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WORKING PAPER

on

THE INSTITUTIONAL INFRASTRUCTURE FOR INDUSTRY

in

THAILAND

by

N. Ramm-Ericson
UNIDO Official

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Introduction

0.01 The International Centre for Industrial Studies, is currently carrying out a 2-year research programme on the establishment and operation of the institutional infrastructure for industry in developing countries, in support of an accelerated implementation of the goals and targets of the Lima Declaration and Plan of Action on Industrial Development and Co-operation, and more generally, the establishment of the New International Economic Order.

0.02 The initial phase of the programme comprises an assessment, in respect of a number of developing countries, of the industrial support functions carried out by existing institutions as well as additional functions needed, to meet the requirements of the countries' industrial development strategy and policies, with particular attention given to the implications of the goals of the Lima Declaration for the institutional machinery in these countries.

0.03 In the case of Thailand a short field mission by the special consultant for the research project, Dr. L.L. Barber, and the UNIDO staff member Nils Ramm-Ericson was undertaken in June 1976. This working paper is based largely on the findings and notes made during the visit and on various documents or publications obtained by the mission or otherwise available at UNIDO headquarters. A listing of the sources is appended as Annex I.

0.04 The purpose of the working paper is primarily to consolidate and analyse the material on the Thai institutional infrastructure for industry (i) for use in the comparative overall analysis and conclusion drawing from the about 20 country surveys or in-depth studies being undertaken in the initial phase of the research programme and (ii) for use as a basis for a further dialogue with the Thai authorities in connexion with efforts to support the development of the country's institutional infrastructure for industry.

I. Brief summary of Thailand's industrial development resources, potential and strategy

a. Industry's role in the economy

1.01 The economy of the country is based primarily on agriculture and nearly 80 % of the labour force is engaged in agricultural production. Rice is the most important crop, followed by rubber, maize, sugar, kenaf, and cassava. Even though agriculture is providing a major contribution to Thailand's economic growth process in terms of income, employment and export earnings, its relative importance has been declining because of a significant change in the structure of the economy. The rapid relative expansion of output in the non-agricultural sectors - particularly in manufacturing - has contributed towards a better sectoral balance. Following tables highlight this development:

	Percentage Distribution of GDP at 1962 Prices							
	1960	1965	1970	1971	1972	1973	1974	1975
Agriculture	38.2%	34.1%	30.0%	29.8%	28.1%	28.0%	27.7%	27.5%
Manufacturing	13.1%	15.5%	17.1%	17.5%	18.1%	18.2%	20.4%	20.2%
Trade	15.8%	16.1%	17.4%	17.1%	18.0%	18.5%	16.5%	15.1%

	Growth Rates of GDP at 1962 Prices						
	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975
Agriculture	5.3 %	4.1 %	4.3 %	-1.6 %	10.2 %	3.2 %	6.6 %
Manufacturing	11.4 %	10.5 %	16.2 %	10.7 %	14.6 %	2.5 %	6.1 %
Trade	7.9 %	10.4 %	3.0 %	5.2 %	12.7 %	-2.0 %	-1.7 %
Total GDP	7.8 %	7.9 %	6.9 %	4.2 %	10.5 %	3.2 %	6.4 %

b. Structure of manufacturing sector

1.02 Although the industry sector (manufacturing) now represents more than 20 % of the GDP (against 13 % in 1960), and 17 % of total investment, it provides jobs for only 5 % of the labour force, or about 900.000 persons. Manufacturing employment is presently concentrated in very small cottage type enterprises on the one hand and in a number of large firms (employing more than 100 workers) on the other, while at present there are relatively few small-medium industrial units (employing between 10 - 100 workers) to fill the gap between these two extremes; such units probably account for under 5 % of the total number of enterprises, 10 % of employment and 15 % of value-added in the industrial sector.

1.03 Unemployment has not been a major problem in Thailand up to now, but the rapid exhaustion of new settlement areas to cultivate will sharply curb the capacity of the agricultural sector to continue absorbing new entrants into the labour force at the same rates as in the past. The expected increase in migration to the urban areas - mainly Bangkok - coupled with existing unemployment there, will necessitate the active exploration of alternatives for employment generation at a lower cost in the industrial, trade and services sectors. (See further para. 1.27, incl. footnote.)

1.04 There is a heavy concentration of the industrial activity to the greater Bangkok area; indeed Thailand's problem of lack of growth poles, alternative to the main metropolis, is one of the most severe and least tackled in Southeast Asia. In terms of value-added, it has been estimated that the industries in the Central Region (including Bangkok) produce about 70 - 80 % of the total value added. *)

*) Location of promoted factories in operation 1960-74:
Bangkok and ~~Samut Prakarn~~ 350, Other provinces in the Central Region 166, Northern Region 37, Northeastern Region 16, Southern Region 34 = 603.

The choice of location is due to several factors such as

- Bangkok is the commercial and financial center in Thailand;
- Bangkok is also the center of administration;
- Good transportation and communication facilities - with favourable rates - are available in and around the Bangkok area as well as lower rates for electricity and water supply;
- The proximity to the only seaport in the country;
- The industries use a very large portion of unskilled labour;
- The role of foreign investment and participation;
- The techniques of production are usually fully imported;
- The growth of inter-industry links;
- Bangkok is the principal market for industrial products with 10 % of the total population and an average level of money-income per resident about 250 % of that in rural areas.

1.05 Practically the only industries not established in or around Bangkok are those based on natural resources. Rice and saw-milling operations are spread throughout all regions. Tin smelting, rubber-processing, non-metallic minerals processing, sugar, tapioca, flour and wood-based industries are located at the sites of resource availability.

1.06 Reliable up-to-date detailed data on establishments in the Thai manufacturing sector and their key characteristics are not available. According to a 1968 industrial census there were about 45.000 manufacturing establishments (a major portion of which were rice mills). Government estimates suggest that by 1973, these had increased to over 66,000 (of which just about 35.000 were "registered").

1.07 The following table indicates the rough distribution of registered establishments and value-added between three broad economic classifications from data available for 1973.

	Establishments in manufacturing industry		Value-added Baht *)	
	No.	%	million	%
Consumer goods industry	27,582	79	19,200	52
Intermediate goods industry	4,974	14	13,200	36
Capital goods industry	2,495	7	4,200	12
	35,051	100	36,600	100

*) 1 US$ = 20 Baht

1.08 Since 1968, value-added in the manufacturing sector has grown from Baht 17,900 million to Baht 36,600 million in 1973 (and approx. Baht 56,000 million in 1975) in current prices, with a relative shift in its composition. In 1973, consumer-goods industries contributed to 52 % of value-added versus 62 % in 1968, intermediate goods industries to 36 % versus 28 %, and capital-goods to 12 % versus 8 %. The increase in the share of intermediate goods was due largely to the backward integration of the textile industry during the period and the manufacturing of a wider range of chemicals and chemical products. The increase in the share of capital goods industries was due almost entirely to vehicle assembly operations.

1.09 Available data on capacity utilization in Thai manufacturing does not permit any quantitative assessment of performance in the sector as a whole *). Apart from the problem of initial over-investment (due to the Government's stop-go policies on investment inducing entrepreneurs to procure excess capacity equipment when investments are encouraged) and temporary under-utilization due to ad hoc input shortages, significant under-utilization of capacity does not seem to have been a major problem in Thailand. In 1974, however, recession in major export markets caused substantial installed capacity to stay under-utilized, particularly in the textile and wood-based industries.

1.10 It might be noted that most plants in Thailand operate on a single shift basis with multiple shifts being confined to industries where process requirements necessitate continous operation, e.g. sugar, chemicals, etc., or in export-oriented industries in which there is pressure to minimize costs, e.g. textiles.

1.11 As far as the ownership of industry is concerned, it is noted later in the paper [para. 4.01], that a policy promoting direct government participation in manufacturing prevailed up to the middle of the 1950's when emphasis was shifted to building the infrastructure and promoting private sector industry development. Furthermore,

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*) Information from firms often overstates available capacity (to discourage government from licensing or promoting new investments) and, at the same time, understates actual production and sales for tax liability reasons.

in 1958 a guarantee was given that the Government would not engage in any new industrial activity in competition with that of enterprises enjoying promotional priviledges granted by the Board of Investment. The current Development Plan, 1972-76, states the policy that

> "the Government will not establish additional public enterprises to compete with private manufacturing concerns; the existing state enterprises will be reviewed to determine whether it is in the public interest that they cease operations, continue or possibly operate as joint public-private ventures."

1.12 While no calculation or reliable estimate of the degree of foreign investment in Thai industry seems to be available, some general observations can be made such as:

- the role of foreign capital is considerable, but less so than in some of Thailand's neighbours, and greater than Thai investment only in a few important industries;
- foreign capital accounts for about 25 % of all Board of Investment promoted equity in operation and somewhat higher share of all capital approved for promotion since 1960;
- out of the 883 firms promoted by the Board of Investment between 1960-75, 415 were joint-ventures and 22 wholly foreign-owned firms;
- most foreign participation has been in non-traditional sub-sectors resulting in the inflow of new technology and in the training of Thai personnel in relatively new fields.

c. Resource endowment

(i) Raw material resources

1.13 Thailand covers an area of about 500,000 square kilometers whereof about 24 % can be cultivated at present. Traditionally the agricultural economy of the country has been dominated by a single crop - rice. Since 1950 more crops have been introduced and areas under non-rice crops have expanded greatly. In 1971, the rice growing area was 48.7 million rai [1 rai = 0.4 acre] and the area with other crops 20.5 million rai. The other crops include maize, tapioca, kenaf, cotton, mulberry trees for silk, coconuts, rubber, tobacco, sugar cane, fruits and vegetables. The recent years have seen the development of regional specialization; kenaf being concentrated in the Northeast, maize in the central plain, rubber in the South, cassava in the Southeast etc. Some of the fastest growing cash crops such as Maize, kenaf and tapioca products have been planted in response to external demand and virtually all of the output is exported. Other crops are primarily grown in response to demand in the home market. These crops include cotton (still far from satisfying the local demand), kapok, coconuts, sugar cane (has recently developed into a major export crop), oil seeds of many kinds, fruits and vegetables and tobacco.

1.14 The envisaged future development for the major primary export products up to 1981 is shown in following table based on NESDB projections :

	Actual export 1976		Projected export by 1981	
Rice	8,250	million Baht	16,600	million Baht
Maize	2,085	- " -	18,000	- " -
Rubber	1,862	- " -	9,350	- " -
Tin	1,644	- " -	3,800	- " -
Tapioca products	1,547	- " -	7,600	- " -
Sugar	1,264	- " -	10,600	- " -
Kenaf and jute	1,087	- " -	1,250	- " -
Shrimp	340	- " -	1,000	- " -
Tobacco leaves	284	- " -	1,100	- " -
Teak	208	- " -	400	- " -

1.15 Although forests cover about half of the total land area, forestry accounts for only 7 % of the GDP from agriculture. Valuable teak used to be a main export item; it has now dropped substantially in export volume. There are, however, still many other species for which both local and export markets exist. In this connexion, the various raw material sources for pulp and paper making existing in Thailand, such as pine-trees, mixed hardwoods, rice straw, kenaf, bamboo, bagasse and rubberwood, may be noted.

1.16 Second to tin, the major mineral resource is fluorite which is being exploited on a large scale for export. Other mineral resources, presently exploited on a small scale, include antimony, gypsum, iron ore, lead, manganese, tungsten, salt, kaolin, feldspar and copper. Minerals which have been discovered but not yet exploited are i.a. zinc, chromite and grafite. Lignite is used for fuel in the North.

(ii) Manpower and domestic market

1.17 There is - as indicated in para. 1.03 above - an abundant supply of unskilled labour both in the Bangkok areas and in the provinces. [The minimum wage for unskilled labour in the Bangkok area is at present approx. $ 1.50 per day]. Skilled workers and technical personnel are, however, scarce.

1.18 The country constitutes a rather sizeable domestic market with a total population of about 42 million*); the buying power per capita in the Bangkok area - with some 4-5 million people - having been estimated to be about 10 times as high as the average for the rest of the country. The GNP per capita is about 6.750 baht, or approx. US$ 340. It should also be noted that the preparatory work on the forthcoming Fourth Plan has reflected the Government's increased emphasis on improving the distribution of development benefits and reducing inequalities between regions, income classes, and urban and rural areas.

*) The population growth rate is as high as about 3 % per annum.

(iii) Capital resources and balance of payments

1.19 The domestic financing needed for the envisaged programme (in the Fourth Plan) to satisfy priority needs for economic and social development would be about 50 % greater in real terms than in the previous period; measures proposed to achieve this include major reforms in the tax structure, and a strengthening and diversification of the financial system. Rapid expansion of private investment is foreseen as necessary to generato needed growth in manufacturing employmont and exports. Because of Thailand's high private savings rate, the availability of private savings is unlikely to constrain private investment.

1.20 While the Government can mobilize the required domestic resources with reasonable effort, the balance of payments could become a serious constraint to growth. In 1972-74, although the country's imports doubled in the period as a result of escalating capital goods cost and a much higher energy bill, increased export earnings generated sufficient foreign exchange to cover imports and retain a sound reserves position. In 1975, however, the balance of payments situation worsened; there was a substantial deterioration in the trade balance with the rapid decline in prices of koy agricultural commodities coupled with stagnation in the volume of these exports as result of poor weather conditions in 1974, and in 1975, especially in respect of rice, declining would demand. It is expected that the next few years might be characterized as a period of smaller increases in export earnings, generated largely by volume growth, a weaking of the terms of trade caused primarily by rising import prices, and rising import requiroments. Consequently, continued emphasis on export promotion and expandod foreign borrowing will be necessary to provide the foreign exchange to support the envisaged economic growth.

d. Industrial development strategy

(i) Strategy during recent past

1.21 From the early 1960s until the present time the national direction in regard to development has been overwhelmingly for economic developmnet at the macro-level. This is reflected in the successive national economic development plans prepared and implemented by government. The main aim has been to increase the gross national product. The strategy adopted to achieve this goal was sizeable public investment into economic infrastructure such as highways, dams, and power plants and the granting of liberal inducements to foreign investments, coupled with policies toward price and income stabilization and industrial peace. Since 1972, however, there has been a feeling that such policies, while leading to increased national incomes, have also at the same time not prevented further polarization of the individual incomes - causing more economic disparity. Therefore, the Third Plan 1972-76 was modified to include programmes which were to promote social development objectives as well. Operationally, the plan de-emphasized major public outlays on infra-structure and spent more on education, welfare and rural development, labour training, etc.

1.22 Thai industrialization, so far, has not been based on the pursuit of a conscious, well articulated strategy, although a marked shift in emphasis in that direction took place with the launching of the Third Plan, 1972-76. Its absence has not impeded industrial growth, but it has resulted in that the Government has not always fully anticipated the side effects of investment decisions on industrial concentration, income distribution, labour absorption and pattern of foreign ownership and control. Moreover, government agencies have not had a broad frame of reference, when having to respond to pressures applied by various interests, resulting in frequent and uncoordinated adjustments of policy instruments. According to a recent IBRD study, in several cases such adjustments have had effects contrary to those intended on investment, output, location and factor use.

1.23 Thailand's industrial development since 1960 has followed a defined pattern; initially emphasis was given to the establishment of industry to replace imports and take advantage of existing local markets which could support domestic production of many types of consumer goods. At the end of the Second Plan period, a reappraisal of the scope and direction of industrialization was made and as a result a major shift in emphasis occurred in the Third Plan, 1972-76. Investment promotion was to be directed to industries which depended largely on local raw materials or those with high labour content. The orientation of the manufacturing sector was shifted from merely the domestic market towards exports as well as towards a strengthening of its structure from mere assembly and to make it more efficient and competitive.

1.24 During the first three years of the Third Plan, the pattern of the Thai economy was somewhat mixed. On one hand the price performance was unsatisfactory and the growth rates of real production and investment fell slightly below the target levels of the Plan. At the same time the balance of payments strengthened. The boom in world commodity prices during 1973-74 contributed both to the sharp rate of inflation *) and the strong export performance, while the energy crisis and the recession in major industrial countries adversely affected the manufacturing sector. Since 1975, the rate of inflation has been stabilized, mainly as a result of decreasing export prices of primary commodities. However, recession which is still persisting in many of the major industrialized countries has a direct effect on the export demand. The Government has shown serious concern over the external sector and measures have been established to improve the export earnings and to give priority in promotional priviledges to export industries.

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*) The price level which had been increasing at a rate of 2-3% per year during the 60' and early 70', jumped to 15 % in 1973 and 23 % in 1974.

1.25 Production in the manufacturing sector diversified substantially during the Third Plan period, with some concentration still on basic import substitution industries relying heavily on imports of raw materials from abroad, for instance textile industry (also export-oriented), plastic industry, light steel industry, paper industry etc. Thus, unless the major key industries could be developed to a certain stage to be able to supply raw materials to the import substitution industries, promotion of those industries could not be successful. The accelerated expansion in the manufacturing sector during 1971-73 - average yearly rate of 14 % - was, however, export led. Exports of manufactures *) rose from Baht 800 million (3.7 % of value added in manufacturing) in 1970 to Baht 5,500 million (15.0 % of value added in manufacturing) in 1973. With very favourable international markets in 1970-73, several major industries that had been established to produce import substitutes were able to increase output and exports rapidly, first by utilizing the excess capacity created during the 1965-69 investment boom and then by undertaking large capacity expansions - many with participation of foreign investors - in 1973. Thus, in 1970-73 the output of woven textile fabrics increased by 93 %, knitted fabrics by 218 %, gunny bags by 73 % and cement by 42 %, while a diverse group of smaller industries - including pineapple canning, iron and steel products, wooden household utensils and electronic assembly - raised their exports from Baht 330 million in 1970 to Baht 2,510 million in 1974.

