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Employment Effects of Foreign
Direct Investments in ASEAN Countries

by

Yasuo Kuwahara
Teruo Harada
Yoshihiro Mizuno
The Japan Institute of Labour, Tokyo, Japan.

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INTRODUCTION

This is a report studying the relationship between foreign investment and its employment effects in five ASEAN countries - Indonesia, Malaysia, the Philippines, Singapore and Thailand. Needless to say, ASEAN^{*} was established in August 1967 as a regional organization to promote economic, social and cultural co-operation among the five countries.

Of course there are many countries in South-East Asia besides the ASEAN countries. But the five countries are typical countries in the region and they are selected for this study with an expectation that an analysis of these five countries will be of useful reference in understanding the situations in other developing countries in Asia.

Most of the foreign investors in developing countries today are thought to be multinational enterprises. This report, however, does not touch upon the "multinational enterprises" as such, but rather focuses on the relationship between direct foreign investment and its employment effect. The reasons are as follows. First, the main theme of this project is an economic analysis of "employment effects of multinational enterprises," but the employment effects can be conceived in essence to result from direct foreign investment. It is true that most of the

* Association of Southeast Asian Nations.

direct foreign investment is made by multinational enterprises, but in the discussion of the employment effects it seems to be better not to limit the scope of analysis only to the employment effects of multinational enterprises, because there is basically no difference in the employment effects whether they are caused by multinational enterprises, binational enterprises, or other foreign investors.

Secondly, in the data available for this project, multinational enterprises were seldom used as a bench mark of classification. Direct foreign investment was more often used in the data of the five ASEAN countries. A secondary reason is to avoid the complexities which lie between the divergence of defining multinational enterprises and the practical treatment for their analysis.

Apart from direct foreign investment, there are of course some problems particular to the multinational enterprise, especially those related to the management of the enterprise. They will also be referred to as they come into question in this report.

Ideally, this report should have been based on an original survey including field studies of the five ASEAN countries. Due to the limitations of time and resources available, however, it primarily relies on a survey of reference works available. Unfortunately there is still only a small number of studies in this field. Therefore

this report had to be based on somewhat sketchy information and data. The authors of this report are well aware of these limitations. As regards the employment problems of foreign firms in ASEAN countries, however, the co-operation of local researchers in the countries was obtained through the Japan Institute of Labour and JIL had already accumulated a series of survey reports. It can thus be said that nearly all available important data and materials have been covered in this report. The reference materials cited are confined to publications as much as possible in view of the possible need for easy reference in further detailed studies. Due to the limit of pages allowable for this report, little reference is made to the aspects of multinational enterprises other than their employment effects. For the other areas, JIL has already published country reports (in Japanese) based on its field surveys and reference to them is recommended if necessary.

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PART I. Historical Background and Overview

Before going into the discussion of the employment effects of multinational enterprises in five ASEAN countries, it will be useful to make an overall review of the historical background in which multinational enterprises came into play in the industrial development of these countries. In this section, therefore, particular attention will be paid to how foreign investment has increased in the industrialization process of these countries, what kind of policies the Governments have taken towards foreign investment, and what role multinational enterprises have played in the industrial development of these countries. The history of foreign investment will be elucidated below for each of the five ASEAN countries in alphabetical order.

A. Indonesia

After independence, industrialization of Indonesia started with the Urgency Economic Programme in 1950, through the First Five-Year Plan in 1956, to the Eight-Year Plan in 1961. With Sukarno's emphasis on 'spiritual and mental development' and military expansion, however, these economic plans did not yield any fruitful result but rather led to persistent government deficits and chronic inflation.

Furthermore, though there were the shortage of capital and the great need for advanced industrial technology, Sukarno's

regime was not so open to foreign investors as John Wong described:

The economic programme of 'Guided Democracy' emphasized national determination and other political objectives rather than rational management of the economy. The nationalization of Dutch enterprises in late 1957 and the subsequent suppression of the business activities of the ethnic Chinese virtually made it impossible for foreign participation in development---- with the exceptions of oil and minerals.¹⁾

