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THE PUBLIC SECTOR AND INDUSTRIAL DEVELOPMENT 1/

by

The UNIDO Secretariat

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The increasing importance of the public industrial sector in a number of developing countries is evident from its growing contribution to manufacturing value added, employment and GDP, and from its role in the development of certain priority or key industrial activities. The sector is viewed here as composed of enterprises that are predominantly owned and controlled by the State and that produce manufactured goods, in accordance with the issues raised in General Assembly resolution 3488 (XXX), which suggested that for the purpose of the report on the public sector called for by the resolution:

> "... the public sector should be viewed as focussing primarily on those entities producing traded goods and services which the Government and its agencies own and control (including partial ownership, if this is sufficient to give effective control), as distinct from the whole range of governmental policy, decision-taking and activity." 1/

An in-depth analysis of the public industrial sector is hampered from the outset by the scarcity of data and the incompatability of the data that exist. Hence, the aim of this discussion is not to give a comprehensive and detailed picture of the sector but to provide an idea of its importance by examining the key issues and problems that arise in the establishment and effective operation of public manufacturing enterprises.

A. The State as entrepreneur and catalyst

The entrepreneurial role of the State is most clearly evidenced when it assumes the direction of public industrial enterprises. Some Governments pursue a middle course between acting as an entrepreneur and simply bringing their influence to bear on private industrial enterprises.

1/ United Nations Economic and Social Council, "The role of the public sector in promoting the economic development of developing countries. Report of the Secretary-General" (E/5985), p.4.

In such countries the State prefers to be a catalyst in a system in which the share of investment in industrial enterprises are divided between the public and private sectors. In either case, the State participates directly as a manager or partner in industrial productive activities, and the size and structure of the sector are largely determined by the extent of its intervention.

The view is now widely held that state participation and direction are necessary aspects of development policy in both the developed and the developing countries. For example, in the Federal Republic of Germany, whose Government is opposed to the concept of nationalization, the State has substantial investments in industry.[2/] The same is true for the United Kingdom; the British Minister for Overseas Development recently stated, in an address on the implications of the new international order:

> "... we now need to extend the concept of intervention and planning from the national to the international level: from the nation to the world, from the country to the planet. We must now determine that we shall solve our shared and common problems only by a firm rejection of any illusion that there is a free world market economy." 3/

Developing countries are currently faced with the task of formulating national development plans and policies not only to achieve a faster rate of economic growth but also to alleviate poverty and unemployment, to rectify the unequal distribution of income, and to overcome economic and technological dependency. In the planning process, the Governments of these countries must be responsible for setting industrial development goals and for directing the flow of resources, both public and private, in order to achieve their objectives in situations that are often quite different from those that existed when industrial development began in the developed countries. For instance, optimum firm size is much larger than in the nineteenth century; market structures are often oligopolistic;

2/ See The Financial Times, 4 January 1979, p.2. See also "The state in the market", The Economist, 30 December 1978.

3/ Address by Judith Hart to the Round Table of the Society for International Development, Rome, 18 May 1978.

trade and foreign investment play a greater part in industrial development; the cost of modern technologies is greater; capital-intensity is higher; and, with scarce capital, the decision for capital deepening often has to be made at a national level.

B. Objectives and rationale of the public industrial sector

Among the specific reasons for the emergence of a public industrial sector in developing countries are:

(a) To ensure the rapid expansion of the industrial sector;

(b) To develop certain industrial activities that the Government desires to promote and that private enterprises do not or cannot enter;

(c) To ensure national control of key industries, e.g. the exploitation and processing of natural resources;

(d) To prevent the domination of the industrial sector by private entrepreneurs;

(e) To import the needed technology and to stimulate research and development to build up indigenous industrial technologies;

(f) To ensure a balanced regional development;

(g) To rescue and revitalize ailing industrial enterprises for economic or social reasons;

(h) To bring foreign-owned enterprises into domestic hands and thus accelerate the process of indigenisation of the industrial sector;

(i) To create greater and better opportunities for employment and for training in new industrial skills;

(j) To provide industrial goods that satisfy basic social and economic needs;

(k) To control prices of specific industrial goods.