1.26 Since mid-1974, Thailand's manufacturing sector has been hit by the recession similar in many respects to those occurring in numerous other countries. The textile industry which is the largest employer in the manufacturing sector was particularly hard hit as production of woven fabrics dropped by 9 % in 1974, and cotton yarn production dropped 24 % as result of reduced export demand. [Simultaneously with the slump in textile sales in 1974, 51 firms received promotion certificates for previously planned textile

*) Other than sugar in respect of which the export volume rose five-fold between 1970 and 1973!

investments totalling Baht 10,400 million. Even though all these projects are not likely to be implemented, the industry will undoubtedly suffer a period of substantial excess capacity until export markets recover.] Some other industries were, however, still faring reasonably well, such as cement - 14 % increase in 1973-75 - and gunny bags - 37 % increase in 1973-75. The food processing industry also continued to do well [although there is an increasingly serious problem of obtaining adequate and reliable supplies of raw materials from small farmers as little new land is available for large scale plantation farming]. Several electronics firms were also setting up or expanding facilities for export production.

b. Strategy in Fourth Plan period 1977-81

1.27 In general it may be noted that a development evaluation of the first four years of the Third Plan indicates that many development problems still exist despite the growth rate of about 6 % on the average which is expected to be achieved for the whole Plan period against the 7 % target of the Plan). Such problems are income disparity, resource allocation, diversifiaction of economic activities throughout the country etc. Against this background overall objectives for the Fourth Plan period 1977-81 have been indicated to be to

- reduce income gap and raise standard of living of the people. (Maximize growth rate alone cannot fulfil income distribution problems in the short run, resources will therefore have to be diverted to areas where they would improve the quality of life of the people. Various mechanisms will be employed regarding development and redistribution of income).

- keep economic growth in consistence with resources availability and growth potential. (Even though some other objectives may have been in conflict with growth objective, it is important that optimum growth rate must be set in consistence with resources availability.

The GDP growth rate for the Fourth Plan is envisaged to be set at the average rate of 7 % annually.)

- promote national security through strengthening the economic and social bases in particular in the rural areas.

- create employment opportunities as well as the improvement of wage and income structure in various sectors. *) (The Plan will aim at full employment. Moreover, the improvement of wage and income structure both in urban and rural areas will also be emphasized in order to help promoting social justice and reducing income gap.)

- maintain economic stability and keep the balance of payments position at prudent level. (Economic fluctuations and price movements experienced during the Third Plan period have brought about widespread uncertainties in the Thai economy. It is therefore felt necessary to set the concrete objective concerning economic stability in the next Plan.)

- increase and distribute public utilities to meet the requirements of the people. (The fair distribution of public utilities is another tool that can help promoting income equality. In the Fourth Plan, it is envisaged that the Government will encourage both the expansion and diversification of public utility projects, in harmony with the production sector requirements particularly in the rural areas.)

- reduce the growth rate of population and improve the quality of human resources. (So far as it can be assessed, the set reduced population growth rate target will not be achieved by the end of the Third Plan. Further reduction of population growth rate through vigorous family planning programme is still one of the major objectives in the Fourth Plan. However, in parallel to this, improvement of manpower quality at all levels will also be emphasized.)

- prevent environmental problems and reduce pollution. (As economic development proceeds, the questions of pollution and environmental problems are increasingly vital. Environmental planning and enforcement of the law are major factors for prevention of future and reduction of the existing pollution.)

- stimulate development in rural areas through decentralization policy. (For development to really reach the grassroots level in the rural areas, the decentralization of administration is essential. During the Fourth Plan period, there will be development plans for individual provinces within the general framework of the Fourth Plan. Also, special emphasis would be given to eliciting popular participation in rural development projects.)

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*) A recent economic report on Thailand (of 14.11.75) notes that 'To achieve its distributional objectives Thailand must aim at a growth rate at least as high as the 7 % target of the Third Plan. Given the rapid expansion of the labour force that is expected for at least the next 15 years and the progressive exhaustion of the supply of free land suitable for agriculture, employment creation is a major problem. Without the rapid intensification of agricultural production and expansion of manufacturing employment, rural under-employment will become more serious that it is now, and substantial open unemployment will emerge in urban areas. Thailand cannot support large numbers of unemployed. Therefore, growing unemployment would by itself necessarily increase income inequalities. It would also depress real labour incomes, further worsening the pattern of income distribution.

1.28 Besides emphasizing on the expansion of basic infrastructure as in the previous plans, development in the Fourth Plan period is expected to be concentrated more on the delivery of economic infrastructure and social services to the rural areas where there is a high potential of growth, and to the target groups where income is relatively low. Moreover, the procedure in delivering development projects, both economic and social, is expected to be based on an integrated approach rather than the sectoral approach as pursued in the past. In doing so, development problems will have to be clearly identified, the development strategies for each problem will be specified in a package form and, finally, the strategies will be translated into development programmes, measures and projects.

1.29 Main development problems, to be tackled in the Fourth Plan period, have been identified to include the following:

- Guidelines concerning macro economic and social structure will be set up with regard to national product, economic stability, employment equilibrium, distribution of income, monetary and fiscal structures, regional and rural development etc.

- Emphasis will be given to problems and policies concerning administration and allocation of sectoral resources, i.a. land uses, water resources, mineral resources, and environmental factors.

- The policy concerning investment for industrial development will be given intensive attention, ranging from questions regarding industrial structure, industrial location, export-oriented industries, taxation system, industrial credit, transfer of technology, industrial co-operation in the ASEAN region, industrial information and research, environmental problems, legal aspects of industrial enterprises, Government industrial administration, and labour situation.

- The specific problems of overpopulation in metropolitan areas will be looked into. Also, specific recommendations will be proposed so as to develop new secondary growth areas in accordance with regional development plans.

- Special attention will be given to policy and structure of public enterprises. Main problems in this area are the absence of definite policy concerning public enterprises on the part of the Government, the lack of clear guidelines for public enterprises and ineffective operations.

1.30 As has been noted in previous paragraph, the Fourth Plan is expected to focus specifically on the development of the industrial sector which again would be given a leading role in the economic growth of the country. This would mean that the rate of growth of value added in the industrial sector will have to be higher than the average growth of the economy, that priority industries will be selected, based on criteria of economic efficiency, employment creation and their potential for rapid growth. To promote economy of scale and economic efficiency, exports of manufactures will be especially supported. Foreign investment will still be encouraged but in a somewhat more descriminate way than in previous years. Attempts could be expected to be made to transfer and adapt foreign technology to suit the local conditions. Industries would be encouraged to move to or be set up in non-metropolitan areas. And, finally, environmental problems will be considered.

1.31 Translated into action programmes this should also mean that at the planning stage specific attention may be given to the need for a strengthening of the institutional machinery (i) for investment promotion (primarily the Board of Investment) on basis of a formulated sector strategy, (ii) for employment generating industrial development in rural or non-metropolitan areas, through industrial advisory services (primarily through the Department of Industrial Promotion) and industrial estates development (through the Industrial Estate Authority of Thailand - IEAT), (iii) for technology adaptation and development in the context of the local conditions, raw material resources, etc. (possibly with main thrust on the Applied Scientific Research Corporation of Thailand - ASRCT).

II. Industrial development planning

2.01 Economic management was relatively weak during the later years of the Thanom period before October 1973, because of the poor interagency co-operation and the weakness of the Cabinet as a co-ordinating institution, and the Sanya Government [October 1973 - February 1975] took a number of steps to improve the situation. One example was the Council of Economic Advisers to the Prime Minister created in March 1974. It consisted of a group of eminent persons and had the task of advising not only on current economic problems but also to take a deep and long view of the country's total economic-political-administrative structures. - The Council, as a non-statutory body, was automatically dissolved when the Sanya Government left power. The Kukrit and, later, the Seni Governments further strengthened the institutions involved in economic management. The Ministry of Finance, in particular, became far more active in policy formulation. Together with the Bank of Thailand and the Budget Bureau they were managing monetary and fiscal policy actively in accordance with the Government's policy objectives instead of relating passively to events as in the past. Other examples of such more active pursuance of economic policy objectives were the creation of the Foreign Investment Advisory Council and the Executive Committee for Exports referred to in para:s 4.19 and 5.01 below.

2.02 The three civil Governments after October 1973 - the Sanya, Kukrit and Seni Governments - concentrated on implementing their short term programmes and on dealing with immediate problems. However, as pointed out in a recent economic report on Thailand , many of Thailand's development objectives can be achieved only through sustained effort over time. To deal with these successfully, the role of <u>longer term planning and policy analysis</u> needs to be strengthened and better integrated with short term management. Substantial institution building would also be necessary for a carrying out of many of the reforms and programmes proposed during the last three years.

2.03 The organ in Thailand responsible for the development planning function is the National Economic and Social Development Board (formerly National Economic Development Board and established 1959) which consists of 45 high level officials appointed by the Cabinet and is chaired by the Prime Minister. Cabinet Ministers act as advisers to the Board and Ministers directly concerned with economic development function as chairmen of sectoral sub-committees. However, the Board itself does not meet often, and its function is to large extent delegated to the Executive Committee which has 9 members, including the Secretary-General of NESDB. The Committee meets regularly as a policy-making body. Its operating arm, the Secretariat of the Board is headed by the Secretary-General. The Secretariat, normally referred to as NESDB, is an agency within the Office of the Prime Minister [reporting directly to the Prime Minister, outside the line of control by the Permanent Under-Secretary of State of the Prime Minister's Office].

2.04 Basically, the NESDB is the economic and social development planning agency responsible for the preparation of the country's five-year development plans. Its planning function makes it necessary to become involved in the policy development processes since it has to review all the ministerial and public enterprise plans. After reviewing, it has to make economic (and social) analyses and how much they cost, how they will be financed, and what kinds of benefits the plans should bring. Thereafter, it devices strategies to maximize gains at the minimum cost, leading into recommendations as to the economic and social development policies that should be pursued. Once the major policies are adopted, the NESDB will have to adjust ministerial and enterprise plans to meet policy objectives.

2.05 Plans which are approved for inclusion in the National Economic and Social Development Plan are not really final; they need periodic adjustment to accommodate additional new programmes in the interim years and/or when operating in a tight financial situation where the annual budget cannot always deliver all the resources the plan needs. The NESDB engages in annual review and mid-term review. When these functions are all added up, the NESDB becomes the de facto policy planning, developing, analysis and follow-up agency in the country as far as economic matters are concerned.

2.06 The National Economic Development Board Act (1959) states, for instance, that the Secretariat of the Board, besides other duties, shall have to review and report on the status of economic development projects of ministries, departments and state enterprises and when considered necessary, make recommendations for acceleration, termination, modification, or liquidation of specific programmes. According to the Act, the Secretariat has the power to require Government's ministries, departments and state enterprises to submit information necessary for the review of the progress of economic development underway. The Development Evaluation Division of NESDB is entrusted the task of preparing such a progress report. The follow-up of all project implementation is, however, beyond the scope of the authority and capability of the Development Evaluation Division and is done by each operating agency.

2.07 The NESDB has over 350 officers working in 11 divisions, the most important being the Division of Economic and Social Planning, the Division of Economic Programmes, with an Industry Section, and the Division of Manpower Planning.

2.08 The NESDB has just finalized the Fourth Five-Year Plan, 1977-81. *) In the previous plans it was felt that planning for the industrial sector was very inadequate. In fact the industrial sector was not included in the first two plans. And in the Third Plan only policies regaruing industrial development were stated, without any specific formulation of the plan. Even though it could be considered that Thailand had been quite successful with her industrialization, it is also felt that industrialization has created a number of problems which might have been avoided on the extent of the problems reduced had there been a properly formulated industrial plan. Dr. Narongchai Akrasanee of the Thammasat University in Bangkok has in a recent study, **) prepared for NESDB, listed the problems as follows:

(i) Foreign investment seems to be too exploitative;

(ii) The growth in wealth due to industrialization has not been justly shared;

(iii) Employment creation has been too low;

(iv) Problem of labour welfare and relations;

(v) Inadequate adaptation and transfer of technology and inefficient utilization of resources;

(vi) Inconsistency among government offices in their actions related to industrial development;

(vii) Environmental problem;

(viii) Concentration of industries in and around Bangkok.

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*) The full text of the Fourth Plan is expected to be available in late 1976.

**) "A Survey of Industrial Infrastructure in Thailand" by Dr. Narongchai Akrasanee, Faculty of Economics, Thammasat University, Bangkok, January 1975

2.09 As noted in paragraph 1.29 above, investment for industrial development is expected to be given intensive attention in the Fourth Plan. Thus, guiding criteria regarding priority industries whose development would be specially encouraged, might be expected to be contained in the Plan. The development of such a strategy for the country's further industrial development should be worked out through close collaboration between NESDB, the Ministry of Industry (particularly its Industrial Economics and Planning Division) and the Board of Investment. It should also be expected that a detailed review of major projects in basic industries will be made and the resource requirements for their implementation elaborated on.*) In addition, the prospects of regional economic co-operation - within ASEAN - in basic industry projects, such as steel and fertilizers, would call for the formulation of a Thai long-term strategy for the development of these industries.

2.10 Macro-economic planning for the industrial sector is mainly being carried out by NESDB. For the purpose of the Third Plan, NESDB prepared projections of the growth in value-added in manufacturing up to 1976, the increase in employment, implied changes in labour productivity and of development expenditure. All these projections were set within the framework of the national accounts and could, therefore, be related to other sectoral and national growth rates. Micro-projections in respect of 19 sub-sectors of the manufacturing sector were also carried out covering growth of demand for the products of the sub-sector, growth in value-added of domestic industry and changes in related imports. [For the most part, the growth in demand for the various products was related to the projected increase in GDP under the Third Plan by means of simple straight-line regression equations derived from relationships

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*) In this connexion it may be noted that several (inter-agency) branch-of-industry <u>ad hoc</u> 'national committees' (such as in iron & steel, fertilizer, pulp & paper have been established and working from time to time, mostly under the aegis of BoI or NESDB, and with representatives often also from MoI, ASRCT, IFCT and others.

in the past. The ratio between domestic production and imports in meeting demand was also derived from past relationship, modified in several instances to take into account human opportunities for import substitution and intentions to take advantage of them.] The NESDB also intended to make projections of changes in employment and investment in the various sub-sectors of manufacturing, but was unable to carry it out due to lack of data.

2.11 The mode of the industry sector plan preparation (for the Third Plan) reflects thus a 'top-down' planning system with little inputs coming from the enterprise level [except for some 10 major products *) in respect of which quantitative production targets for 1976 were indicated].

2.12 The Ministry of Industry (MoI) has been taking part, although to very limited extent, in NESDB's planning work on the industry sector primarily through the Industrial Economics and Planning Division (IEPD). **) Also other agencies, like the Board of Investment (BoI), the Industrial Finance Corporation of Thailand (IFCT), and the Ministry of Commerce concerned with the industrial sector development were consulted. Essentially, these agencies are often carrying out duties also of an industrial planning nature, but there seems to be a general tendency to regard planning as a separate aspect of administration which can be separated from the agency's more established tasks instead of the framework which relates these tasks one to another and gives them point and direction.

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*) Sugar, gunny bags, cement, paper, vegetable oil, automobile tires, petroleum, steel and other iron, textile cloth, fruit canning

**) Under a UNDP/UNIDO assistance project an industrial programming adviser worked in the Ministry of Industry in 1971, being attached to the IEPD. In his assessment, the role of the IEPD needed to be much more clearly established and accepted. As its name implies it should have central instead of perepheral responsibility for the planning of industry. It should take on itself the supply of the industrial input - projections and policies - to the plan, instead of merely contributing to the work done by the NESDB. This is not to say that its contribution would not be subject to modification in the light of points raised by NESDB having regard to national planning considerations; however, the main input should come from the IEPD, the modification from others. In other words, IEPD should act as a programming or development unit for industry. (Terminal Report by [illegible], Adviser on Industrial Development Programming, [illegible].1971)

2.13 In order to avoid this situation an effective information and feedback system has to be developed to ensure that both the enterprises and the co-ordinating or implementing government agencies, participate effectively in the plan formulation. Also, the administrative structure as the vehicle to achieve the planned social and economic goals, must be suitable for the functions it is assigned to perform. Whenever necessary, the system has to be remodelled for this purpose. Until then the planners must take into account the limitations and the capability of the existing administrative structure in formulating the plan.

2.14 It is generally recognized that planning and implementation have to be the responsibility of different organizations. Therefore, an effective information system needs to be developed to keep the planning agency posted with the current situation. This aspect is looked into in following chapter.

2.15 Furthermore, with a highly centralized administrative system, as in Thailand, the fragmentation of responsibility into a larger number of ministries and departments has led to a compartmentalization of activity wherein co-ordination between the agencies concerned has become progressively more difficult as the administrative hierarchy comes down to the operative level in the provinces. Even at the central level, governmental operations appear to be constrained not only by the overlapping of responsibilities but also by the inflexibility of rules and regulations aimed at perpetuating central control. This highly compartmentalized and centralized governmental bureaucracy is co-existing with the almost total absence of representative local agencies in the provinces which could have initiated and implemented development activities and with a system that provided minimum financial resources even to the local agencies that existed.

2.16 A major constraint for regional planning efforts has, no doubt, been the capacity of the bureaucracy to effectively implement programmes. Integrated planning does exist, the major problem has been the lack of integrated implementation because of the considerable duplication of functions and lack of co-ordination between the very many governmental agencies involved. A beginning has been made recently by consolidating functional responsibilities at the central government level. However, it still remains to be seen to what extent these organizational re-adjustments would be really reflected in effective co-ordination in implementation at the local, operational levels.

III. Industrial statistical data services

3.01 Of paramount importance is the concept of economic planning and relationship between Government and industry that has been the basis of the country's national plans, with reliance mainly placed on spontaneous forces in the economy to bring about development. The Government (in the Plan or otherwise) points directions for development and endeavours to concert the various operating forces in securing progress in these directions, but it does not seek to be the main agent of progress itself. The Government endeavours to create a favourable climate in which industry can operate, assists in identifying problems hindering its progress and in overcoming them through selected policy instruments. To fulfil its functions towards industry in this context, the Government must have a thorough knowledge of the structure and functioning of the industrial sector, and a clear view of its potential, problems and deficiencies and overall constraints governing its operations.