Following the 1965 change in government, Suharto made a fundamental shift in the economic and political policies of Indonesia. In his programme for the 'New Order', he rigorously attempted to stabilise and rehabilitate the economy taking the course of industrialization. This industrializing policy of Indonesia also required an open-door policy towards foreign investment to meet her swelling needs for foreign capital and technology. Thus in April 1967 the New Investment Law was laid down as a ground rule for favourable treatment to foreign investors and for "economic nationalism" to control foreign investment by designating the industrial sectors for foreign investors and obligating them to fade out in 30 years or to set up a joint venture with local capital and to gradually transfer their owned shares to local people, etc.²⁾

Along with this line of policy, Indonesia launched Repelita I (First Plan for April 1969 - March 1974), setting the initial stage for import-substitution type of industrialization and at the same time giving priority to the development of her agriculture and infrastructure. As a matter of fact, the manufacturing industry occupied only 5.9% on the average of the total value added in 1960-69, which then increased to 16.1% in 1974. Similarly, the proportion of the manufacturing employment in Indonesia was only 0.38% of the total population in 1964, which subsequently rose to 6.5% in 1971 with the average growth rate of 7.3% during 1970-73.³⁾

With the enactment of the New Investment Law of 1967, the influx of foreign capital increased more rapidly than had been expected. In this sense, foreign capital played an important role in the initial stage of industrialization in Indonesia. In fact, the stock of private foreign investment in Indonesia stood at the level of US\$254 million at the end of 1967 but subsequently increased to US\$900 million at the end of 1971 and US\$2,100 million at the end of 1974. And, in the period of 1967-72, the proportion of private foreign capital to the total capital investment in Indonesia averaged 56.9%. When viewed more in detail by industry, however, it was 92.5% in mineral, 69.5% in agriculture and fisheries, 68.3% in forestry and 37.4% in manufacturing. It can thus

be said that foreign capital played a dominant role in the capital investment of Indonesia in the period and that it particularly flowed into her primary sector with an underlying motive to secure, maintain or develop raw material supplies.⁴⁾

During the same period of 1967-72, foreign investment projects approved by government authorities amounted to US\$2,488.4 million in total. Table 1 shows the industrial breakdown of the total amount. As shown there, 38.3% of the total amount of approved projects was in mining, 30.9% in manufacturing and 16.8% in forestry. Meanwhile, Table 1 also shows the amount of foreign investment projects actually implemented in Indonesia. The total amount of implemented projects was US\$710.4 million, which constituted only 28.5% of the total amount of approved projects. Thus the implementation rate of foreign investment projects was still low in the period. At any rate, 50.4% of the total amount of approved projects was in manufacturing, and in the manufacturing industry, textile and metal constituted 19.2% and 11.1%, respectively. Apart from manufacturing, implemented projects in mining occupied 23.3% of the total amount and those in forestry, 15.8%.

Though foreign investment thus increased in Indonesia, her policy became more selective towards foreign investors. In spring 1970, the Government revised the New Investment

Table 1 Foreign Investment Projects* in Indonesia
by Industry (1967-72)

Unit: US\$ million, %

Industry	Approved Amount	Projects %	Implemented Amount	Projects %
Agriculture	83.2	3.3	16.6	2.3
Forestry	419.1	16.8	112.0	15.8
Fishery	27.4	1.1	19.6	2.8
Mining	953.7	38.3	165.5	23.3
Manufacturing	768.9	30.9	357.8	50.4
Food stuffs	91.1	3.7	55.2	7.8
Textile	307.1	12.3	136.1	19.2
Timber	2.0	0.1	3.4	0.5
Paper	13.3	0.5	7.3	1.0
Chemical	124.9	5.0	58.4	8.2
Metal	143.7	5.8	79.1	11.1
Others	86.8	3.5	18.3	2.6
Construction	34.5	1.4	4.0	0.6
Hotel & Trade	99.7	4.0	16.5	2.3
Transport & Communication	18.3	0.7	7.7	1.1
Other Services	83.6	3.4	10.7	1.5
TOTAL	2,488.4	100.0	710.4	100.0

* Excluding oil and banking sectors.

Source: Bank of Indonesia, Report for the Financial Year 1976/1977 (Jakarta, BOI, 1978), pp. 157-158.