The following paragraphs illustrate the rationale for the public industrial sector in specific developing countries.

Algeria has adopted the position that all important means of production and distribution should be vested in the public sector. The Charte nationale (National Charter) of Algeria, adopted by a popular referendum of 27 June 1976, includes the statement:

> "The methodic nationalization of land, mines, hydrocarbons, foreign trade, banks, insurance companies, transport, unoccupied buildings and all foreign firms places all the economic control levers in the hands of the nation.... In the case of industry, the intervention of the national private sector is limited to activities carried out by small enterprises and involving the last stage of the industrial process. These activities must be situated downstream from the production of state factories, notably in the case of small-scale manufacture of certain articles of current consumption." 4/

In Brazil, the main explanation for the expansion of public industrial enterprises is that they have entered areas that were beyond the organizational and financial resources of Brazilian private companies. Direct public investment has been of particular importance in steel, petroleum and chemicals. In steel, private profitability was at one time favourable, but the huge amount of capital required by large modern integrated mills was not forthcoming from private sources; government equity participation reduced the amount of private capital needed and also ensured the future of the industry. Government firms currently account for a good part of the steel industry's production. Extensive exploration for petroleum (and to a lesser extent its processing) seemed so unprofitable that strong incentives would have been needed to induce private activity. It appears that petroleum production and refining in Brazil today are at far higher levels than they would have been without direct government intervention. The fact that PETROBRAS was established with a virtual monopoly of petroleum exploration and refining would imply that the desire for state control of basic raw materials was a motive for the expansion of public industrial enterprises.

4/ United Nations Economic and Social Council, op cit, p. 11.

The petrochemical industry in Brazil is illustrative of a situation in which the public sector came in as an entrepreneur with sufficient resources to co-operate as an effective partner with transnational corporations and the local private sector in developing an industry that required massive capital investment and the implantation of advanced technology. The petrochemical industry in Brazil is characterized by a unique combination of local private capital, state capital and transnational corporations that are bound together by buying-and-selling relationships and equity interlocks to form a single interdependent system. The public sector initially entered the industry in the 1960s not because it was anxious to take over the petrochemical industry but because the private sector was anxious to gain its participation.[5/]

In Egypt where the public sector currently accounts for a considerable part of the country's industrial production, the role of the State in industrial development originated with government policies following the 1952 Revolution that were designed to accelerate the industrialisation of the country. To achieve this objective, the Government favoured public investment, in particular in heavy industries (e.g. steel) which had proved unattractive to the private sector.[6/]

In the reply of India to the Secretary-General's note verbale concerning the implementation of General Assembly resolution 3488(XXX) on the role of the public sector in promoting the economic development of developing countries, the Government stated that, in 1966, the Prime Minister declared:

5/ See Peter Evans, "Multinationals, state-owned corporations, and the transformation of imperialism: a Brazilian case study", Economic Development and Cultural Change, vol. 26, October 1977.

6/ Robert Mabro and Samir Radwan, The Industrialization of Egypt 1939-1973 (Oxford, Clarendon Press, 1976).

"We advocate a public sector for three reasons: to gain control of the commanding heights of the economy; to promote critical development in terms of social gain or strategic value rather than primarily on considerations of profit; and to provide commercial surpluses with which to finance further economic development".

In 1969, the Prime Minister observed further:

"The public sector occupies a pivotal role in our economic strategy. From the beginning, it has been recognized that the public sector would necessarily have to venture into the difficult and intensive fields of basic industry which the private sector had shunned for long". 7/

Certain basic industries accordingly have been reserved for the State and others have been left to the private sector or for joint endeavours. The new industrial policy of the Government is not explicit on the roles of the public sector versus the private sector, although the emphasis has shifted from heavy industrialization as the prime engine of growth to rural development and small-scale industry. Programmes of industrial development in the public sector in India have encompassed the setting up of steel plants, coal mines, heavy machine-building factories, fertilizer factories, the manufacture of heavy electrical equipment and oil exploration and development.