3.02 To enable the design and development of the policy instruments required to encourage industry in the desired directions, basic industrial sector data requirements would include (according to the above mentioned report of the UNIDO Industrial Development Programming Adviser)*):

A. Volume and value of output and its component products (these should be specified in such a way that they are readily related to imports and exports)

B. Volume and value of raw materials used; specified whether from domestic or external source;

C. Inputs of power, packaging material etc.

D. Wages and salaries paid

E. Number of persons employed by description and level of skill

F. Number of location of establishments

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*) See footnote to para. 2.12 above

G. Plant capacity in terms of physical output and carefully defined having regard to hours worked etc.

H. Total value of investment on a uniform basis, say, current replacement value.

I. Annual increment of investment similarly defined.

J. Home and export sales by volume and value (with indication whether products are sold for intermediate or final use)

K. Competing imports.

3.03 It should be recalled that UNIDO provided expert assistance in 1969-70 [to the Department of Labour mainly, but also to the National Statistical Office (NSO) and the Ministry of Industry] for the development of an adequate system of industrial statistics. The main task for the expert was to advise on the preparation of a Standard Industrial Classification for Thailand *) covering all economic activities for the purpose of developing a uniform system for classification of statistical data according to kind of activity of the establishment or enterprise to which these data refer, thus making it easier to obtain comparable data and to combine information from different statistical sources in statistical analyses, e.g. production statistics, employment statistics, industrial censuses [made from time to time by the NSO], population censuses, etc.

3.04 It is evident that for all economic sectors where annual or more frequent statistical surveys are to be initiated it is necessary to establish a register of enterprises and establishments if mail canvassing is to be used. Depending on the work involved in establishing and up-to-date keeping, the register

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*) The Standard Industrial Classification for Thailand thus prepared is based on the International Standard Industrial Classification (ISIC); the adjustment to the particular structure of economic activity of Thailand is made by a further sub-division of individual ISIC groups whenever it has been found to be of particular interest.

should be restricted to economic sectors where current statistical data are most heavily needed, e.g. mining and manufacturing. Several governmental agencies such as the Ministry of Industry, the National Statistical Office, the Department of Labour and the Board of Investment are at present engaged in keeping registers of establishments, or factories, wholly or mainly for statistical purposes. The size of these registers vary from a coverage of all economic activities except agriculture, forestry, fishing and public administration and defence (Department of Labour), to all manufacturing establishments, or factories, for which an operation licence is required (Ministry of Industry) and establishments in the promoted industries for which promotion priviledges have been granted (Board of Investment). Apart from the collaboration between the Department of Labour and the NSO (the latter has received register lists from the Department of Labour) there is little or no direct co-operation between the various agencies regarding the register work. Apart from the basic enquiry made by the Census of Manufacture in 1968 *) the NSO has so far not been able to complete current industrial statistics which are of much use for general industrial planning or market analysis. Indeed, one of the factors which appear to cause specific concern to foreign-owned companies and joint ventures is the lack of reliable statistics on which to base future market and production projections.

3.05 Partly because of the lack of industrial statistics published by the NSO, a number of other governmental agencies as well as research institutes and private organizations have tried to prepare their own statistics mostly aimed to satisfy some particular needs for data. Industrial statistics are also partly prepared as a subsidiary exercise from data collected for administrative purposes. Thus, in the Ministry of Industry statistical data is being collected in connexion with granting operation licences; a major problem here being lack of updating as well as incompleteness in the originally requested data.

*) A limited census was undertaken in 1971, which attempted to cover only establishments employing 10 or more workers. It covered 3.005 establishments (of which 727 had fewer than 10 workers)

3.06 The present situation with a number of governmental agencies and other institutions bothering the individual establishments engaged in manufacturing, with questionnaires asking for statistical information, partly identical and partly slightly different, is detrimental and fosters unwillingness of private enterprises to co-operate with government agencies collecting statistical data. There seems also to exist a deplorable lack of co-ordination between the various agencies in their efforts of collecting statistical data, and sometimes even between various divisions within the same agency.

3.07 The NSO has tried to establish a programme for industrial statistics both in respect of infrequent industrial censuses and annual and more frequent statistical surveys. Mostly because of shortage of a sufficient staff of qualified personnel allocated to these statistics, the implementation of the programme has been slow. The general questionnaires utilized in the census of manufacture as well as in the annual surveys seem to have been too ambitious, especially when the general distrust by private enterprises of governmental agencies collecting statistical data is taken into account. Partly because of too comprehensive questionnaires, partly because of unwillingness by the firms to give away their figures, and partly because of lack of sufficient means to achieve satisfactory reporting from unwilling respondents, neither the amount nor the quality of the data received has been sufficient for a satisfactory achievement of the industrial statistics programme. To this has to be added the very long time lag between the collection of the statistics and its publishing.

3.08 As consequence, the various agencies engaged in industrial planning, finding the NSO not being able to supply the data needed, have been trying to build up their own systems of industrial statistics. However, the various statistics compiled are widely differing and the users are often more confused than ever, not knowing which of the often contradictory data are to be trusted. *)

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*) The most efficient statistical analytical work is understood to be done by NESDB and the Bank of Thailand.

3.09 Theorectically, the NSO should be the most efficient institution for elaborating the basic industrial statistics, usable for industrial planning as well as for other purposes. The staff of NSO should a priori have the best knowledge and experience how to plan and conduct industrial surveys as well as experience in data processing procedures. Authorized by legislation covering the statistical field, the NSO is also in a better position than most other governmental agencies when it is a question of getting the required data. *)

3.10 At the same time it is clear that agencies dealing with detailed industrial planning at the project level and policy making, such as the Ministry of Industry and the BoI, will need to have access to individual factory data in additon to aggregated industrial statistics compiled periodically by a statistical agency.

3.11 The aforementioned UNIDO adviser recommended that, in principle, the National Statistical Office would be best placed to collect industrial statistics of the general type recommended by UN, such as annual data on kind of activity, use of labour, labour cost, total value of output, total value of input, quantity and value of important goods produced and materials consumed, etc. Other data, which may be needed for industrial planning and policy-making or for general assessments by potential investors and others, such as registered capital, investment costs, production capacity, product ranges, trade channels, etc. should on the other be collected by another agency than the NSO, partly because it would break with the general statistical programme set up by NSO, and partly because the user

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*) The Board of Investment, for instance, in collecting information from enterprises in the promoted industry branches, may have difficulties to obtain data from enterprises other than those with promotional priviledges in force.

of these types of data very often will need individual figures instead of aggregate totals. The collection of data needed in order to study, on a comparative basis, the efficiency or profitability of individual factories such as use of different type of machinery or technology and different types of labour in relation to quantity and/or value of output and quantity and/or value of consumed materials would also be outside the statistical programme of NSO. Studies of this type will normally have to be on an ad hoc nature, restricted to a relatively small number of industries and thus difficult to integrate in industrial statistics of the general type.

3.12 More recently, in 1973/74, UNDP/UNIDO has provided expert assistance to the Industrial Economics and Planning Division (IEPD) of the Ministry of Industry, for the purpose of advising on a building up of its industrial statistics and information activities. The immediate objectives of the technical assistance included the task to advise the Industrial Information and Documentation Unit (since 1974 Centre for Industrial Statistics, Information and Research) of IEPD in the collection, processing and publishing of accurate, complete and up-to-date statistics on the country's industry.*) The United was as initial step to collect data on production and distribution as stipulated in the 1969 Factory Law **) [see para. 4.03 below]. Supplementary to this data on inputs (e.g. investment, employment and raw materials) were to be collected as well.

3.13 Accordingly, out of the 40.000 to 45.000 firms registered at the Factory Control Division of the Ministry of Industry, under the Factory Law, the IEPD has selected 60 kinds of industries with

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*) In addition to the assistance in collecting, processing and publishing industrial statistics, advise was also to be given in connexion with IEPD's research and studies work in support of policy decisions and industrial planning.

**) The Factory Law specifies - in Section 39 (15) - that a Licencee to operate a factory has, as one of several specific duties, "to make reports on the volume of production and disposal of the factory". An active follow up on this duty has not been made by MoI until the above-mentioned selective information collection was initiated.

about 1.500 firms, all large or medium-sized, for monthly mail questionnaires covering actual production, capacity and sales in physical units. [The very big number of about 25.000 - rice mills are, for instance, not included.] The response is about 70 % *) which means that IEPD has the mail returns with industrial statistics on production and sales of only 2 % of the registered firms in terms of their numbers, while if the industrial production and value added are considered the coverage is around 30 %. - It should at the same time also be borne in mind that in respect of a number of industrial sub-sectors, covering most of the country's large and medium-size industry, the regular monthly reporting is close to 100 %.

3.14 The selection of firms can certainly be questioned [from statistical sampling point of view] since they were not selected at random but according to the amount of investment - 1 million bahts and above. The UNIDO Mid-term Review Mission in April 1975, recommended that an immediate aim should be to cover about 3000 firms and to apply random sampling. This would much enhance the usefulness of the data for planning purposes, e.g. industrial location planning beyond the Bangkok area.

3.15 An annual publication by IEPD, "Industrial Statistics", is the principal organ for the dissemination of the information collected.**) Besides, the monthly production data of 21 industrial products is regularly published in the 'Monthly Bulletin' of the Bank of Thailand.

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*) According to the UNIDO expert, Mr. Brahma's report 'Computerization of the Industrial Data for Thailand' of 2 October 1974

**) IEPD is also considing to publish a monthly bulletin [a 'trial' issue was recently published]. One of the major drawbacks of both publications is the lacking of accuracy of data since no reliability checks have been applied so far. Remedial action was proposed in connexion with a review of the technical assistance project, it being realized that such checks would require a major effort by way of input of staff resources.

3.16 It should also be noted that the Board of Investment has fairly recently established a very detailed reporting system in respect of the several hundred enterprises which are enjoying incentives benefits.

3.17 Apart from the NSO, the Ministry of Industry and the Board of Investment, many other agencies collect and use data on industry. The Bank of Thailand, the Industrial Finance Corporation, The Labour Department, the Ministry of Finance (Revenue Department and Customs Department), the NESDB *) and the Association of Thai Industries partly collect their own data on industry or use such data provided by others.

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*) It may be noted that the NESDB representative at the Mid-term Review Meeting in April 1975, of the assistance project to IEPD [see para. 3.14] emphasized NESDB's need for up-to-date data which the NSO was unable to produce so far and which could be produced by IEDP.

IV. Industrial investment promotion

4.01 The Second World War and its aftermath brought into sharp focus the need for industrialization and import substitution and this encouraged the Government to establish a number of industrial enterprises ranging from sugar to paper, gunny bags, plywood and glass containers. The policy of direct governmental participation in manufacturing continued up till the middle of the 1950s, when emphasis was shifted to building the infrastructure and promoting private sector participation. While direct government investment continued in practice, but to a smaller extent, the first Act for the promotion of industries was passed in October 1954. In 1958, the Government guaranteed not to engage in any new industrial activity in competition with that of the promoted enterprise or expropriate or nationalize any private industrial activity. A year later the Board of Investment was established to render assistance to would-be industrial entrepreneurs and investors under the provision of the 1954 Act. That Act was replaced by the Promotion of Industrial Investment Act of 1960 with the Board of Investment becoming the administrator of the new Act. In 1962, the Act was revised to liberalize the promotional benefits and simplify the legal and administrative procedures. During the 1960s, the Government's choice of promoted industries was based almost entirely on import substitution. Promoted firms were confident in not merely being exempted from tariff payment for import of capital goods etc. but at the same time in being protected rather heavily from foreign competition for their finished product.

4.02 Two important changes were introduced in the late 1960s in the Government's policy of industrial promotion. Firstly, promoted industries were granted full duty exemption on import of capital goods, except those that were locally produced. Secondly, with a view to encourage the use of local raw materials, the exemption limit for import of raw materials (having earlier been totally exempt) was reduced to a maximum of 1/3 of the value which would be allowed by the BoI only when it considers the exemption being justified. The Promotion of Industrial Investment Act was replaced by National Executive Council Announcement No. 227 - the Investment Promotion Law - in October 1972. The new law enabled the Board of Investment to give greater fiscal priviledges to export-oriented industries and industries located outside Bangkok.

4.03 Except for the licence to operate a factory under the Factory Law *), imposed primarily for reasons of health and safety **) there are no licensing barriers to industrial investment; in addition to the tariff and protection policies pursued by the government, industrial investment in desired directions is thus primarily encouraged by the provisions of fiscal and other incentives granted by the Board of Investment. The Board is empowered to:

(i) determine the list of industries to be promoted;
(ii) approve individual projects to which promotion benefits will be granted; and
(iii) decide upon the extent of tax exemptions to be given in each individual case.

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*) Under the Factory Law of 1969, all factories (using machinery of two horse power or more or employing seven or more workers) must be licensed by the Minister of Industry who is given wide power of discretion under the Law. Before granting a licence, officials of the Ministry mus inspect the factory to ensure that it conforms to the specifications previously submitted to the Ministry. A licensee operating a factory must maintain the factory and equipment in a structurally strong, safe condition; provide sufficient emergency alarm system, fire-fighting equipment etc. It may not cause grave nuisance or danger to the public. All existing licences have to be renewed every third year.

**) Recently, in a few cases, the Ministry of Industry has also been refusing licencees on economic grounds, after having announced (gazetted) that the specific industry sector does not need additional capacity.

4.04 The task of the Office of the Board of Investment (BoI) is to "take steps to induce investment in activities of economic and social importance and necessity to the nation. It shall provide investment services and perform other administrative functions" [Article 10 of NEC Announcement No. 227]. Only the minimum size for firms - expressed usually in terms of capital investment but sometimes in terms of basic capacity or output - have been announced in advance by the BoI, and these size requirements are actually rough guidelines to help the BoI judge whether a prospective project is likely to be sound. In addition, the Board may require from applicants certain conditions on the amount and source of capital, the nationality and number of shareholders, local materials to be used, the nationality and number of personnel, training and employment of manpower and the distribution, designation and equality of products. No concrete guidelines for these conditions are provided in the legislation and are thus left to the discretion of the BoI. In practice it appears that the Board has restricted itself to conditions concerning the import of machinery within a specified time; the production inputs and manpower plans proposed by the applicant himself; and in respect of a few selected industries, the percentage of Thai ownership. The encouragement of joint ventures is determined by what the Board thinks "the market will bear" *).

4.05 In line with the Government's emphasis on export promotion and stimulation of investment to generate employment, the Board of Investment announced in April 1975, new and more detailed guidelines on investment promotion. The explicit

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*) According to the BoI publication "Investing in the Dynamic Growth of Thailand', September 1975.

objectives behind the changes were:

(i) the creation of a favourable investment climate *);

(ii) the promotion of direct foreign investment with appropriate safeguards;

(iii) greater decentralization of investment to provincial areas through special incentives and through provision of improved public infrastructure;

(iv) acceleration of project identification effort through special studies;

(v) direct relation of promotional priviledges to the benefits expected to be derived in each case; and

(vi) formulation of an explicit industrialization strategy.

4.06 The primary fiscal incentive which may be given to promoted firms consists of full exemption from corporate income tax for a period of 3 to 8 years. Generally, firms are given 5 years' exemption while longer periods are reserved for projects unlikely to show a profit in their first 2 or 3 years; shorter periods are often granted to promote expansion programmes. Approved machinery may be imported without duty provided that 'similar machinery approximately equal in quality and price are not being produced in the country in sufficient quantity'. The Board may prescribe in the firm's promotion certificate the period of time in which such tax-free imports may be made; usually 2 years is allowed. Raw materials are not normally exempt from tariffs although there are provisions for their relief as special incentives or as export incentives.

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*) With the improved performance of the economy starting late 1972, and a generally brighter outlook for the future, a great many private sector investment decisions were made and applications to the BoI for promotional priviledges increased from an average of about 100 in 1970-71 to nearly 200 in 1972, and 550 in 1973. The private sector investment (primarily in industry) increased by 19 % in real terms in 1973 and 17 % in 1974. [This investment brought substantial additional capacities, inter alia, to the sugar, textile, gunny bag and tapioca flour milling industries.] The investment climate worsened, however, during 1974, for a variety of reasons, including the lack of clear policy toward foreign investment. Applications to BoI dropped to 225 in 1974, and just over 100 in 1975.

4.07 Promotional benefits granted are since 1975, linked to employment creation, export generation, use of locally produced raw materials and plant location in ten designated "development zones", or "investment promotion zones". Under the new rules, non-export oriented industries [less than 20 % of total sales exported] are eligible for promotional priviledges only if they locate outside Bangkok, have protection of less than 30 %, value-added of at least 30 % and Thai participation of at least 40 %. Moreover, they can receive tax exempt status (up to 5 years) only if they employ at least 200 workers and invest at least 50 million Baht (approx. US$ 2 1/2 million). Export-oriented firms, on the other hand, receive tax exempt status and are entitled to promotional priviledges without having to meet the above criteria.

4.08 Non-tax investment promotion measures include a guarantee that the promoted firm will be allowed to remit foreign currency from Thailand in order to recover equity investment, to repay foreign loans, to remit profit and interest, and discharge obligations contracted for the use of rights and services relating to its promoted activity.

4.09 In effect, three types of protection against competition may be offered to the promoted firm, namely, firstly, that the government will not establish a new state enterprise which would compete with it, secondly, the firm is protected theoretically against the creation of uneconomic overcapacity in its industry through the Board's practice of suspending new promotion in an industry where there are sufficient firms to supply local needs and, thirdly, protection against imports is provided in various ways - competing imports may be prohibited altogether or subjected to increase in import duty if they are "of the same kind as those being produced by the promoted person."

4.10 As noted earlier, investors interested in projects which are not eligible for promotion under the Investment Promotion Law may still establish the project but without priviledges, for instance, concerning duties on imported machinery and equipment. However, to encourage an increase in export trade the Government has recently introduced a number of special incentives for exporters, promoted as well as unpromoted; the most important being a reduction with 90 % of the customs tariff which have been paid on goods which are imported with the intention that they will be processed, mixed or assembled into products for export. Tax credit provides another export incentive also available to unpromoted exporters. In the case of promoted firms, the incentives law provides special benefits for exporters which the BoI may add to the promotional priviledges. Thus, full exemption of import duties on raw materials used in processing or assembling an export commodity may be granted during a limited time period. [These duty exemptions for promoted firms are in addition to drawbacks and tax refunds generally available to unpromoted exporters and administered by the Fiscal Policy Office in the Ministry of Finance]. Another special incentive is relief of export tax and business tax on export output. Finally, the law provides for a small export subsidy in the form of an allowance against taxable income.