Law of 1967 and the tax law. The revisions were meant on one hand to give more favourable treatment to foreign investors by increasing the rate of tax exemptions, extending the period of carrying over business losses and approving a wider scope for accelerated depreciation, while on the other hand having a more selective foreign investment policy by changing the 5-year tax holiday which had been provided indiscriminately for all foreign investment projects. More specifically, the tax holiday was revised as follows: Two years for the "priority" industries designated by the Government, and renewable annual extensions to a maximum of 6 years if the foreign investment project makes a tangible contribution to the obtaining or saving of foreign currency, if it is undertaken in an area other than Java island, or if it is given special priority by the Government.⁵⁾ Along with these revisions, the Government issued orders in November 1970 and February 1971 to prohibit foreign capital from flowing into 39 branches of the light industry (paint, toothpaste, matches, nails, screws, etc.).

In more recent year, Indonesian policy towards foreign investment has become more selective and restrictive. In the presidential statement of January 1974, Suharto demanded a majority rule of local capital in joint ventures. Up to that time the ratio of local capital in joint ventures ranged from only 15 to 25% in most cases. To increase the ratio, he presented a general guideline that foreign investors should

make a concrete plan to transfer their capital to local people before opening a new joint venture and that locals should own 51% or more of the capital as early as possible. The capital transfer was thought to take the form of buying the stock owned by foreign investors, which he anticipated would require the financial assistance of the Government or the Development and Investment Bank. Furthermore, the Government has come to restrict "non-pribumi", (non-indigenous) from investing in new joint venture projects as the local partner and encourages "pribumi" (indigenous) to become the major local partner or top management of the joint venture. Finally, with a view to promoting employment of local people, the Government has taken more restrictive policies by designating branches of economic activity in which foreigners are not allowed to engage, or may do so only during a specified period. Also each joint venture is required to train locals and to prepare a programme of technology transfer.⁶⁾

Table 2 indicates the aggregate amount of approved foreign investment in the recent years from 1971 to 1978. As shown in the table, the amount was US\$1,562 million at the end of 1971, which almost quadrupled to US\$5,372 million at the end of 1978. When viewed by country origin of foreign capital, the approved investment from Japan amounted to US\$ 262 million or 16.8% of the total at the end of 1971. This

Table 2 Foreign Investment in Indonesia*
by Country Origin

Country Origin	Unit: US\$ million; (%)						
	1971 End of June	1972 End of Dec.	1973 End of Dec.	1974 End of Dec.	1976 End of Apr.	1977 End of May	1978 End of June
Japan	262 (16.8)	354 (16.0)	634 (23.2)	1,083 (27.9)	2,016 (40.5)	2,044 (39.4)	2,080 (38.7)
U.S.A.	533 (34.1)	803 (36.4)	831 (30.4)	974 (25.1)	1,000 (20.1)	1,000 (19.3)	1,020 (19.0)
Hong Kong	100 (6.4)	163 (7.4)	264 (9.7)	446 (11.5)	515 (10.3)	546 (10.5)	577 (10.7)
West Germany	20 (1.3)	26 (1.2)	30 (1.1)	166 (4.3)	175 (3.5)	177 (3.4)	181 (3.4)
Netherlands	34 (2.2)	48 (2.2)	70 (2.6)	171 (4.4)	175 (3.5)	178 (3.4)	180 (3.4)
Others	613 (39.2)	813 (36.8)	903 (33.1)	1,039 (26.8)	1,096 (22.0)	1,312 (25.3)	1,334 (24.8)
TOTAL	1,562 (100.0)	2,207 (100.0)	2,732 (100.0)	3,879 (100.0)	4,977 (100.0)	5,193 (100.0)	5,372 (100.0)

* Aggregate amount of foreign investment projects approved by the Indonesian authorities since 1967.

Source: JETRO, Kaigai Shijo Hakusho (White Paper on Overseas Markets), 1972-77/78.

jumped up to the level of US\$2,080 million or 38.7% of the total at the end of 1978. Thus at present Japan occupies the largest share of the approved investment projects in Indonesia.

On the other hand, the U.S.A. was the largest investor in 1971 registering US\$533 million or 34.1% of the total amount for the year. It subsequently continued to increase but only increased to the level of US\$1,020 million or 19.0% of the total amount in 1978. As a result, it became second to Japan after 1973. If the Japanese investment and the U.S. investment are added together, they continued to occupy the majority of the foreign investment projects throughout the period.

