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D01484

Distr.
LIMITED
ID/WG.64/SP.1
8 September 1970
ORIGINAL: ENGLISH

United Nations Industrial Development Organization

Seminar on the Organization and Administration of Industrial Services (for Asia and the Middle East)
Tashkent, USSR, 12 - 26 October 1970

THE ORGANIZATION AND ADMINISTRATION OF INDUSTRIAL SERVICES IN THE [illegible] COUNTRIES OF ASIA 1/

Prepared by the Secretariat of
the Economic Commission for Asia and the Far East
(E C A F E)

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id.70-6931

Table 2

Developing ECAFE countries: a/ Index number of industrial production
(1963 = 100)

	1948	1953	1955	1958	1960	1961	1962	1963	1964	1965	1966	1967
Mining & manufacturing, electricity & gas	32	38	50	65	79	85	92	100	109	117	124	130
Mining	37	36	47	66	83	88	95	100	110	120	126	143
Coal	35	45	48	61	77	83	91	100	97	104	106	107
Metal	51	83	86	74	97	99	103	100	109	112	113	118
Crude petroleum & natural gas	33	20	37	66	81	87	95	100	117	128	136	161
Manufacturing	32	39	52	65	78	85	92	100	108	116	123	126
Food, beverages, tobacco	47	58	67	79	88	96	98	100	108	116	127	121
Textiles	43	53	63	78	87	90	95	100	108	110	110	116
Paper and paper products	9	22	42	54	72	79	86	100	107	115	126	131
Chemical, petroleum & coal products	46	35	49	67	82	85	90	100	110	114	124	134
Non-metallic mineral products	17	34	43	64	77	85	101	100	108	120	124	135
Basic metal	22	29	34	39	65	73	78	100	100	103	110	110
Metal products	15	21	36	52	68	79	89	100	117	131	135	139
Light manufacturing	37	46	59	71	82	88	93	100	107	115	121	121
Heavy manufacturing	24	28	40	56	73	80	89	100	111	119	126	132
Electricity and gas	18	29	37	53	69	77	87	100	114	128	140	159

Source: UN, Monthly Bulletin of Statistics, February 1968 and May 1968.

Note: a/ Afghanistan, Brunei, Burma, Ceylon, China (Taiwan), Hong Kong, India, Indonesia, Iran, Republic of Korea, Malaysia, Pakistan, Philippines, Thailand and Republic of Viet-Nam.

The higher growth rates in the heavy industry sector have been a characteristic of both the region as a whole and the individual countries. While this does indeed mean a shift of emphasis in the pattern of development, it does not mean that heavy industries have taken the place of light industry in terms of contribution to total value added in manufacturing. For the region as a whole, the contribution of the light industries sector to total value added still remains significant. This is true of all countries of the region with the exception of India and Japan. In India, the percentage of value added from consumer goods industries changed from 68.4 in 1950/51 to 33.9 in 1965/66, in intermediate goods from 23.4 per cent to 43.2 per cent, and in machinery goods from 7.8 to 21.9 per cent during the same years. Changes in respect of the other countries have not been as significant and the light industry sector remains of considerable importance.

Table 3

Growth rate of manufacturing in selected ECAFE countries a/

	1953/1958	1958/1963	1953/1963	1958/1967
Korea, Republic of	16.1	10.0	12.7	11.7
Japan	11.2	17.0	14.0	13.6
Philippines	11.1	6.0	8.6	5.4
China (Taiwan)	9.0	13.1	11.0	14.1
India	6.2	8.3	7.3	5.8
Australia	6.2	6.4	6.3	4.7(1958/1966)
New Zealand	5.6	6.7	6.2	6.3(1958/1966)
Burma	2.8	5.5	4.2	-
Ceylon	2.6	6.7	4.6	5.4(1958/1966)

a/ 1953/1963 base 1958, 1958/1967 base 1963.

Source: Extracted from National Tables in the Growth of World Industry 1953/1963, United Nations, New York, 1965.

United Nations Statistical Yearbook, 1967 and Monthly Bulletin of Statistics, Sept. 1968., U.N.

Excluding the developed countries of the region, it could be observed that consistently high growth rates were maintained only by two countries, namely the Republic of Korea and the Republic of China. In these two countries numerous favourable factors have contributed to the maintenance of such growth rates. The principal factor was the availability of foreign resources. Countries, such as, Ceylon, India, Indonesia, Malaysia, Pakistan, the Philippines and Thailand depended heavily upon exports of primary commodities and consequently, with the exception of India and Pakistan, relied heavily upon this sector as the principal supplier of foreign resources for industrial development. But declining commodity prices and unfavourable terms of trade vitiated much of these efforts. In examining the problems, the major issue will pertain to questions of increasing the rates of grow in respect of most of the countries of the region and maintaining the existing high rates in others.

From the brief review of industrial development among ECAFE developing countries, one is tempted to draw some currently useful generalizations which may be summarized as stated below.

(a) Most countries in the region are small, their per capita income low and the size of markets are rather limited. Industrial integration beyond natural boundaries and regional cooperation therefore is highly desirable.

(b) Many of them are greatly dependent on exports of primary goods to earn foreign exchange. The declining commodity prices and unfavourable terms of trade vitiated much of their efforts for industrialization. Thus, an urgent need exists for finding new export items, namely manufactures and semi-manufactures and to expand the present export trade of such items. The need for export drive is further accentuated by the problems of un-utilised capacities in industries already established.

(c) Most industries set up in these developing countries are small in size and they are mainly import substitution industries. Their resources are therefore very limited and need strong support from government and industrial services for their growth.

(d) Very few of them have high growth rates while majority of them are still struggling to maintain the low rate of growth. Measures for cooperation at regional or sub-regional levels are needed to narrow the disparity in growth among developing countries; continued and increasing external help is needed in order to accelerate their industrialisation.

(e) The industrial structures in few countries, however, are changing and the growth in heavy industries sector is growing faster than in light industries sector in those countries. This pattern of industrial growth calls for heavier investments and higher degree of both technological and managerial skills.

(f) Countries being limited in resources and as most capital goods are being imported from abroad, the need for foreign capital and foreign assistance in the form of transfer of technology continued to be important. The joint ventures between local and international companies have been useful channels through which both foreign capital and transfer of technology have been achieved to some extent.

CHAPTER I

Industrial Services in Selected Countries

Having drawn some generalizations on industrial development in ECAFE developing countries, an attempt will be made to draw a cross-section view of industrial services in the ECAFE region. In drawing up a somewhat representative picture of the region's organization and administration of industrial services, a selection of countries was made, starting with Japan, the leader in Asia, a giant industrial power in the world scene, followed by two fast developing countries, viz, the Republic of China and the Republic of Korea. Few other countries were chosen to present a typical set up of industrial services in most of Asian developing countries.

The full range of industrial services, playing supporting roles to development of industries can not be covered adequately in a brief survey such as this. Most developing countries started industrialization as part of government economic development planning and industrial plans are mainly drawn up by state planning bureaus and the supporting services, either in public sector or in private sector are more or less closely associated with or controlled by the governmental rules. As observed earlier, industries are mostly small in size and limited in resources and therefore the industrial services in private sector, such as, chambers of commerce and industries, research institutions and design centres are generally weak in their effectiveness for lack of resources. The effectiveness of such services in most developing countries has been mainly dependent on how far the concerned states are prepared and able to support such industrial services.

Japan

Compared to developing countries in Asia, Japan has a relatively long history behind its "modernization" process which may be termed as the long process of industrialization. Its institutions have therefore been well tried and well established properly linked up with one another. However, during

the past-war period, Japan has set up some new institutions to deal with post-war rehabilitation of industries, such as the Japan Development Bank which was set up in the early post-war years for utilizing U.S. aid in financing industries. Nevertheless, the main instrument for regulating Japan's industrial recovery and growth in the post-war period has been and still is the enormously effective Ministry of International Trade and Industry (MITI).

As the name of the Ministry implies, Japan's industrial programme has been closely linked up with its trade policy. This important linkage, though generally recognised in most developing countries of Asia, is often found lacking in strong bondage for close coordination. Ministry of Trade and Ministry of Industry are often functioning with less recognition for each others supporting roles being played in their national development. One ministry devotes its energy towards production aspects, while the other giving attention mainly on the trade aspects. It is often not fully realized that trees planted, to grow in strength from year to year and to bear fruits must have continuous flow of water and fertilizer. Industries promoted by industrial sector must be able to grow from strength to strength by selling its products to growing markets. These two important aspects of industrialization is found closely knitted together in Japan's industrialization picture.

The economic condition or in fact the long tradition of Japan is such that Japan's industrial growth has often been regulated by the availability of imported raw materials. This is where trade policy, or more specifically import control, would more or less condition the growth of Japan's industries individually. Another aspect of trade policy is the protection of domestic enterprises from foreign competition by the manipulation of tariff and quota systems. A parallel measure in this respect, which has been a sensitive issue between Japan and the western countries, is the protection of domestic enterprises from the so-called foreign domination. In this respect, the position of Japan is in sharp contrast to that in the other developing countries

of Asia, because the latter would very much welcome foreign investments instead.

Japan's example in its institutional arrangements for industrial promotion has been very closely followed by countries such as the Republic of Korea and the Philippines. Other than established executive Ministry in charge of Industry (and commerce combined), there are two main fields of industrial promotion namely, industrial financing and industrial research, which found parallel development in the other countries mentioned. It could be seen in this paper that while developing countries are paying more and more attention to financing side, the industrial research and development side was still left without much support. Japan's marvellous growth of industrial exports has been greatly supported by its strength in the field of research and development. This particular aspect of industrial services will be discussed later.

In the case of the Japan Development Bank(JDB) its role as a primary source of industrial financing during the post-war years, has gradually diminished when big industries in Japan have developed their capacities for self-financing and when other financial institutions in the private sector have taken over a major part of industrial financing. In recent years, loans from the JDB for large enterprises constituted only a small per cent of the outstanding loans of these enterprises. The bulk of their credit is now obtained from city banks, trust banks and local banks. This is the position which most developing countries in ESCAP region are yet to achieve.

In the case of small scale industries, the share of loans obtained from the government-owned financial institutions, as compared to total loans outstanding is also small. But absolute figures appear impressive in each case, owing to the size of the Japanese economy (e.g. outstanding loans of JDB at the end of September 1969 stood at U.S.$4.4 billion). JDB is wholly owned by the Japanese Government, and it has been given the power to float bonds in the domestic and overseas markets.

The stress on industrial research as exemplified by the huge Agency of Industrial Science and Technology in Japan, which is a very important branch of the Ministry of International Trade and Industry (MITI) has to be emphasised. This Agency was established as early as August 1948 and it now has a staff of well over 4,000. The annual budget in recent years was about $45 million. Other than the general administrative set-up at the headquarters of that Agency, there are 15 independent research institutes and laboratories in the fields of metrology, chemicals, fermentation, geology, polymers and textiles, mechanics and also integrated industrial research institutes in several localities of Japan. Other than this Agency which is concerned mainly with applied research, there are numerous research institutes run by universities and private enterprises. This linkage in the field of research and development between industries and universities is yet to be strengthened in most developing countries. Japan's remarkable success in export trade was largely contributed by her research and development facilities which enable her to produce sophisticated products of high artistic design and quality. One important feature in Japan's industrial growth is that while continuing to borrow technical know-how from other advanced countries in the West to the extent it is essential, tremendous effort has been put in by Government and private industries and research institutions and universities to adapt the borrowed technology and to develop the indigenous technology. It is said that for every dollar spent on borrowed technology, Japan spends seven dollars on other technological efforts such as adapting, finding the most appropriate technology to suit indigenous conditions, conducting original research and development, and developing indigenous technology[2]

2/ K.K. Suri, "R & D challenges in the Seventies". The Economic Times, February 14, 1970.

Coming back to the Ministry of International Trade and Industry, the bureaus in charge of industrial development can be identified as follows: Industry Policy, Heavy Industry, Chemical Industry, Textile and General Merchandise, Mineral Ore and Coal Mining, Mining Safety, Public Utility Industry, Ad.hoc Coal Policy Headquarters, Agency of Industrial Science and Technology, Industrial Products Inspection Institute, Textile Products Inspection Institute, Weights and Measurements Training Institute, Mine Inspection Training Institute, and Safety Techniques Training Institute, under each bureau, there are several divisions. For example, the Heavy Industry Bureau has Divisions in charge of policy, export of heavy industrial products, iron and steel administration, iron and steel production, industrial machinery, cast and wrought products, electronics policy, electronics and electrical machinery, automobiles, vehicles, weights and measurements, aircraft and ordinance. It is not possible to produce a complete organizational chart of MITI which has a staff of over 14,000 (as of 1969).

Within the MITI, there is a specialized agency for medium and small-scale enterprises. By Japanese standards, any enterprise with less than 300 workers and with a capital less than 50 million yens is considered a medium-or small-scale industry. Hence, almost 50% of Japan's industrial output and exports have been produced by these small industries which account for 99% of the total number of establishments. This special agency takes care of communicating government policies and projections to the small industries and also helping them in short-or long-term financing, when necessary. However, as in the case of private enterprises in most countries, such small-scale industries always take their own initiative, with only a small minority appealing for government assistance. The operations of this agency have also been closely imitated by some other countries, notably the Republic of Korea.

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The Republic of Korea

To highlight the rapid industrial growth taking place in the Republic of Korea, a brief account on her recent economic development would be desirable. Until 1961, the Korean economy, like most developing countries in Asia, suffered from all symtoms of underdevelopment, that is, a high population growth, low level of per capita income, low capital accumulation, weak industrial structure, vicious inflationary trend, chronic deficit in the international balance of payments and, all in all, a painfully slow tempo of economic growth. It was in such a background that the First Five-Year Economic Development Plan was drawn up with the stated object of accelerating industrialization and achieving a self-sustained growth.

With the launching of the First Plan in 1962, the Korean economy took the first high step towards industrialization so as to break down the old crust of underdevelopment, and manufacturing surfaced as the dynamic element in the economy where agriculture had been dominant. On the completion of the First Plan, the nation's economy was found to have made impressively great strides towards the goal of industrialization. It chalked up an average 8.3 per cent sustained growth of the gross national product and underwent a desirable structural change which strengthened its infrastructure, during the First Plan period, 1962-1966. Thus, the GNP grew to 913.8 billion won in 1966 from 613.6 billion won in 1961 at 1965 constant prices. The per capita GNP increased to $131 in 1966, a rise of almost one-half over the 1961 level of $90.

The basic objectives of the Second Five-Year Economic Development Plan (1967-1971) are "to promote the modernization of the industrial structure and to build the foundations of a self-supporting economy". Specifically, the plan primarily aims at (1) accelerated and diversified industrialization with

emphasis on investment in such industries as the chemical, machinery, and iron and steel industries, and (2) improvement of the balance of payments position by achieving an increase in commodity exports on the one hand, and by promoting import substitution on the other. The export target in 1970, which was originally set at $710 million has recently been revised to $1 billion.

In the course of the second Plan period, the economy continued the rapid expansion achieved during the First Plan period. The GNP grew at a rate of 8.9 per cent in 1967, and 13.3 per cent in 1968. The average growth during the First Plan was 8.3 per cent per annum. The rapid expansion was accelerated in 1969. According to the tentative GNP estimate of the Bank of Korea (BOK), the GNP for 1969 expanded by a record high rate of 15.5 per cent. Accordingly, the per capita GNP grew to $165 in 1968 from $121 in 1966, it has reached $195 in 1969 by the BOK tentative estimate. With this growth, Korea now stands second only to Japan to be ranked among the most rapidly developing countries. Its exports have also expanded from $250 million in 1966 to a level of $700 million in 1969. Of the total exports of $32.6 million in 1960, semi-manufactures and manufactures accounted for 12.5 per cent and 4.9 per cent respectively. By 1966 the share increased to 31.6 per cent for the former and 32.4 per cent for the latter. Most of the industrial exports came from light industries, especially textile products and clothing. Along with the industrial progress, exports increased by about 42 per cent annually during 1962-1969. Since 1962, exports of manufactured goods have increased sharply, accounting for 79 percent of the total commodity exports in 1969. During 1962-1969 period, light industry recorded growth rates ranging from 15 to 18 per cent annually, while heavy industry recorded annual average growth rates ranging from 21.9 per cent in metals to 27.1 per cent in machinery. The growth of light industry has been led by textiles, one of the nation's major export goods, whereas that of heavy industry has been supported by active import substition of such key products as fertilizer, refined oil,

automobiles, electrical machinery, and ships.

Having given the impressive picture of industrial growth in Korea the Republic of Korea, well supported by high growth in its economy and exports of manufactured goods, an attempt will be made in the following paragraphs to illustrate the intensive planning and working of administrative machinery of industrial services supporting the industrial growth in Korea.

For Korea, there is the ministry of commerce and industry which should be the central agency for policy-making and execution of industrial development policies. However, a special feature of the administrative set-up in Korea, with regard to planning and policy-making at the highest level, is the well-known and powerful Economic Planning Board (EPB). This Board is under the leadership of a deputy prime minister with all ministries related to economic affairs as members of the Board, including finance, commerce and industry, agriculture and forestry, construction, communication, post and telegraph, and science and technology. Within the Board, there are two administrative branches - one in charge of planning and the other in charge of the budget. The EPB controls the budget of the Government and is a very powerful body in the allocation of government resources for development.

The Ministry of commerce and industry, as a member of EPB, is responsible for implementing the policies as set by the latter, and the budget is likewise controlled. Within the Ministry, there are two major branches - one in charge of trade matters and the other for industrial matters. The organizational structure of this Ministry is very much simpler than that of Japan, although it follows the same model. There are only five major bureaus in the industrial branch, namely, power, mines, industry I (dealing mainly with heavy industries), industry II (dealing mainly with light industries) and small-scale industries. In order to co-ordinate the efforts of these bureaus

for observing the policies set for the Ministry as a whole, a new post- that of Director of Industrial Promotion - was created in early 1970. The office of this director deals with the adjustments of measures for mines and industries to conform with policy, to regulate demand and supply of resources according to plans, and also to co-ordinate all other productive factors such as investment, know-how, land, water supply, labour relations and so forth.