7/ United Nations Economic and Social Council, op.cit., p.6.

In Jamaica, on the basis of problems of structural unemployment, regional unemployment and underemployment and of sectoral underinvestment, a green paper on industrial development was issued giving the main objectives of direct public-sector participation as: "(a) the achievement of the targeted rate of industrial investment; (b) the promotion of a desirable pattern of industrial location; and (c) the development of an effective planning and implementation framework for the sector within which the main growth points in the sector can be identified and their development ensured." 8/

The State as an economic agent has been playing an important role in the Mexican economy in recent decades (1935-1975). The reasons given for direct state participation in industrial productive activities include: (a) direct exploitation and processing of basic and strategic natural resources that guarantee state sovereignty over such resources, e.g. the nationalization of the petroleum industry; (b) investment in economic activities that because of their long gestation period and large capital requirements had not attracted the private sector; (c) control of prices, in particular of steel and petrochemicals because prices of these products largely determine the price level of many other industrial goods in the country; and (d) salvaging private enterprises that were on the verge of bankruptcy, essentially in order to maintain employment levels or to sustain certain industrial activities that were basic to a minimum integration of the economy. In Mexico the public sector is particularly active in petroleum and petrochemicals, iron and steel, fertilizers and the manufacture and repair of transport equipment. 9/

8/ Green Paper on Industrial Development Programme, Jamaica, 1975-1980, p.3.

9/ See René Villarreal and Rocio R. de Villarreal, "Las empresas públicas como instrumento de politica economómica in México", <u>El Trimestre Económico</u>, vol. XLV (2), April-June 1978.

In Trinid and Tobago, the need r greater nation control of the economy appears to have been an important reason for the expansion of public industrial enterprises. The Government, which has been attempting to hasten "localization" (that is, the transfer of effective control of economic activity into the hands of nationals of Trinidad and Tobago), 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." 10/

In the Arusha Declaration (1967), the United Republic of Tanzania outlines the objectives for the public sector, as follows: (a) to achieve economic justice by controlling the principal means of production; (b) to ensure the well-being of all citizens; (c) to prevent the exploitation of one person by another or of one group by another; and (d) to prevent the accumulation of wealth to an extent that is inconsistent with the existence of a classless society. Following this Declaration, the Government transferred the control and ownership of the large private and foreign-owned industrial enterprises to parastatal organizations. 11/ By 1974, the public sector accounted for about 50 per cent of manufacturing value added and 50 per cent of industrial employment.

In Zambia, as in other developing countries such as Malaysia, the public industrial sector has been regarded as an important vehicle for rectifying social and ethnic inbalances. Rapid indigenization has clearly been an important factor in the nationalization of industry and in the investment of the Industrial Development Corporation of Zambia. 12/

10/ United Nations Economic and Social Council, op. cit., p.10.

11/ Second Five-Year Plan for Economic and Social Development of Tanzania (1969-1974), vol. 1, General Analysis (Dar es Salaam, The Government Printer, 1969).

12/ See "State participation and the Zambian economy", World Development, vol. I, No. 10 (October 1973).

C. Issues affecting the role of the public industrial sector

The trend towards a greater role for the public industrial sector in the industrialization process in developing countries is linked with three main issues: (a) the control of the development of natural resources, (b) the acquisition and adaptation of technology, and (c) rural development.