Table 3 indicates the aggregate amount of foreign investment in Indonesia by industry in the same period of 1971-78. As is clearly shown there, US\$539 million or 34.5% of the total amount approved in 1971 was directed to the mining industry and US\$395 million or 25.3%, to the forestry industry. At the end of 1978, though the aggregate amount of foreign investment in these two industries increased to US\$863 million and US\$519 million, respectively, their share of the total went down to 16.1% and 9.7%, respectively.

On the other hand, foreign investment in manufacturing amounted to US\$386 million or 24.7% of the total at the end of 1971, but it rose more than eight times to US\$ 3,185 million or 59.3% of the total at the end of 1978. When seen by further breakdown of the manufacturing industry, foreign

Table 3 Foreign Investment in Indonesia*
by Industry

Industry	Unit: US\$ million, (%)						
	1971 End of June	1972 End of Dec.	1973 End of Dec.	1974 End of Dec.	1976 End of Apr.	1977 End of May	1978 End of June
Manufacturing	386 (24.7)	636 (28.8)	1,005 (36.8)	1,858 (47.9)	2,869 (57.6)	3,066 (59.0)	3,185 (59.3)
Textile	-	-	416 (15.2)	687 (17.7)	691 (13.9)	698 (13.4)	750 (14.0)
Chemicals	-	-	48 (1.8)	291 (7.5)	356 (7.2)	406 (7.8)	443 (8.2)
Electric	-	-	541 (19.8)	70	75	77	77
Others	-	-	-	(1.8)	(1.5)	(1.5)	(1.4)
				810	1,747	1,885	1,915
				(20.9)	(35.1)	(36.3)	(35.6)
Mining	539 (34.5)	842 (38.2)	842 (30.8)	861 (22.2)	861 (17.3)	861 (16.6)	863 (16.1)
Forestry	395 (25.3)	439 (19.9)	492 (18.0)	506 (13.0)	487 (9.8)	489 (9.4)	519 (9.7)
Real estate	24 (1.5)	6 (0.3)	6 (0.2)	223 (5.7)	234 (4.7)	239 (4.6)	239 (4.4)
Agriculture	7 (0.4)	11 (0.5)	15 (0.5)	126 (3.2)	196 (3.9)	198 (3.8)	224 (4.2)
Hotel & Tourism	55 (3.5)	87 (3.9)	93 (3.4)	173 (4.5)	173 (3.5)	173 (3.3)	173 (3.2)
Construction	-	19 (0.9)	65 (2.4)	62 (1.6)	67 (1.3)	67 (1.3)	68 (1.3)
Others	156 (10.0)	167 (7.6)	214 (7.8)	70	90	100	101 (1.9)
TOTAL	1,562 (100.0)	2,207 (100.0)	2,732 (100.0)	3,879 (100.0)	4,977 (100.0)	5,193 (100.0)	5,372 (100.0)

* Aggretege amount of foreign investment projects approved by the Indonesian authorities since 1967.

Source: Same as in Table 2.

investment projects particularly increased in the chemical and other industries, though the absolute amount of foreign investment in textiles still continued to be a substantial proportion during the period.

As mentioned above, foreign investment in Indonesia greatly increased from US\$254 million in 1967 to US\$5,372 million in 1978, playing an important role in her industrialization. This seems to imply that her reliance on foreign capital and technology was and still is very high. There is no doubt, however, that she will realize self-sustained economic growth if she can make the best possible use of her available natural resources and the huge pool of low-cost labour, developing dynamic local entrepreneurship and an efficient bureaucracy.

Repelita II (April 1974 - March 1979) aimed at securing an adequate supply of food and clothes, producing building materials to house the people, improving the social overhead capital and welfare facilities, and increasing employment opportunities with a target of 7.5% economic growth on the average.⁷⁾ Subsequently, Repelita III (April 1979 - March 1984) has planned a shift to export-substitution type industrialization with a somewhat modest target of 6.5% economic growth. For this period it is planned to increase per capita national income by 24%, increase industrial production at the average rate of 11% per annum, and decrease the share of