4.11 A recent analysis of the impact of Thailand's protection and incentive policies *) suggests that in general, these policies have not resulted in inefficient high cost production across the board. However, they have inadvertently resulted in focussing on import substitution, with higher "effective protection" being provided to industries producing for the domestic market than those producing for export. Success in increasing manufactured exports was thus achieved in spite of, rather than because of, the tax and tariff policies [during the time before the recent special benefits for

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*) Narongchai Akrasanee, 'The Structure of Effective Protection in Thailand: A Study of Industrial and Trade Policies in the early 1970s'; March 1975.

export production took effect]. Moreover, frequent adjustments having been made in the tariff structure, have resulted in significant variations in protection levels within and between various industry groups for which there is no underlying rationale.

4.12 The present uncoordinated application of tariffs, control of imports, exports and prices, registration and licensing policies and the case-by-case provision of incentives has resulted in an unwieldy approach to encouraging efficient industrial growth with some incentives being offset by the impact of others. It has also resulted in an immense administrative burden on BoI.

4.13 In the context of its continuing dialogue with the Thai Government on economic matters the World Bank has recently recommended a complementary two-part incentive strategy based on:

(i) a general system of non-discretionary incentives based on tariffs and tax exemptions which would be applied to broad classes of industries; and

(ii) a detailed discretionary review of only major projects in basic industries.

4.14 The BoI proposes to launch parallel studies aimed at improving the co-ordination of the country's investment regulations *) and at strengthening its own operational capabilities.**)

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*) A note on the different administrative procedures for permission to establish and operate a manufacturing enterprise, for promotional certificate etc. is appended as Annex II. It is based primarily on information contained in Dr. Narongchai Akrasanee's study 'A Survey of Industrial Infrastructure in Thailand' of January 1975.

**) A number of improvements in the operations of the BoI are under consideration. As now administered, the BoI uses a committee system, with the entire 18-man Board (see Annex III) dealing with a great variety of routine matters, and sub-committees handling others. It is hoped that many of these routine matters will be delegated to the Secretary-General and through him to the staff. An organization chart of BoI is given in Annex IV.

Although the BoI is an early example of its kind and imbued with very broad discretionary power, it does not yet seem to enjoy the human and budgetary resources, nor the power to co-ordinate (at operational level) the bureaucracy responsible for various aspects of industrialization which are now features of its equivalents in, for instance, Malaysia (FIDA), Singapore (EDB) and the Philippines (Board of Investments). Problems caused by these relative resource and power constraints have been observed to include:

- Follow-up work on promoted enterprise has been patchy, in spite of some efforts to introduce comprehensive survey-techniques and information gathering and storage. This impairs severely on the Board's ability not only to ensure that the letter and spirit of such promotion conditions as are imposed are being followed in each case, but also to implement or recommend modifications to the system in the light of experience.
- In the absence of co-ordination among agencies, the Board does not have access to satisfactory industrial survey work covering the whole of industry against which it can measure the performance of its promoted firms, and in the light of which it can decide which sectors and industrial characteristics to encourage from time-to-time.
- Resources to carry out pre-feasibility studies to guide the promotion of new industries are not adequate; apart from a handful of broad industry studies (some carried out with UNDP/UNIDO assistance) no effective work in this area is conducted, with the consequence that the selection of industries for promotion has been comparatively arbitrary and non-integrated, that little emphasis has been placed on promoting positively production techniques which would increase a firm's contribution to employment or increased utilization of locally available materials etc.

- Regional development can only to limited extent be stimulated by BoI which has no offices in major provincial centres [in contrast to, for example, IFCT, see para. 4.27 below].

4.15 As illustrated in detail in Annex II, a great many institutions are involved in the administrative procedure related to an industrial investment project and a common complain from investors relates to the number of places required to be visited and the length of time it takes to obtain the various necessary permissions. In his study on industrial infrastructure, Dr. Narongchai Akrasanee *) argues strongly for the setting up of a strong investment centre in Thailand. As it is now, there is little co-operation between the various institutions involved; in fact (according to Dr. Narongchai) each institution performs its function autonomously thinking it is not their direct responsibility to inform others. Although the Board of Investment as such (= the Committee) consists of members from the various institutions/ministries concerned for the purpose of co-operation this is only at the policy-making level. **)

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*) Dr. Narongchai Akrasanee 'A Survey of Industrial Infrastructure in Thailand', January 1975.

**) The principal incentives under the Investment Promotion Act are in the realm of customs duties, taxes, immigration and land. Since the BoI exercises no jurisdiction over these areas, actual implementatio of the incentives requires the co-operation of many other Government agencies. (This is unlike the case of say, Singapore, where the Minister of Finance both grants the incentives and administers them.) For this purpose (1) representatives of the implementing agencies sit on the Board of Investment [Committee members being at Under-Secretary of State or Secretary-General level, with the Minister of Industry as Chairman and Ministers of Finance, Agriculture, Commerce and Foreign Affairs as 'advisors'], and (2) close liaison between the BoI and the implementing agencies has been established, with more or less success at the staff level. In short, the Thai experience represents an approach to incentive implementation through the use of committee and liaison with strong independent operating agencies which actually control the incentives.

4.16 The seriousness of this problem should not be underestimated. It has been well put in a study by Charles Draper 'Private Foreign Investment in ASEAN - A Study on Trends, Policies, Incentives and Impediments' (ECOCEN, Bangkok, February 1974) as follows:

> 'In the absence of up-to-date survey-work, and consequent reasoned policies (whether co-ordinated or not), each of the responsible planning, industry, exchange-control, promotion, incorporation, taxation, customs and immigration agencies must 'fly blind' to a large extent, especially in its dealings with foreign investment and in making industrial assessments such as that of impending over-capacity in a field. Indead, the policies and practicies of most of these agencies are designed to meet different needs and are not concerned specifically with foreign investment issues at all. In this situation, the authorities must rely too much on information provided by private enterprise.'

Mr. Draper continues by referring to the examples provided institutionally in the efforts of, for instance, the Philippines, Malaysia and Singapore and even Indonesia which

> 'demonstrate the need for industrial planning, infrastructural development, research, and specific correction of disincentives - co-ordinated directly with or by a highpowered investment agency - to play a much more important role than the standard package of fiscal incentives and guarantees doled out by that agency.

4.17 Given the BoI's very broad scope of discretion and the importance of sound decision-making on its part, the World Bank has also recommended that the internal evaluation capabilities of BoI be strengthened and its focus shifted from evaluating individual projects to establishing priorities for major sub-sectors. The need for strengthening of BoI capabilities would relate to its staffing, operations, systems and procedures. [It should be borne in mind in this connexion that, hithertoo, the BoI has had to perform the important functions entrusted to it within very limited budgetary resources.] To assist BoI and relieve it of some unnecessary work in examining each case from the ground up, a system of general criteria applicable to broad categories of industries would need to be developed. Also, specialized technical expertise to focus on specific tasks, required from time to time, may be obtained through technical assistance.

4.18 It is understood that the BoI is seeking grant financing for the undertaking of studies to assist more national and co-ordinated industrial development, focussing, inter alia, on issues such as

(i) determination of priorities for investment, project possibilities, and the desired pattern of agro-industrial development;

(ii) development of a policy position on foreign investment and the incentives and safeguards need to attract it; and

(iii) reviewing alternative approaches to industrial investment promotion.

4.19 In August 1975, a policy statement was issued which further clarified the government's attitude toward direct foreign investment and announced the formation of a 'Foreign Investment Advisory Council' comprised of prominent foreign and Thai business.*) In general terms, the government policy vis-a-vis foreign investment is to:

- encourage direct foreign investment but to selectively direct it to sectors where foreign expertise and capital are most needed; and
- increase Thai participation in joint-ventures.

4.20 Another specific measure aimed at promoting foreign investment in industry was the establishment in 1975, by the BoI (with bilateral assistance) of industrial promotion offices in Frankfurt and New York.

4.21 The gradual reduction of the foreign share of ownership is often a major stipulation when promotional priviledges are granted. In November 1972, the Aliens Business Act (NEC Announcement No. 281) was put in force. The Act, being administered by the Department

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*) Including representatives of the American, Japanese, French and German Chambers of Commerce, the Secretary-General of the BoI, the President of the Board of Trade, and the Director of the Economic & Social Planning Division, NESDB.

of Commercial Registration, Ministry of Commerce, is in effect classifying manufacturing industries in two categories as concerned foreign participation:

(i) Industries in which no new foreign majority-owned companies could be established but existing ones could continue although not expand beyond a certain limit *);

(ii) industries in which new foreign majority-owned companies could be established and existing ones allowed to expand indefinitely.

4.22 Also in late 1972, the Aliens Occupations Act (NEC Announcement No. 322) was put in force, prohibiting foreigners from certain specified occupations and requiring all aliens to obtain work permits. The Aliens Occupations Act is administered by the Department of Labour.

4.23 It is understood that consideration is being given to have the Thailand Management Development and Productivity Center (TMDPC) at the MoI, to review the use and need for technical personnel brought in from abroad, so that the Government would be in a better postition to adjust their length of stay to real need. TMDPC would also help encourage the use of local expertise and help find local sources of such expertise.

4.24 As part of the industrial promotional efforts of the Government the Industrial Estate Authority of Thailand (IEAT) was established, through National Executive Council Announcement No. 339, in December 1972, with the objectives of development of land areas suitable for establishment of an industrial estate, including building roads, factory waste disposal pipes or other necessary installations as well as providing other facilities and services to smooth the work of industrial operations. Two types of industrial estates are envisaged, namely: (i) general industrial estate, and (ii) export-processing zone. The Director-General of the Department of Industrial Promotion is Chairman of IEAT.

*) Existing firms cannot increase their annual sales or production over 30 % above 1972 levels. Business granted promotional priviledges are exempt from this provision

4.25 One industrial estate (operated by IEAT), Bang Chan Industrial Estate outside Bangkok, is in operation since a few years. One more industrial estate, privately owned, in the vicinity of Bangkok has recently been established. IEAT is giving technical help to it. Plans are underway for several other estates to be set up in the provinces (Udon and Uta-pao in the Northeast, Sampangpeng in the North and Phuket in the South). The industrial activities as may be permitted in the export-processing zone shall be limited to activity which is wholly new investment and which will not affect or damage other local industries which have been already exporting their products. The industrial operator in the export-processing zone is prohibited to bring the products out of the zone for sale in the country.

4.26 The role of the Ministry of Industry *) in actively promoting industrial investment has by and large been confined to the samll industry sector [see chapter VIII below]; the BoI, now under the chairmanship of the Minister of Industry, having played the leading role in promoting larger industries (in those selected fields or areas where promotional priviledges were to be considered). Notable efforts in promoting medium-scale industries in particular in the areas outside Bangkok are, however, made by the Department of Industrial Promotion both in the North by the Industrial Services Institute, Chiang Mai [see para. 8.06 below] and by the Planning Division. Since some time, the Survey Section of that Division has made concentrated efforts to identify industrial opportunities in the South while at the same time using its findings to guide the Department's technical and financial assistance in that area. The Department of Industrial Promotion would like to set up a one-step service to investors (whether in promoted industries or not).**) So far, it can only supply information. It is preparing a handbook for potential investors, presently in Thai for local use, eventually to be translated into English.

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*) It may be noted that, in connexion with the recent appointment of a new Undersecretary of State for Industry [who before that was Director-General of the Department of Industrial Promotion], an internal ad hoc planning committee within MoI was created, consisting i.a. of the Chiefs of the Planning Division of the various Departments, with the task of reviewing the programmes of the various Departments in order to ensure full co-ordination and inter-departmental support.

**) Such a one-stop service has been most actively called for by the Association of Thai Industries. [See also footnote *) under para. 4.30 below]

4.27 An important promotional function is also played by the Industrial Finance Corporation of Thailand (IFCT) [see further in Chapter VI] which during the last years has been pursuing a development strategy aiming, inter alia, at

(i) financing smaller, riskier projects in the Bangkok area which could not attract interest from commercial banks;

(ii) financing a few large and complex projects which required substantial promotional inputs; and

(iii) promoting projects, particularly agro-industrial projects, in lesser developed regions.

4.28 Thus, IFCT's management has recently taken three major steps in an effort to alleviate the concentration of its financing to the Bangkok area. Firstly, it has decided to lend its domestic currency funds at a concessional interest rate for agro-based projects which are generally located outside the Central Region.

Secondly, a separate section in the Planning Department has been set-up for developing projects with high economic priority in industrially less congested areas. Thirdly, IFCT has recently opened branch offices in the South (Haat Yai *), the Northeast (Khon Khaen) and the North (Lampang). More generally it has continued stepping up its promotional efforts through:

(i) a continuation of its programme of industry studies:

(ii) encouragement of private entrepreneurs to establish pioneer industries on a joint venture basis with foreign partners;

(iii) direct industrial promotion (IFCT has been playing a lead role both as a provider of technical assistance and as a representative of domestic investors in establishing joint ventures in the palm oil, sericulture, castor oil and rock salt industries);

(iv) regional seminars in various parts of the country at which interested investors and traders are invited to discuss specific investment opportunities to be taken up by IFCT;

(v) the establishment of a special project promotion unit at the head office.

4.29 IFCT has also given particular attention to a strengthening of its links with various business associations and chambers of commerce, with the commercial banking sector and with other Government agencies (in particular, BoI and NESDB) in order to play a more effective role in the planning and development of projects in their early stages.

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*) The Haat Yai branch office was the first to be established in December 1975. During its first months of operation it identified 19 (!) promising new projects in the region.

4.30 As general conclusion it may be said that in order to ensure an effective industrial investment promotion in the context of the Government's industrial development strategy, several areas where a strengthening would be particularly useful, could be indicated, such as:

(i) information: present data on several important features of the industrial sector are inadequate and a much better information system needs to be developed (see Chapter III);

(ii) co-ordination: organizational arrangements need to be developed to ensure full co-ordination for all policy measures affecting industrial development; a strengthened Board of Investment would play a key role; *)

(iii) promotional priviledges: the present ad hoc review of individual incentives by the BoI should be replaced by a framework of broader policies along the lines outlined in para. 4.14 above;

(iv) tariff reform: major reform of tariffs and indirect taxes is essential to establish a more uniform level of effective incentives; **)

(v) reduced reliance on direct controls: import, export, price and investment control should be administered within the framework of well designed investment incentives;

(vi) location strategy: location in development zones in various parts of the country should be emphasized. Current policies tending to encourage infrastructure and transport rate differentials in favour of the Bangkok area should be reviewed while at the same time over-provision of incentives for relocation should be avoided.

*) One of the early actions of the National Administrative Reform Council (NARC), in power since October 1976, has been the announcement of a restructured Board of Investment which now is to be headed by the Prime Minister (rather than the Minister of Industry) and include seven key Cabinet ministers. Furthermore, the new administration has declared that it intends to revise the Investment Act so that the Board of Investment will become a one-stop service center for investors, thus reducing the red tape in dealing with the multiplicity of government agencies that in the past approved investments.

**) Detailed recommendations are given in the study by Dr. Narongchai Akrasanee, 'The Structure of Effective Protection in Thailand, A Study of Industrial and Trade Policies in the early 1970's; March 1975

V. Promotion of industrial exports

5.01 It has been noted above [in para.1.25], that the accelerated expansion in the manufacturing sector during 1971-73 was export led; the share of manufactured products in total exports rose from 4.1 % in 1970 to 15.1 % in 1973 (in a situation where the total exports over the same period increased by 120 %!). The main contributing factors to export success over this period, have been a record of relative domestic prices stability, low wages and the effective devaluation of the Baht (which is fixed to the US dollar). Most of the export growth took place in labour-intensive industries like textiles and apparel, and jewelry industries. It is considered that, while the manufactured exports were nominally aided by Government incentives introduced in 1970 (although the tariff structure continued to somewhat of constitute a negative bias*)], the growth of this export between 1970 - 73 was spurred largely by external factors, such as strong demand, more rapid price inflation in importing countries, prodding by overseas buyers and foreign trading partners in joint ventures etc. With the worldwide downturn in 1974, the rate of manufacturing export growth slowed down. It is, however, generally felt that considerable scope remains for further developing sources of raw materials and intermediate products for export-oriented processing and manufacturing industries. **) In recognition of the need of a

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*) A study carried out by Dr. Narongchai Akrasanee of Thammasat University, Bangkok - 'The Structure of Effective Protection in Thailand: A Study of Industrial and Trade Policies in the Early 1970s', dated March 1975, indicates that the potential effective protection resulting from the tariff structure and other forms of administrative intervention introduced a heavy bias in favour of import substitution and against export orientation.

**) Indeed, a striking feature of Thailand's industrial development so far is the lack of industries whose production is geared almost completely to supplying export markets. By comparison with many other Asian countries, the distinct advantage of an adaptable, easily trained and yet relatively low-cost labour force remains under-utilized in Thailand.

more aggressive exporting stance on the part of Thai manufacturers coupled with support from the Government, inter alia, by way of improved information services, an Executive Committee for Exports was established in 1975. The Executive Committee is under the Chairmanship of the Prime Minister, with the Minister of Finance as Vice Chairman and the Ministers of Commerce, Agriculture and Co-operatives, Industry, Communications and Foreign Affairs as members. The Secretariat of the Committee has been created in the Office of the Prime Minister.

5.02 The Executive Committee for Exports is charged with a wide range of responsibilities. It is to establish export targets, formulate policies and measures related to exports as well as co-ordinate the activities of various governmental and private institutions. The Committee and its secretariat are empowered to eliminate obstacles and problems encountered by exporters and to take necessary action aimed at the expansion of production, increase in internal and foreign investments and reduction of trade deficits.

5.03 Plans are under way to the effect that under the overall supervision of the Executive Committee for Exports, the export promotional services at present existing in various governmental departments should be strengthened; an Export Service Center has been established under the control of the Ministry of Commerce to co-ordinate them.

5.04 The Executive Committee for Exports has also put forward a great number of specific measures that could facilitate industrial exports, such as:

(i) better communication between the private sector and the Government during trade negotiations;

(ii) creation of bonded manufacturing plants and export processing zones [see para. 4.25 above];

(iii) improvements in port facilities and shipping services and in physical infrastructure outside of Bangkok;

(iv) standardization of goods for export and inspection prior to shipment;

(v) strengthening of the role of commercial attachés in collecting market information, organizing more trade exhibitions, and making information about export possibilities more readily available to local manufacturers; and

(vi) improving credit facilities for exporters and investigating the possibility of establishing an Export-Import bank.