International prices for primary commodities exported from developing countries have often fluctuated widely and have not been indicative of long-term comparative advantage. Value added in the processing and marketing of end-products has accrued mainly in the industrialized countries. Historically, this situation has tended to benefit the industrialized countries to the disadvantage of the developing countries. It is not surprising then that calls for a new international economic order have focused on national control of the exploitation and processing of natural resources. In the Lima Declaration and Plan of Action on Industrial Development and Co-operation it is stated "that every State has the inalienable right to exercise freely its sovereignty and permanent control over its natural resources..." and "... that effective control over natural resources and the harmonization of policies for their exploitation, conservation, transformation and marketing constitute for developing countries an indispensable condition for economic and social progress." (ID/CONF.3/31, chap. IV, paras. 32 and 34)[13/] In many developing countries, owing to the absence of a sizeable national entrepreneurial class with adequate capital and technological know-how, the only alternative to outright private foreign ownership and control of natural resources may be public national ownership, to the extent that effective control is ensured. For industrial

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13/ Transmitted to the General Assembly by a note by the Secretary-General (A/10112). Also available as UNIDO public information pamphlet PI/38.

projects in which investments are large and have long gestation periods, an increasing number of joint ventures are occurring between the public industrial sector in developing countries and partners from the developed countries. The public industrial enterprises seek the technology, the know-how and the foreign markets owned or controlled by the industrialized countries, while the foreign partners seek the finance and political protection that only the State can provide. Thus, the increasing importance of the public sector in industrial development in the developing countries may actually lead to greater opportunities for international co-operation between developing and developed countries.

The achievement of a 25 per cent share of world industrial output by the year 2000 implies the application of technology on a massive scale. The question is how and on what terms this technology is to be acquired from the industrialized countries and adapted to the conditions of the developing countries. One way of obtaining the technology is, of course, to let foreign firms come in and bring their technology with them, or to allow the local private industrial sector to enter into licensing agreements for the purpose. But uncontrolled entry makes it difficult for developing countries to gain real access to technology once it is implanted and to guide the technology to priority industrial activities. A basic cause for concern at the Second General Conference of UNIDO was the imperfection of the market for technology, the extent of abusive practices and the limitations on access to technology as well as its foreign exchange cost.

One solution to the problem of gaining continuous long-term reliable access to new technology without giving up national control of strategic branches of industry is for the State to enter into joint ventures with foreign parties. This sort of arrangement permits control over investment and production, the training of local technicians in the technology, and local participation in the profits. In short, gaining real access to technology and control of the industry may require that the State have a share in both the ownership and management of a particular industry.

While efforts to industrialize in some developing countries have led to encouraging results, large segments of their rural population have benefitted little, if at all, from the progress achieved. The industrialization of rural areas can be an important input to rural development. However, with limited financial resources, insufficient entrepreneurial capabilities, inadequate infrastructure and the long distances from rural areas to metropolitan markets, direct state intervention, including the establishment of public industrial enterprises, may be the only way to promote rapid industrial development in the rural areas of developing countries.

D. Contribution of the public industrial sector

It would be expected that the industrial branches in which the public sector is directly involved would cover many and varied activities since they are conditioned by the economic, social and political priorities laid down by individual Governments. Table I shows the major areas of industrial activities of the public sector in 29 developing countries. No statistical data are provided; the information is intended merely to give an approximate idea, which indicates the wide range of activities in the sector.

As may be expected from the policies of a number of developing countries designed to secure the national processing of local raw materials and to establish the pillars of industrialization through the direct participation of the State, a pattern of state participation is emerging. Within the public industrial sector in these countries basic industrial goods appear largely to predominate. This is also the case for the capital goods industries in a few countries, in particular in the more developed of the developing countries where such industries are already established.

While table I indicates that the public sector also participates in the basic consumer goods industries, this may be explained in part by the centrally planned approach to development of some of the developing countries represented in the table. In other cases it may reflect a lack of capital and entrepreneurial resources in the private industrial sector and thus point to the need for the State to initiate or to give a push to activities in these branches.