The Korea Development Bank (KDB) is another institution which has a pivotal role in industrial promotion in that country. It has a rather important place in industrial financing, compared to its counterpart in Japan, although the private banks are now doing the major part of such financing. This Bank was established as early as 1955 (two years later than the establishment of the Japan Development Bank). In the early years of its operations, over half of the total industrial loans available was provided by that Bank, particularly in terms of capital fund loans. Up to the latest year (1969), the share of KDB in the total capital fund loans from all banks was still prominent. In recent years, the commercial banks have been able to provide short-term loans for the major part of the operating funds of industries. The important role of the Korea Development Bank in industrial promotion can also be observed from the rather complicated operating of the Bank. It is not only responsible for directing loans from government resources, as the Bank's capitalization came totally from public funds, but it also guarantees foreign loans for local industrialists and possesses a large number of staff for business evaluation and analysis and for general economic research (other than industrial research). According to the statute of the Bank, it will supply only such funds as other banking institutions find difficult or impossible to provide.

Therefore, it has centered its financing activities on the supply of long-term credit. Its latest statement of activities showed that nearly half of its loans and guarantees were for manufacturing and another 40% for electricity and water works. Other economic activities such as transport, construction, mining, and so forth, took over the remaining 10% of the Bank's resources. The distribution between guarantees and the Bank's own loans was about 3 to 1 at the end of 1969. This shows that the Bank has taken a very important role as the guarantor of foreign loans to local industrialists.

A Ministry of Science and Technology was set up in 1964 to promote scientific and technological development, and industrial research in particular. Attached to this Ministry are the offices of atomic energy, geological survey, and meteorology. Under its jurisdiction, there is also an International Co-operation Division in charge of co-operation with all United Nations technical assistance programmes.

An Institute of Science and Technology was organized in 1964, with the co-operation of a famous research institute in America, for the purpose of doing applied research. However, the site of this Institute was still under construction in early 1970. When it is completed, it will house a staff of about 500 of which more than 200 will be research and technical personnel. It will deal with all major branches of industrial research, including electronics, building technology, material sciences, food technology, electronic data processing, chemical engineering and so forth.

In order to achieve a further promotion of export-oriented industries, a new law was passed in January 1970 for the establishment of a free export zone in Masan. This free export zone will be modelled after the Kaohsiung export processing zone in Taiwan, for processing imported parts and materials for export only.

The Republic of China

Planning. The principal machinery for industrial development has been the "Council for International Economic Co-operation and Development" (CIECD). The "basic efforts" of this Council are: (1) to draw up economic development plans; (2) to enhance efficiency in production and trade, in order to compete in the world market; (3) to channel capital and know-how into productive enterprise from both domestic and foreign resources; (4) to continue improvement of investment climate, by providing protection for sound and legitimate investment and ensuring opportunities for growth.

In order to reach the above aims the functions of CIECD are designated to cover the following fields (according to the latest revision of the regulations concerning the organization of that Council):[3/]

1. Matters pertaining to the formulation, integration, compilation and revision of long-term (ten-year) and medium-term (four-year) economic development plans;
2. Matters pertaining to the formulation of annual operational plans for the implementation of medium-term economic development plans (including timely revision thereof);
3. Matters pertaining to the review and recommendation of basic policies and measures needed for plan implementation;
4. Matters pertaining to the preliminary review and compilation of budgetary estimates for investment projects of the government sector (including government agencies at all levels and government enterprises);

3/ Regulations governing the organization of the Council for International Economic Co-operation and Development, Executive Yuan, August 1, 1969.

5. Matters pertaining to the programming and negotiation for external funds and foreign know-how needed for plan implementation;
6. Matters pertaining to co-ordination and over-all review in the implementation of basic measures and economic development plans;
7. Matters pertaining to the follow-up, supervision and evaluation of the implementation and budget execution of important economic development projects;
8. Matters pertaining to the administration of the Sino-American Fund for Economic and Social Development;
9. Other matters pertaining to the formulation, co-ordination and evaluation of economic development plans and their implementation; and
10. Matters referred to the Council by the Executive Yuan.

The above functions may be grouped into two main categories: (1) as a planning and policy-making body for economic development in general, and industrial promotion in particular; (2) as an administrative agency for foreign aid and investments, particularly U.S. aid.

The policy-making level of CIECD is the Council which consists of: A Chairman whose position is to be filled concurrently by the President of the Executive Yuan (equivalent to the Prime Minister of other countries) or to be appointed by him, to administer the affairs of the Council; and eleven members consisting of the Minister of Finance, Minister of Economic Affairs, Minister of Communications, Governor of the Central Bank of China, Secretary General of the Executive Yuan, Director-General of Budgets, Accounts, and Statistics of the Executive Yuan, Governor of the Taiwan Provincial Government, and Chairman of the Joint Commission on Rural Reconstruction, and three other individuals to be appointed by the President of the Executive Yuan. A Secretary-General and two Deputy Secretaries-General are appointed to supervise the secretarial staff in executing the policies decided by the Council.

Within the Secretariat, there are eight administrative divisions (according to the latest reshuffling):

a. The Over-all Planning Division which is responsible for the formulation, review and compilation of long-term, medium-term and annual plans; making studies and recommendations on important policies and measures needed for plan implementation; and making economic analyses.

b. The Sectoral Planning Division which is responsible for review, co-ordination and compilation of sectoral plans for agriculture, industry, transportation and communications, national land use and regional development, and public works.

c. The Development Financing Division which is responsible for preliminary review and compilation of the budgetary estimates for investment projects of the government sector (including government agencies at all levels and government enterprises); programming and negotiation for external funds; preparation of annual budgets for the Sino-American Fund for Economic and Social Development; and programming of other financial resources.

d. The Performance Evaluation Division which is responsible for the follow-up, evaluation and over-all review of the implementation of important measures and investment projects; and custody, management and audit of the annual appropriations from the Sino-American Fund for Economic and Social Development.

e. The International Co-operation Division which is responsible for the promotion and co-ordination of international and regional economic and technical co-operation projects and programmes.

f. The Investment Services Division which is responsible for making studies and recommendations with respect to the improvement of investment climate (including investment laws and regulations); identification of investment opportunities; making studies, and planning of land use for industry; and rendering investment services.

g. The Public Relations Division which is responsible for editing publishing and dissemination, through the mass communication media, of information regarding government policies, measure, and plans for economic development; and other matters relating to public relations.

h. The General Administration Division which is responsible for office administration, secretarial service, conferences, general services, cashier's work, and review of work progress of other divisions and offices of the Council.

According to an earlier document,[1] the role of CIECD was defined to cover the whole process of promoting economic and industrial development - planning, implementation and performance evaluation. This role applies to over-all and sectoral plans as well as individual projects.

At the policy-making level, several committees were being organized to deal with production factors or resources involved, mainly, finance, manpower, foreign exchange, communications, etc.

Co-ordination and consultation had to be continuously conducted between the CIECD and the various ministries and the Taiwan Provincial Government, on the one hand; and between the CIECD and the public on the other hand. The former aspect mainly concerned development plans; the latter concerned investment projects.

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[1] Council for International Economic Co-operation and Development - Organization and Functions - Taipei, Republic of China, April 1968.

Within the Ministry of Economic Affairs, an Industrial Development Bureau was recently organized (early 1970) to provide an executive agency for supplementing the efforts of the CIECD, to strengthen its Investment Services Division in particular, and to implement the plans and policies of CIECD on industrial development.

While the Investment Services of CIECD has a staff of about 50, the said Bureau is manned by a staff of about 170, comprising six divisions - three technical divisions: (1) metals and machinery, (2) chemicals and (3) textiles; and three operational divisions: (1) taxes, (2) industrial estates, and (3) assistance to small-scale industry and general research.[2/] Other related bodies in industrial promotion are the China Productivity and Trade Centre, the Metal Industries Development Centre, and the Taiwan Handicraft Promotion Centre.

The Ministry of Economic Affairs (MOEA) also runs two training centres for employees in public industrial enterprises, and supervises a UNDP project concerning "Vocational training service for industries".

Industrial feasibility studies

In order to explore the investment opportunities in the country, the Industrial Development and Investment Centre (IDIC), under CIECD, has since establishment in 1959 taken the initiative in conducting a number of industrial feasibility studies independently or in co-operation with foreign agencies. A series of booklets have been published by the centre as investment reference material, containing useful information on the supply of raw materials, technical know-how, present status of production, possible markets and rough estimates of capital outlay on the following products, many of which have been developed into important exports from Taiwan: petrochemicals, man-made fibres, chemicals from carbide, polyethylene, melamine, steel, pulp and paper, dyes, furniture,

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2/ A steering committee for this Bureau takes care of co-ordination with other agencies.

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canned fruit, glass, methanol, acetylene black, rugs, agricultural chemicals, preserved fruits, polystyrene, natural gas transmission lines, hand tools, toys, radio and TV sets, silk, frozen food, styrene monomer, polyacrylic fibre, synthetic rubber, canned chinese food, yachts, human hair wigs, optical instruments and plastic flowers.

Industrial Research

There are six independent industrial research institutes in Taiwan:

(1) Union Industrial Research Institute (UIRI) of [illegible], whose major activities are related to the development of chemical processes and to serving agro-based industries through technological research and extension services;

(2) Mining Research and Service Organization of [illegible], which was set up to make overall surveys of natural resources in Taiwan and render assistance to the coal mines but has recently undertaken energy studies in collaboration with a group of United States experts;

(3) Glass Products Research Institute, established in 1963 with the sponsorship of the glass industry, which provides engineering services to local glass manufacturers, trains technical personnel, and develops the technology for new products and processes;

(4) Textile testing Centre, which performs quality analysis of locally produced textile products;

(5) Metal Industries Development Centre, which was established with the assistance of the United Nations Development Programme (Special Fund) to train personnel required by industry and render services to the metal and machinery industry to improve capability and raise quality standards;

(6) Food Processing Institute, established in 1965 by the Taiwan Canners' Association and now receiving United Nations technical assistance, which aims to increase the diversity, quality and profitability of processed foods through research, demonstration, testing, consultation and extension services.

Many government and private enterprises also carry on extensive research work. Among the government enterprises are:

(1) China Petroleum Co. with its Refinery Laboratory in Kaohsiung, Taiwan Petroleum Exploration Division in Miaoli and Research Division of the Chia Yee Solvent Works in Chiayi;

(2) Taiwan Power Co. with its High Voltage Research Institute;

(3) Taiwan Sugar Co. with its Taiwan Sugar Experimental Station;

(4) Taiwan Fertilizer Co;

(5) Taiwan Aluminium Co;

(6) Taiwan Alkali Co; and

(7) Taiwan tobacco and wine monopoly Bureau. In the private sector, research is done by Taiwan cement Co., Formosa Plastics Corporation, China man-made Fibre Corporation, and Taiwan Pulp and Paper Company. Finally, there are two chemical engineering research institutes attached to the universities - National Taiwan University and Chen Kung University.

As in smaller developing countries, the industrial research been somewhat neglected in the past. Apart from lack of funds, another fundamental reason for the neglect to research and development, whether industri or non-industrial, is in the words of the Committee for Science Development of the National Security Council (established 1967), "the extremely acute shortage of competent personnel, not only in science and technology but also at the

administrative level". This shortage arises from brain drain abroad and the lack of appropriate facilities for scientific research and development which accentuates the exodus of trained personnel from Taiwan.

Industrial Standards

The National Bureau of Standards was established on 1 March 1947, in accordance with the standards Law promulgated in 1946. Under this Bureau there are the standards council and eleven technical committees on Civil engineering, Mechanical Engineering, Electrical Engineering, Chemical Industry, Textile Industry, Mining and Metallurgy, Agriculture, Foods, Industrial Safety, Quality Control and Packaging and Packing. The Standards Council is the chief organisation in establishing national standards, and is responsible for approving or rejecting the draft standards from the technical committees concerned. The number of published standards by the Council reached 2750 in 1968, of which 179 were approved on the mainland prior to the removal of the National Government to Taiwan in 1949.

According to the Commodity Inspection Law promulgated in December 1932 but amended in May 1965, which was enacted with the purpose of improving the quality of commodities, gaining the confidence of the market, promoting the interest of consumers, and promoting the development of agriculture, industrial and mining enterprises, the Ministry of Economic Affairs is authorized to decree which commodities for export are subject to compulsory inspection. Export inspection is the responsibility of the Bureau of Commodity Inspection and Quarantine of MOEA. The headquarters is located in Taipei, with branch offices in major cities. Over 90 per cent of the export commodity inspection is performed by the Bureau and its branch offices. However, certain commodities, such as sugar, rice, coal and a part of textile products, are inspected by public or private non-profit agencies on a contract basis, after (1) careful

review by the Bureau as to their competence in performing the appropriate inspection and (2) approval by the Ministry of Economic Affairs of their qualification to undertake the inspection.

A manufacturing plant with a sound quality control and in-plant inspection system in operation may apply for "inspection rating". Under this rating system industries are classified into three grades, viz, A, B and C. For 'A' grade industries, the export certificate is issued against the manufacturer's own inspection record. For 'B' grade industries, the export certificate is issued after review and approval by the Bureau's technical staff against the manufacturer's records. For those having a 'C' rating, certain tests or analysis are waived.

Industrial training

Despite the rapid growth of industries in recent years there has been a corresponding growth in the industrial manpower required. This phenomenon exists simultaneously with an excess of supply over demand of manpower as a whole. In other words, the compositon of manpower supply has been lop-sided, with a plethora of unskilled labour but a shortage of skilled (and to a less extent, of semi - skilled) labour, now in increasing demand as industry grows and its requirements shift increasingly from unskilled and semi - skilled labour to more skilled labour for production of sophisticated products.

For the improvement and extension of vocational education, a four-year (1967-71) "National Vocational Training Service for Industry" project is being implemented, with a budget of US$ 2,153,500 contributed about equally by the Chinese Government and the United Nations Development Programme (Special Fund) and with the International Labour Organization as the executing agency. Under this project a pilot accelerated industrial vocational training centre will be established to function as a demonstration centre for all vocational training for industry, to cover initially eight trades: Machine shop, electronics and television, industrial electricity, welding, foundry, pattern-making,

sheet metal work, and refrigeration and air conditioning. The training to be offered will be of four types: (1) trainers for in-plant training with trainees to be selected from among those nominated by enterprises and possessing appropriate education, industrial experience and personal qualities; (2) instructor training in job analysis, course organization, instructional techniques, related trade information, and upgrading of technical skills, with trainees to be selected on the basis of appropriate technical and personal qualities; (3) up-grading training by short-term courses to be organized upon request of industry for employed industrial workers and supervisors, through the use of mobile units consisting of motor vehicles equipped with relevant equipment and training materials, audio - visual aids, etc; (4) industrial entry workers training in the pilot centre, the duration and content of which will be determined in consultation with industry. With the experience gained in the pilot centre, the Government intends to expand the vocational training activities by establishing up to four additional centres in other industrial regions. The National Vocational Training Service for Industry will be autonomous in nature; it will be directed by a Governing Board, composed of twenty - five to thirty - one members representing government agencies, industrial enterprises, labour and other relevant organizations. The function of the Governing Board will be the determination of policies, operational plans and training programmes to be implemented for the project and co-ordinated with the National Manpower Development Plan.

Industrial enterprises have also established training institutes. Of these, one of the best known is the Tatung Institute of Technology at Taipei, established by the Tatung Engineering Company, a pioneer in the electric engineering field. The Institute, offering a four - year collegiate course (both regular day course and evening extension course) in electrical engineering,

mechanical engineering and industrial administration since 1963. The China Productivity and Trade Centre, established in 1955 for the purpose of improving management practices and industrial productivity, has provided industrial training for Chinese trainees at home and abroad, and trainees from other developing countries. During the period of 1956 to 1965, the Centre had conducted 444 classes for 14,644 trainees in various fields, such as, business administration, industrial engineering, cost accounting, marketing and international trade, industrial technology and others. The Metal Industries Development centre, established in 1963 in Kaohsiung as a US$ 2 million project jointly financed by the Chinese Government and the United Nations Development Programme for an anitial period of five years, provides short - term courses for trainees from industry to develop the organizational skills of management, supervisors and foremen. In addition, the Centre for Public and Business Administration was set up in the National Chengchi University in 1962 to assist the Government, industry and commerce with on-the-job training and to co-ordinate academic training in industrial management, and the Management Development Centre of the Taiwan Provincial Reconstruction Department has since 1954 trained medium-level personnel and first - line supervisors.

Industrial Financing

Facilities for medium or long-term financing are conspiciously absent in Taiwan's financial institutions. The loans extended are generally short - term rather than medium or long - term ones. In general, the conclusion by one United Nations financial expert is that "industrial banks do the same banking business as the commercial banks"[6]. Thus, for the whole banking system in Taiwan, there were in October 1967 outstanding loans of almost NT$36 billion, equivalent to US$ 900 million. Of this total, about three-quarters

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6/ M.M. Meeng, "Final Report on Small and medium-sized Industries in the Republic of China" P. 32.

were for a duration of one year or less, with less than one-fifth having a duration of over three years. Of the total outstanding loans and discounts of NT$36 billion at the end of October 1967, NT$ 14.2 billion or almost 40 per cent was for manufacturing. Of this total for manufacturing, the fact that NT$ 12.7 billion or almost 90 per cent was for current operations and only NT$ 1.5 billion or 10 per cent was for capital expenditures further confirmed that it is the practice of existing banks to extend short rather than medium or long-term loans to industry 1/.