5.05 Another example is the problem faced in the context of the recent textile industry slow-down, by the many smaller textile companies which are dependent on the domestic market having not had the resources or capability to establish export contacts. The Thai Textile Manufacturers Association (TTMA) considered a levy of 5 baht per spindle per month to subsidise these companies in their efforts to exports, but found that it did not have the money to do so. (The feeling now in textile circles is that it seems inevitable that the textile slow-down should accelerate the trend towards vertical integration and bigger units).

5.06 The governmental department with responsibility for the development of industrial production for export is the Department of Industrial Promotion (DIP) *) in the Ministry of Industry. This is being done through the Industrial Service Institute (ISI) in Bangkok and, for Northern Thailand, in Chiang Mai **), through the Textile Industry Division **) and through the Thai Handicraft Promotion Division (and Narayana Phand Handicraft Center, the Government handicraft shop). As yet, DIP's main attention has been given to the handicraft products development as far as export products development is concerned, and a more active focussing on required services - promotional, product development and adaptation etc. - to the small- and medium sized industries with export potential should be considered. Also, DIP's Textile Industry Division might be given more resources towards assisting the country's smaller textile plants in their export efforts (see paragraph 5.05 above).

5.07 One area to which increased attention might be given within the industrial services activities, for instance in ISI Chiang Mai, is to identify and assist manufacturers with potential export products. A UNIDO/Japanese Government sponsored technical co-operation project (VC/RAS/75/011) is currently under implemention in four South East Asian countries, including Thailand, with the aim at promoting the development of export-oriented industries in these countries. It is envisaged that under this project inter alia advisory services through international experts or consultants will be provided, through the Development of Industrial Promotion, at the plant level on product and production development.

5.08 The Thai Industrial Standards Institute (TISI), within the Department of Science, Ministry of Industry, was established in 1970 (with UNDP/UNIDO assistance). Of vital importance for the country's export potential of manufactures is TISI's firm policy of aligning new Thai standards to international standard specifications

*) An organizational chart of the Department of Industrial Promotion is given in Annex VI

**) Presently UNDP/UNIDO assisted

wherever possible. In addition to the development and issuance of industrial product standards TISI has since 1972 issued licences to companies to use the TISI quality mark on their products. The fields in which those licences cover include in the case of compulsory licences: tapioca, ballasts for fluorescent lighting and canned pineapple. In addition over 50 voluntary licences have been issued to manufacturers of a wide variety of products such as various building materials, food products, electrical goods, ceramic ware, Thai silk, etc.; the scheme being increasingly recognized as vital in the campaign for quality levels in the country's exports.

VI Industrial financing *)

6.01 In terms of its structure, the diversity of institutions, financial services offered and the variety of financial instruments available for mobilizing savings, the financial system in Thailand is still in the early stages of its development, and as short as fifteen years ago almost all corporate financing needs were obtained from personal and family sources. At the same time there were no investment banks or development banks, no stock exchange etc. in existence. While other institutions, such as insurance companies, provident and pensions funds and commercial and savings banks, did exist they did not play a role in the capital market. **) In 1962, under private initiative, the Bangkok Stock Exchange was formed to facilitate the trading of a handfull of company shares which were then publicly available. It was succeeded in 1975, by the official Securities Exchange of Thailand.

6.02 Also in 1962, the Industrial Finance Corporation of Thailand (IFCT) was formed as a private development bank with support from the government. ***) IFCT's primary objective is to assist local industry in raising the necessary capital required for its development, and its main activities have been in providing long-term loan financing to local industry. Lately, it has expanded into direct participation in equity investments.

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*) A thorough review of the sources of financing for industry is given in Chapter III.3.1 of Dr. Narongchai Akrasanee's study 'A Survey of Industrial Infrastructure in Thailand', January 1975.

**) Even today the role of private pension and provident funds needs to be widened, as does that of life insurance companies, in the mobilization of savings.

***) 53 % of IFCT's shares are with local banks or Thai individuals and 47 % with foreign banks. Major credits have been provided, besides by the Bank of Thailand, by the World Bank Group, the Asian Development Bank, KFW of Germany, the Exim Bank of Japan, the Japanese and the Danish governments.

6.03 IFCT is the only specialized long-term investment financing institution in Thailand, with roughly 80 % of its commitments channelled to the manufacturing sector, and, since 1970, increasingly to medium-large plants oriented toward export production. It offers project loans of one million baht upwards at modest rates. Its annual lending volume represented on the average about 2 % of total annual private sector investment in manufacturing in the late 1960s and early 1970s. Although this share doubled in 1974 and 1975, to an average of 4.1 %, it still remains relatively low *). However, because IFCT's financing covered a relatively small proportion of total project cost, its influence was exerted over a much larger portion of total private investment in manufacturing - estimated to be around 25 % in 1974/75. Indeed, IFCT's lending operations last years have been rising while overall investment levels have been falling. To a large extent, this reflects IFCT's willingness to take calculated risks in the interests of medium and long-term development at a time when other financial institutions are retrenching and approaching investments with a cautious wait - and - see attitude in a climate of general uncertainty over the future.

6.04 The criteria used by IFCT in evaluating loan applications are:

(i) the thorough economic, financial and technical feasibility of the project;

(ii) the positive contribution of the project to the national economy and development of the country;

(iii) the non-availability of funds from other sources on resonable terms.

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*) It is expected to raise to about 6 % by 1976/77

6.05 IFCT's management has recently taken three major steps in an effort to alleviate the concentration of its financing to the Bangkok area. Firstly, it has decided to lend its domestic currency funds at a concessional interest rate for agro-based projects which are generally located outside the Central Region. Secondly, a separate section in the Planning Departments has been set-up for developing projects with high economic priority in industrially less congested areas. Thirdly, IFCT has recently opened branch offices in the South, the Northeast and the North (see para.4.26 above).

6.06 As for the institutional characteristics of IFCT,*) reference is made to the detailed information contained in the World Bank report, dated 10 August 1976, 'Appraisal of the Industrial Finance Corporation of Thailand' The report concluded i.a. that the quality of IFCT's project appraisal work was satisfactory and has shown consistant improvement over the past two years. [This was, in part, traceable to the influence of rigorous standards set by IFCT's previous UNDP/UNIDO-sponsored advisors; the credit in responding to and maintaining such standards, however, belonging entirely to IFCT's staff.] IFCT has also an excellent project follow-up system. Before appraisal, loan applications are cursorily screened to establish prima facie viability and eligibility for IFCT financing. This aspect of IFCT's work needssystematic strengthening.

6.07 In 1964, the Small Industries Finance Office (SIFO) was established in the Department of Industrial Promotion, Ministry of Industry. Its principal objective is to provide financial assistance to small industrial enterprises, including cottage and

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*) The organization chart of IFCT is shown in Annex V

handicraft industries. SIFO plays the role of a broker - it evaluates the projects but does not grant loans directly, it only recommends that loans be made by the Krung Thai Bank *) (which provides 75 % of the loan amount while, SIFO provides 25 % from its budgetary allocation). The Krung Thai Bank manages the loan from then on. Individual loans are limited to a maximum of 1 million baht. **) As a financial conduit SIFO has not proven to be particularly effective in addressing the needs of the small industry sector. In the 10-year period 1964-74 it had approved only 809 loans for a total amount of 207 million baht (approx. US$10 million). As Dr. Narongchai in his industrial policies study ***) notes: "considering the number of small-scale firms in existence, it can not be said that SIFO has contributed much to the creation of small-scale entrepreneurs." There is a definite physical constraint on SIFO's project processing capacity due to limited staff resources as well as to procedures. Most of the loans (about 35 %) are for fixed asset financing in the manufacturing sector, mostly in industries in the groups of intermediate products at a higher level of fabrication, construction materials and processed food. Loan losses have been remarkably low, about 1 % of the outstanding value, largely because the loans are heavily overcollateralized (the security being reviewed and set by the Kung Thai Bank.) Virtually no supervision is carried out by SIFO and no assistance extended to borrowers in difficulty.

6.08 Still it might be said that although the activities of SIFO are small and limited, it provides incentives for small-scale firms which must be considered helpful for the firms which receive them. A strengthened linkage between the financing assistance provided by the Department of Industrial Promotion, through SIFO, and its technical services could, however, be expected to much enhance the aid to small-scale industries [see chapter VIII below].

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*) The Krung Thai Bank is the country's 2nd largest commercial bank and is almost wholly government owned.

**) IFCT on the other hand will not normally make a loan of less than 1 million baht.

***) Dr. Narongchai Akrasanee, 'The Structure of Effective Protection in Thailand: A Study of Industrial and Trade Policies in the Early 1970s', March 1975

6.09 Since the latter part of the 1960s, Thailand's finance and securities companies have expanded significantly and become a major source of short-term loans. The rapid development of the finance business in the country can be attributed mainly to increase in demand by local industry for short-term credit coupled with the availability of short-term funds which the public wants to invest at a much higher interest rate than those offered by commercial banks. [Latest available figures indicate that finance companies borrow from the public at the rate of 10 1/2 - 12 1/2 % per year compared with a 6-8 % rate paid by commercial banks. The prime lending rate is about 13 1/2 - 14 %; by law the maximum rate companies can charge is 15 % per annum.]

6.10 One of the general conclusions arrived at by Dr. Narongchai in the study referred to above *) was that it seems quite clear that the sources of industrial financing are too limited. He recommended that high priority areas to be developed and further strengthened were the credit institutions such as IFCT and SIFO, and the securities market. Along the same lines, the World Bank in its recent appraisal report **) of IFCT in supporting consideration for a proposed further loan, commended 'IFCT's performance over the last two years in efficiently allocating resources and playing a significantly stepped-up developmental role in encouraging sound industrial investment' and felt that the proposed further loan support ***) would 'allow IFCT to continue pursuing the successful course presently chartered' as well as 'continue the process of internal institution-building.

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*) Dr. Narongchai Akrasanee, 'A Survey of Industrial Infrastructure in Thailand', January 1975

**) 'Appraisal of the Industrial Finance Corporation of Thailand', 10 August 1976

***) The World Bank approved a US$ 25 million loan to IFCT in September 1976. Earlier World Bank Group loans have been $ 2.5 million in 1963 and $ 12 million in 1974.

VII. Technology transfer, adaptation and development, applied industrial research

7.01 In Thailand, as well as in other developing countries, the process of inflow of foreign technology requires annually vast amounts of foreign currency, thus representing a heavy burden to the national economy. It has also been observed that in a number of cases repeated purchase of the same technology has occurred and terms and conditions of technology agreements have not been most beneficial, neither to the recipient local companies nor to the national economy on the whole. Little systematic efforts seem to have been made to assess the possibility of creating a governmental regulatory system for an effective technological policy, with required institutional structure, aiming at e.g.

- better utilization of local sources in terms of technical expertise, manpower, raw materials, etc.
- better utilization of local existing and available technologies;
- the channelling of the technology into preferred industrial sectors;
- commercial and technical terms of agreements to be fully in line with national policy objectives.

7.02 Little attention has so far been given to the question of most suitable technology in the assessment of projects applying for promotional priviledges; the work on this aspect seems to have been confined mainly to ad hoc evaluations ex post of the effects of various projects in this respect.*) Given the limited resources allocated to the Board of Investment this is fully understandable. Within the framework of the industrial sector studies envisaged in para. 4.18 above, technology policy indications might be formulated to provide necessary guidance for the industrial project promotional work of BoI (and IFCT, etc.) Also, in the case of promoted industries, the BoI might be expected to give closer attention to the terms of technology transfer agreements in their appraisal of new projects. **) The field is also wide open for a strengthening in general of the regulatory role that the Government plays in this area with regard to the safe-guarding of its economic and technological position.

7.03 It is understood that in preparing the Fourth Plan NESDB has given some consideration of the question of national capacity in technological terms to create or adapt new technology. The co-ordination, in general terms, of the country's scientific and technological research is since 19??, vested in the National Research Council (NRC). The Office of the NRC is organizationally an agency within the Office of the Prime Minister.***) Its main functions are to recommend policies and programmes for the promotion of research

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*) Dr. Udom Keripibulo, Department of Economics, Kasetsart University, Bangkok, has recently carried out a survey to look into the effects of the promoted projects on technology transfer and employment. He posted over 100 questionnaires to various types of industries under promotion. The results obtained were as follows:

(i) Most of the technology used is process-embodied technology;
(ii) Regarding suitability of the technology used it was shown that the technology brought in had to be adapted and that most of the investors preferred capital intensive methods;
(iii) When there was a lack of skilled manpower, some investors resorted to utilizing fully automatic machines or employing foreign workers; the majority chose to train existing local workers.
(iv) The training provided was mostly "on-the-job" training.

**) At present, the BoI has no expertise to assess the technology proposed by applicants/investors and a spokesman of BoI indicated (in June 1976) that the cost of such reviews of technology might outweigh benefits.

***) It is understood that consideration is given to placing the NRC under the aegis of the NESDB who would formulate and develop a technology policy to guide the research work.

to consider ways and means of obtaining funds for research, to co-ordinate research in various branches of sciences, to promote and encourage government and private research, to maintain a register of research work undertaken, and of researchers in various branches of sciences. It has a total number of personnel of 190.

7.04 The institution in Thailand which has as its main function to adapt and develop technology, to build up an autonomous technological capacity is the Applied Scientific Research Corporation of Thailand (ASRCT), which was established in 1964. The Applied Scientific Research Corporation of Thailand Act 1963 gave the legal framework for the creation of a semi-autonomous applied research institution operating outside the Thai civil service. Although it is nearly wholly dependent on governmental financial support, it has an almost unique capability within the country of being in a position to co-ordinate research programmes involving governmental departments, other governmental organizations, foreign and international agencies as well as to carry out research project on contract basis for private industry.

7.05 ASRCT's main objectives are defined in the Act as:

'to initiate, carry out, promote and support applied scientific research and investigation in connexion with, or for the promotion of, any matter affecting national development, the natural resources, industries and administrative services in the Kingdom, including health and welfare of the Thai people, and to promote the application of the results of applied scientific research for the benefit of the nation.'

7.06 The following policy guidelines of January 1976 for ASRCT's work have been approved by the Board of ASRCT:

1. ASRCT will conduct applied research and effectively transfer the technology for the promotion of national economic and social development, both in the government and the private sectors as well as in the international programmes.

2. ASRCT will emphasize research for agriculture and industry, to promote maximum employment and manpower particularly in rural areas, to promote maximum utilization of natural resources, and to promote higher standard of living through generation of better income, environment, and infrastructures.

3. ASRCT will accelerate transfer of technology resulting from research to reduce import and to increase export earnings.

4. ASRCT will provide research services through contract research wherever practicable. However, the benefits of the research to the public at large will be the criteria for concluding the contract agreement.

5. ASRCT will promote higher standards of agricultural and industrial products by co-ordinating to utilize the testing capacities available and to maintain the standards of testing of the country.

7.07 The emphasis of ASRCT's activities is on applied scientifc research; they are directed to research programmes which have been assembled in the light of the requirements of Thailand's economic development plan. Research programmes are originating in may ways, from governmental and industrial requests (contract research), through surveys *) and contact with industry (in-house research) and approaches from foreign and international agencies (grants research). The current research programmes may be divided into five main categories:

1) Research to promote agro-industry;
2) Research to solve problems of existing industries (trouble shooting), including pollution problems;
3) Research to adapt known technology to local conditions;
4) Research associated with techno-economic (industrial) feasibility studies
5) Research on utilization and upgrading of local raw materials, including agricultural wastes and crop residues.

7.08 Concomitant with carrying out applied research, ASRCT is also responsible for training scientific research workers, providing central technical information services, testing services and providing a central service for making scientific measurements.

7.09 Although ASRCT was set up as an autonomous body in the sense that it was not answerable to any one Minister or Ministry, provisions were written into the Act which gave the Minister (in charge of the Act) "power and authority of general supervision over the general activities of the Corporation." The Act also stipulated that 'the Council of Ministers, on the recommendation of the National Research Council (NRC) shall appoint ....the Board." At present the Board consists of

*) As a result of the industrial surveys a highly useful book "The Industrial Sector in Thailand" was published in 1971.

a Governor who acts as the executive head of ASRCT as well as the Chairman of the Board, and four members, namely the Secretary-General of the NRC, the Secretary-General of the NESDB, the Secretary-General of the Board of Investment and, finally, a business executive.

7.10 The ASRCT has a total staff of 385 persons. It consists of eight departments, namely *):

1) Technological Research Department (formerly Technological Research Institute)
2) Agricultural Research Department
3) Engineering Department
4) Economic Department
5) Building Research Department
6) Testing and Standard Department
7) Environmental and Ecological Research Department
8) Thai National Documentation Center.

7.11 Given the huge range of problems which ASRCT could work on the one hand and the very serious shortage of experienced scientific manpower on the other, the Board and management of ASRCT employ two mechanisms to maximize the utility of its resources. Firstly, despite the apparent rigidity of the organization chart, research is in fact carried out by multi-disciplinary teams drawn from the various groups, as appropriate, of the eight departments together with such outside assistance (from e.g. universities) as is necessary. Secondly, each research programme is continually monitored from the commercial and economic viewpoint so as to direct as early as possible weaknesses in the

*) An organization chart is given in Annex VII.

viability of the programme.

7.12 It should be noted that the measures referred to in previous paragraph were initiated only very recently in connexion with a major reorganization of the ASRCT. A candid picture of ASRCT's research programme planning during its first 8 years is given in the report of the UNDP/UNIDO Research Management Adviser, Dr. F. Neville Woodward in his report of 24 November 1972 "Policy and Programme for Improving Effectiveness of the Applied Scientific Research Corporation of Thailand."