Table I Distribution of priority manufacturing industries in the public sector, for selected developing countries

Category	ISIC	Bangladesh	Brazil	Dem. Yemen	Ecuador	Egypt	Guatemala	India	Indonesia	Iraq	Iran	Jamaica	Jordan	Kuwait	Mexico	Morocco	Nigeria	Oman	Pakistan	Rep. of Korea	Saudi Arabia	Singapore	Sri-Lanka	Sudan	Syrian Arab Rep.	Thailand	Trinidad Tobago	Tunisia	Turkey
asic consumer goods																													
Food, beverage and tobacco	31	x		x	x		x			x	x	x			x										x	x		x	x
grain mill products	3116			x								x																	
sugar factories and refineries	3118	x						x								x	x	x					x	x		x			
Textile, wearing apparel, leather incl. footwear	32	x		x			x	x				x											x	x	x	x			x
spinning, weaving and finishing textiles	3211	x		x			x			x					x											x			
asic industrial goods																													
Pulp, paper and paperboard	3411							x		x		x			x		x						x			x			x
Industrial chemicals (petrochemicals)	351		x		x	x		x	x	x		x		x	x	x	x		x	x	x	x	x		x			x	x
fertilizers and pesticides	3512	x			x			x	x			x	x		x		x		x	x			x					x	
Petroleum refineries	353		x		x			x	x		x	x	x	x	x		x	x	x	x		x				x	x	x	x
Non-metallic mineral products	36						x					x						x	x				x			x			x
cement lime and plaster	3692	x			x	x		x	x	x		x	x	x				x	x				x					x	
Basic metals	37									x					x														
iron and steel	371	x	x		x			x	x		x	x				x	x	x	x	x		x	x					x	x
non-ferrous metal (copper)	372							x			x									x									
apital goods																													
Machinery and transport equipment	382, 383, 384														x					x						x			x
Engines and turbines	3821																												
Agricultural machinery and equipment (tractors)	3822	x			x	x		x		x									x						x				
Other machinery, except electrical	3823, 3824, 3825, 3829	x					x																						
Industrial electrical machinery (heavy)	3831	x															x		x										
Ship building and repairing	3841				x																								
Railroad equipment	3842																												
Motor vehicles (commercial cars and lorries)	3843				x										x		x		x										
Aircraft	3845																												
Electronics	3832							x												x									
ther manufacturing																													
Wood and wood products incl. furniture	33			x	x										x								x			x			x
Paper and paper products, printing and publishing other than pulp and paper	34 excluding 3411														x								x						
printing and publishing	342													x				x											x
Other chemical products (pharmaceutics)	352							x					x		x														
Miscellaneous products of petroleum and coal	354														x											x			
Rubber products	355																												
Plastic products	356			x																									
Metal products, except machinery & equipment	381																												
Other manufacturing	385, 390			x											x											x			x

Sources: UNIDO country studies, national sources, and The Economist, 30 December 1978.

Note: Significant participation (present or planned) by the public sector is denoted by X.

A major problem in investigating the role of the public sector is the unavailability of data, in particular data that can be used for cross-national comparisons. The figures in tables II, III and IV are therefore presented mainly for illustrative purposes to give a broad and tentative view of the relative importance of the public industrial sector in a few developing countries for which data were available. The indicators used are the contribution of the public sector to industrial output and the share of the public sector in industrial investment and in employment.

Table II shows the relative contribution of the public and private sectors to manufacturing output in 11 developing countries. In a few cases it also gives the average annual rate of growth of the sector for various periods. The figures indicate that the contribution of the sector to manufacturing output in the 11 countries varies widely: 7.8 per cent in Mexico, 30.0 per cent in India, 37.0 per cent in Turkey, 67.0 per cent in Egypt, and 85.1 per cent in Somalia. Except for Mexico, the contribution did not fall below 23.0 per cent. In general, the table shows the importance of the public sector in the industrial output of both the least and the more developed of the developing countries.

Table III gives the actual and planned shares of the public and private sectors in total industrial investment in 20 developing countries for which data were available. For some countries the table also shows the historical trends in these shares. Investment in the public industrial sector varies as a percentage of total industrial investment from 9.3 per cent in Morocco to 97.9 per cent in Iraq.