Among the industrial banks, those undertaking financing of manufacturing industries include the Bank of Taiwan, the Bank of Communications, the Bank of China, the Central Trust of China, and the semi-governmental China Development Corporation. The Bank of Taiwan operates primarily as a commercial bank, although in respect to reserve requirements it is classified as an industrial bank. The Bank of Communications, established on the mainland in 1907 and reactivated in Taiwan from 1960, is an industrial bank undertaking the financing of the long-term needs of industry, mining, transport, etc. The bank of China, established in 1912 on the mainland but reactivated in 1960 in Taiwan, has as its chief borrowers for short-term loans business concerns which specialise in the export of manufactured goods. The Central Trust of China, establish in 1935 on the mainland as a general agency to which various kinds of business could be entrusted by government organisations, moved to Taiwan in 1949 to undertake centralized purchasing of supplies for government organisations and public enterprises from abroad, and export of products of public and private enterprises. It extends, also on a short-term basis, export loans to finance manufacturing and processing of export merchandise, and purchasing loans to local manufacturers for financing imports

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1/ Taiwan Financial Statistical Monthly, October, 1967, P. 41-42.

of national and equipment. The Central Trust of China has also commenced to undertake export insurance, including insurance of export loans. The China Development Corporation (CDC), incorporated in May 1959, is a semi-governmental enterprise whose share capital of NT$ 120 million is subscribed to the extent of one-fifth by government financial institutions, with the rest coming from private sources. Its main purpose is for development finance to private productive enterprises in order to help promote domestic industries. As of 30 September 1967, the financial resources at its disposal, including capital and reserves but mainly loans from the International Bank for Reconstruction and Development, the International Development Association, the United States Development Loan Fund and the USAID Counterpart Fund, were reported to have reached a total of NT$ 2.5 billion or US$ 62.5 million.

The above summary of industrial banks undertaking industrial financing reveals the important role played for industries by the Bank of Taiwan in short-term loans, and by the Bank of Communications and the China Development Corporation in medium and long-term loans. These loans, whether short-term or medium and long-term, are generally available for large rather than small industries, although the Bank of Communications, through agency operations, extends loans to small and medium industries, for which the amount extended has been rather insignificant.

Industrial estates

With a view to encouraging the development of small and medium industry the fourth four-year plan provides for the establishment of industrial estates in various parts of the island, especially at Taipei to the north and Kaohsiung to the south. The first and best known industrial estate is located in Liuchow, 22 km from Taipei and 8 km from Keelung. Planning started in early 1960, and construction of the estate over an area of 40 hectares, comprising a road, utilities, a service centre, and the factory buildings, was completed in early 1965. Other industrial estates under construction or consideration include

Tingkan and Kweishan near Taipei City; Hsintien, Chungho and Shulin in Taipei Hsien; Neili in Taoynan Hsien; Hualien harbour; an estate for processing of man-made fibres in Toufen, Miaolien Hsien; an estate for the petrochemical industry in Tsoying, Kaohsiung; and an estate for the food processing industry in Taichung.

The Kaohsiung Export Processing Zone (KEPZ) combines an industrial estate with a free trade zone, mainly as a way out of the complicated and time - consuming procedure for tax payment on imported raw materials and tax rebate upon exports of finished products made of these materials. The KEPZ administration was formally established on 15 September 1966. The zone, with an area of 69 hectares was planned to accommodate 120 export factories with a total investment of US$ 18 million and an export value of US$ 72 million, employing 15,000 persons. Now the KEPZ has reached its saturation point and additional similar export free zones are being planned for accommodating more sophisticated export industries.

Small Industry

It was observed in the paper on "Taiwan's Industrialization, with Special Reference to Policies and Controls" by K.C. Fong (P.F. 409) that --" in Survey of industrial policies and controls one important conclusion that emerges is that large industries enjoy marked advantages over small industries. This conclusion applies in almost every respect -- protection, tax incentives, technical assistance, industrial financing and infrastmeture". In an analysis of the second Industry and Commerce Census for 1961, it was found that large industry employing over 100 persons with power equipment contributes 68 per cent to the total value added, while small industry accounts for only 32 per cent. On the other hand, small industry accounts for 62 per cent of productive workers employed, as compared with only 38 per cent for large industry.

In order to look after the needs of small industry the Small Business Committee of CIECD, which aims at helping medium and small - scale industries to solve their financial, technical, sales, managerial and organisational problems, was founded and began to operate in March 1966. Its objectives are: 1) to carry out research into, and establish, an appropriate small business assistance system; (2) to assist banks in improving their services to medium - and small - scale industries; (3) to raise the technical standards of medium and small-scale industries; (4) to promote co-operation in production and sales among medium and small-scale industries; (5) to develop the export capability of medium and small-scale industries to the greatest extent possible in compliance with the government policy for encouraging exports. The Small Business Committee is composed of ten members, including the Secretary General of CIECD (an ex officio member concurrently serving as the convener), one high ranking official appointed by CIECD as a member and concurrently the Executive Secretary, and eight representatives from the Ministry of Finance, the Ministry of Economic Affairs, the Foreign Exchange and Trade Commission, the Central Bank of China, the Taiwan Provincial Department of Reconstruction, the CIECD Investment Operation Division, the China Productivity and Trade Centre, and the Metal Industries Development Centre.

Under the Small Business Committee, a Small Business Working Group has been set up to undertake assistance work. In principle, the group will make best use of the existing personnel and facilities of the agencies concerned. Also, an Advisory Committee, formed of fifteen experienced entrepreneurs and relevant experts engaged by the Chairman of CIECD, is to offer opinions to and provide consultative services for the Small Business Committee[1]. There are reports to be more than 50,000 small business establishments

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1/ CIECD, An Introduction to the Small Business Committee, Taiwan, Republic of China.

INTRODUCTION

Industrialisation is largely dependent upon the effecient functioning of a number of supporting services concerned with development planning, the creation and expansion of industry and its day-to-day operation. These are known collectively as "industrial services". To appraise the entire range of such industrial services in the developing countries of ECAFE region would involve a great deal of resources and time to obtain a comprehensive picture in the region. It is therefore, in this paper, a brief cross-section view of the internal organization of such services in certain selected countries is taken and tries to identify the weaknesses for further improvement in their effectiveness in supporting industrial development in this region.

Before attempting to appraise the organization of industrial services in selected countries of the region, it may be appropriate to take a bird's eye view of industrial development in ECAFE region as this would indicate the type of industrial services which should be given more attention. This will be done in the following paragraphs.

From almost the time of independence, most developing countries recognised that they must develop manufacturing industries to serve home and, perhaps, foreign markets. Toward this end they placed great emphasis on industrialisation.

At the early stage of industrialisation they generally embark on import substitution, chiefly because of reliance on a captive domestic market. Import substitutions enjoys the natural protection of distance and transport costs, makes fewer demands on standards of efficiency, service and quality; moreover, it is facilitated by familiarity with the formerly imported product. It will generally cover goods of final demand. However, as industrialization progresses among the developing countries, the chain of industrial production is lengthened

which indicates the scope of operation for the Small Business Committee and the need to be strengthened by a strong secretariat.

Export marketing and promotion

Industrial exports are handled mainly by private industrial enterprises, and to a much lesser extent by private traders. This is in clear contrast with an industrial country such as Japan, where about one half of the total export value is reported to have been handled by five large trading firms (Mitsui, Mitsubishi, Sumimoto, etc.).

The Central Trust of China (CTC) was designed to handle trading operations for public enterprises and government organizations. It extends assistance to private enterprises by acting as their pruchasing agent for raw materials, as a financing organization for their imports and as sales agent for their export products in foreign markets. It has contributed considerably, through its widely scattered branch offices, to enhancing the exports of public enterprises including sugar, canned pineapple, camphor, aluminium ingots and sheets, textile products and railroad ties and exports of private enterprises including cement, iron and steel, electric appliances and citrus fruits. It also undertakes various kinds of trade promotion work, such as participation in international trade fairs, setting up of merchandise showrooms in its branch offices, and collection of market information.

The Taiwan Supply Bureau handles trade operations for public enterprises and government organizations at the provincial level. It provides the same kind of services as CTC for private enterprises in the following industries: woollen textiles, paper and pulp, mat bodies, plywood, canned food (excluding canned pineapple), monosodium glutamate, Pvc products, electric fans, sewing machines, bicycles and parts.

In view of the prevalence of small traders in the export business, the Government encouraged the establishment of the China Trade and Development Corporation, which started operation in January 1966, with a share capital of NT$ 100 million or US$ 2.5 millions. The principal stock-holders include two American banks (Bank of California International Corporation of San Francisco and Irving International Financing Corporation of New York), two Chinese government-owned banks (Bank of Taiwan and Land Bank of Taiwan), and over thirty private manufacturing enterprises in different fields including cement, chemicals, pulp and paper, plywood, textiles, canned food, flour, monosodium glutamate, rubber products and engineering. It acts both as a distributor and as foreign sales representative for Taiwan producers and as a source of supply of both finished and raw materials for manufactures and markets in other countries.

United and joint marketing of exports

As noted, many industries in Taiwan are operated by small and medium-sized firms. Unorganized production and export often lead to excessive production and cut-throat competition in foreign markets, which inevitably cause a sharp decline in price, deterioration in quality, and finally loss of the export market. To combat these short comings, the Government has encouraged united and joint marketing of exports in foreign markets through limitation of production by means of export quotas, improvement of quality and united quotation of export prices. This arrangement was developed in 1962 through the establishment of the China Paper Trading Corporation, with the encouragement of the Foreign Exchange and Trade Commission, at a time when the paper industry was choked by over-production and intensified competition in local markets, and outlets to foreign markets appear the only way out. Through the combined efforts of

the corporation, exports increased and the industry recovered from its difficulties. Along with the growth of exports in textile products, these arose excessive competition in foreign markets, as a result of which two consolidated trading companies were set up for joint marketing of exports. The same happened in the case of the Taiwan Canned Mushroom Export Co. When exports of canned mushroom from Taiwan boomed in the early 1960's, packers set out to work in every corner of the island, resulting in interior quality and adverse repercussions in foreign markets. As a consequence, the Company was established in 1963, through joint subscription to its shares, to handle the problem and succeeded in reaching a production quota arrangement, assignment of sale agents in major importing countries, levelling up of prices, improvement of quality and a solid increase in exports. Canned asparagus, citronella oil, flavouring powder and rubber products are other processed products which have adopted similar arrangements.[2/] Similarly, members of the Taiwan Steel and Iron Industries' Association have under government direction set up the China Steel Trading Corporation with the over-all objective of stabilizing the industry, promoting export sales, pooling or otherwise managing the purchase of scrap, improving technical and managerial know-how, and establishing and controlling quality standards.

The Taiwan Handicraft Promotion Centre (THPC) is a non-profit making enterprise started in 1956 under the sponsorship of the Chinese Government agencies concerned and the United States ICA Mutual Security Mission to China. Its responsibility is to assist the implementation of the over-all handicraft development programme in Taiwan, including expansion of overseas market for Taiwan handicrafts, with a view to increasing the country's foreign exchange earnings. The fact that Taiwan's handicraft exports have risen from US$ 2.5

2/ ECAFE, the Republic of China's Export Possibilities of Manufactures and Semi-Manufactures, PP 113-114.

million in 1965 to US$ 14.6 million in 1965, that is, by almost six times in the course of a decade, is a testimony to the significant contributions made by THPC. The centre started with government grants, outside contributions, and fees for services rendered, has now become self-supporting through its own operations, mainly earnings from the model retail center at its headquarters at Taipei.

Singapore

An island nation, similar in background to Hong Kong, with entrepot trade economy strongly supported by banking, insurance and port facilities, crowded with people of many years experience in trading and financing, is following the development pattern of Hong Kong, i.e., diversifying its economy by setting up export oriented industries. Although the economic background of their recent past are similar, Singapore is pursuing a more directed planning with active participation and support by the government, which is somewhat quite different from the policy of Hong Kong Government, following laissez faire policy in the promotion of trade and industry. Only recently there has been some governmental interference in industry and trade.

Singapore's view of industrialization is included here to provide a view of closely knitted industrial services that is being developed in that island country with two millions population.

Planning and execution of plans are entrusted to the most important body known as the Economic Development Board (EDB).

(a) Economic Development Board

The Economic Development Board (EDB) was established on 1 August 1961, when Singapore embarked on a programme of rapid industrialization. This recognised the need for appropriate national machinery to execute Singapore's industrial blueprint. Prior to the setting up of the Board, there was the

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Singapore Industrial Promotion Board, which ceased to exist as a body corporate and whose assets were taken over by EDB in 1961.

The primary function of EDB has been to promote the establishment of new industries in Singapore and to accelerate the growth of existing ones. Until its reorganization in 1968, the Board was the hub of Singapore's industrialization process, entrusted with responsibilities on infrastructural development, financing and industrial promotion (including export promotion). As a government statutory body, it carried out pre-investment studies and followed up by providing sites and buildings, equity participation and loans, management training and technical services in the form of prototype production, standards and research, and export promotion.

In 1968, its responsibilities on infrastructure, financing and export promotion were taken over by the Jurong Town Corporation (which was created in June 1968), the Development Bank of Singapore (July 1968) and Intraco (December 1968) respectively. EDB has since concentrated on industrial promotion.

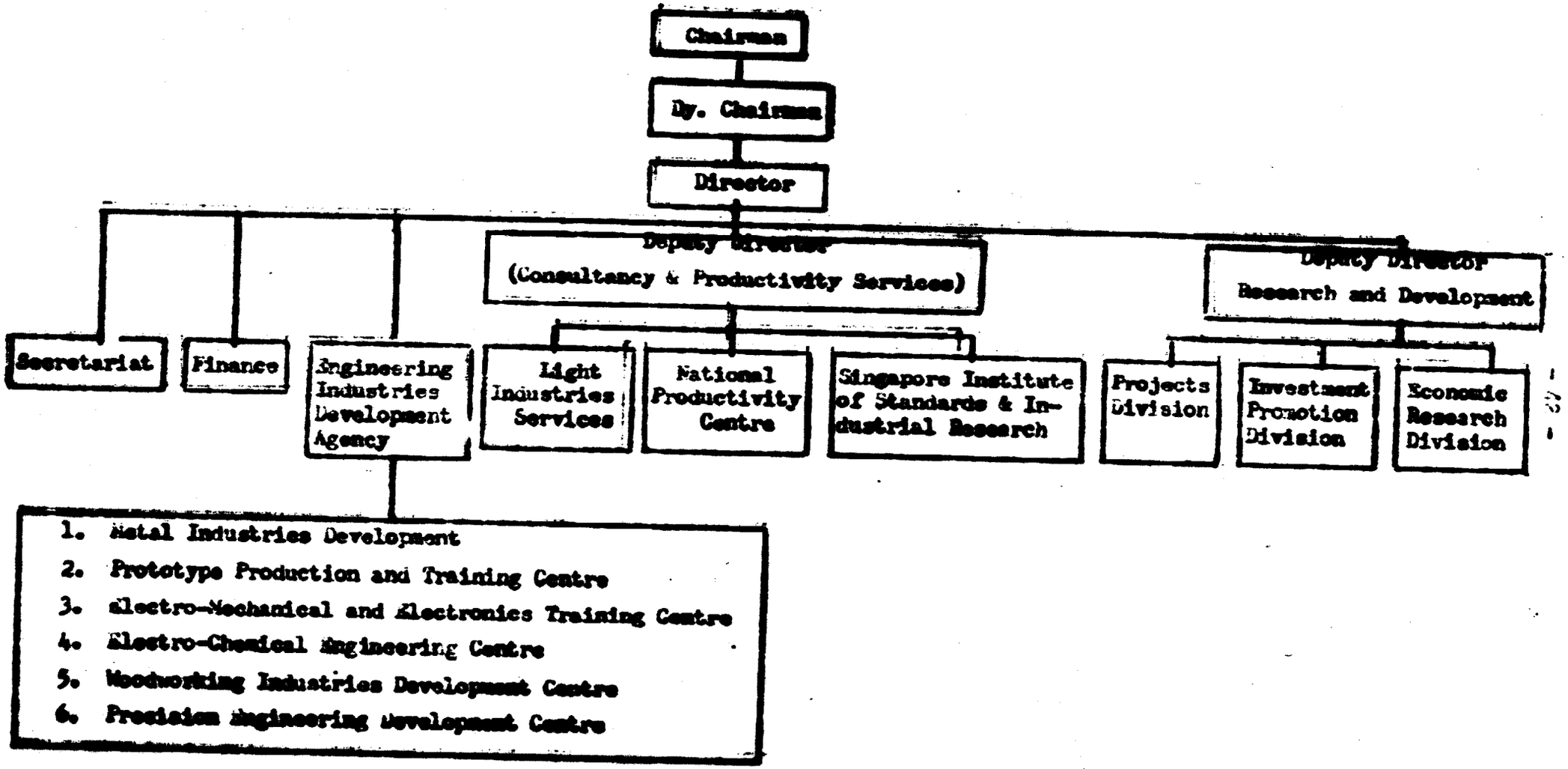
The present organizational chart of EDB is shown on the opposite page.

The Board is governed by a committee comprising the Chairman, the Deputy Chairman, the Director and other members representing commercial, manufacturing, labour and banking interests in Singapore. The staff strength of the Board expanded eight-fold from 81 in 1961 to some 649 in 1967. This was necessitated by the quickening pace of industrialization in Singapore, as reflected by the growth of such indicators as number of establishments, work force in industries, industrial output and value-added during the same period.

The units making up the reorganized EDB are as follows:

(i) Consultancy and Productivity Services (comprising Light Industries Services, National Productivity Centre and the Singapore Institute of Standards and Industrial Research);

ORGANISATION CHART OF ECONOMIC DEVELOPMENT BOARD, SINGAPORE



(ii) Engineering Industries Development Agency (EIDA) (with 6 support centres concerned with metal industries development, prototype production and training, electro-mechanical and electronics trai , electro-chemical engineering, woodworking industries developme and precision engineering development);

(iii) Development and Research (consisting of the Projects Division, Investment Promotion Division and Economic Research Division);

(iv) Finance;

(v) Secretariat.

(i) Consultancy and Productivity Services

Rapid industrialisation in Singapore has stressed the urgent need for a comprehensive system of technical services for industries. The need is f particularly by the large number of small manufacturing enterprises to which normal commercial services are not readily accessible or are beyond their

One of the three units providing industries with consultancy and productivity services ", the National Productivity Centre (PC) was establi in 1967. The Centre undertakes technical studies needed as a guide in lab negotiations but its principal objective is to promote productivity in and inculcate productivity consciousness among local industries. It also conduc training courses of eight weeks' duration, with emphasis on practice, for management executives and trains teams of workers for new firms being set up in Singapore.