agricultural production from 31% to 27% of the GNP.⁸⁾

Practically speaking, however, Indonesia will continue to rely on foreign capital for 21% of the investment funds required to implement the 5-year plan for her socio-economic development. In this context, the BKPM (Badan Koordinasi Penanaman Modal -- Investment Coordination Agency), which was established in June 1973, has become the competent authority to control foreign investment in Indonesia. In February 1977, it announced an investment priority list with ramification in four areas: 1) priority areas with provision of tax exemption, special depreciation arrangement, etc., 2) beneficial areas in which 20% of the investment amount is deductible from profits with 5% for each year over 4 years, 3) free areas open to foreign investment with no preferential treatment, and 4) prohibited areas in which foreign investment is banned. In the priority list, the BKPM enumerated 831 industries in 1977 and 1,114 industries in 1978. The priority areas for local investors increased from 49% in 1977 to 56% of the listed industries in 1978. On the other hand, the priority areas for foreign investors decreased from 31% in 1977 to 14% in 1978, and the prohibited areas for foreign investment increased from 48% in 1977 to 69% in 1978.⁹⁾

It can thus be said that Indonesia has come to take an increasingly selective policy towards foreign investment while giving more incentives and priorities to investment by

locals, especially pure Indonesians.

B. Malaysia

Unlike many other Southeast Asian countries, Malaysia has been endowed with a combination of favourable conditions for economic growth -- a rich resource base, relatively low population pressure, good supply of entrepreneurial skills, reasonably efficient bureaucracy as well as adequate infra-structural facilities. These favourable conditions have enabled Malaysia to enjoy the highest per capital income level only next to Singapore in South and Southeast Asia.

Malaysian industrialization began with the production and processing of primary products. As a matter of fact, up to 1957 rubber and tin accounted for 85% of her gross export proceeds. It was recognized, however, that the world demand for these primary products was weakening and the fluctuations in their export earnings might have adverse effects on the economy at large. This recognition led to a development plan to diversify economic activities and develop manufacturing industries.

Thus, the First Malaysian Plan (1966-70) was set up to commit the country to industrial diversification and economic growth. The main objective of the plan was of course to improve the living standard of all races in the country. Even by 1970, however, the mean monthly income of Malay households

was M\$179 while that of Chinese and Indian households was M\$387 and M\$380, respectively. The main reason for Malay low incomes was that they were often engaged in the lowly rewarded agricultural sector and seldom represented in the modern urban sector. Under these circumstances, their social unrest in 1969 lead to an overall review of the national development strategies, and finally led to the formulation of the New Economic Policy.¹⁰⁾ The NEP is a long-term socio-economic policy designed to achieve national unity through the two-pronged objectives of eradicating poverty irrespective of race and restructuring society to eliminate the identification of race with economic function.¹¹⁾

To realize the basic objectives of the NEP, the Second Malaysian Plan (1971-75) was established with a strong bias towards 'equity' as opposed to 'growth'. It thus aimed at drastically reducing the economic imbalance existing between the Malays (bumiputras) and the other races.

Meanwhile, Malaysia enacted the Pioneer Industries Ordinance in 1958 to initiate import-substitution type of industrialization. With the introduction of tariff protection and other qualitative restrictions for imports, Malaysia began an active policy to attract foreign capital for her industrial development. As a result, foreign investment, especially that of the U.S.A. and Japan, remarkably increased

in the manufacturing sector towards the end of the 1960's where British capital had conventionally occupied a dominant position.

In 1968, the Government replaced the PIO by the new Investment Incentive Act with a view to more elaborate incentive structure tax relief measures to promote the development of specific priority industries, the dispersion of industrial activities to rural areas and the increase in the domestic value-added of manufactured products.

Furthermore, the IIA was partially revised in September 1971 to direct foreign investment to the following areas or sectors: i.e., 1) labour-intensive and export industries (assembly of electronic components, processed textiles, etc.) rather than import-substitution industries, 2) export-oriented industries which utilize locally available raw materials and increase their value-added by the manufacturing of the export goods, and 3) the geographical areas where industries are underdeveloped or non-existent. At the same time, the revision of the IIA resulted in a severer restriction on the share of foreign capital. Thus, since the Second Malaysia Plan, the share of foreign capital in already existing companies is to be leveled down to 50% and that in newly established enterprises has been required to be 49% or less with the purpose that the bumiputras will control 30% of the capital ownership and hold the top management

positions in the commerce and manufacturing industries within 20 years.¹²⁾

Thus, foreign investment has become to be controlled to a large extent by the 'Malayanisation' of the NEP. Nevertheless, it has taken a substantial share of the total capital investment in Malaysia. As of 1972, it marked 81.6% of the total capital investment in the petroleum and coal industries of West Malaysia, 68.0% in the chemicals and chemical products, 63.7% in the food and beverage industries, and 59.8% in the machinery and transport industries, though it was only 32.9% in the textile industry.¹³⁾