The decision to invest in the public industrial sector depends on factors which are by no means static but which vary according to the changing economic, social and political situation in a particular country. The high figures for shares of public industrial investment in table III for Iraq and Somalia, for instance, may be explained by the fact that these countries have chosen a centrally planned approach to development. The low figure for the share in the Republic of Korea may be explained by that country's commitment to a market economy. What is interesting to note from table III ' owever, is the relativ 'y high shares of ublic industrial investment in Mexico (59.6 per cent), Turkey (55.0 per cent), Venezuela (49.8 per cent), El Salvador (40.9 per cent), Morocco (34.8 per cent) and Iran (33.4 per cent). This may be the result of policies to concentrate in the public sector industries considered basic to further industrialization or industries engaged in the exploitation and processing of local raw materials, with high capital requirements. In some cases, it may also be the result of a lack of sufficient entrepreneurship and finance in the private sector of the economy.

Table IV indicates the shares of employment in the public and private sectors in total industrial employment in the eight countries for which data were available. In the years shown the labour force in the sector accounted for between 6.0 and 78.3 per cent of the total industrial labour force in the countries represented. However, the small number of countries and the reliability of the data do not permit more than the obvious observation that the wide variation in the share of the industrial labour force in the public sector reflects the variations also observed among developing countries in the shares of the public and private sectors in total industrial investment and in their contributions to manufacturing output.14/

14/ It would be useful to make an effort to obtain data in order to assess the contribution of the public sector to specific industries in the developing countries, particularly the priority industries indicated by the Lima Declaration and Plan of Action. An ECLA study "Public enterprises: their present significance and their potential in development", published in the Economic Bulletin for Latin America in 1971, indicated that out of a total of 17 major integrated steel enterprises, producing 80 per cent of the steel in Latin America, 8 were state enterprises proper and accounted for 47 per cent of production; 2 others, with mixed private and public capital, accounted for 12 per cent; 2 that were controlled by foreign capital accounted for 7 per cent; and the remaining 5, owned by domestic private investors, were responsible for 14 per cent. However, the data referred to the year 1966 and by now the situation may have changed significantly.

E. Organization of the public industrial sector

While the public industrial sector is assuming an increasingly important role in the industrialization of a number of developing countries, few countries have formulated concrete strategies for the sector to make it an effective instrument of economic development, or have set up machinery to co-ordinate and control the activities of the sector. Such machinery is needed to ensure standards of performance and accountability and to minimize the competitive use of limited resources, the duplication of production and the multiplication of internal services such as purchasing, accounting and marketing. Co-ordination can be especially valuable in investment planning, research and development, management, technical training and consultancy.

Some developing countries, however, have attempted to overcome difficulties of co-ordination and control in the public industrial sector. For instance, Argentina, Guyana, Malaysia and Mexico have set up a separate ministry of public (including industrial) enterprises, in order to place under one ministry a wide range of functions, such as investment and pricing policies for industry, appointment of board members, setting of financial and other objectives, approving capital structures and borrowing arrangements, and undertaking efficiency audits. Other developing countries have created advisory-cum-supervisory bodies to provide various services in order to achieve better policy formulation and co-ordination and to enhance overall efficiency. For example, India has established the Bureau of Public Enterprises, Nepal the Corporation Co-ordination Council, and Trinidad and Tobago the Statutory Authorities Service Commission. Another institutional device that has become well known is the establishment of holding companies such as the Ghana Industrial Holding Corporation, the National Development Corporation of Tanzania, the Industrial Development Corporation of Zambia and the Bolivian Development Corporation.