The Singapore Institute of Standards and Industrial Research (SISIR) provides testing and laboratory services for industries and is equipped to check the quality of a wide range of locally manufactured goods to national specifications. Other ancillary services include repair and calibration of

industrial and scientific instruments. Technical and research facilities are also available for raw material investigation, process development and modification, product improvement and waste product utilisation.

Started in 1963, the Light Industries Services (LIS) at present concentrates on consultancy services (ranging from problems on electroplating to those on noise control, production planning and accounting systems), product design and project development (e.g. market studies). Its previous functions of manpower training and financing were relinquished with the transfers of its workshops to EIDA and its loan section to Development Bank of Singapore (DBS).

(ii) Engineering Industries Development Agency (EIDA)

Working closely with LIS, the EIDA was formed in April 1968. Its services are more specialised than those of LIS. It aims at (a) promoting the development of more sophisticated engineering industries, particularly in metal and precision engineering, electronics, machinery and shipbuilding; (b) providing necessary supporting services, including the production of tools, dies, jigs and fixtures; metalworking and finishing, including precision die-casting, foundry, heat treatment and plating metallurgical and metrological services; (c) undertaking product research, design and development (d) providing training and upgrading facilities, under actual production conditions, for skilled workers, technicians and engineers, in the related fields; and (e) supporting the national programme for technical education and training, including the provision of in-plant experience for teachers and instructors.

Besides providing the necessary back-up production facilities and services for the metal and engineering industries, the precision engineering & electronic industries, the Agency provides crash training programmes

and in-plant training facilities for young school-leavers to overcome the shortage of skilled artisans and technicians in the fields of tool and die making, machine tools, foundry and metallurgy, precision engineering and metal furnishing. This will make it possible to build up a pool of highly skilled workers necessary to encourage the setting up of such sophisticated industries in Singapore.

In fact, EIDA fulfils the need for a centralised agency to co-ordinate and administer the various foreign-aided projects. The Agency comprises six component centres. They are the Prototype Production and Training Centre, a project set up with Japanese Government assistance; the Metal Industries Development Centre, a United Nations Development Programme (UNDP) assisted project by the International Labour Organisation (ILO); the Electro-mechanical Training Centre, a French assisted project; Woodworking Industries Development Centre and the Electro-Chemical Engineering Centre, both former UNDP projects; and the Precision Engineering Training Centre, which is financed by the United Kingdom.

(iii) Research and Development

There are three units under this administrative arm - the Projects Division, the Investment Promotion Division and the Economic Research Division. The Projects Division, inter alia, identifies the types of industries suitable for establishment and evaluates proposals by investors relating to pioneer status, loans, tariff protection, immigration facilities and registration under the Control of Manufactures Ordinance. Responsible for the Board's over-all investment promotion programme, the Investment Promotion Division establishes and maintains contacts with industrialists in Singapore and abroad. Overseas offices are set up at important commercial centres in many parts of the world.

Acting as a statistical clearing house for EDB, the Economic Research Division makes economic studies. It also carries out quarterly surveys of all firms at Jurong and other industrial estates as well as pioneer firms in other parts of Singapore, with the view to assessing the progress made in the industrial sector periodically.

(b) Jurong Town Corporation

Under the Jurong Town Corporation Act 1968, the Corporation shall "provide facilities for the management of industrial estates and sites in Singapore and amenities for the advancement of the well-being of the people living and working in such industrial estates and sites." The Corporation manages seven industrial estates, namely, Jurong Town, Kallang Park, Kallang Basin, Kampong Ampat, Tanglin Halt, Redhill and Kranji/Sungei Kadut, scattered in vaious parts of Singapore.

The largest of these estates is Jurong Town, which sprawls over an area of some 17,000 acres. The policy of the Corporation is to make Jurong a self-contained town, complete with social and infrastructural facilities. Industrial infrastructural facilities which come under the Corporation's development programme include:

(i) roads;

(ii) railways: Twelve miles of railway have been laid linking Jurong to the main Singapore-West Malaysia network;

(iii) wharves: A 3,000-foot deep-water wharf with five berths and a 1,260-foot coastal, ship and fishing boat wharf serve Jurong Town. The facilities available at these wharves are modern and include a fully integrated bulk cargo handling system capable of handling dry bulk cargo;

(iv) Ready-built standard factories: Ready-built factories with covered floor areas ranging from 9,400 to 35,000 square feet are available for sale or rental to industries in Singapore;

by then entering into the field of intermediates which generally belong to the category of so-called "process industries" where economies of scale play a major role. For small countries with limited domestic markets, and in cases where the need to achieve economies of scale demands large production units, the establishment of a new industry to replace imports can become economical only when export possibilities are also taken into consideration. In the circumstances, the need arises for industrial integration among several countries which are too small to start out individually with the establishment of an industry which requires a minimum optimum scale for economical operation.

In the ECAFE region, most developing countries may be considered as small nations having limited home markets. Aside from the large populous and somewhat self-contained countries of India, Indonesia and Pakistan, the other seventeen developing countries[1/] may be considered small. In terms of population, only 222 million, or one-quarter of the total population of 884 million for the twenty ECAFE developing countries, are to be found in these seventeen countries. In terms of area, 5.06 million km^2 or 48 per cent of the total area of 10.55 million km^2, belong to these seventeen countries. All these countries enjoy a rather low level of national income. With the exception of the oil-producing countries, Brunei and Iran; the entrepot cities, Hong Kong and Singapore; and the relatively more developed countries, the Republic of China, Malaysia, and the Philippines, the rest of the developing countries in Asia, large or small, enjoyed in 1967 a per capita income of less than US$150, but generally around the regional average of US$ 100.

1/ These include: Afghanistan, Brunei, Burma, Cambodia, Ceylon, the Republic of China, Hong Kong, Iran, the Republic of Korea, Laos, Malaysia, Nepal, Philippines, Singapore, Thailand, the Republic of Viet-Nam and western Samoa; the centrally planned economies of mainland China, Mongolia, North Korea and North Viet-Nam are excluded, so also are the developed countries of Australia, Japan and New Zealand.

(v) Services: A full complement of services are provided in the form of electric power, domestic water, telephone and sewerage. In addition the Jurong Town Corporation provides economical industrial water for factory use at Jurong, for as little as S$0.20 per thousand gallons to large consumers.

The development of social amenities for the residents of Jurong Town has been accorded top priority by the Corporation. The amenities include low-cost and executive class housing, markets and shops, banks, cinemas, clinics, hospitals, community-recreational areas, transport services and public parks. Among the last-mentioned is the 700-acre Jurong Park which includes a tropical garden, a Chinese garden, a Japanese garden, a large lake for sailing with restaurants, boatels, holiday chalets, a drive-in cinema and an eighteen-hole golf course.

In 1968, the Corporation comprised seventeen members, including its Chairman, representing the interests of government departments, statutory boards, industry and trade unions. A total of 459 officers were then employed by the Corporation.

(c) Development Bank of Singapore (DBS)

Taking over the financing portfolio from EDB, the Bank was incorporated on 16 July 1968. Besides financing manufacturing and processing industries, it also supports other projects in line with the Government's development policy, including real estate development within the urban renewal scheme, tourist development projects, and projects related to the conversion of the United Kingdom military bases. It makes medium - and long-term loans, takes up equity participations, guarantees loans raised from other sources, and goes in for certain commercial banking operations aimed at supplementing the services provided by existing commercial banks.

With private sector participation in the Bank and its freedom to borrow funds from abroad, more funds will be available for industrial financing than had been possible from EDB. DBS has an authorised capital of S$200 million, of which S$100 million had been subscribed and fully paid by November 1968; the share issue to the private sector was taken up successfully by institutional and individual investors. The shares are quoted on the Stock Exchange of Malaysia and Singapore and at mid-1969, they were held 49 per cent by the Singapore Government, 26 per cent by commercial banks, 8 per cent by insurance and other financial institutions and 18 per cent by other companies and members of the public. In addition to its share capital and the S$45 million government loan, the Bank has obtained two lines of credit from the Government totalling S$80 million.

Since its inception to June 1969, the Bank approved fifty-two new project loans totalling S$101 million, 83 per cent being long-term loans repayable over more than five years; and it agreed to take up equity in twenty projects amounted to nearly $24 million. This total commitment of S$125 million represents 40 per cent of the total project costs. Some 68 per cent of the commitment went into manufacturing industries and 30 per cent into services, namely, tourism, warehousing and storage. Applications for new loans and equity participations have continued to pour in, and DBS expects a continuation in this fairly rapid expansion of its lending business.

The Bank commenced its commercial banking operations in June 1969. It undertakes short-term financing by overdraft facilities and will shortly be financing foreign trade upon finalizing agency arrangements with correspondent banks. Commercial banks themselves view these activities as complementary to and not competitive with their own activities.

(d) **Intraco**

Intraco Ltd. (or International Trading Company) was established in December 1968 as a public limited trading company, with the Singapore Government owing a sizeable portion of its paid-up capital and the balance belonging to the private sector.

The major functions of the company are (i) to organize and promote the exports of locally manufactured goods and the bulk imports of raw materials for the industries. Intraco was envisaged to benefit both local industries and potential overseas buyers/sellers. (On the one hand, most local manufacturers are at present too small to maintain an export sales department of their own, to establish individual contacts with the large number of potential overseas buyers, or to acquaint themselves with overseas market conditions. On the other hand, potential overseas buyers can be relieved of the inconvenience of dealing with a wide variety of local manufacturers, whose quality of products has not been established internationally and reliability of supply uncertain); (ii) to finance both the export sales of manufacturers in need of credit, promotional and other market development expenditure, and the bulk imports of raw materials for the factories at more competitive prices, thereby reducing production costs; (iii) to strengthen or improve the weaker industries whose products have good export potential by providing financial, technical and managerial assistance, or to establish new industries through equity participation in partnership with available expertise, both local and foreign.

With the formation of Intraco, the Export Promotion Centre (EPC) - a unit of EDB until the Board's reorganization - ceased to function as a clearing house for local manufacturers wishing to export and for overseas buyers interested in local products. The Centre became redundant and has

been absorbed into Intraco. Unlike EPC, which operated on a very small scale and provided services free of charge, Intraco intends to have world-wide operations and is run on purely commercial lines with a view to making profits. The Company holds five subsidiary companies whose activities range from lumbering to warehousing and transportation. Various measures have been, or will be, implemented under the aegis of Intraco for export promotion, such as establishment of a network of overseas sales offices, organization of Singapore trade missions where participation will be on a more selective basis, and participation in important overseas trade fairs.

(e) Employment Bill 1968

Of considerable importance to successful industrialization are good labour relations. To this end, the Government induced the National Trades Union Congress, the Singapore Manufacturers' Association and the Employers' Federation to pledge jointly in a Charter for Industrial Progress in 1965, to increase industrial productivity through mutual co-operation. A productivity code of practice was adopted providing for arbitration of labour disputes, with the advice of the National Productivity Centre of EDB; and joint productivity consultative councils with representatives of management and workers were formed.

These measures and institutions paved the way for the enactment of the Employment Bill in 1968. With the prospect of mass unemployment arising from the United Kingdom's troop withdrawal, the Bill standardized the working week at forty-four hours, reduced public holidays from sixteen to eleven, cut down overtime pay on non-working days from 300 per cent to 200 per cent and limited overtime. Plainly, the Bill sought to eliminate abuses and provide for a better distribution of work and more employment. This example may be emulated by other developing countries in the region especially where labour unrest is prevalent.

(f) Technical Education Department

Coming to grips with the manpower problems of a fast industrializing society, Singapore began revamping its educational system and placing greater emphasis on technical education in 1968. Facing up to the task of massive educational reorganization have been the National Industrial Training Council (NITC), a ministerial body, charged with the formulation of government policy on technical education on the one hand; and the Technical Education Department (TED), which has been set up as one of the two departments of the reorganized Ministry of Education, responsible for policy implementation on the other.

Existing types of institutions such as secondary technical schools have been consolidated and expanded, while new types such as industrial training centres and the Singapore Technical Institute have emerged. More vocational institutes for the training of craftsmen have been built.

The root of Singapore's educational problem has been the preponderance of pupils receiving academic education, a pattern clearly not in harmony with the nation's industrialization programme. In 1967, before the massive reorganization began, there were approximately seven pupils receiving academic education to every one recipient of technical education. By 1969, the academic-technical distribution ratio was whittled down to about 4:1, and the Technical Education Department has set its sights on a ratio of 2:1 by 1972. The production of Technicians at the Singapore Polytechnic and the Ngee Ann College has been stepped up, while at the professional level, the faculty of Engineering has been established in the University of Singapore.

The need for national machinery for industrialization

The efficacy of Singapore's machinery for industrialization, particularly EDB, is best reflected on the progress in the industrial front since the inception of the Board in 1961. The economic indicators speak for

themselves. During 1961-67, the number of manufacturing establishments as well as employment in these establishments more than doubled, gross value added increased by 1½ times while industrial output rose by 2¼ times.

Noteworthy characteristics of Singapore's machinery for industrialisation are as follows:

(i) Reliability and minimal red tape. EDB is regarded by the World Bank as "a successful development institution that inexperienced entrepreneurs could rely on for effective assistance, including also avoidance of the need to deal with other Government departments".

(ii) Comprehensiveness. The measures and institutions are designed to provide as comprehensive a range of services as practicable to industries in Singapore. From the point the investor gets in contact with the Investment Promotion Division of EDB and comes up with a proposal for investment, he can count on the Board and the other components of the national machinery for "maximum assistance, encouragement and support from the Government". A typical entrepreneur may require, prior to investment, the services of the Projects Division to assess the soundness of his proposal; for the setting up of his plant (assuming that his proposal is sound), the services of the Jurong Town Corporation to provide him with a factory site and the services of the Development Bank of Singapore for financing; and after the establishment of his plant, the multifarious technical services such as management training of the National Productivity Centre, product quality tests of the Singapore Institute of Standards and Industrial Research and product design services of the Light Industries Services.

(iii) Assistance to small industries. An interesting aspect of the machinery is that a good deal of the services are tailored particularly to assist small industries, which do not have or cannot afford all the necessary facilities for development. LIS is a case in point, although there is no hard and fast definition as to the "light industries" eligible for assistance.

(iv) Initiative. Government initiative is characteristic of the Singapore machinery, the private sector being given all support by the Government. A good example is Intraco, which has developed from the defunct Export Promotion Centre. With the increasing tempo of industrialization, there has been a need for industries to look beyond the comparatively small domestic market of 2 million people (notwithstanding the high purchasing power of Singaporeans) for the sale of their products. Through Intraco, the Government has been spearheading the drive to seek export markets for these products.

(v) Adaptability. The Singapore machinery has been adaptable in that it has been capable of adjustment in the light of changing needs. The reorganization of EDB into four separate entities, namely, JTC, DBS, Intraco and EDB itself, demonstrates the adaptability of the machinery. The pace of industrialization was such as to necessitate a streamlining of EDB's major functions, with the result that infrastructure, financing and export promotion have been taken over by JTC, DBS, and Intraco.

(vi) Inter-sectoral relationship. The machinery has also taken cognisance of developments in other sectors related to industry, particularly trade and manpower. On the relationship between trade and industry, Intraco's role in export promotion of locally

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The comparatively minute industrialisation which has been achieved by developing countries is short through with weaknesses. Most of the factories are small in capacity, and they cannot grow big because, in many cases, the single countries are too small to constitute a proper market and, what is more, even when a country is large... as India, the amount of money in the hands of the people does not provide mass purchasing power. Income per capita in India is still very low and the income of all the developing countries together is but 25 per cent of the world total.

Table 1

Area, Population and National Income of ECAFE Developing Countries, 1964

Country	Population (thousand)	Area (1,000 sq. km)	Density (Population per sq.km)	Gross National Product (GNP) (million US dollars)	Per Capita GNP (US dollars)
Afghanistan	15,227	647	24	...a,b	...a,c
Brunei	84[x,a,e1]	6	19	99[a,b]	1,177[a,c]
Burma	24,229	678	36	1,613	67
Cambodia	5,866[d]	181	34	729[b,d]	124[c,d]
Ceylon	10,965	66	167	1,497	144[f]
China (Taiwan)	12,070[e]	36	336	2,556[b]	212[c]
Hong Kong	3,692	1[f]	3,978	1,126	305[f]
India	471,624[f]	3,046	155	42,000[h]	89[i]
Indonesia	93,906[a,j]	1,492	69	7,534[d]	81[d]
Iran	22,184[d]	1,648	14	4,879[d]	220[d]
Korea, Rep. of	27,633[k]	98	281	3,091[b]	112[c]
Laos	1,980	237	8	...[l]	...[l]
Malaysia	9,398[l]	332	27	2,668[l]	284[l]
Malaya, States of	8,039[l,e1]	131	99	2,514[l]	313[l]
Sabah	521[l]	76	7	146[l]	280[l]
Sarawak	838[l]	125	7	201[l]	240[l]
Nepal	9,980	141	70	665	67
Pakistan	96,683[d]	947	106	8,525[d]	88[i]
Philippines	31,270	300	104	4,821[b]	154[c]
Singapore	1,820	0.581	3,133	964	530
Thailand	29,700	514	58	3,709[b]	125[c]
South-Viet-Nam, Rep. of	15,715	171	92	1,891	120
[illegible]	122	3	43	...	...
Developing ECAFE Countries	883,668	10,545	84	96,660	109

Sources: (1) UN, Statistical Yearbook, 1965.
(2) UN, Monthly Bulletin of Statistics (Oct. 1966).
(3) Economic Survey of Asia and the Far East, 1965.

a Census.
b 1960.
c Excluding transients afloat.
d Gross domestic product.
e Per capita GDP.
f 1963.
g Comprising the Islands of Taiwan and the Pescadores.
h Land area only. Total, including ocean area within administrative boundaries, is 2.916 km.^{2}
i Excluding Kashmir-Jammu, the final status of which has not yet been determined; also excluding Sikkim.
j National income.
k Per capita national income.
l Excluding West Irian.
m Excluding alien armed forces, civilians, aliens employed by armed forces and foreign diplomatic personnel and their dependents.
n 1965.