7.13 In noting that [in the field of industry] with a few notable exceptions ASRCT's investigations had "failed to help existing or catalyse the development of new industries", Dr. Woodward in his report pointed at reasons such as:

- ASRCT management had been research rather than industry oriented. There had been no corporate policy or plan, no extension service or effective links with industry; its overall research programme was built up on an ad hoc basis. No evaluation of the component parts of the programme was undertaken in a systematic way;
- ASRCT had made little effort to find what industry required or to identify a potential industrial partner before initiating a research investigation. Rather, it worked on projects which the staff selected as being potentially

valuable and tried to "sell" the end result often with meagre success;

- In the early days ASRCT, although conscious of its independence and autonomy, was run as an autocracy with all decisions taken by the chief executive. The Corporation was being managed like a government department with all the restraints and inhibitions attached thereto.

7.14 One of tho recommendations of the Woodward report was the strengthening of ASRCT's work in providing advisory, consulting and trouble shooting services to the industry, by the establishment of an Industrial Advisory Service whose functions would be:

(a) To direct any request for assistance to the correct person or department in the Corporation and ensure that the service provided is paid for at economic rates;

(b) Operate a Technical Information Service until such time as the Documentation Centre is able to do this; and

(c) Appoint two industrial liaison officers who should be technically qualified (chemistry or engineering), have industrial experience, and be versatile.

Their duties would be as follows:-

(i) They should pay regular planned visits to companies concerned with manufacturing and processing to acquaint them with the facilities available at ASRCT and how these may be used most effectively.

(ii) They should advise industry about the work going on not only in the Corporation but also in the universities and elsewhere in Thailand and abroad.

(iii) When on routine visits to a company, or when requested to call by a company the industrial liaison officer should ascertain and discuss the company's technical problems. Many of these the officer will be able to suggest an answer for immediately, whilst others might have to be taken back to the Corporation for the Technical Information Service to find an answer in its record or by discussion with the appropriate Corporation expert. Provided no investigational work is required, the service up to this stage should be free. If on the other hand investigational work is required, then an estimate of cost of this would have to be prepared by the appropriate technical staff member who would ultimately be responsible for undertaking the work.

7.15 The sources of ASRCT's income, as set forth in the ASRCT Act, are primarily to be from:

(i) Grant made available by the Government, or from various other sources;

(ii) Fees charged by the Corporation for investigations or for scientific tests or measurements or for other services.

7.16 The major source of ASRCT's annual income is from the Government in the form of a block allocation of funds. Of ASRCT's 31 million bahts income in 1975, 27 million came from the Government's allocation, 3 million from foreign and international agencies in the form of grants and 1 million came from earnings.

The planned growth of ASRCT's income 1977-81 is as follows (in million baht):

	Government's budgetary allocation	Other sources	Total
1977	32.10	1.61	32.10
1978	30.04	3.34	33.38
1979	29.51	5.21	34.32
1980	28.89	7.22	36.11
1981	28.16	9.37	37.55

7.17 It should also be noted in this connexion that attempts are currently being made to obtain Government's approval to allow tax exemption for the money spent by the industry for research and developmental services provided by ASRCT or other governmental research agencies. This incentive, it is hoped, would sewer as an effective inducement for the industry to seek technological changes through research and development.

7.18 ASRCT is, however, by no means the only institution dealing with industrial research in Thailand. Other institutions include:

(i) The Department of Science, Ministry of Industry with following five Divisions: Chemistry Division, Biological Science Division, Physics & Engineering Division, Analytical Chemistry Training Division and Research Division. Its total number of personnel is 521 persons *) (thereof 218 with scientific and technological qualifications). Although its main functions are to act as a central scientific laboratory in analysing and testing materials for government

*) This includes the personnel in the Thai Industrial Standards Institute (TISI) which is an entity under the Department of Science.

agencies and private enterprises, it also engages (with rather limited inputs) in scientific research in order to utilize natural resources and industrial by-products for economic use. Under the Department of Science is, furthermore, the Ceramics Industry Research and Development Centre.

(ii) The Department of Mineral Resources, Ministry of Industry, is concerned inter alia with technical research on mineral dressings, metallurgy and mining technology.

(iii) The Department of Industrial Promotion, Ministry of Industry, in its Cottage Industries Division, is investigating ways and means to utilize more domestic raw materials and to bring new types of materials into production, and in its Textile Industry Division,*) is conducting research and experiments with new designs and materials and acting as central textile laboratory;

(iv) The Department of Industrial Works is performing work in the context of the Factory Act and Machinery Registration Act of direct relevance to, inter alia, environmental research;

(v) The Sugar Institute, Ministry of Industry, is to, inter alia, perform research and technological improvement of sugar production from sugar-cane;

(vi) The Forest Products Research Divison of the Royal Forest Department, Ministry of Agriculture and Co-operatives, has the objectives to perform the technical investigation concerning the properties, utilization, collection, prevention, and improvement of wood and forest products, including the collecting of relevant data and specimens so as to find out the correct and efficient ways in utilization of wood and then introduce them for the popular usages in industries.

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*) UNDP/UNIDO assisted under large-scale project

(vii) The Forest Industry Organization, a government enterprise under the Ministry of Agriculture and Co-operatives, is also, inter alia, conducting research, investigation and experiments on forest industrial products. It publishes its work in 'Thai Teak', (English version) and 'Wood Preservation Plant' (Thai version).

(viii) The Institute of Environmental Research, established in 1974, at the Chulalongkorn University has the objective to serve as a center for study and research related to the environment and to connect this work with the other academic disciplines in the University, thereby furthering multi-disciplinary research concerned with environmental problems.

(ix) The Institute of Food Research and Product Development (IFRPD), Kasetsart University, is since 1969, conducting research on food science and technology with special interest in the economical advantages in food industry and agriculture, aiming at improving the quality of raw materials used for food industry. IFRPD has a personnel of 187 persons (whereof 55 with scientific or technological qualifications).

(x) The Preserved Food Organization, Ministry of Defense, is a government enterprise which inter alia conducts research on and development of industrial food production.

(xi) The Government Pharmaceutical Organization, Ministry of Public Health is a governmental enterprise with functions, inter alia, to encourage the local production of medicine, to carry out analyses of raw materials and finished products.

(xii) The Korat Sericultural Research and Training Centre, to which the Japanese Government has promoted assistance during several years.

VIII. Services to small-scale industry

8.01 As noted in paragraph 1.02 above, there are in Thailand relatively few small-medium industrial units (employing between 10 and 100 workers). The Government has generally recognized that small-medium industrial units provide a promising vehicle for expanding and dispersing investment and employment opportunities at a reasonable capital cost without necessarily sacrificing the objectives of productivity, efficiency and competitiveness. However, very little accurate information is available on the key factors related to these industrial units, i.e. their use of capital and labour, their capacity utilization levels, age of their plant and equipment or their financing and technical assistance needs.*)

8.02 This situation and the Government's commitment to small-medium industry development over the Fourth Plan period 1977-81 have led the IFCT to take the initiative in launching a study which would explore the dimensions of the small-medium industry assistance problem and evaluate alternative approaches to tackling it. The study will in particular explore the pros and cons of various institutional alternatives for delivering financial and technical assistance services to small-medium industries in the most cost-effective manner. It will involve the participation of various government agencies (Ministry of Finance, Bank of Thailand, MoI, NESDB and the National Institute of Development Administration - NIDA) and academic institutions (Faculty of Economics at Thammasat University) and is intended to result in the development of a project package which would be suitable for financing by the World Bank. The study itself is to be funded by the counterpart funds generated from previous loans from the Kreditanstalt für Wiederaufbau (KfW).

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*) As far as Northern Thailand is concerned a significant amount of information has been put together in connexion with the work of the UNDP/UNIDO in Chiang Mai.

8.03 In addition to the Small Industries Finance Office (SIFO) (see para 6.07 above) the main institutional support for small-medium industry development is being provided by the Department of Industrial Promotion, Ministry of Industry through its Industrial Services Institute in Bangkok and in Chiang Mai in Northern Thailand. The Bangkok Institute was established in 1966 (under the name of the Small Industries Service Institute - SISI) with UNDP/ILO assistance, while the Chiang Mai Institute became fully operative in 1973. It is being assisted by UNDP/UNIDO/ILO. The main functions of the two Institutes are to render technical extension and advisory services in the professional fields needed for successful operation and management of medium and small-scale industries. Specifically this is being done through the provision of economic studies and market research services, product and process design, and testing services, technical and management training and manufacturing services and extension and advisory services at the enterprises.

8.04 The main impact on the small industry development in the Bangkok area of the work of ISI Bangkok seems to have been through the provision of various training programmes for technical personnel in small-medium industries. Due to large turnover of the local personnel at ISI which was trained while expert assistance was provided (essentially 1966-71) and the relative inexperience of the ISI staff (largely consequencial to the turnover situation) the Bangkok industrialists have only to a very limited extent used the ISI advisory service in the different fields. Also it is generally considered that in the Bangkok environment such services or know-how might be obtained elsewhere by the entrepreneurs.

8.05 The response from industry seems to have been considerable better in the case of ISI, Chiang Mai. There again the local staff is, however, very inexperienced as yet and the international expert assistance is envisaged to continue for another two years. Emphasis in the work of ISI Chiang Mai is, according to the Institute's development objectives, being placed on medium and small-scale enterprises with the following characteristics:

- agro-based,
- export-oriented,
- labour-intensive, and
- industries which otherwise are based on the region's resources, are potentially competitive, and have good prospects for long-term growth.

8.06 Besides providing assistance to existing industries, the ISI Chiang Mai is(in contrast to ISI Bangkok) giving major attention to the promotion of new industrial enterprises and is in those endeavours co-operating closely with NESDB, BoI, IFCT, the Industrial Estates Authority of Thailand (IEAT) and other agencies.

8.07 ISI Chiang Mai is working closely with SIFO which has a representative in ISI's office in Chiang Mai and a muterally supporting work on providing financial and technical assistance to small industries is gradually being built up. Also, close links with the new IFCT Northern Thailand branch office in Lampang are being developed.

8.08 In connexion with the discussions on a Phase II technical assistance project for the years 1977 and 1978 (after the first year's of building up period) the immediate tasks of ISI Chiang Mai were narrowed down in scope and area of coverage. For example:

(i) To fulfil the objective of assisting existing industry the ISI Chiang Mai will be expected to gradually achieve the capability of effective assistance, at a satisfactory level, in the professional fields needed for the successful operation and management of medium and small-scale industries. However, such capability will normally not include specialized technical branch know how on products and processes, other than those for which ISI Chiang Mai has specialized sections (e.g. ceramics, foundry);

(ii) The "service area" [as far as the UNDP technical assistance is concerned] shall be comprised of the districts (Changwats) Chiang Mai, Lamphun and Lampang only. Former clients in other parts of the Northern Region shall continue to be serviced in individual cases when a promising service programme has been earlier initiated, and obligations to the client established. Requests from industry in the Northern Region outside of the 'service area' may be attended to with lower priority than that of clients in the 'service area'.

8.09 One area of great concern has been lack of autonomy, even in day to day administration of ISI Chiang Mai. Originally, overall control and direction of ISI Chiang Mai was the responsibility of the Director of ISI Bangkok - a Division of the Department of Industrial Promotion. Later (in connexion with a mid-term review of the Phase I assistance project), this situation was modified to the effect that responsibility for the ISI Chiang Mai rested with the resident Chief of ISI Chiang Mai who reported directly to the Director of ISI Bangkok who then had the overall responsibility (under the Director-General of the Department). It was noted, however, that it appeared that little or no delegation of responsibility and control did in fact take place. Later in 1976, however, a major change took effect in that ISI Chiang Mai was elevated to Division level (at par with ISI Bangkok) and the Director of ISI Chiang Mai became directly responsible to the Director General of the Department of Industrial Promotion. (It might be mentioned that in the highly centralized administrative system of Thailand such a decentralizing step was considered almost unique.)

8.10 Initial plans are underhand for the provision of small-scale industry support also in the Southern and Northeastern Regions. However, it seems clear that any move in that direction will be on a much smaller scale (than when ISI Chiang Mai was established) aiming at a gradual consolidation and expansion.

8.11 One specific problem severely affecting the possibilities for production of goods, although primarily for training and demonstration purposes, at the various facilities of the Ministry of Industry, such as those of the ISI Bangkok and the ISI Chiang Mai workshops, the Textile Industry Division and the Ceramic Industry Research and Development Centre, is Government regulations to the effect that the proceeds of any sales must return to general revenues rather than being used to purchase raw materials for continuing operation of the production unit concerned.

IX. Industrial management development and training

9.01 The Government, in recognizing the importance of improving the productivity of the fast-growing industrial sector, established in 1962, the Thailand Management Development and Productivity Centre (TMDPC), with ILO-assistance. TMDPC constitutes now the Industrial Productivity Division of the Department of Industrial Promotion, MoI.

9.02 The essential objective of TMDPC is to raise the standard of management and productivity in the country by training all levels of management in the use of effective management methods and techniques primarily through the holding of seminars and training courses; by carrying out short consultative assignments on specific problems; by compiling and disseminating information concerning management development, production and quality control; and by serving as a forum where industrial organization and management problems can be discussed.

9.03 As indicated, TMDPC has recently changed its situation from semi-autonomy [under the aegis of the Department of Industrial Works and, later, the Department of Industrial Promotion] to become a division of the Department of Industrial Promotion. Earlier TMDPC aimed at being largely self-supporting but was unable to achieve this; only about 5 % of its necessary budget was covered by incomes from fees of training courses and consultancy services. Now the Centre is trying to get authority to keep any income from its services, on agreement that its basic government appropriation would be cut to match. Preliminary agreement has been reached on this matter with the Ministry of Finance and the Budget Bureau. The structural change also meant a change in the status of the Centre's personnel to that of civil servants, at a lower level of salaries (but with other benefits, such as pension, security in employment etc.). From the start, one of the main problems for TMDPC has been the large staff turnover; the salaries being considerable lower than in private industry.

9.04 The work of TMDPC - after the initial about 8 years when ILO expert assistance was provided - has tended to be more and more confined to the conducting of training courses in various disciplines and less on individual consultancy in industry. About 1.500 persons are being trained in the various courses and seminars each year.

9.05 Taking the consequencies of the difficulties in retaining a well-qualified technical staff [in competition with industry] the TMDPC is now building up a new cadre of officers (civil servants) coming directly from the universities with practically no experience from industry. Their main functions are to organize the various training courses while the teachers are hired on ad hoc basis from industry.

9.06 The TMDPC is the Thai member of the Asian Productivity Organization (APO) in Tokyo, and from time to time seminars and courses with expertise provided by APO are held.

9.07 Recently, TMDPC has begun to set up courses in the provinces. One course on management techniques was recently given in the South in collaboration with the Faculty of Engineering at the Prince of Songkla University, and a seminar for management executives - from medium-sized industries in the North - was held in July 1976, in Chiang Mai in collaboration with ISI. [Generally, the Industrial Services Institutes in Bangkok, and Chiang Mai deal with training for small scale industry, re. both managerial and technical problems, while the TMDPC concentrates on management aspects mostly in middle to large sized enterprises.] Next year a TMDPC training course is planned to be held in the Northeast in co-operation with the Khon Kaen University.

9.08 One fairly recently added function of work of TMDPC is to assist foreign investors in the processing of visa and work permit for expatriate staff. An enlarged policy advisory role for TMDPC in this connexion is envisaged as indicated in para. 4.23 above.

9.09 Side by side with the TMDPC the Thailand Management Association (TMA) is active in the field of management development at various levels. The TMA is a private organization established in 1964. It describes itself as "a professional body of managers and executives who are interested in increasing the knowledge and skills of those engaged in management in the industrial and commercial enterprises in the country." The Association is self-financing. Its course fees are higher than those of TMDPC. The TMA belongs to the Asian Association of Management Organizations (AAMOCIOS), and the Asian Regional Training and Development Organization (ARTDO). It is Thai representative of the Asian Institute of Management, Philippines.

9.10 The TMA conducted in 1975, 81 seminars and courses with a total participation of 2,860 persons. Of the seminars and courses, 70 were in Thai, 10 in English and one in Thai with simultaneous translation. The broad subject areas were general management, finance, marketing and personnel management. TMA has three very active 'management groups', namely the Marketing Management Group, the Financial Marketing Group and the Personnel Marketing Group, which develop TMA's programme of seminars, study tours etc. in these fields. One specific result of this work is a referral list of private consulting firms in Thailand. TMA has also promoted a business code of ethics, binding on all members. It also supports the development and use of standards and the TISI quality certification marking scheme. TMA members and officers sit on various Government boards and committees, sometimes as individuals, sometimes as representatives of the Association.

9.11 An important role in the field of management development and training is also played by the (UNDP/UNIDO assisted) Textile Industry Division of the Department of Industrial Promotion. *) The textile industry is tho biggest single industry in the country; the larger companies employing in total about 75.000 people. Most of the larger companies are joint ventures, mainly Thai-Japanese, Thai-Waiwanese, Thai-British or Thai-French. A significant proportion of technology transfer (and export marketing) has come from the foreign interests in these companies. Most of the smaller companies have employed foreign technicians but the emergence of more skilled Thai national management to significant degree due to the work of the Textile Industry Division) has allowed for the phasing out of these technicians.

9.12 By 1970, when consideration was given to the establishment of the Textile Industry Division - TID - [using the already existing small Fibre Experimentation Centre of the Department of Industrial Promotion as a nucleus] the expansion of industrial manufacturing capacity in Thailand's textile industry had progressed with such speed that the technical services, organization and training facilities had been unable to

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*) The functions of the Textile Industry Division are to promote the development of the country's textile industry by satisfying needs for technical consultancy, textile testing, textile design services, and technical and management training as well as research and experimental facilities, thus enabling the industry to consolidate and expand its position both with reference to the domestic market and to exports. An organizational chart is appended as Annex VIII.

keep pace. In the whole of the textile field the number of suitably qualified Thai personnel in the higher and middle management levels was very small; the industry relied almost totally upon foreign management and technical staff. [It was estimated that Thai nationals holding degrees from any textile college numbered only five.] Indeed the Thai textile industry was in dire need of fully qualified Thai nationals trained for not only the senior and junior management levels, but also textile technicians, foremen and skilled operatives.

9.13 Through the years, the TID has developed training programmes both at its own facilities and in-plant in full co-operation with the industry and its associations, namely

(i) the Textile Manufacturers Association of Thailand which amongst its members has practically all the large vertical units, and is generally recognized as the main representative body in the textile industry;

(ii) the Weavers Association of Thailand which has a membership of about 300, most of whom are small weaving establishments; and

(iii) the Thai Silk Association being the responsible and representative body amongst the Thai silk section of the industry.