Table II. Manufacturing output by public and private sector, for selected developing countries

Country	Share of sector (%)			Growth of public sector		Remarks
	Year	Public	Private	Period	Average annual rate (%)	
Democratic Yemen	1969	39.4	28.6	1974–1979	21.0	Total industry includes mixed and co-operative sector, 1973/74 at 1969 constant price
	1973/74	44.9	31.9			
Egypt	1975	67.0	33.0	1973–1974	2.6	
				1974–1975	8.1	Mining and manufacturing, estimates
India	1960–1961	8.0	92.0			Mining and manufacturing
	1975–1976	30.0	70.0			
Iraq	1969	54.0	46.0	1969–1972	12.4	
	1972	58.2	41.8	1969–1975	20.5	Total industry
	1975	47.4	52.6	1972–1975	29.2	
Mexico	1972	7.8	92.2			
Pakistan				1972–1973	18.0	
				1973–1974	31.0	Production in Board of Industrial Management enterprises
				1974–1975	22.0	
				1975–1976	4.0	
Saudi Arabia				1970–1975	9.0	Value added in the non-petroleum industry
Somalia	1973	85.1	14.9			
Sri Lanka	1974	23.0	77.0			1970–1976: Increase of 100% in the public sector (planned)
Turkey	1976	37.0	63.0			
United Republic of Tanzania	1974	50.0	50.0			Estimates

Sources: UNIDO country studies, national sources, and The Economist, 30 December 1978

Table III Public and private investment in manufacturing (Percentage)

Country	Period	Share of sector Public	Private	Remarks
Egypt	1969/70	96.6	3.4	Mining and manufacturing
	1970/71	96.8	3.2	
	1971/72	95.1	4.9	
	1973	95.0	5.0	
	1974	98.1	1.9	
	1975	89.6	10.4	
El Salvador	1973-1977	40.9	59.1	
Guatemala	1976-1979	15.9	84.1	
Haiti	1976-1981	10.0	90.0	All industry
India	1966-1967	61.7	38.3	All industry
	1970-1971	61.0	39.0	
	1975-1976	60.9	39.1	
Iran	1968	42.2	57.8	Mining and manufacturing
	1969	41.3	58.7	
	1970	44.0	56.0	
	1971	35.6	64.4	
	1972	33.3	66.7	
	1973	29.1	70.9	
	1974	33.4	66.6	
Iraq	1960	12.2	87.8	
	1975	97.9	2.1	
Ivory Coast	1971-1975	19.3	80.7	
Mexico	1974	59.0	41.0	
Morocco	1973	9.3	90.7	Manufacturing and processing industry, excluding construction and transport
	1974	19.7	80.3	
	1975	24.1	75.9	
	1976	34.8	65.2	
Nigeria	1970-1974	17.7	82.3	All industry, excluding mining
Pakistan	1965-1970	47.0	53.0	
	1970-1975	57.0	43.0	
	1975-1980	76.0	24.0	
Peru	1971-1975	25.3	74.7	
Republic of Korea	1972-1976	10.4	89.6	
Somalia	1973	79.9	20.1	All industry
Sri Lanka	1972-1976	55.3	44.7	Mining, Quarrying and manufacturing
Tunisia	1973	41.6	58.4	
	1974	34.0	66.0	
	1975	42.4	57.6	Estimate
	1976	38.3	61.7	Forecast
	1969-1972	58.4	41.6	
	1973-1976	44.3	55.7	
	1977-1981	53.7	46.3	Target
Turkey	1966-1976	55.0	45.0	All industry
Venezuela	1976-1980	49.8	50.2	
Yemen	1969/70			
	1975/76	76.2	23.8	

Sources: UNIDO country studies, national sources, and The Economist, 30 December 1978.