Table 4 indicates the amount of foreign investment in the pioneer industries of Malaysia by country origin. As is shown there, Japan invested M\$44.9 million or 11.4% of the total amount at the end of 1971. At the end of 1977, however, Japanese investment increased more than five times to M\$239.6 million or 23.4% of the total, which came to occupy the largest share of all the countries. On the other hand, Singapore invested M\$116.2 million at the end of 1971, which was the largest investor (29.4% of the total). She also increased her investment to M\$225.8 million constituting 22.0% of the total amount at the end of 1977. During the same period, the U.S.A. increased investment from M\$60.7 million (15.4% of the total) to M\$190.8 million (18.6% of the total). The relative share of the U.K. decreased from

Table 4 Foreign Investment in Pioneer Industries
of Malaysia by Country Origin

Unit: M\$ million; (%)

Country Origin	1971 End of Dec.	1972 End of Dec.	1973 End of Dec.	1974 End of Dec.	1975 End of Dec.	1976 End of Dec.	1977 End of Dec.
Japan	44.9 (11.4)	46.7 (11.6)	48.7 (10.0)	117.7 (19.5)	148.6 (19.9)	184.1 (20.7)	239.6 (23.4)
Singapore	116.2 (29.4)	85.1 (21.1)	139.8 (28.7)	162.8 (26.9)	185.0 (24.7)	196.5 (22.1)	225.8 (22.0)
U.S.A.	60.7 (15.4)	61.7 (15.4)	91.7 (18.8)	81.2 (13.4)	106.4 (14.2)	162.7 (18.3)	190.8 (18.6)
Hong Kong	33.6 (8.5)	38.3 (9.5)	44.4 (9.1)	45.9 (7.6)	104.2 (13.9)	93.8 (10.5)	166.3 (16.2)
U.K.	84.5 (21.4)	85.0 (21.1)	91.2 (18.7)	93.4 (15.5)	104.9 (14.0)	123.3 (13.8)	123.7 (12.1)
Others	55.4 (14.0)	85.7 (21.3)	72.0 (14.8)	103.3 (17.1)	99.2 (13.3)	129.9 (14.6)	78.0 (7.6)
TOTAL	395.3 (100.0)	402.7 (100.0)	487.8 (100.0)	604.3 (100.0)	748.3 (100.0)	890.3 (100.0)	1,024.2 (100.0)

Source: Same as in Table 2.

21.4% in 1971 to 12.1% in 1977, though the absolute amount of her investment itself increased from M\$84.5 million to M\$123.7 million. The total amount of foreign investment in the pioneer industries increased about 2.6 times from M\$395.3 million at the end of 1971 to M\$1,024.2 million.

Table 5 indicates the foreign investment by industry from the end of 1972 to the end of 1977. During the period, foreign investment in the electric and electronic industry increased about 7.8 times in amount and the relative share rose from 5.9% to 18.1%. At the same time, foreign investment in the textile industry also increased about 6.8 times and the relative share increased from 6.6% to 17.6% during the period. It should be noted, however, that the relative share of foreign investment in the metal, food and beverage, petroleum and chemical industries decreased more or less during the period, though the absolute amount of investment in these industries was on the increase.