X. General conclusions

10.05 Although the Thai economy is still basically an agricultural economy, the industrial sector has developed very rapidly during the last 10-15 years. To support the industrial development a rather comprehensive institutional infrastructure has been built up through the years. However, it seems to be generally agreed that until recently - the early 1970s - the industry grew without the institutions having, by and large, had much impact. This seems to have been the case for instance in respect of small-scale industry development as well as for the promotion of large scale industrial investments and of manufactured exports.

10.06 It is only in the last few years that the Government has accorded full attention to the institutions as being the major instruments in the implementation of a more defined strategy for the country's industrial development, with emphasis on employment creation, dispersal of industrial activity outside the Bangkok area, exports of manufactures, increased utilization of local raw materials etc.

10.07 Another criticism has been the tendency of building up the development programme from the top down. Instead of approaching development from the rural areas upwards, instead of identifying needs by asking what is needed, instead of a coherent strategy for whole sectors, and instead of an intense process of consultation and communication, development seems often to have imposed from above.

10.08 Furthermore, with a highly centralized administrative system, as in Thailand, the fragmentation of responsibility into a larger number of ministries and departments has led to a compartmentalization of activity wherein co-ordination between the agencies concerned has become progressively more difficult as the administrative hierarchy comes down to the operative level in the provinces. Even at the central level, governmental operations appear to be constrained not only by the overlapping of responsibilities but also by the inflexibility of rules and regulations aimed at perpetuating central control. This highly compartmentalized and centralized governmental bureaucracy is co-existing with the almost total absence of representative local agencies in the provinces which could have initiated and implemented development activities and with a system that provided minimum financial resources even to the local agencies that existed.

10.09 A major constraint for regional planning efforts has, no doubt, been the capacity of the bureaucracy to effectively implement programmes. Integrated planning does exist, the major problem has been the lack of integrated implementation because of the considerable duplication of functions and lack of co-ordination between the very many governmental agencies involved.

10.10 Little attention has so far been given to the question of most suitable technology, in connexion with the establishment of new industries. It can, however, be envisaged that within the framework of comprehensive analyses of various industrial sectors, technology policy indications might be formulated to provide necessary guidance for the industrial promotional work undertaken by various agencies, such as the Board of Investment, ISI, IFCT, ASRCT and others.

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'Public Enterprise in Asia: Studies on Co-ordination and Control', edited by Abu Sharaf H.K. Sadique, ACDA, Kuala Lumpur, 1976

'Draft Final Report on Export Development Programme in Thailand' by A. Menhinick, Senior Trade Promotion Adviser (ITC/UNCTAD/GATT) at the Department of Business Economics of the Ministry of Commerce, Bangkok. Report dated May 1975.

Inaugural address of H.E. the Prime Minister at the Symposium on Export Development Policy for Thailand, 16 April 1975.

'Industrial developments in Asia and the Far East', selected documents presented to the Asian Conference on Industrialization, Manila 6-20 December 1965. Vol. III Country Reports (including Thailand)

Project document: Industrial Service Institute, ChiangMai - Phase II.

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Project Document - Establishment of the Textile Industry Division, THA/71/540. UNIDO/TCD.177 of 15 March 1973

Project Request - Establishment of the Textile Institute of Thailand. Revision 2, March 1972

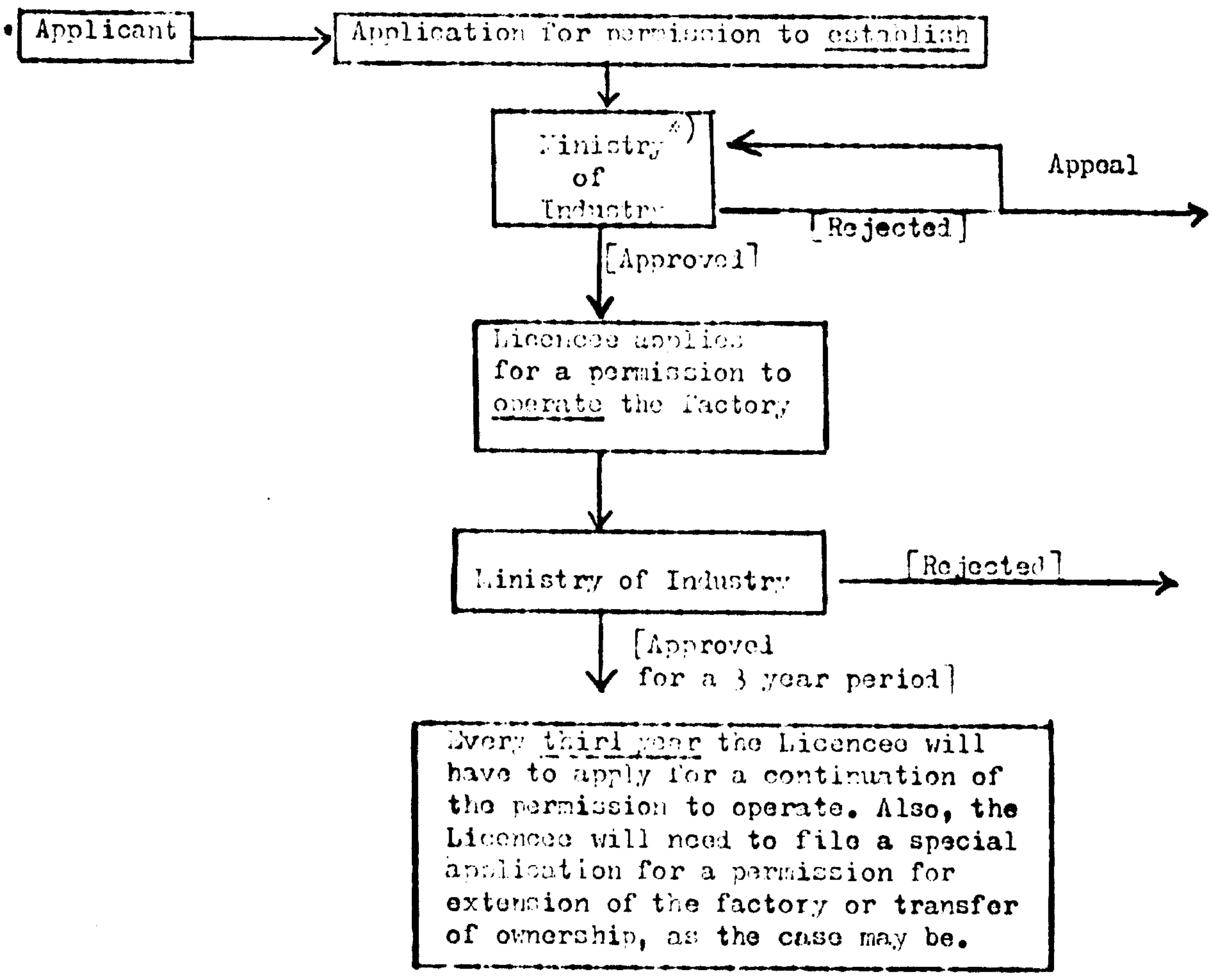
John Tusa, 'Thailand's Development Debate, article in Third World, published by the Fabian Society, May 1973

Glyde, Henry R., Institutional Links in Science and Technology, The Case of the United Kingdom and Thailand. (Draft of 1971). ASRCT and Science Policy Research Unit, Univ. of Sussex

Additional source material of great value have been various World Bank economic and other reports.

Note on the administrative procedures for permission to establish and operate a manufacturing industry for the granting of promotional certificate, etc.

a. Administrative procedure for filing application for the permission to establish and operate a factory (the Factory Law):



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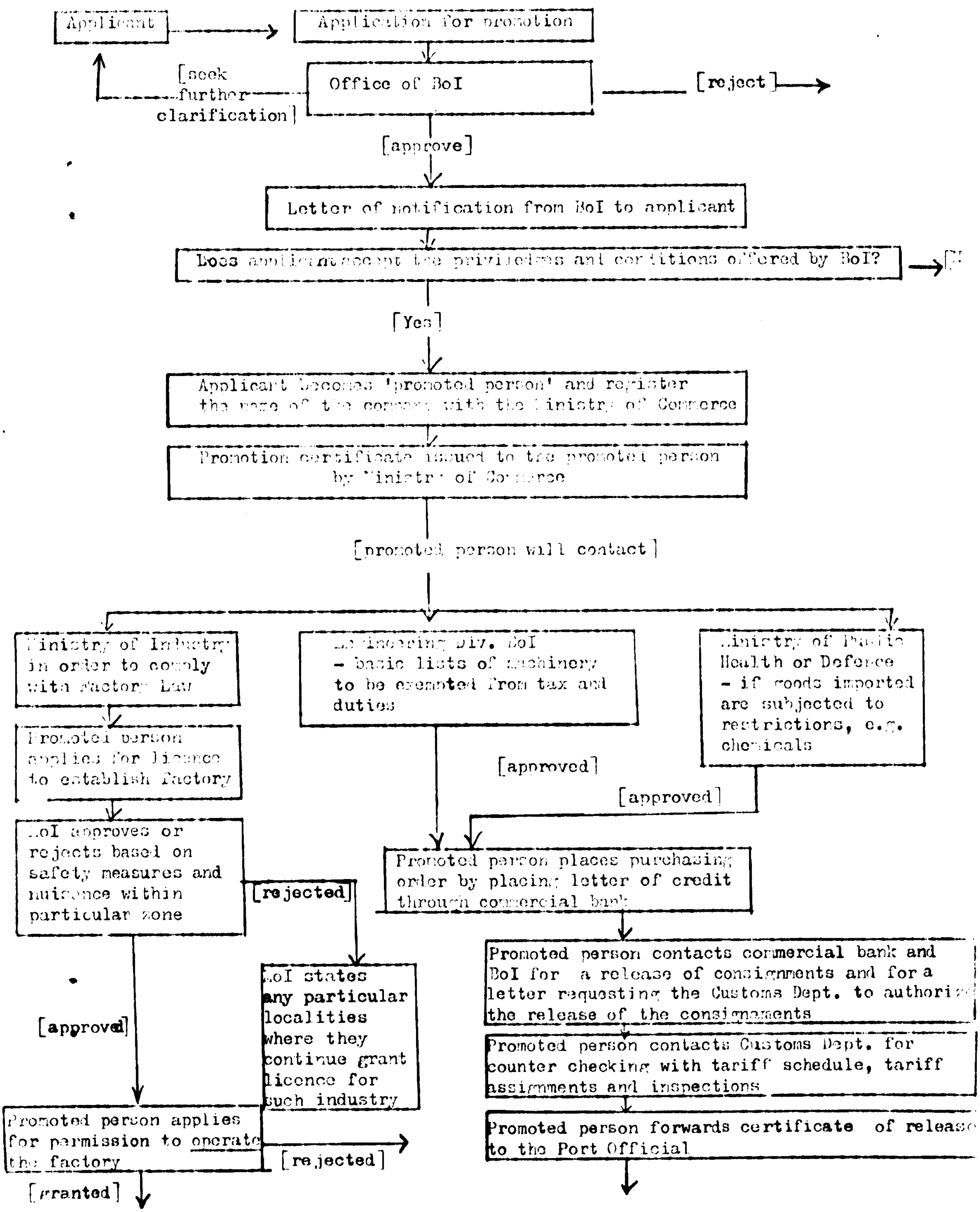
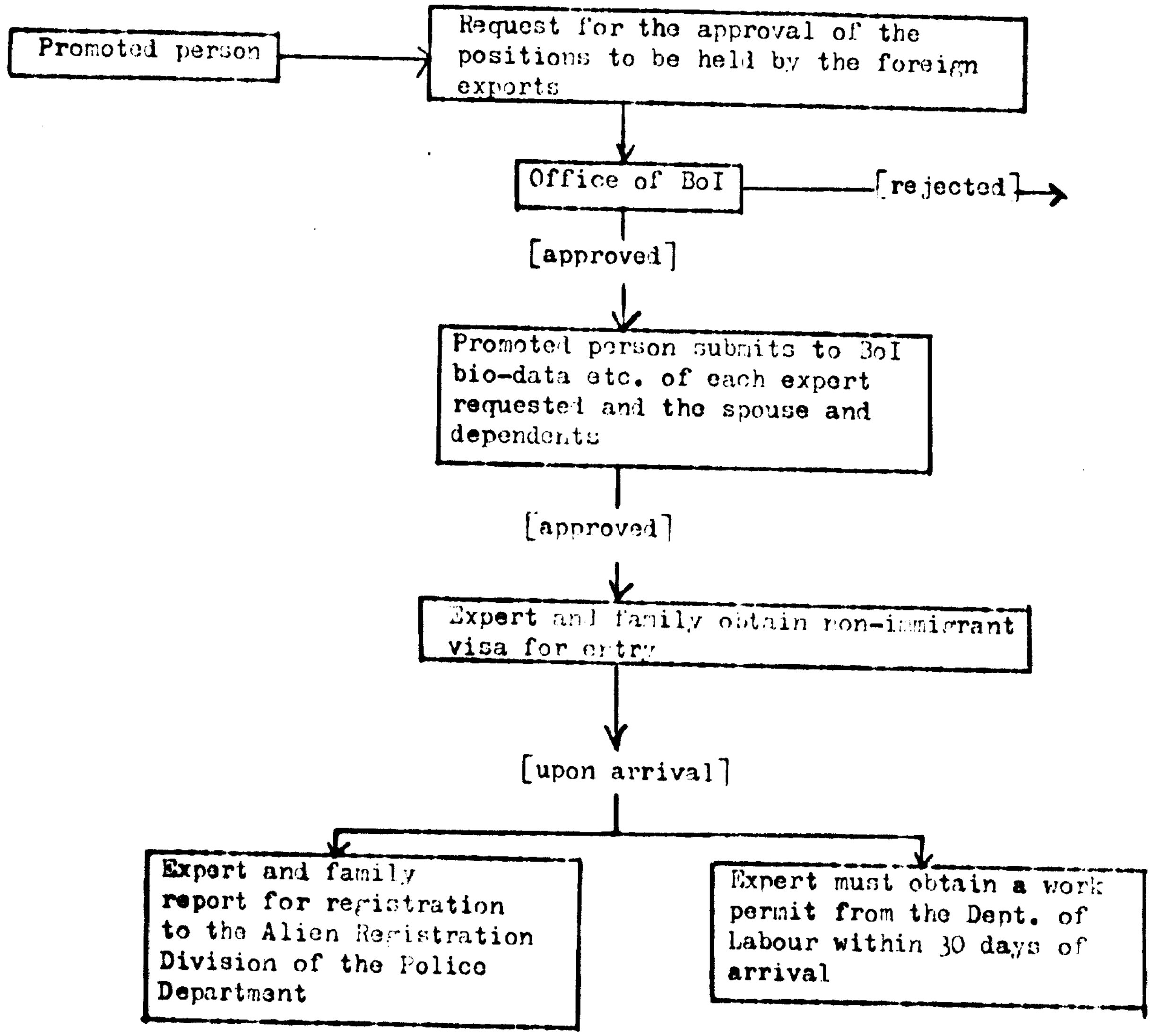
*) Before taking the decision regarding the establishment of a factory, other Ministries, such as the Ministry of Public Health are consulted; the result being a relatively time consuming process.

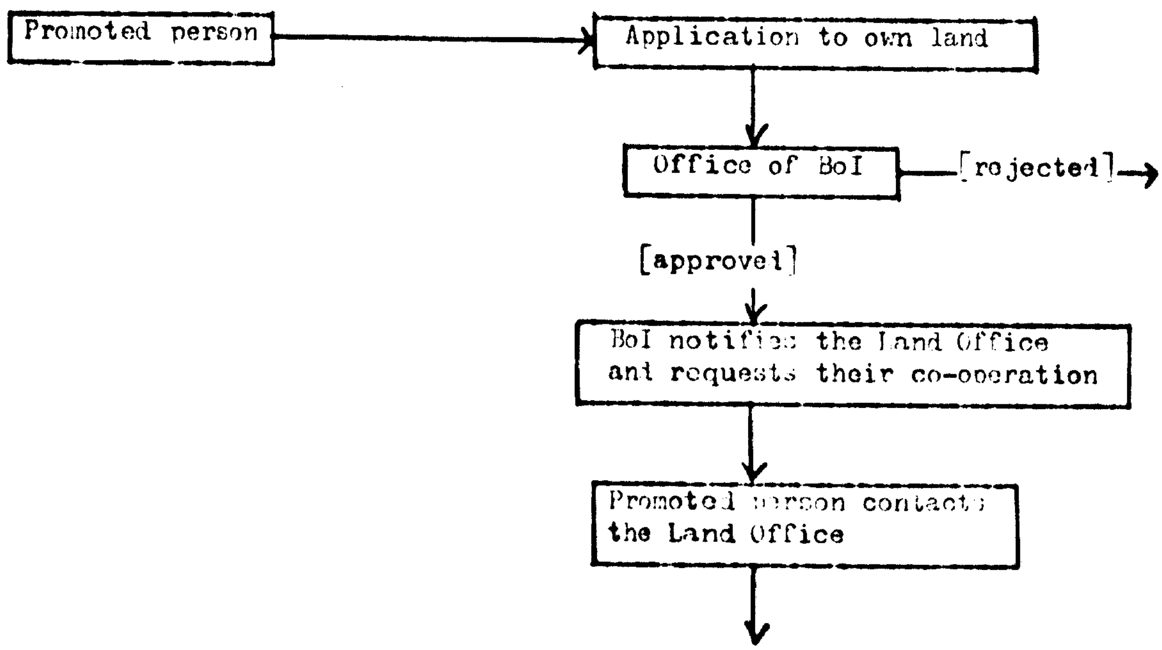
b. Procedure for the promoted person



c. <u>Procedure for bringing in foreign expertise for promoted persons</u>



d. <u>Procedure for acquiring the right to own land for promoted person</u>



Procedure to be followed by an entrepreneur in establishing a new industry (without promotional priviledges).

