluding car and truck tyres. d. Manufacture of batteries and torch cells e. Manufacture of electrical goods f. Manufacture of electrical cables g. Manufacture of pharmaceutical products h. Glass manufacture i. Plastic products j. Vehicle body construction k. Food and beverages	Large number of foreign industrial enterprises have been set-up in the Investment Promotion Zone under the Greater Colombo Economic Commission. Main investment have been in the following fields: a. Garments b. Cotton Gloves c. Fishing gear and accessories d. Gem cutting etc. Joint-ventures: Here too no strict industries have been set aside but three joint stock companies are in three joint stock companies are in existence today dealing with the following industries: a. Porcelain tableware for exports b. Porcelain figures for exports c. Wall tile manufacture.	While no specific industries have been reserved for this sector generally they are engaged in the following industries: a. Manufacture of rubber articles such as mattresses. b. Making of coir products c. Small scale textile weaving units d. Handicrafts