Table IV Employment in manufacturing, by public and private sector, for selected developing countries

Country	Year	Sector: Public (Thousand persons)	Sector: Private (Thousand persons)	Total	Sector: Public (Percentage)	Sector: Private (Percentage)	Growth of public sector: Period	Growth of public sector: Average annual rate (%)	Remarks
Democratic Yemen	1973	4.3	1.2	5.7	75.4	21.1	1973-1974	16.3	Total employment includes mixed sec and co-operative sector.
	1974	5.0	0.9	6.2	80.6	14.5	1974-1975	- 12.0	
	1975	4.4	1.0	5.9	74.6	16.9			
Egypt	1975	600.0	400.0	1,000.0	60.0	40.0	1967-1974	2.4	Mining and manufacturing estimate
India	1977	1,222.0	4,157.0	5,379.0	22.7	77.3			In so-called "organized sector"
Iraq	1969	44.6	97.0	142.3	31.3	68.7	1969-1972	19.8	
	1972	76.6	110.6	187.2	40.9	59.1	1969-1975	13.2	Total industr
	1975	93.6	143.0	236.6	39.6	60.4	1972-1975	6.9	
Somalia	1973	4.5	2.4	6.9	65.3	34.7			
Sri Lanka	1974				6.0	94.0			
United Republic of Tanzania	1974				50.0	50.0			Estimates
Yemen	1969	3.6	1.0	4.6	78.3	21.7			

Sources: UNIDO country studies, national publications, and <u>Financial Times</u>, 14 August 1978.

Such institutional mechanisms have solved the problems of co-ordination in the public industrial sector with varying success. It is clear, however, that much still needs to be done by many developing countries to rationalise the fragmentary approach to the co-ordination and control that exists at present in the sector.

Perhaps of equal or greater importance is the lack in several developing countries of a concrete strategy for the long-term development of the public industrial sector. An overriding need, if the sector is to become an effective instrument of economic development, is for the formulation of such a comprehensive strategy with objectives (both economic and social), priorities, targets and implementation measures clearly defined at the global, sectoral and enterprise levels. This is a prerequisite not only for increasing the effectiveness of the sector, but also to establish a basis for measuring its performance in terms of capacity to produce industrial goods at an economic cost within clearly defined economic and social objectives.

F. Performance of the public industrial sector

An increasing number of developing countries are concerned with the problem of measuring the performance of public industrial enterprises. Obviously, such measurement reflects whatever criteria of performance are chosen and that choice in turn is conditioned by whatever goals have been set for the sector.

A dilemma that faces developing countries in the selection of appropriate indicators for measuring the performance of public industrial enterprises is the need to reconcile social considerations with a commercial orientation.15/ For the private industrial sector profitability is a ready indicator of performance. For the public industrial sector, however, there is a clear need to adopt a multidimensional approach to evaluating performance, since a single indicator or even a set of purely economic indicators would not take into account the social objectives that form part of the rationale for the sector.

15/ See Measures for Improving Performance of Public Enterprises in Developing Countries, (United Nations publication, Sales No. 73.II.H.2).

A review of experiences in developing countries reveals that in most instances financial criteria are stressed in the measurement of performance of public industrial enterprises. This may reflect the concern of Governments that the public industrial sector should largely finance its own expansion. In both the developed market economies and the centrally planned economies self-financing out of reinvested surpluses has largely accounted for the high rates of capital formation that have made possible accelerated industrialisation. Another reason for emphasising financial criteria may be that the concept of commercial profitability is firmly embodied in conventional accounting practices, which are widely understood and which are limited to simple statements of actual cost and revenue. As may be expected, a quick review of the performance of individual public industrial enterprises in developing countries, in terms of financial criteria, gives a mixed picture of profits and losses from country to country and from one enterprise to another within one country. In view of the limited criteria used for measurement, it would be unrealistic to make a generalisation on the performance of the sector in developing countries.

What is required is a multidimensional national system of performance measurement that would take economic as well as non-economic factors into account. The establishment of such a system would need to be preceded by a strategy for the long-term development of the public industrial sector, which would identify concrete goals and targets. At the enterprise level it would involve: (a) specifying in operational terms the national goals or targets expected of each enterprise; (b) devising indicators for the assessment of the attainment of these targets; and (c) measuring the actual performance against the targets set. While this would not be an easy task for developing countries, the performance of the sector could be improved substantially by the use of this more effective system of measurement.

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