Lack of size in industry means a built-in inability to reach efficient operation. Big scale production lowers costs and increases productivity and nowhere more than in the heavy industries. The result is that this most essential branch of industry is weakest. Since industry is weak, all the requirements for industrial success are weak also. There exist constant shortages of managerial and technical codes and skilled labour; government machinery to back up industry is inadequate; and credit and financing, marketing, training in industrial skills, engineering and consulting services, all the institutional requirements also are underdeveloped.

With all these handicaps, general performance of industry is understandably poor compared to that of industry in the developed countries. The poor performance is reflected in high cost, low productivity, poor quality and high prices of industrial goods.

Industrial Growth

Although the general background picture of industrialisation seems rather depressive, the recent trends of industrial growth rates with reference to the index of industrialisation for the developing countries of the ECAFE region, have indicated that the region as a whole has advanced from the primary stage of industrialisation and is at present approaching what may be called the secondary stage. The key indicator of this is the high rate of growth in the heavy industrial sector for the region as a whole, in particular among those countries such as India, Pakistan, Republic of China and the Republic of Korea, where the pace of industrialisation has been relatively rapid. This development is noticeable from the fact that, where as light industries contributed 64.0 per cent to manufacturing value added in 1960, its contribution in 1966 fell to 58.7 per cent; heavy industry contribution increased from 36.0 per cent in 1960 to 41.3 per cent in 1966.

Although contribution to growth output from the light industrial sector is still of considerable importance and remains higher than that from the heavy industrial sector, the change in the growth pattern is significant particularly in view of the increased demand for highly trained skills that are required as a result of the increasing pace of heavy industrial development. It also calls for much heavier investment.

The manufacturing index for the five years 1963-1967 shows an increase of 26 per cent. Paper and paper products have shown an increase of 31 per cent; chemical, petroleum and coal products an increase of 34 per cent; non-metallic mineral products 35 per cent; metal products 39 per cent; the growth rate in basic metal industries has slowed down considerably - between 1960 and 1963 there was a growth rate of slightly above 50 per cent and since then it has declined to an almost static situation, with a growth rate of only 10 per cent for the five years ending 1967. The index of light manufacturing industries showed an increase of 21 per cent. The rate of growth in textiles was 16 per cent and that of food beverages and tobacco, 26 per cent. The highest growth rates were reached in the production of electricity and gas (59 per cent), crude petroleum and natural gas (61 per cent) and mining (43 per cent).

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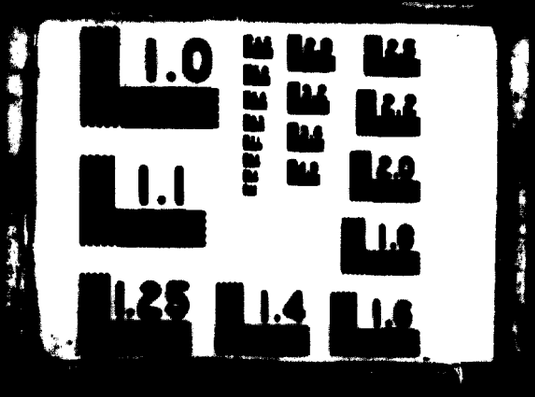

manufactured goods and bulk imports of raw materials for industries is clear. At the same time, no effort has been spared by EDB and the Technical Education Department in ensuring that industrial development in Singapore is not hampered by shortages of skilled manpower.

Hong Kong

In spite of the success in its development of export-oriented industries during the last 15 years or so, the efforts have so far been initiated by private enterprises with very little governmental interference. In fact, Hong Kong has until recently been rather proud of its laissez faire policy in the promotion of trade and industry.

Only in the last three years did the Hong Kong Government take steps to create some statutory bodies for promoting certain aspects of industrial development. Within the Department of Commerce and Industry, there have been two advisory boards established, one for trade and industry in general and the other specifically for cotton. Among the routine functions of that Department, which is engaged mainly in trade agreements and in the licensing and inspection of finished products for exports, the day-to-day administration are handled by three Divisions - two Commercial Relations Divisions and the Industry and Certification Division.

Independent statutory bodies appointed by the Hong Kong Government in recent years in relation to industrial promotion are, namely, the Hong Kong Productivity Council, the Trade Development Council, and the Hong Kong Export Credit Insurance Corporation. The Productivity Council was established by statute in January 1967. The Council comprises a chairman and 20 members, all appointed by the governor, of whom 10 members represent management, labour, academic and professional interests. The other 10 members are heads of government departments closely associated

trained personnel for better-paying jobs abroad, mostly in the United States, and at American bases in the Philippines and throughout the Pacific region. Consequently, there is an urgent need for a carefully planned centrally-directed manpower training programme that will meet existing and projected manpower requirements for industry and other sectors of the economy in order to sustain the efforts towards maximum utilisation of human resources. This situation has been recognised and efforts are being made to rectify this condition. The Manpower Development Council was set up by presential executive order.

Management training

The University of the Philippines, the Philippine College of Commerce, the College of Public Administration and the Philippine Management Association have all played an important role in the field of management education at a higher level.

The Philippine Management Association, in collaboration with the Harvard Business School, has initiated an annual Advanced Management Programme for the South-East Asia region, and since 1956 has provided top-level management training courses similar to those available at the Harvard Business School. Participants from several Asian countries attended such annual programmes.

The above mentioned Programme has created so much enthusiasm at the senior management level that ample funds were raised and established the Asian Institute of Management which provided two-year MBM programme.

Export promotion

To emphasise export targets and take a new look at the basic problems encountered in the export field, the National Export Co-ordinating Centre (NECC) was set up by presidential order and began to function in January 1968. The NECC has made a direct and pragmatic approach to eliminate some

of the problems faced by exporters, mainly in the matter of export clearance. Initially it concentrated on removing "red tape" and cutting through useless and cumbersome administrative practices. The NECC also acted as a "trouble-shooter" under the authority of the Presidential Economic Staff and was thus able to obtain results in areas where several ministries and government agencies have been involved.

A Bill has been introduced in Congress for establishing an export industrial processing zone in which all activities would be tax free. The Government is now actively studying to establish such an estate along similar line established in China(Taiwan).

Small industries

Cottage and small industries in the Philippines have developed successfully since 1962, when they were placed under the supervisory responsibility of the National Cottage Industries Development Authority (NACIDA). The Government has now created a fairly large organisation to assist cottage and handicraft industries through NACIDA's facilities, which include a head-quarters in Manila and twelve extensive service units throughout the country which provide assistance for production and design. NACIDA, among its other responsibilities in some cases acts as intermediary between producers and buyers.

NACIDA's present programme includes a technological and development centre for cottage and small-scale industries which is being established under a three-year agreement with the Japanese Government to carry out the following activities:

- Practical and theoretical training of Filipino technicians in the field of small-scale industries;

- Demonstration and introduction of modern techniques and machinery for small-scale industries;
- Research with a view to improving techniques in commercial production and marketing;
- Research and testing pertaining to the design of production and development of machinery in small-scale industries.

CHAPTER II

The need for strengthening of industrial services

The cross-section view of industrial services have been given in the previous chapter which illustrated various forms of industrial services and their organization and methods of administration adopted in these selected countries. Besides Japan, in ustrial services are mainly government sponsored, and in most cases they are still greatly dependent on the support of their respective governments irrespective of what they are, namely, autonomous, semi-autronomous or a bureau of a government's ministry. Most governments in Asia have attempted to same stringent government financial control on these agencies providing industrial services by setting up outside the normal ministerial control as autonomous or semi-autonomous bodies, partly financed by government and partly financed by private sector. Very few institutions providing industrial services have been able to stand on their own feet without financial contributions from their governments or from outside international agencies or assistance from developed countries. The support from private sector is still much needed and this is perhaps, due to the fact that industrialisation in ECAFE developing countries is in a formative stage and the size of industrial units are also generally small. The resources of such small industries being limited, they are unable to organise among themselves to set up industrial services.

In view of the above mentioned situation, it is intended to review the needs for further development and expansion of industrial services in this region by type of services rendering support to industries.

The policies adopted by the governments in developing countries generally influenced the type of organisation and administration of industrial services in their countries. Generally speaking, developing countries in the ECAFE

region may be classified into three groups in respect to the public sector in manufacturing: (1) countries which emphasize the public sector in principle, desiring eventually to establish socialism in their territories (e.g. Burma, Ceylon, India), (2) countries which emphasize the private sector in principle, hoping eventually to transfer the interest of the public sector in manufacturing to the private sector wherever feasible (Republic of Korea, Republic of China, Philippines and Thailand), and (3) countries which in principle have no preconditioned preference for either the public or the private sector (e.g. Cambodia and Laos).

In developing countries where industry is emerging as the dynamic growth factor, government usually plays an important role in providing industry with all kinds of assistance, both technical and financial, in facilitating and accelerating its growth. One major task of most developing countries in this region is to formulate industrial policies and drawing up industrialization plans and providing incentives. According to the political views of each government, the resources for industrial development are apportioned between public and private sectors. Except for Hong Kong, which is a State until recently followed a laissez faire policy, a great emphasis has been given by most developing countries on planning. In most cases, industrial planning is carried out by the Ministry of Planning or on Economic Development Board entrusted with national planning. Few years ago much attention was given by governments on planning, programming and strategy for industrial development. The ECAFE secretariat has also devoted much resources towards assisting governments of member countries in this direction. It is therefore felt that except for annual review of industrial development plans by their respective government there is not much urgent need for further development

or expansion of activities in planning and programming. What is now needed more urgently is regional and sub-regional cooperation to eventually achieve industrial integration beyond natural boundries to set up economically viable, capable of competing in the world market. ECAFE has stressed the importance of plans harmonization and AIDC activities in this direction are described in the next chapter.

Financing

The industrial financing has been a major concern of most developing countries in this region. As observed earlier in the introduction, developing countries in the region are characterized by these symtoms: low income, limited resources, slower growth, limited market and short of technical know-how and skills. The shortage of finance for industrialization is therefore a major problem.

As it can be seen from the cross-section view of various industrial services, developing countries in the region have set up different types of financial institutions either as a state owned organization or autonomous or semi-autonomous bodies. In some countries there is only one development banks, but in some countries there are more than one financial institutions with supplementary functions or somewhat overlapping operations. In the Republic of China, for example, financial institutions devoting to industries were set up under different circumstances, and therefore their present set up is mainly due to historical background.

The process of industrial growth requires, among others, the development of capital markets that will provide an adequate supply of investment funds to entrepreneurs who are setting up new industrial projects or expanding existing ones. But the institutional arrangements for the mobilisation of capital are either lacking in developing countries or are of a rudimentary nature. In the circumstances the establishment of private or government

eponsored financial institutions to mobilise savings or to channelise government funds or private deposits for industrial investment may be regarded as an organized attempt to circumvent the institutional inadequacies and imperfections of a less developed capital market.

In such endevours, India as a planning concious nation has had considerable experience in mobilising savings and channelizing funds for industrial development. The Indian's efforts in this field may be mentioned briefly as an illustration of a wider diversification of financial institutions. Since 1948, a number of special institutions have been set up in India for the provision of finance to industrial enterprises. These have now come to occupy an important position as sources of long-term finance and constitute a complement to the banking system which has so far specialised largely in the provision of short-term advances for working capital purposes.

The first to be set up by the Central Government was the Industrial Finance Corporation of India (IFC) in 1948. The vast area of the country and the need to assist a large number of medium and small-scale enterprises, however, made it necessary to enact the State Financial Corporations Act of 1951, providing for the establishment of State Financial Corporations (S.F.Cs) in the federating States of the Indian Union. At present with the exception of Nagaland, in all the other 15 States there is a State Financial Corporation, including the Madras Industrial Investment Corporation, set up under the Indian Companies Act.

In the initial years, as a matter of policy and on account of certain statutory restrictions, these institutions confined their assistance to industrial concerns in the form of long-term mortgage loans, and were not in a position to meet all the requirements of developmental finance. The need was thus felt for an institution to stimulate the supply of risk capital

through subscriptions to as well as underwriting of the issues of joint stock companies, and accordingly, the Industrial Credit and Investment Corporation of India Ltd.(ICICI) was established in 1955 as a privately owned development bank.

The next development was the establishment in 1958 of Refinance Corporation of India Ltd (R.C.I) for assisting banks to extend, within limits, medium-term loans to industry by providing refinancing against such loans. The Industrial Development Bank of India (IDBI), established under a separate statute in July 1964, is the latest of the special financial institutions for the provision of medium and long-term credit to industry. As a wholly owned subsidiary of the Reserve Bank, the IDBI is conceived as an apex of the reorganized and integrated structure of industrial financing institutions in the country, geared to the increased tempo of industrial development in the Fourth and subsequent Five-Year Plans. In the interest of better coordination, further liberalization and enlargement of the range of financial facilities, the statute of the IDBI provided for the merger of the R.C.I. (which was effected from 1 September 1964), acquisition of 50 per cent share capital of the I.F.C. (which was accomplished in August 1964), and extension of IDBI's facilities to a large number of financial institutions (including the I.C.I).

Apart from these industrial financing institutions, the control and State Governments have set up industrial development corporations with promotional and developmental functions for accelerating industrial progress. The National Industrial Development Corporation (NIDC) was established in 1954. In recent years several State Governments have set up at the regional level, separate Industrial Development Corporations (SIDCs) with functions similar and comparable to those of the NIDC.

The development of small-scale industries by various promotional measures and the enlargement of institutional credit facilities to this sector has been a matter of special concern in view of its importance to the country's economy. With this in view, the National Small Industries Corporation (NSIC) was established in 1955 and some State Governments have also established Small Industries Corporations (SISCs) in recent years. A credit guarantee scheme was instituted in July 1960 to provide a degree of protection to approved financial institutions against the risk of loss on short and medium term advances to small-scale industries.

While the special financial and promotional institutions were sponsored by the central and state Governments for routing medium and long term funds mainly from Government to industry, the nationalisation of life insurance business and the setting up of the Life Insurance Corporation of India (L.I.C) in 1956 was a step in the direction of more effective mobilisation of savings of the community for investment in industrial and other sectors.

A new dimension to the saving and investment aspects of the economy was added by the establishment of the Unit Trust of India (UTI) in July 1964. It is designed to mobilise small savings of investors and enable them to acquire an asset which combines the qualities of safety of capital, steady yield, growth potential, good liquidity and a certain amount of tax concessions. Particularly, the L.I.C., SIDCs and U.T.I. have reinforced and sub-stantially enlarged the facilities for raising equity and loan capital offered by the term lending institutions, viz., the I.F.C., ICICI, SFCs and IDBI for financing investment in the private industrial sector.

From the brief account of the efforts made by the Government of India for mobilisation and channelising investments to industries, it will be noted that over the last two decades or so, India has introduced various financial services to accelerate industrial growth. Such measures are

seen followed in other developing countries of the region through adaptation and tailered to their needs. It will be observed that a combination of state owned banks type of institution to private limited company type started initially with the outright grants given by the government and in some cases with the financial assistance from international institutions such as IBRD, IFC and IDA.

As earlier studies have indicated, the rate of domestic savings obtaining in ECAFE countries is not high and most of them, excluding Japan, have a rate of net savings below their minimum requirements for financing economic development. The aggregate savings of each of these countries include a large proportion of household savings. Whereas the government and corporate or business components of savings find their way into pre-conceived investments, the household savings offer a vast potential for diversion into industrial investment. A substantial portion of household savings is held in the form of cash and financial assets which provide liquidity to the small savers. Investment in land and real estate is also an important factor in the destination of their savings as these assets represent security, provide protection against inflation, besides carrying prestige value for the owners. The direct holding of corporate securities by households form a small percentage of their total savings in most of the ECAFE countries. The existing pattern of distribution and destination of domestic savings in these countries therefore reveals a large potential for their mobilization and direction into industrial investments. India has devised various measures and institutional arrangements to mobilise domestic savings. The experience gained in India can be usefully adopted in most developing countries, especially, the operation of Unit Trust of India. The need for industrial

with productivity matters. The terms of reference of the Council are wide ranging, and are aimed at promoting by all means possible increased productivity in industry in Hong Kong. A sizable budget has also been approved for the establishment of a Productivity Centre, which was inaugurated in April 1967, to be the executive agency for the Council. The Centre takes care of an intensive programme of productivity training and consultation for industry.

The Trade Development Council was established in early 1967. It has been working for the past three years as a statutory corporation, financed by a nominal levy of 0.05% of all imports and exports of the Colony, under an independent chairman with members drawn from the Hong Kong Chamber of Commerce, Federation of Hong Kong Industries, the Chinese Manufacturers' Association, Hong Kong Tourist Association, Exchange Banks' Association and including the Director of Commerce and Industry, the Director of Information Service, and four individual members appointed by the Governor. The Council has a permanent secretariat under an executive director and it maintains several offices overseas in places such as London, New York, Brussels, Sydney, and Nairobi. The main functions of this Council are to promote trade fairs and survey missions, to plan better services for the exporters by collecting, analysing and distributing market information, and to publish periodicals for promoting Hong Kong exports. As the bulk (over 90%) of Hong Kong's industrial output has been for export, the Trade Development Council has been given a very prominent role in Hong Kong's efforts for industrial promotion.

In this connexion, the Hong Kong Export Credit Insurance Corporation, which provides protection against the risk in overseas trade, has also been playing an important role. During its three years of operation, exports to over 120 countries were covered. This represented an estimated annual export turnover of about HK $800 million (as estimated at the end of 1968). The

financing services in developing countries is largely contributed by inadequacy of their commercial banking systems as explained below.

Although the commercial banks are the oldest form of financial institution known to the ECAFE countries, the disquieting feature of the commercial banking system in the ECAFE countries is its reluctance to engage in long-term lending to industry. The system has confined itself to the financing of established industries in the form of short-term self-liquidating working capital loans. This situation is well illustrated in the brief description of industrial financing in the Republic of China, and it is applicable to most developing countries of Asia. For this reason, many developing countries have established financial institutions such as those mentioned earlier on India. However, special types of financial institutions set up to provide medium and long-term loans to industries are still unable to meet the needs by industries. In most cases, such institutions fully or partly owned by the States, have to operate under strict financial rules and the time taken and the complexity of procedure and red tape shy away many would be borrowers. It was therefore emphasized by the Preparatory Committee for the Second Asian Conference on Industrialization held in June/July 1970 in Bangkok that, ..."The banking system in developing countries of the region should be encouraged to play a more effective role in financing industries as they have a wider network of operation. The national or central banks in the countries could well consider encouraging commercial banks to extend medium - and long-term loans to industries and assist them with various measures such as preferential treatment in re-discounting financial papers originated from industries, etc". Some of the financial institutions set up for industries in developing countries of the region also undertake equity participation and underwritting of new issues, the stock exchanges and underwritting activities are still on limited scales and this is the area where

further development is highly desirable. Special attention is being paid by some governments to meet the financial needs of medium - and small industries and the development of capital market.