The entrepreneur applies for permission to establish a factory direct to the Factory Control Divison, Ministry of Industry. Under the Factories Act, no one will be allowed to establish or enlarge a factory without having first obtained a licence from the Ministry of Industry. It must therefore be pointed out here that a licence permitting the establishment of a factory must be obtained from the Ministry of Industry in all cases, whether the industry has been approved by the Board of Investment under the Promotion of Industrial Investment Act or not. However, in the case of an Industry which has been approved by the Board of Investment, the issuing of the licence by the Ministry of Industry is definitoly assured, whereas in the case of other industries, the Minister of Industry can refuse the application for licence.

If the location of the factory is to be in greater Bangkok the application must be submitted at the Factory Control Division, Ministry of Industry. If the factory is to be erected in the provinces, the application must be made at the office of the District Officer concerned, who will process and submit it to the Governor of the appropriate province, who in turn will pass it on to the Ministry of Industry with his comment. In either case the application must be made on the official forms and must be accompanied by plans and drawings of the factory to be erected and the layout and details of the machines to be installed. Engineers of the Factory Control Division will inspect the proposed site after the application is sent to him. If the application is approved, a licence signed by the Minister of Industry permitting the establishment of the factory will be issued to the applicant, who will have to comply closely with the conditions (if any) stipulated in the licence.

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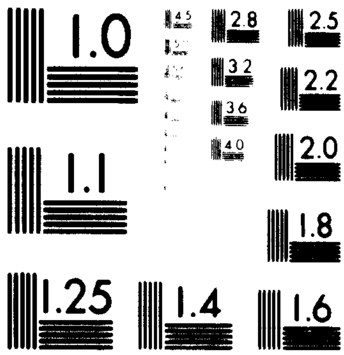

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In the meantime, if the location of the factory is in a municipal area, a permit to erect buildings and operate a business establishment, in accordance with by-laws, must be sought from the municipal authority concerned. The application for this permit must be accompanied by detailed plans and drawings of the buildings to be constructed.

If the enterprise is going to be operated as a juristic person, that is, as an ordinary partnership, or a limited partnership, or a limited company (corporation), it must be registered with the Department of Commercial Registration, Ministry of Commerce, in accordance with the Commercial Registration Act of 1956.

When the buildings have been constructed and the machinery erected and the factory is ready to start operation, a request for a permit to start the factory must be submitted to the Factory Control Division of the Ministry of Industry. In accordance with the Factories Act, no factory can start operation without a permit to start operation issued by the Factory Control Division after inspection by the competent official. It must be pointed out here also that any expansion of the factory at a subsequent date cannot be carried out without a licence permitting the expansion from the Factory Control Division.

Annex III

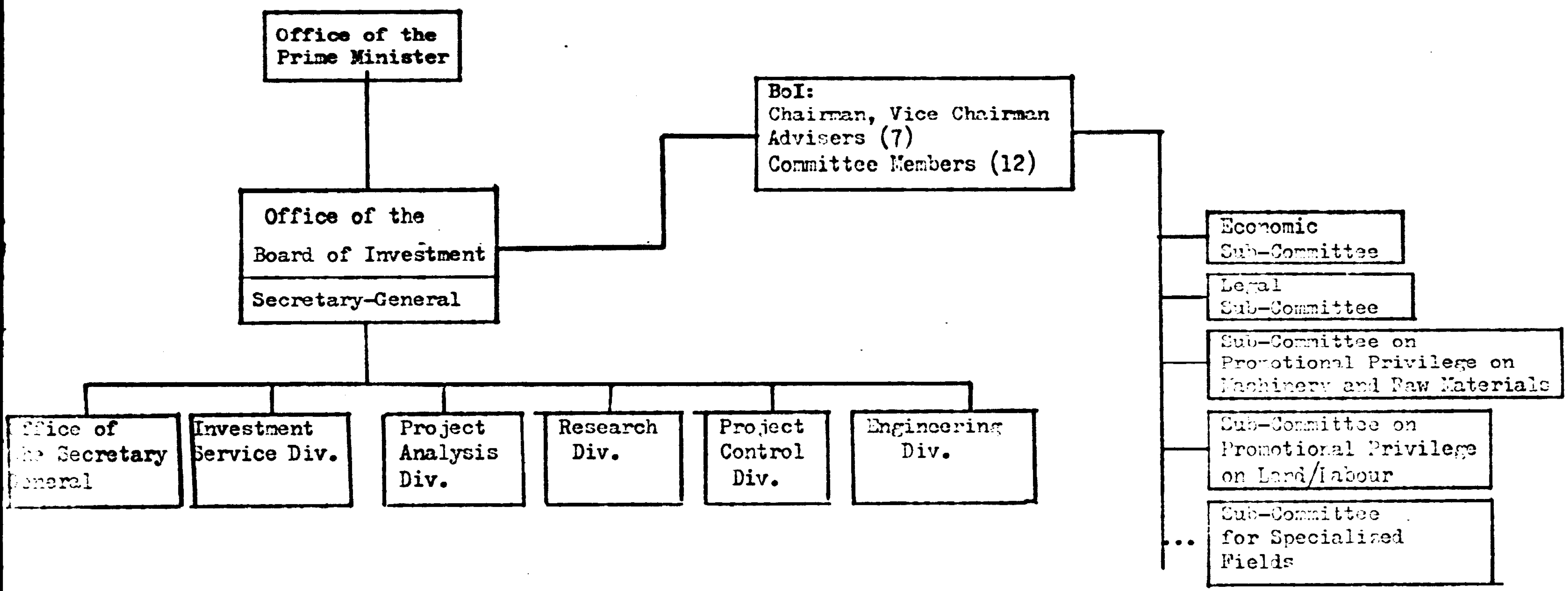
Members of the Board of Investment

The members of the Board of Investment are appointed by the Cabinet. Latest available (Nov. 1974)* list of members and advisors is as follows:

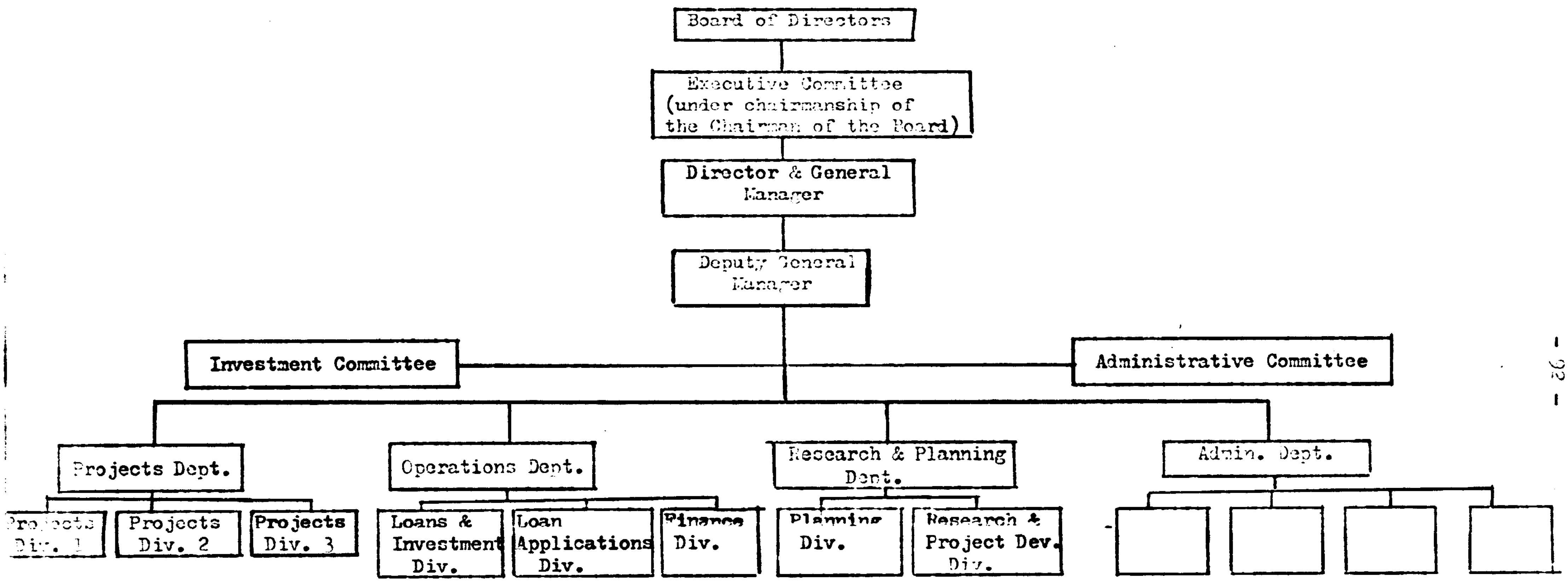
Chairman	-	Minister of Industry
Vice-Chairman	-	[Non ex-officio member]
Committee Members	-	Director of Budget Bureau
	-	Under-Secretary of State, Ministry of Agriculture
	-	Under-Secretary of State, Ministry of Industry
	-	Under-Secretary of State, Ministry of Commerce
	-	Secretary General of the Cabinet Secretariat
	-	Secretary General of NESDB
	-	Secretary General of the Juridical Council
	-	Director General of the Department of Customs
	-	Governor of the Bank of Thailand
	-	General Manager of IFCT
	-	Undersecretary of State, Ministry of Finance
	-	[Non ex-officio member]
	-	Secretary General of BoI [also Secretary of the Board]
Advisors	-	Minister of Finance
	-	Minister of Agriculture and Co-operatives
	-	Minister of Commerce
	-	Minister of Foreign Affairs
	-	[Non-office holder]
	-	[Non-office holder]

*) This information is superseeded by the announcement in November 1976, referred to in footnote *) of para. 4.30. (The Board of Investment is now to be headed by the Prime Minister and its members to include inter alia seven key Cabinet ministers).

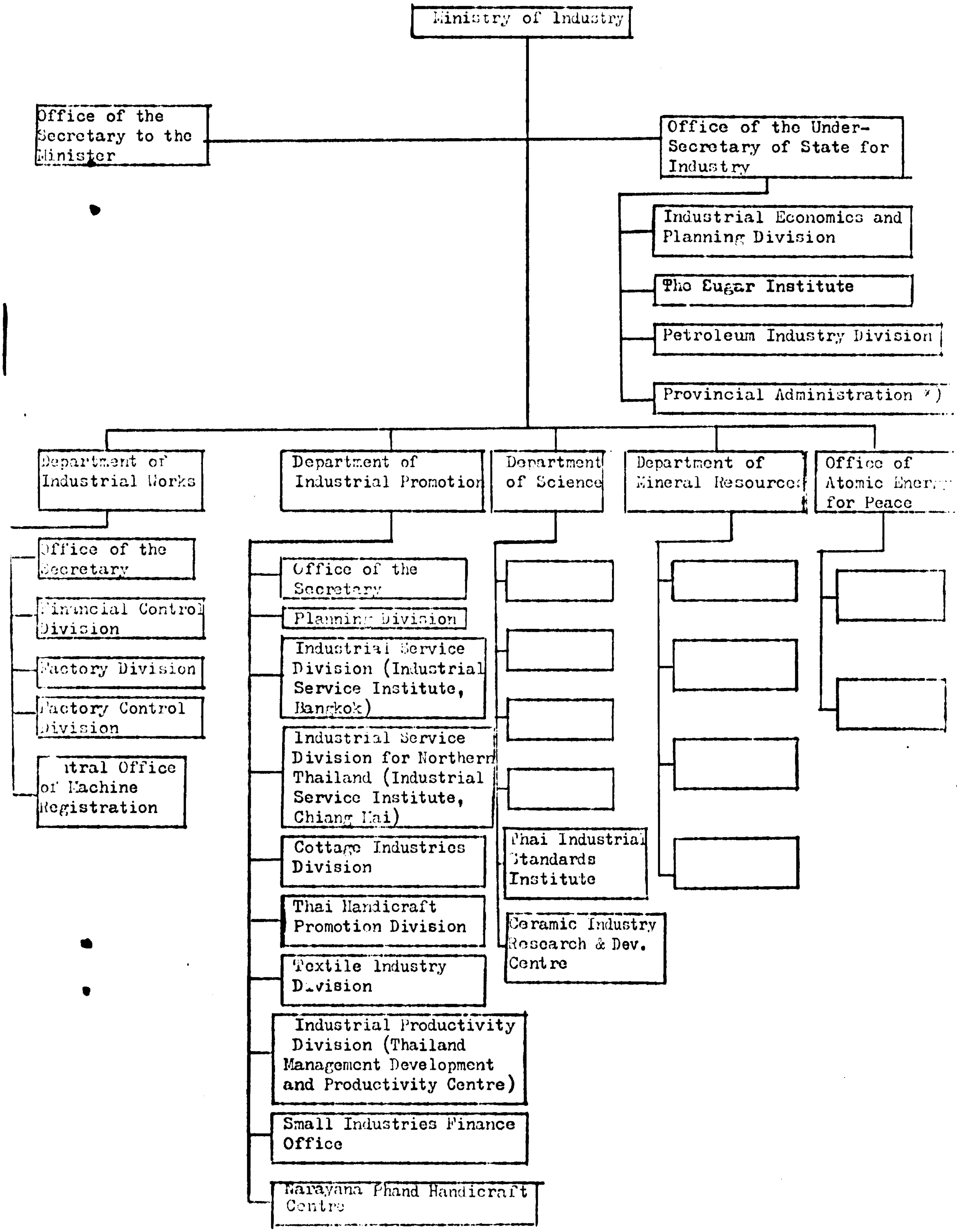
Board of Investment (BoI)



Industrial Finance Corporation of Thailand (IFCT)

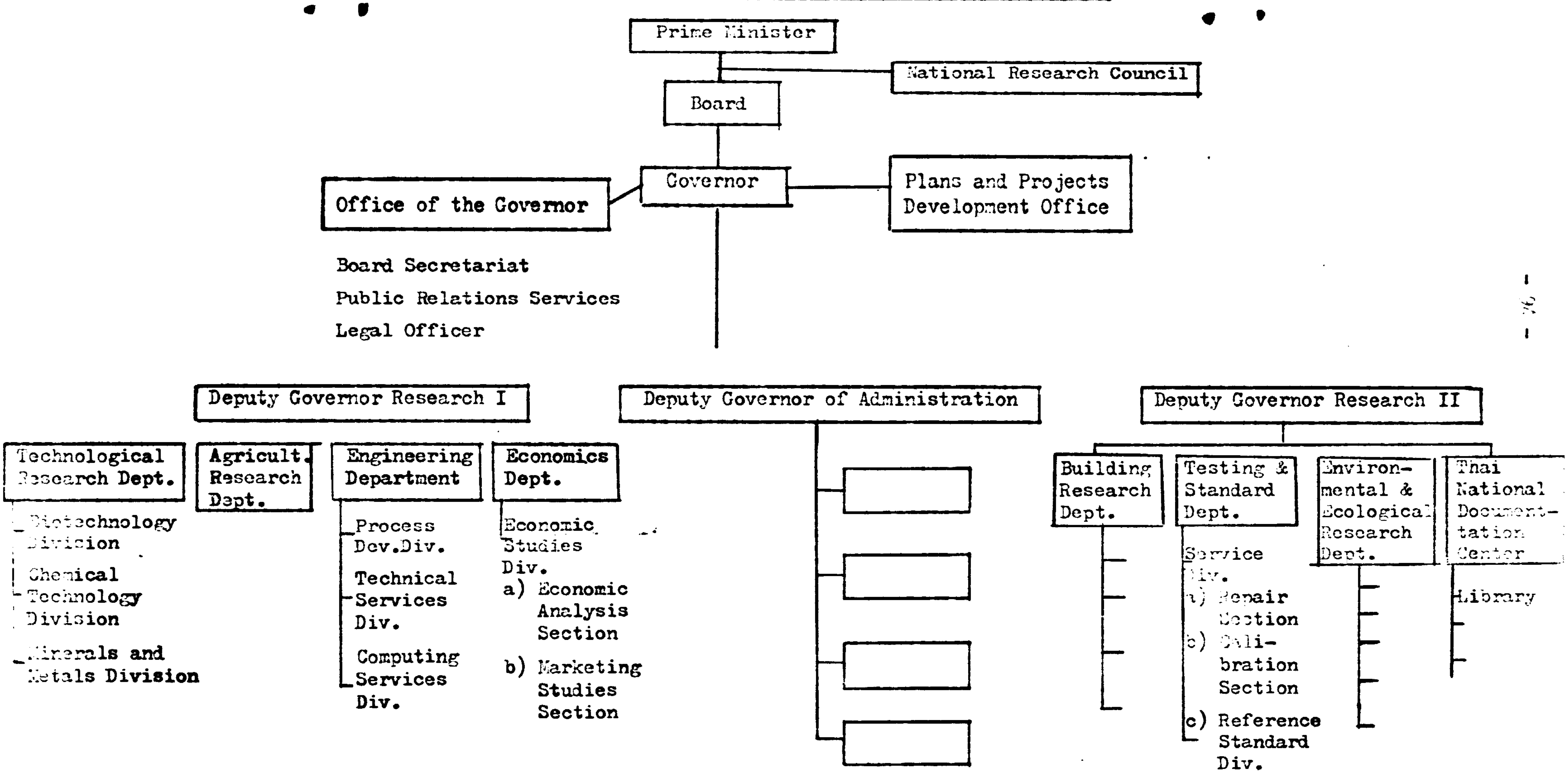


Annex VI



*) Includes Provincial Industrial Offices in 15 provinces

Applied Scientific Research Corporation of Thailand (ASRCT)



ORGANIZATION CHART OF THE TEXTILE INDUSTRY DIVISION

TEXTILE INDUSTRY DIVISION

- - - - Textile Executive Board (Consisting of representatives from the Government, industry and other qualified persons.)

Office of the Chief of the Division

Administration, Training and Extension Section
- Administration
- Training
- Extension
- Consultancy
- Information, Statistics and Library

Textile Design and Engineering Section
- Spinning Laboratory
- Weaving Laboratory
- Silk Reeling Laboratory
- Knitting Laboratory
- Textile Design Laboratory
- Mill Engineering Workshop

Textile Chemistry Section
- Dyeing Laboratory
- Printing Laboratory
- Finishing Laboratory
- Man-made Textiles Laboratory

Textile Testing Section
- Physical Testing Laboratory
- Raw Silk Testing Laboratory
- Microscopical Testing Laboratory
- Colour Fastness Testing Laboratory
- Chemical Testing Laboratory

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