The shortage of foreign exchange has also restricted expansion of industries in the region. Although some financial institutions do provide loan in two parts, one in local currency and another in foreign currency, in order to be able to widen the scope of assistance to industries by industrial finance institutions, it is important that these institutions receive increasing support from international institutions such as ADB, IFC, IBRD, etc.

Export promotion

(a) Industrial estates and free zones

Various measures and promotional services have been organized and they are being expanded in many developing countries in the region. The most impressive institutional arrangement has been Kaohsiung Export Processing Zone mentioned in the previous chapter on China(Taiwan). The industrial estates are also set up in developing countries, rather extensively in, Malaysia, Singapore, Republic of China and Republic of Korea. These estates have contributed considerably towards export promotion as they help to reduce unit costs and facilitate export. The industrial estates and export free zone are generally administered by specially formed boards operating as autonomous bodies. Initially governments contributed financial grants and loans and at later stage, such boards acquired capital needed through borrowing. The administration is generally control by the concerned governments but private sector is usually represented on these boards.

(b) export credit and credit insurance

The need and importance role play by export credit and export credit insurance have been recognized by most developing countries. Special financial institutions were set up in recent years and they were either

operated as fully state owned organization or set up as public limited companies operating on commercial basis. Capital required was generally contributed partly by concerned government and partly by private sectors through equity participation. Some institutions were set up as in the case of development corporations under special laws setting them up as autonomous bodies with provision to borrow and acquire additional capital through various channels.

(c) standardization, quality control and pre-shipment inspection

Standardization

Standardization laws have been enacted in most developing countries in this region, but degree of enforcement of such laws vary widely among them. Countries which have exerted much efforts towards promoting industrial exports have set up various machinery to ensure quality control and pre-shipment inspection. While standardization was normally entrusted with Standards Bureaus, quality control and pre-shipment inspection functions were carried out by specially created bodies, e.g. Malayan Pineapple Industry Board, Malaysian Timber Export Industry Board, Bureau of Fiber Inspection Service, Philippines Coconut Administration, etc. In China (Taiwan) for example, the organization responsible for establishing the National Standards is the National Bureau of Standards. For pre-shipment inspection, the Taiwan Bureau of Inspection and Quarantine, for the quality control, the Board of Foreign Trade; all of the three being agencies of the Ministry of Economic Affairs.

These bodies are generally established as government agencies under appropriate ministries through special legislations.

At the instance of the Asian Standards Advisory Committee, the ESCAFE secretariat has issued a brochure entitled "Quality Control and Pre-shipment Inspection for Export in ESCAFE countries" for wide dissemination in the

ECAFE member countries, covering thirteen countries, viz, Australia, Cambodia, Hong Kong, India, Iran, Japan, Republic of Korea, New Zealand, the Philippines, Republic of Singapore, Thailand and the Republic of Viet-Nam. These were the countries responded to the enquiry on this subject.

As a result of ECAFE initiative over the last two decades and because of the general appreciation of the value of standards all over the world, many countries of the ECAFE region have organized or are in the process of organizing their national standards bodies. Among the twenty-five regional members of ECAFE, there were only six NSBs twelve years ago where now there are seventeen in different stages of development, namely:

1. Australia
2. Burma
3. Ceylon
4. China
5. India
6. Indonesia
7. Iran
8. Japan
9. Korea, Republic of
10. Malaysia
11. Nepal
12. New Zealand
13. Pakistan
14. Philippines
15. Singapore
16. Thailand
17. Viet-Nam, Republic of

In regard to their membership of ISO and IEC, the countries may be classified as follows:

1. Members of both ISO and IEC	8
2. Members of ISO	13
3. Members of IEC	8
4. Members of neither ISO nor IEC	3

The remaining countries of the ECAFE region which still lack this facility are:

1. Afghanistan
2. Brunei
3. Cambodia
4. Fiji
5. Hong Kong
6. Laos
7. Mongolia
8. Western Samoa

Among these countries, Hong Kong neither has a standards body nor is likely to create one. Nevertheless, Hong Kong has a positive interest in regulating its export trade and industrial production according to standards of the purchaser, and is a Correspondent Member ISO. Similarly, or because of other reasons, in some of the remaining seven countries the need for a full-fledged national standards body may, perhaps, not be so urgent. There might be a case, however, for two or more of these countries to join hands to establish a multinational body, on the pattern of the Central American countries or otherwise. In any event, the need for standards and associated activity will exist in all these countries and will have to be met by some sort of a simpler organization. This is a question to be examined separately in the context of the economy of each country. In the case of Afghanistan, for example, such an examination has already been carried out by a United Nations expert, who has indicated how a very modest start could usefully be made.

Information about the status of development of the various NSBs in the region has recently been collected and is now available in a publication of ECAFE, entitled the "National Standards Bodies in the ECAFE Region", which may be obtained on request from the secretariat. This publication gives in concise form information about the range of their activities, statistics of their achievements, as also their names and addresses. Limitation of space forbids further discussion of the different NSBs, but it should be noted that many of them have made considerable progress and that some may be considered comparable to those in the most advanced countries of the West.

To give a brief picture of present status of national standards bodies in Australia, Ceylon, the Republic of China, India, Indonesia, Iran, Japan, the Republic of Korea, Malaysia, New Zealand, Pakistan, Philippines, Singapore, Thailand and the Republic of Viet-Nam are summarised and attached to this paper as Annex I.

(d) Information and Advisory Service

This is one area where much attention is yet to be given to help export industries to find markets and establish contacts for their exports. The developing countries in the region generally need assistance to set up such information and advisory centres. An Information and Advisory Centre set up in Pakistan could be an example of this type which was designed to concentrate on four main branches of information: location of markets, location of customers, tariffs and general information.

(e) Trade Show rooms

As an export promotional measure, a number of developing countries in this region have set up trade centres in their capital cities and few countries have their show rooms established at various trade centres scattered around the world where exportable items are displayed and assist the buyers to establish contacts with suppliers at home. The type of centres similar to that of the China Display Centre in Taipei should be developed more in smaller developing countries with considerable export potential for manufactures and semi-manufactures.

(f) Industrial Design

There appears to be a pressing need to popularise industrial design education in developing countries of ECAFE region. In Japan now-a-day, industrial designers are reported to have been much sought after and are getting higher income than most engineers. As industrialization progress

and the need for exports become more pressing, the role of industrial designers in improving the quality and attractiveness of products will become more significant. Thus, establishment and promoting industrial design centres whose functions amongst others would be to assist manufacturers to follow the changes in patterns, technical desing and taste of foreign consumers should be given an adequate attention. While efforts are being directed to popularising industrial design practice through establishment of industrial design centres, the basis issue of producing industrial designers should also be tackled jointly by the governments and art institutions as well as technical institutes where industrial design education can be provided. The industrial designer has been defined by the International Council of Societies of Industrial Design (ICSID), as "one who is qualified by training, technical knowledge, experience and visual sensibility to determine the materials, construction, mechanisms, shape, colour, surface finishes and decoration of objects which are reproduced in quantity by industrial process. The industrial designer may, at different times, be concerned with all or only some of these aspects of an industrially produced object. The industrial designer may also be concerned with the problems of packaging, advertising, exhibiting and marketing when the resolution of such problems requires visual appreciation in addition to technical knowledge and experience." Much efforts are needed to produce such persons of special qualifications in the developing countries of the region.

Pakistan has been a pioneer among developing countries in this region by setting up the Pakistan Council of Industrial Design (PCID) at Karachi in 1957 to promote industrial design and after much effort , the Pakistan Design Centre was established in October 1965 at Karachi.

Trading Corporations

Japanese industry and trade communities have been highly successful in utilizing the services of trading companies which are commercial firms with world-wide network specializing in export and import services. Industries in developing countries in the region being limited in size and also lack in knowledge on export trading, some governments have sponsored in setting up trading corporations primarly for handling export business of small- and medium- sized industries but procurement of raw materials, machinery and spare parts is also undertaken by those corporations. Examples of such organizations can be found in the Republic of China, Republic of Korea and Singapore. Such corporations are set up as public limited companies with equity participation both government and private sectors.

Industrial Research

As in the case of industrial standards, various developing countries have set up industrial research institutes to facilitate application of science and technology to development. However, much work is still to be done to expand the scope of activities in this field on adaptation of foreign technologies to local conditions and also on original research work for which Japan has been noted for their success.

Although a few developing countries have sector-wise research institutes devoting their resources to research on specific problems of their respective sector of the industry such as electronic or food processing, etc., it is still in a very early stage of development and much resources would be necessary to expand research activities in these sector-wise research institutes. As observed in the previous chapter on cross-section view in respect of the Republic of China, the main problems have been limited resources and research facilities which was considered as one major factor for "brain drain" in this field.

At the second session of the ECAFE Advisory Council for Industrial Research which was held in January 1969 at Bangkok, the following general observations were made on the country reports on the development of industrial research:-

"---- The setting up of a separate ministry of science and technology, as had been done in several countries of the region, to be an instrument for the promotion of Industrial Research was considered desirable. The Council felt that, while the minister in charge might normally be a political appointment, such a ministry should have an eminent scientist or technologist as an adviser to the minister. The need for setting up a national science council as a high-level policy making and advisory group was stressed..... It was pointed out that, in the developed countries, industrial research was largely the responsibility of the industry and that, in the socialist or centrally planned countries, it was the responsibility of the public sector industry; whereas; in the developing countries, the link between industry and research was either weak or missing. It was noted that contract research organizations operated successfully in many developed countries. In several countries, industry-government participation in research had also been successful. In developing countries, it was difficult to raise funds for research and therefore industrial research became the responsibility of the government. It was felt that commodity and service oriented research should be encouraged within industry and that the government should also support basic research, long-term applied research and research in areas of infrastructure such as environment, power, water, etc., and new frontiers of research. One important drawback in the developing countries was identified as the inadequacy of design and engineering facilities for developing the bench process to a commercial stage".

The industrial research activities in developing countries of ECAFE region are shared among four main groups. In many of ECAFE developing countries industrial or applied research institutions have been set up, but in most cases their fields of operation are limited by resources available in terms of finance and equipments. As observed by the Advisory Committee mentioned above due to limited resources available for research and development by the exte research institutions, the link between industry and research was either weak or missing. Local large industrial organizations either public or private with resources to finance their own research activities have established own laboratories within their industries for sector-wise research works. The next group is international firms operating industries in developing countries either as joint-ventures or as their own subsidiaries, normally maintain quality control laboratories and basis and major research works are done in their main research and development centres usually located at headquarters. The fourth group is consisted of universities where industrial research projects could be undertaken profitably. In Japan there has been closer collaboration between universities and industries on various research projects financed by industries. Universities in developing countries are also rather limited in their resources and therefore their activities in industrial research should be supported by industries who in turn are generally small in size incapable of making substantial contributions for research. The state sponsored industrial research institutions must therefore be strengthened by making available more financial and physical resources. It was also stressed by the Advisory Council for Industrial Research at its second session in connexion with the question of "brain drain", that the levels of remuneration, as well as other conditions of service applicable to research workers, needed substantial improvement in relation to the standards applicable to other professional categories.

Corporation's facilities are available for those who carry on export in Hong Kong, including several overseas companies which have recently set up operations in the Colony.

It is noticeable that, in comparison with other Asian Countries, Hong Kong has not been paying sufficient attention to other means of industrial promotion such as financing, special considerations for small - and medium - scale industries, provision of industrial sites, tax incentives for new enterprises, and so forth. Hong Kong's position is unique[1] and its industries have been growing so rapidly in the recent past that the Government has not felt the pressure for taking such actions. However, it is reported that a bill is under preparation for the setting up of an institution for financing the replacement of equipment in existing industries, particularly the smaller ones.

Industrial Training

The rapid expansion of Hong Kong's industry, accompanied by a growing shortage of skilled and semi-skilled labour, prompted the Hong Kong Government to review in 1964 its overall policy and machinery to carry out its objectives in the field of industrial training. As a result, in June, 1965, it appointed the Industrial Training Advisory Committee to examine the whole problem of industrial training. On the advice of this committee, the Hong Kong Government has so far appointed nine associated industrial committees to investigate and report on industrial training problems in: four manufacturing industries, (namely electronic, textile, clothing and plastics, which manufacture about 70% of Hong Kong's exports), four separate industrial committees covering engineering and allied trades in automobile repairs and servicing, electrical

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1/ The "free port" status of Hong Kong is precisely the condition which, for example, the Kaohsiung free-zone has been trying to emulate.

Management Consultancy Services

The development of management consultancy services to industry in the ECAFE region may be considered still in its early stage of development for the reasons that most industries are small and limited in resources to engage the professional assistance of management consultants. Only few large industries could afford to acquire the services of such consultants at considerably high fees. The urgent need for consultancy services by numerous small industries throughout the region has been recognized and some governments have established productivity centres which combine management training and consultancy services designed specifically for small-and medium-sized industries. Good examples of such centres could be found in Thailand and Singapore where the centres were assisted by ILO experts. Another example of combining management institute and providing consultancy services to industry as part of promotional activity for modern management techniques was set by the Industrial Management Institute of Iran. It was established as an independent organization by the decree of the Council of Ministers in 1962. Although it was sponsored by the Government, its charter provides for operating autonomy under the over-all direction of a Board. This Board consisted of five representatives from sponsoring government agencies, industrial credit banks, and private industry, in whom was vested broad policy-making responsibility for the Institute. The Institute is providing services to industry in the related fields of management consulting, technical assistance and management training. The fees charged by the Institute to its clients were based on actual man-hours of professional time devoted to client's project by Institute staff members, plus out-of-pocket expenses for travel.

At the Preparatory Meeting of Senior Officials for the Second Asian Conference on Industrialization it was observed that the majority of business enterprises in the developing countries being small, are, often unable to afford their own management services and in this context, the promotion and development of management consultancy services would help a great deal. It stressed that the governments of developing countries should encourage the establishment of management consultancy firms to assist industry, to achieve better management. In this connection, developing countries in the region may emulate the operation of the Small Business Promotion Corporation which under direction of the Smaller Enterprise Agency, Ministry of International Trade and Industry (MITI), Government of Japan, which trains and educates management consultants in the service of the prefectural governments and public organizations. It should, however, be noted that in Japan private consulting firms are also well established.

Management training

The need for management training in developing countries of the ECAFE region has been well recognized and in most countries management courses are taught at educational institutes and some governments have established management institutes. Better known institutions in developing countries of the region are the two national bodies in India, viz, the Indian Institute of Management (IIMA), Ahmadabad, and the Indian Institute of Management (IIMC), Calcutta; the Industrial Management Institute in Iran and the Asian Institute of Management in Manila which was established through cooperation between the private business community, universities and the Harvard Graduate School of Business Administration.

The present training facilities for management for all levels, viz, middle, senior executives and top executives level, are still far from

being able to meet the needs and much efforts should be devoted by developing countries in establishing management training facilities. The Preparatory Meeting for Second Asian Conference on Industrialization discussed this problem and stressed the importance of management training and the development of managerial know-how, as on this would depend, in a large measure, the success or otherwise of the industrialization effort of the countries.

CHAPTER III

Regional Cooperation on Industrialization

(a) Asian Industrial Development Council

Measures to speed up Asia's industrialization were first discussed on a regional basis at the Asian Conference on Industrialization, held in Manila, the Philippines in December, 1965. The Conference emphasized the need to focus attention on specific areas for co-operation among Asian countries through harmonization of their national development programmes. It suggested intensive studies and field investigations of the feasibility of joint action in selected key industries. To foster cooperation in industrialisation, the Asian Conference on Industrialisation was made a permanent organ of ECAFE, and recognizing the need for suitable machinery to assist the developing countries in promoting and accelerating their industrial development the Asian Industrial Development Council (AIDC) was established in 1966.

AIDC consists of representatives nominated by the twenty-five member and associate member countries within the geographical scope of ECAFE, these countries are: Afghanistan, Australia, Brunei, Burma, Cambodia, Ceylon, the Republic of China, Fiji, Hong Kong, India, Indonesia, Iran, Japan, the Republic of Korea, Laos, Malaysia, the Mongolian People's Republic,

Nepal, New Zealand, Pakistan, the Philippines, Singapore, Thailand, the Republic of Viet-Nam and Western Samoa.

The Council aims at promoting harmonization of national industrial development plans and identifying, in collaboration with the countries concerned, projects where the co-operation of two or more countries could be of mutual benefit, as, for instance, in the pooling of markets to achieve economies of scale, international division of labour and fuller utilisation of raw materials. It assists member countries, on request, in preparing industrial feasibility studies as well as programmes for the investigation and implementation of projects; in procuring financial and technical assistance for implementing those projects; and drafting applications for loans from multilateral, regional and other sources.

Since its inception over four years ago, apart from providing a forum for continuous dialogue between the countries on specific project proposals, the Council has completed surveys of six industrial sectors, viz, Iron and Steel, Forest Based Industries, Fertilizer and Allied Chemicals, Agricultural Machinery, Oils and Fats and Petro-chemical Industries, with the help of sixteen study groups. It has completed feasibility studies in respect of some projects in two sectors. It has also initiated for implementation of an Asian Industrial Survey for Regional Cooperation. It was recognised that in addition to such sector by sector approach there is also an urgent need to take an over-all view of the problem of regional industrialisation and co-operation in long-term perspective. With the help of a long-term perspective study, realistic and comprehensive formulation of optimum co-operative programmes of industrialisation would be greatly facilitated. It is hoped that this very important survey could be launched in earnest before the end of 1970.

Organisation-wise, the formal structure that has evolved is the holding of at least one council session a year, with a chairman and two vice-chairmen elected to serve for a one-year term. The Government of each regional member and one associate member state of the ECAFE is entitled to nominate one representative to serve as a member, who should, as far as possible, be a senior government official at policy-making level in the field of industry and planning.[11] To ensure continuity of work, when the council is not in session, the chairman is authorized to represent the council in matters related to industrial development in the ECAFE region, consider and assist in obtaining any assistance requested by action groups or the countries concerned for the planning and implementation of appropriate projects and review periodically the work of the Advisory Group and give necessary directions regarding its programme of work.[12] The experience of the past four years has pointed to the need of an Executive Director of the Council as a full-time staff member to undertake energetic and purposeful follow-up of AIDC projects which have reached various stages of investigation and on which considerable resources have been expended by the member countries and the United Nations.[13] The ECAFE has also endorsed the appointment of an Executive Director for AIDC at its twenty-fifth or twenty-sixth sessions.

11/ ECAFE, Report of the First Session of the Asian Industrial Development Council (E/CN.11/747), 1966, p.21

12/ Ibid., p. 17.

13/ ECAFE, Report of the Fifth Session of the Asian Industrial Development Council (E/CN.11/904) 1970, pp. 8-10.

The Council is assisted by an Advisory Group of outstanding experts in the field of industrial development provided by member countries within and outside the region. The work of the Advisory Group is chiefly on preliminary economic analysis; but it may be asked by member countries and the Council to examine and advise on questions of regional harmonization of industrial plans, industrial co-operation and related matters.

(b) "ECAFE" Advisory Council for Industrial Research

In pursuant of the recommendation made by the first Asian Conference on Industrialization, a Consultative Group for Promoting Co-ordinated Industrial Research in Asia and the Far East was convened in December 1966. This Group took into consideration the proposal to set up an Asian council for industrial research and technology, and after full consideration of all the factors, the Group strongly recommended the setting up of a regional advisory council for the ECAFE region as soon as possible and that this council be called the "ECAFE" Advisory Council for Industrial Research. The first session of the Advisory Council was held in December 1967. At this session it was decided that each member of the council should submit a list of the activities of research organizations in his country from which data could be collected for identification of research projects suitable for co-operation and collaboration at the national and regional levels.

At the second session of the Advisory Council, in January 1969, suggestion and recommendations were made for consideration by national governments and organizations, for implementation by national organizations with the support of the ECAFE secretariat and for implementation by the secretariat it was decided to select eight research fields and seven studies each of which were to be entrusted to a regional co-ordinator who, assisted by the country co-ordinators, would work closely with the secretariat. A number of

regional and country co-ordinators have been appointed and the regional co-ordinators have entered into correspondence with country co-ordinators requesting them for the relevant available information, including published literature.

(c) Asian Standards Advisory Committee (ASAC)

The Asian Industrial Development Council at its first session urged the member countries to develop standardization as an organized activity and requested ECAFE secretariat to extend assistance in this regard. The first Asian Conference on Industrialization also recommended that a regional standards committee be established to promote standardization in the region. Accordingly, an intergovernmental body known as the Asian Standards Advisory Committee (ASAC) was established in 1967 to encourage and promote standardization activities on an organized basis in the ECAFE countries.

The Committee had considered matters, such as, the training of standards engineers, quality control, certification marking, introduction of the metric system and the methodology for proper co-ordination between national and international standards.

Training schemes have been developed by mutual co-operation among the countries of the region. For example, India, Iran and Japan have accepted candidates from other countries for training in their national standards bodies. In view of the increased demand it appears necessary to augment the available training facilities and efforts are being made to seek UNDP assistance.

The countries of the region have been encouraged by the Committee to join ISO and IEC and play an effective role in the formulation of international standards, particularly in subjects and commodities of particular interest to the region. In order to be able to present effectively to ISO and IEC

an agreed regional viewpoint, ASAC has recently set up a number of working groups, each dealing with a particular subject or commodity. So far eight such working groups have been formed, viz, steel products, tea, coconut oil, rice, timber and timber products, Domestic Electrical appliances (safety aspects), Rubber and Standard atmosphere for testing and conditioning.

Many countries of the region currently use the metric system and most others are in the process of conversion to it. As this process involves certain complicated problems, ASAC has recommended that the countries which have changed over recently make available their own experience and know-how to the others.

(d) Southeast Asia Iron and Steel Institute (SEAISI)

The establishment of a Southeast Asia Iron and Steel Inatitute was recommended by the Survey Mission on the Development and Expansion of the Iron and Steel Industry in Southeast Asia in its report submitted in September 1967. This Institute will be formally inaugurated in October, 1970. Its head office will be located in Singapore. The Institute is a joint effort of six member countries, namely, Indonesia, Malaysia, the Philippines, Singapore, the Republic of China and Thailand, in the first instance, with membership possibly extended in due course to other interested countries such as Japan and Australia.

The Institute aims at furthering the development of iron and steel industries within its member countries and consequently stimulating regional co-operation among these countries and supporting member countries, namely, Japan and Australia. Under its constitution, "the Institute may:

(i) provide a forum for the exchange of knowledge and discussion of problems relating to all aspects of the development of the iron and steel industries in its member countries;

(ii) provide advisory services and carry out, commission or promote the study of scientific, technological and economic aspects of iron and steel development in its member countries;

(iii) encourage the establishment and extension of training programmes for all categories of iron and steel industry personnel employed in the member countries of the Institute;

(iv) promote steel product standardization and utilization within its member countries;

(v) collect, collate and publish statistics of iron and steel production, consumption and trade;

(vi) disseminate the results of its activities, by publications and other means, to regional, national and international organisations and agencies, and to the public in general;

(vii) in general, do any and all lawful things necessary in connexion with, or incidental to, the accomplishment of any of the purposes above enumerated without pecuniary profit to the Institute or any member thereof."

The Institute will be governed by a Board of Directors comprising one director from each country and each supporting country. The Board will be entrusted with over-all responsibility on all matters relating to the Institute, including any amendment to the constitution of the Institute.

(e) Asian Development Bank (ADB)

The First Ministerial Conference on Asian Economic Co-operation held under the auspices of the ECAFE in Manila in December 1963, passed a resolution endorsing a proposal to establish a Regional Development Bank for Asia. The inaugural meeting of the Board of Governors of the Asian Development Bank was held in Tokyo, Japan in November 1966, initiating the formal operations of the Bank with 19 regional members and 13 non-regional members.

The ADB began operations at the end of 1966 with an authorized capital of U.S.$ 1,100 million and subscribed capital of U.S.$ 970 million. The Bank's capital structure relies on both regional and non-regional subscriptions, with the regional share predominating. In 1969, the total loans approved by the Bank amounted to U.S.$98.1 million, which brought the Bank's total lendings up to U.S.$ 139.7 million. Financing of the Bank has been at market rates from ordinary capital, and, since June 1969, the Bank has introduced lending on concessional terms from its Special Funds. In 1969, the share of ordinary loans was 84.1 per cent and that of concessionary loans was 15.9 per cent. Such concessionary loans were granted to large infrastructure and agricultural projects. A number of loans were made to developing financing institutions in member countries. The Bank's technical assistance operations here so far mainly covered agriculture, fisheries, transportation and development banking.

Cumulative commitments as of 31 December 1969[@]

	(in millions US dollars)
Ceylon	10.59
Republic of China	25.41
Indonesia	3.39
Republic of Korea	31.30
Malaysia	18.10
Nepal	6.01
Pakistan	10.00
Philippines	7.50
Singapore	10.00
Thailand	15.00
Western Samoa	2.40
	139.70

@ Includes: (i) A loan of US$10 million to Thailand
(ii) A loan of US$6.01 million to Nepal

Source: ECAFE, "Industrial Financing", E/CN.11/I&M/Ind.Conf.2/L.47.p.21.

apparatus and appliances, machine shop and metal working, and ship-building and ship repairs, the building industry.

Industrial training in Hong Kong may conveniently be divided into four levels in respect of which the Government's policy is as follows:

Technological training: a joint government and university responsibility;

Technician training: principally Government's responsibility with capital contributions from industry to facilitate expansion where necessary;

Craftsman training: a joint responsibility with Government providing institutional training for certain common basic trades with industry giving training for all other trades either through apprenticeship schemes or by systems of vocational training;

Operative training: the responsibility of industry which should provide on-the-job training, although Government may assist group training schemes or training schemes of certain single companies by granting land free of premium for the erection of training establishments or by granting loans from the Development Loan Fund for the purchase of flatted factory space for training purposes.

Technical and Quality Standards

There are no laws in Hong Kong requiring locally manufactured commodities to meet specific technical and quality standards; goods are usually produced to such standards as the buyer may specify although many Hong Kong Factories have, by their own efforts, become known in world markets for high quality standards. There is an increasing interest in standards and the Federation of Hong Kong Industries has established a standards testing laboratory in which textiles and other products are tested up to internationally recognised

(f) Private Investment Company for Asia (PICA)

1969 saw the beginning of operation of a new type of financial institution, the Private Investment Company for Asia (PICA) organized on somewhat similar lines to the ADELA Investment Company S.A which has been operating in Latin American since 1964. As a multi-national corporation with an authorised capital of US 40 million PICA has the same geographical coverage as the Asia Development Bank, i.e., the developing countries of Asia excluding Japan and Hong Kong. But whereas the Asian Development Bank imports its assistance to Governments and their agencies, PICA provides its service directly to the private sector and aims at the development of and investment in private business opportunities in the developing countries of Asia. The shareholders of PICA are drawn from three groups: the United States, Japan and Europe, Australia and Canada. The two main services offered are equity capital and long and medium-term loans for new and existing enterprises: the scope ranges from manufacturing, transportation to agricultural processing enterprise. One year after the PICA commenced business, it seems too early to evaluate the impact and role this corporation could play for the development of the industry of Asia, but it may contributs to implementing the concept of the private sector contribution to development, accelerate the development of capital markets and support the joint-venture approach to industrial investment.

(g) Asian Productivity Organization (APO)

Having felt the "progressive attitudes and techniques can best be obtained through a concerted productivity drive by the several Asian countries, cooperating on a multilateral basis to strengthen and improve their national productivity", the Asian Governments established the Asian Productivity Organization in May, 1961, by drawing up a Convention for this purpose.

The APO tries to achieve the objectives by a multipronged approach in its activities and programmes through establishing linkage between productivity and economic planning, hastening and strengthening the productivity movement in the entire region, fostering mutual help, dissemination of knowledge and assisting national organizations' activities. In line with these approaches, the APO holds conferences and symposia; organizes observational teams; arranges for services of technical experts; handles technical inquiries; conducts training courses; provides fellowships; gives faculty support to seminars; encourages research and maintains information activities.

Important policy matters concerning the APO's programmes, budget finances and membership are decided by its supreme organ - the Governing Body - which is composed of Directors representing their governments. A Chairman and two Vice-Chairmen are elected from among the Directors of the Governing Body.

The sources of revenue for APO at present are: membership fees, special grants from member governments, grants from other governments, grants from international organizations and foundations and assistance from industry.

Membership in the APO is open to all Asian Governments, that are members of the ECAFE. To become a member, a country needs the approval by two-thirds vote of the Directors of the APO. Governments outside Asia may become Associate members, upon approval by two-thirds vote of the Directors of the Governing Body. Associate members are entitled to participate in all meeting and activities of the organizations and its organs.

The Headquarters of the APO is located at Tokyo, Japan. The Secretariat, headed by the Secretary-General and composed of international staff from among the member countries, is the executive organ for implementing the decisions.

At present, membership comprises: Ceylon, Republic of China, Hong Kong, India, Indonesia, Iran, Japan, Republic of Korea, Nepal, Pakistan, Philippines, Thailand and Republic of Viet-Nam.

Asian Institute of Management

The Asian Institute of Management established in Manila, the Philippines, two years ago was born out of the urgent need for competent managers in the Philippines and indeed in all of Asia. It arose from realisation of two leading private universities in the Philippines, viz, the Ateneo de Manila University and the De La Salle College, that they could optimise their resources by jointly establishing the full-time two-year programme of graduate business education. The Asian Institute of Management offers a full-time intensive Master of Business Management Programme (MBM) patterned after the Harvard Business School case method and seeks to train over a two-year period exceptionally able Asians who are interested in being managers. The assistence given by the Ford Foundation made it possible the assignment in the Institute of twelve faculty members from the Harvard Business School, each for a period of two years, to assist in curriculum and course development and the training and development of the Institutes own faculty members abroad.

The Institute takes modern management techniques and concepts, and teaches them in the context of business and cultural realities of Asia. It is, therefore, believed that the Institute will offer managerial training of a professional character which will be more relevant and more useful for the purposes of the Asian potential manager than the training offered by most schools in Europe or the United States.

The Institute has resources that amount to over US$7 million. In the school year 1970-71, the Institute offered twenty-one international fellowships which will be available to Asian Nationals from countries other than

the Philippines. It is hoped that the Institute in due course will grow into a leading regional institute for management training.

CHAPTER IV

Summary and Conclusions

As it has been mentioned in the introduction to this paper, the developing countries in ECAFE region are characterized by their limited markets, low per capita income, limited purchasing power, predominated by small- and medium-sized industries with limited resources to maintain effective research for product development and marketing, especially for export, etc. This situation necessitated their governments' active support and provision of essential industrial services. For this reason, governments of developing countries in the region are providing various industrial services, such as, planning and programming for industrialisation, incentives for investment in industries, establishment of industrial estates and export free zones, industrial development banks, export credit and insurance corporations, industrial research and standardizations, management and productivity centres, technical institutes, etc.

Also, it has been observed that developing countries in the region, except for few lagging countries, are gaining momentum in industrialisation and some have reached the secondary stage of development where heavy industries sector is assuming more and more important role in contribution towards GNP. This factor will soon call for more sophisticated services and higher level of technologists and skilled operators. It will also require higher level of managerial skills and application of modern management techniques (computerization, operations research, etc.)

The main theme of this paper being the organisation and administration of industrial services in the developing countries of Asia, the attention is directed towards assessment of the adequacy or otherwise of industrial services being made

available to industries and the problems being confronted in administration of such services. It is also intended to identify areas where improvements in volume or in their effectiveness are necessary to accelerate industrial growth.

Except Hong Kong, which maintains a policy designed to keep government interference within industry at the lowest possible, most countries have special agencies entrusted with planning and industrial promotion. In most cases, these bodies are within the administrative scope of either the Ministry of Industry and Commerce or Ministry of National Planning. In other words, such industrial planning and promotion agencies are generally manned by civil service people and they are therefore paid according to regular government servants' pay scales. One interesting exception is found in the Republic of China where a special budget was provided for CIECD (the main planning body) and a special salary scale established with a slight premium over the regular civil service scale. Such industrial planning and promotion agencies are usually financed from regular budget of concerned governments.

It is a common feeling among officials of the national machinery for promoting industrialisation that there is still a lot of room for improvement of coordination at different levels and of evaluation at different stages. It appears to be more of the problem of management rather than lack of facilities or funds. In the Philippines, for example, it has been felt that the coordination of policies of the institutions involved in industrial promotion is relatively important. This could be a major reason why the establishment of a Board of Investment was called for three years ago. In the Republic of China, with the establishment of a new Bureau for Industrial Promotion within the Ministry of Economic Affairs, coordination at the executive level may now draw more attention from the administrators involved.

It may be mentioned here in passing that at the twenty-sixth session of ECAFE held in April 1970, it was observed that in the field of industry, programming and planning of industrial undertakings should be increasingly done in the context

of regional cooperation.

In the case of financial institutions for industries established by the governments either as a state enterprise or as a public limited company with government and private participation, they are normally set up as autonomous bodies and their staff members are according to the bank scales and are usually better paid than civil servants. Such financial institutions are usually governed by boards of directors with representatives from public and private sectors. In most cases, when such banking institutions were established, the initial capital was either an outright grants from the budget or through issue of shares subscribed by both government and private sectors. Subsequently, funds were raised through borrowing or issue of bonds and debentures.

In connexion with promotion of industrial investments, the Advisory Group of the Asian Industrial Development Council (AIDC) at its fourth session, observed that in many developing countries potential investors, local as well as foreign, must consult and obtain the approval of several government departments or agencies before launching new industrial ventures. This is frequently a considerable disincentive to investment and governments should carefully explore the possibility of designating one department or agency to handle all aspects of new industrial investment so that applications can be processed efficiently and expeditiously. Such a change might also be helpful in improving relations between government and the private sector. It is certainly helpful to a prospective investor to have only one agency to deal with and to know that a decision, one way or another, would be forthcoming quickly.

It has been observed at various meetings and conferences that the commercial banks can play and should play an important role in industrial financing due to the fact that they have access to all classes of savers through the network of their branches. One of the problem areas of financing is that commercial banks, except in very few developing Asian countries, are not playing the required role in the

financing of industrial investment. The banking system in developing countries of the region should be encouraged to play a more effective role in financing industries as they have a wider network of operation. The national or central banks in the countries could well consider encouraging commercial banks to extend medium- and long-term loans to industries and assist them with various measures such as preferential treatment in re-discounting financial papers originated from industries, etc.

The industrial development banks, or the industrial development finance companies, have proved to be very useful instruments for industrial financing throughout the ECAFE region. The reason is that they satisfy the need for long-term capital, both loan and equity, for the implementation of the various industrial undertakings. Whether they are private or government-owned or controlled, such institutions should no doubt be encouraged in order to have a more active and positive role in the industrial financing of the region. In larger developing countries of the region, such as India and Pakistan, the objective of official policy is to build up a diversified structure of banks and specialised financial institutions and the moulding of credit institutions to serve the need of expanding industry has become an urgent task. For this reason, an Indian picture of industrial financing was given under the section on Industrial Financing in Chapter III.

Research and development work constitutes one of the most important pre-requisites for industrial growth. This realization has led the industrialised countries to provide an outlay of expenditure on research and development of 2 to 3 per cent of the gross national product, whereas the developing countries of the ECAFE region spend very much less owing to shortage of financial resources and lack of qualified scientists and trained personnel. The shortage of research personnel is somewhat aggravated by brain drain due to lack of attractive salary and modern equipments for research work to keep potential research scientists to stay on their

jobs for long. Resulting from this shortage of capital and lack of scientific manpower, there is an urgent need for cooperation and coordination of policies, programmes and facilities in respect of research and development work. The countries of the region cannot afford wasteful and avoidable duplication of effort in the solution of identical problems, when there is the alternative possibility of pooling research experience and endeavour. The national research institutes should also be strengthened financially and salary scales need to be modified to alleviate the problem of "brain drain". The organization and administration of such research institutions may be changed similar to that of financial institutions with adequate autonomy and more active support from industry.

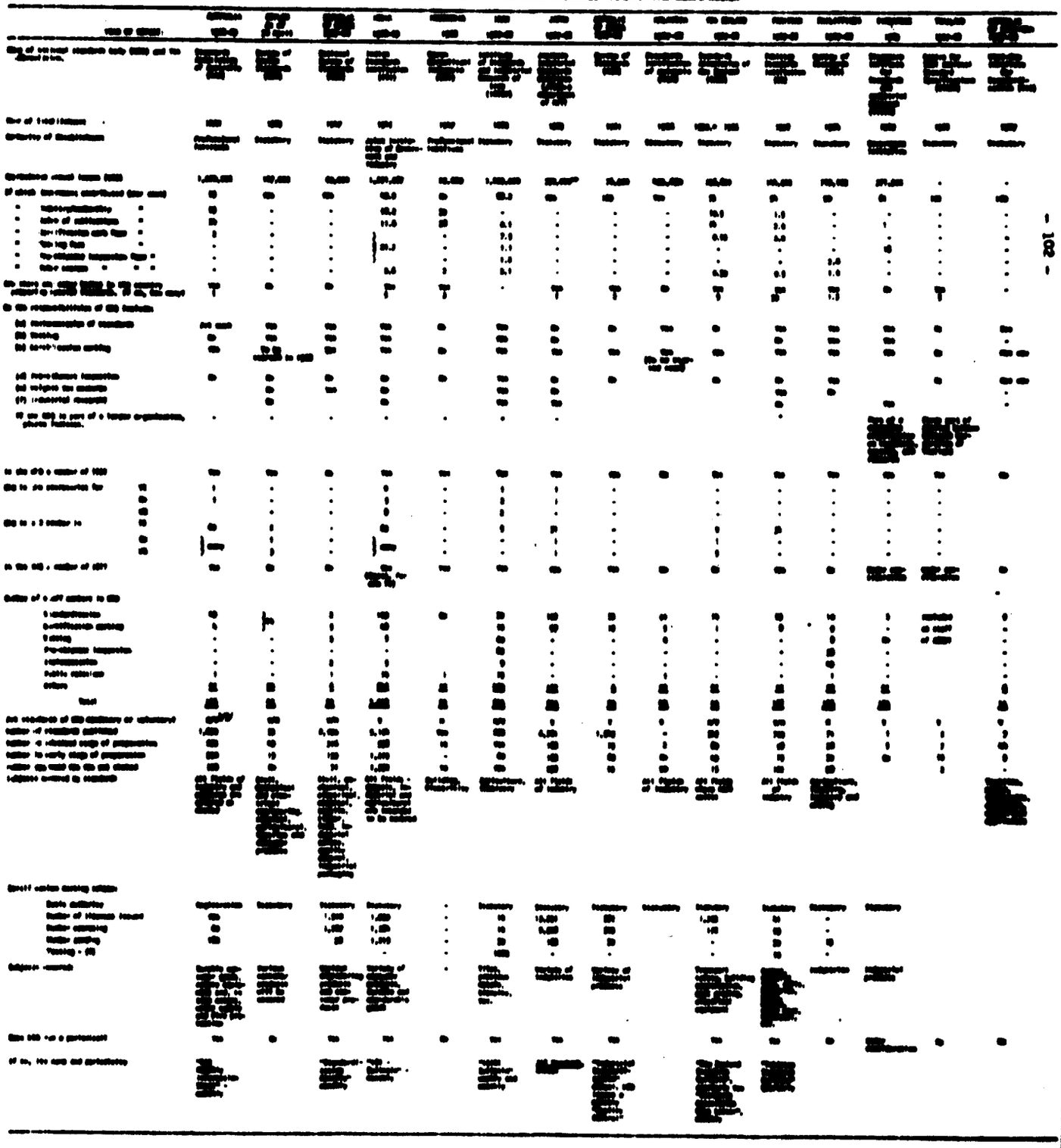
In view of the important relationship between industrial growth and exports of manufactures and semi-manufactures, it was recommended at the twenty-sixth session of ESCAFE that greater attention be paid to improving productivity and to maximum utilization of industrial capacities. In this paper, two most successful developing countries have been mentioned, viz., the Republic of China and the Republic of Korea, in promoting industrialization and as well as industrial exports. The measures taken in these two countries as described in this paper should be followed in most developing countries in the region. The solutions to the problem of diversifying and increasing exports of industrial goods must be directly linked with the measures taken in the field of investment and industrial production. The industrial services more directly related to export of industrial goods, such as export free zones, standardization and pre-shipment inspection, quality control schemes, export credit and insurance corporations, industrial design centres, trade display and promotion centres, trading corporations, information and advisory centres, etc., need to be strengthened. The organization and administration of such services should be, as far as possible, in the form of autonomous bodies jointly supported and administered by public and private sectors. The services set up for industries must necessarily have a very close association with them,

and to ensure such association, it is best to be managed jointly with them. In the field of industrial design, it is still in its very early stage of development and much efforts are needed to promote industrial design education and practices in the developing countries of ECAFE region. Japan has set a very good example in this field and has shown tremendous success in exports of her well designed products throughout the world.

One important lacuna may be the consultancy service, especially to small- and medium-sized industries. The measures being taken by the Government of Singapore in this direction can be followed fruitfully by other developing countries of the region. While private consultancy services take considerable time to develop as development of their services is entirely dependent on the development of their customers, the urgently needed consultancy services can be provided as it was done in Singapore or Iran. The management training institutes should also provide consultancy service to industry as part of their programme for development of managerial skills. The major problem here again is frequent loss of teaching staff to private industries where there are better prospects for higher remunerations.

(Form)

INVESTMENT BANKING THE OFFICE OF GENERAL PURCHASES ORDER OF THE ARMY FORCES



Title of Order														
Date of Order														
Authority of Organization														
Operations under Order 2000														
Of which investments contributed from assets														
Withdrawals/liability														
Sales of collections														
Non-Private sales Fees														
Tax by Fees														
Tax-related Inspection Fees														
Other assets														
Do there at 2000 Balance to the assets subject to current liabilities, at the end														
On the establishment of this Section														
(a) Remuneration of members														
(b) Trading														
(c) Small-scale lending														
(d) Non-Bank Deposits														
(e) Rights the assets														
(f) Industrial charges														
If so, this is part of a larger organisation, please Explain.														
Is the Fund a member of IDA														
Has to be contracted for														
Has a limit in														
Is the Fund a member of IDA														
Number of Staff members in IDA														
Professionals														
Secretarial Services														
Typing														
Professional Inspection														
Administration														
Public relations														
Others														
Total														
Are members of IDA officers or advisers														
Number of members permitted														
Number of elected seats of proposition														
Number to verify seats of proposition														
Number who hold IDA as elected														
Officers covered by members														
Staff votes during office														
Bank authority														
Number of Members found														
Number standing														
Number voting														
Voting - IDA														
Subject records														
Has IDA not a permanent														
If no, for sure not satisfactory														

* Has Added Members from Section, the Others.

** Includes Expenses of Loans to Group of Subsidiaries and Assets from sale of Advances made to Members of IDA.

S = Standard Expenses
D = Subscriptions
C = Closing Costs

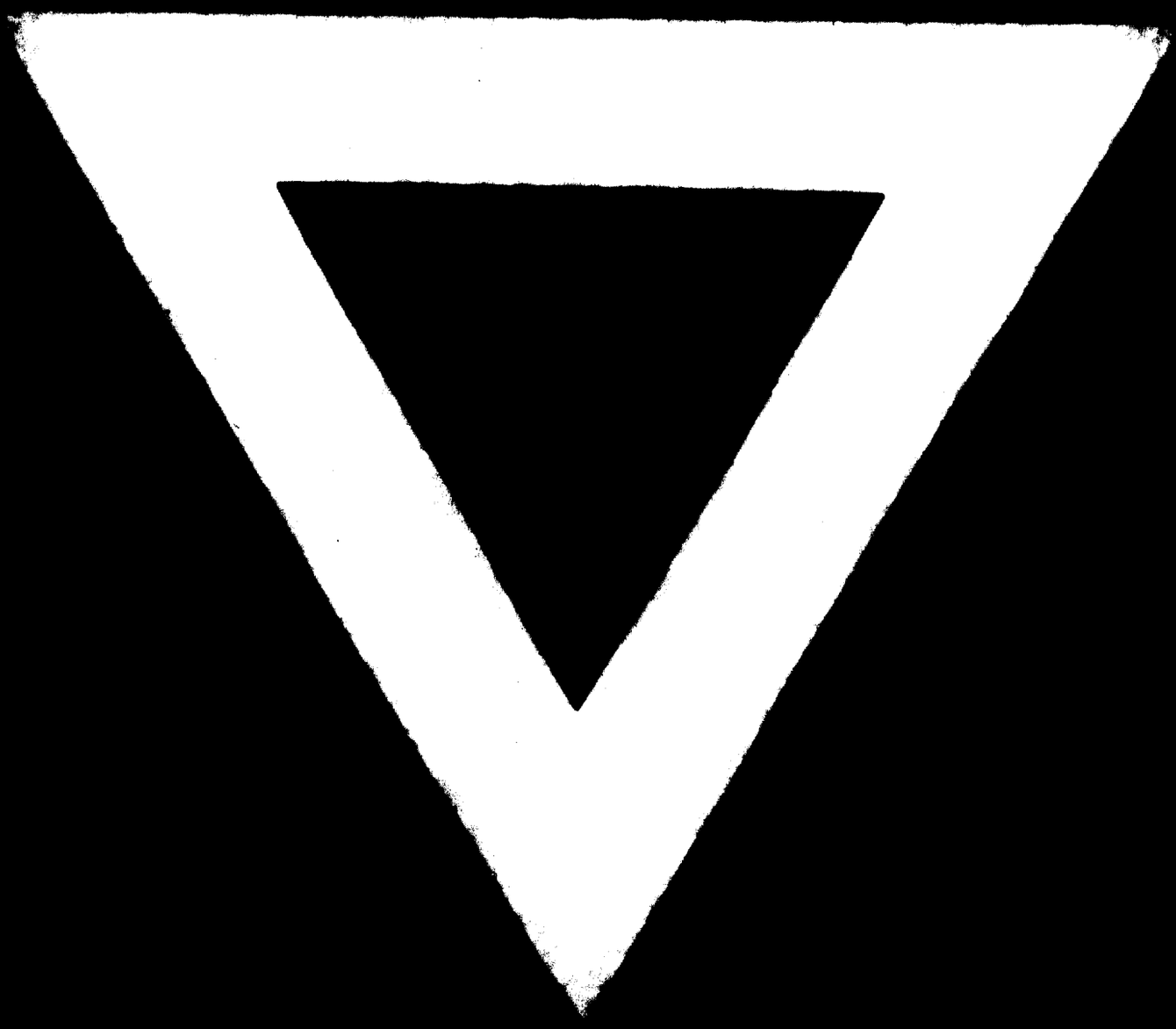
M = Members
N = Investors

standards and certified where appropriate. These include the British Retail Trading Standards (R.T.S.A.) and British Standards Institute (B.S.S.). The Federation testing service is also able to test textiles and other products against buyers contract specifications and certify conformity where appropriate. A sample deposited by buyers and the Federation will test consignment products against these samples to ensure standardisation.

The agreement signed between the Federation and the Federation of Swiss Watch Manufacturers provides for Hong Kong manufactured watchcases, which have been tested by the Federation of Hong Kong Industries and found to be up to the highly exacting Swiss Standards prescribed in the agreement, to be awarded the Federation's "tested quality" label. Watchcases bearing this label quality for import into Switzerland for use by members of the Federation of Swiss Watch Manufacturers. It is reported that at present Hong Kong is the only teritory in Asia from which members of the Federation of Swiss Watch Manufacturers are permitted to purchase watch cases for use in the production of Swiss Watches.

A similar agreement exists between the Federation and the International Wool Secretariat for the use of the "Woolmark". Under this agreement Hong Kong woollen manufacturers who can conform to the stringent requirements imposed by the International Wool Secretariat can apply for the use of this quality symbol on their products.

The Commerce and Industry Department of the Hong Kong Government has responsibility in the field of health and safety standards for Hong Kong products. The Department has instituted a special inspection and certification system which at present concentrates on materials used in toys and paints production.



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The Philippines

In the Philippines, there are several levels of major institutions in the field of industrial development. At the highest policy-making level is the National Economic Council, which is to advise the President of the Republic regarding the formulation of over-all development plans and policies and the allocation of financial resources for both the public and private sectors. It also advises the President regarding the investment priority plans as prepared by the Board of Investments.

Within the Office of the President, is the Presidential Economic Staff to undertake economic planning between the aggregative level and the sectoral plans of individual government agencies and also to advise the President on matters of economic policy.

In between the Department of Commerce and Industry and other ministries involved in economic affairs, a Board of Investments was established in September 1967 for the primary purpose of co-ordinating the investments of both the private and public sectors, with the formulation of annual investment priority plans. Lately, the third investment priority plan was approved by the President upon recommendation of the National Economic Council and became effective in May 1970.

The Department of Commerce and Industry has always been the central agency in the government for undertaking general development promotion, administration and regulation in the field of trade and industry. Among other things, it also exercises over-all supervision of the country's trade and industry, policy formulation and co-ordination on matters relating to export promotion. Another long-standing government agency is the National Science Development Board which undertakes to integrate and co-ordinate scientific and technological research and supervise the running of government-

owned research institutes such as the National Institute of Science and Technology, Coconut Research Institute, Textile Research Institute, Philippine Atomic Research Commission, etc. This Board is quite similar to the Japanese Agency for Science and Technology or the Korean Ministry of Science and Technology. As hinted in earlier paragraphs, the Development Bank of the Philippines (DBP) has occupied an important position in the field of industrial financing in the post-war era. However, there are other financial institutions, such as the National Investment and Development Corporation (which is a subsidiary of the Philippines' National Development Bank), and also the National Development Company and the Private Development Corporation of the Philippines, which have also been engaged in industrial financing.

Perhaps because of the frequently changing administration and policies in the Philippines (since no single President has served for more than one term except the current President), there has been the feeling of a need for co-ordinating the implementation of policies at different levels of industrial promotion -- hence the establishment of the Board of Investments. Perhaps also because of the lack of co-ordination of financing policies in the earlier years, there is a rather odd phenomenon - the under-utilization of capital capacity in many major fields of industry in the country, including such industries as cement manufacture, automotive assembly, manufacture of certain electrical appliances, several of the food processing industries and also the manufacture of iron and steel products. With the establishment of the Board of Investments, and with the preparation of the annual investment priority plans, the financial institutions are now to allocate their funds according to the directives set by such plans, in order to channel new funds into other areas of development. The Board of Investments now has a staff of about 200 professionals in many fields of engineering for evaluating the feasibility of new projects. Out of evaluation of the performance of previously established industries which were financed partly by public funds

is still left to individual financial institutions.

The Development Bank of the Philippines is a long-term financial institution chartered by an Act of Congress in 1958 and fully owned by the government. It succeeded the Rehabilitation Finance Corporation which was established as early as 1946, for providing credit facilities for the rehabilitation and development of agriculture and industry, and for the reconstruction of property damaged by war. Therefore, the loans of the DBP are divided into three categories, namely, for industrial development, for agriculture, and for real estate. However, the bulk of the loans from this Bank has been for financing industry. For example, of the total loans extended during its 22 years of operation (since the establishment of the Rehabilitation Finance Corporation) slightly over half of the total of 4.1 billion pesos was for industrial financing, slightly over 20% was for agricultural financing, and less than 15% for real estate financing. The balance is for other purposes such as advances to private-owned development banks, rural banks, building and loans associations, and so forth.

The Development Bank of the Philippines has a staff of over 2,000 with an elaborate organizational structure, including departments for agriculture, industry, real estate, government loans and acquired assets, security marketing, development and rural banks; and including administrative departments such as treasury, accounting, auditing, legal, investment banking, economic research and so forth. It has also over 50 branches and agencies throughout the Philippines, which are authorized to receive savings and time deposits and to administer trust investment funds. One major function of this Bank is to guarantee foreign loans for local industrialists (as in the case of Korea) and it is also authorized to issue Progress Bonds for financing or re-financing of industries. The share of its guarantee of foreign loans has not been over-whelming as in the case of the Korea Development Bank.

The National Institute of Science and Technology, which is the major research agency under the National Science Development Board, has an impressive staff manning its various research centres, such as the Industrial Research Centre, Food and Nutrition Research Centre, Biological Research Centre, Medical Research Centre, Agricultural Research Centre, Test and Standards Laboratory, and so forth. However, the Industrial Research Centre may service only the smaller industries with technical problems mainly of quality control.

Standardization and quality control

The Bureau of Standards is mainly concerned with standards for primary commodities and it does not provide sufficient coverage for sophisticated manufactured products. At present the Bureau uses American standards as the base for domestic and foreign markets. Although experience has been gained in this field, the measures adopted appear to lack effectiveness owing to inadequate means of control and enforcement.

Manpower development

The country enjoys one of the highest literacy rates in this part of the world and has extensive public and private education facilities which have long used the English language. This language capability and educational base permits access to and use of the store of management and technical knowledge which has originated in the leading developed countries, such as the United States and the United Kingdom. As a result, a strong basis exists for the development of both managerial and technical skills.

However, the Philippines situation is characterised by a preponderance of students taking courses that are only remotely related to the needs of economic development; hence the existence of a high degree of unemployment among the educated and a shortage in semi-skilled craftmen and technicians. This is further aggravated by the yearly exodus of several thousands of