In the Third Malaysian Plan (1976-80) about 60% of the total investment amount is expected to come from private sources (M\$26,500 million), 86% of which is to be supplied by local investors. In the first two years, domestic private capital failed to attain the target. Consequently, the Government attenuated its policies in favour of Malay interests to attract more foreign capital and capital of non-bumiputras. As a matter of fact, the

Table 5 Foreign Investment in Pioneer Industries
Of Malaysia by Industry

Unit: M\$ million; (%)

Industry	1972 End of Dec.	1973 End of Dec.	1974 End of Dec.	1975 End of Dec.	1976 End of Dec.	1977 End of Dec.
Electric & Electronic	23.8 (5.9)	26.2 (5.5)	90.9 (15.0)	131.6 (17.6)	168.5 (18.9)	185.7 (18.1)
Textile	26.6 (6.6)	57.6 (12.1)	51.7 (8.6)	64.6 (8.6)	137.2 (15.4)	180.7 (17.6)
Metals	75.6 (18.8)	111.7 (23.4)	144.5 (23.9)	147.9 (19.8)	135.6 (15.2)	137.4 (13.4)
Food & Beverage	81.0 (20.1)	88.4 (18.5)	109.7 (18.2)	118.5 (15.8)	117.3 (13.2)	134.1 (13.1)
Petroleum	94.7 (23.5)	74.6 (15.7)	74.6 (12.3)	107.1 (14.3)	112.5 (12.6)	112.5 (11.0)
Chemicals	54.5 (13.5)	55.1 (11.6)	59.1 (9.8)	72.3 (9.7)	92.5 (10.4)	98.6 (9.6)
Rubber	17.9 (4.4)	20.3 (4.3)	20.3 (3.4)	41.1 (5.5)	58.3 (6.5)	62.3 (6.1)
Wood products	13.0 (3.2)	17.6 (3.7)	23.9 (4.0)	31.4 (4.2)	30.3 (3.4)	35.0 (3.4)
Others	15.6 (3.9)	25.1 (5.3)	29.5 (4.9)	33.8 (4.5)	38.1 (4.3)	77.9 (7.6)
TOTAL	402.7 (100.0)	476.6 (100.0)	604.2 (100.0)	748.3 (100.0)	890.3 (100.0)	1,024.2 (100.0)

Source: Same as in Table 2.

Government approved 187 projects with foreign capital in 1976, 23% of which were projects with a majority share of foreign capital. Furthermore, though the employment visa for foreigners used to be controlled severely, it has been issued at the time of project application to the competent authority.¹⁴⁾

C. Philippines

After her independence in 1946, the Philippines came to rehabilitate and reconstruct the economy which had been seriously damaged in World War II. Industrial policy was virtually nonexistent until she took a deliberate industrializing policy in the 1950's.

Like other countries, however, it started with the import-substitution type of industrialization with a two-pronged approach consisting of tax exemptions on one hand and import and exchange control policies on the other. Tax exemptions were given to the "new and necessary" industries under Republic Act No. 35 in 1946 and later in 1953, under Republic Act No. 901. On the other hand, import controls were first imposed in 1949 to restrict the outflow of foreign exchange but afterwards, they came to favour certain types of imports, intermediate goods in particular.¹⁵⁾ As a result, industries mushroomed behind the tariff walls between 1950 and 1957, resulting in a very high economic growth of 11 percent during the period.

The Philippine economy, however, became more dependent on imports and endangered her international balance of payments, which her domestic industries remained very much in their 'infant' stage. Wong described it as follows:

The next phase, starting from 1956, witnessed a sharp deceleration in manufacturing growth, culminating in the devaluation of the peso in 1962. Despite exchange rate adjustments, industrial stagnation continued while import substitution dragged on with no immediate prospects of proceeding on to a more dynamic 'export-substitution' phase of growth. . . . Thus two decades of industrialization efforts via the 'import-dependent import-substitution' in the Philippines only resulted in a badly distorted industrial structure in terms of output mix.¹⁶⁾

In 1962, the wholesale lifting of controls on all foreign exchange transactions had an immediate impact on foreign investment. They were liberated from quantitative restrictions on profit remittance, capital transfer and the availability of foreign exchange for both commodity inputs and invisible payments at the prevailing exchange rate.

The enactment of the Investment Incentive Act in 1967

was an important milestone in Philippine economic legislation. It was the first purposive attempt to define the specific incentives for Philippine nationals as well as the areas open to foreign investment and to make foreign investment consistent with national development objectives. To cite the explanation of Tanchoco-Subido, the substance of the law was as follows:

Under the law, a foreign enterprise may be registered and extended fiscal incentives if it enters an area classified as "pioneer" investment. "Preferred" areas of investment are open to foreign investments on a joint venture basis up to 40 per cent of total project equity. There are two criteria under which a firm may be permitted to engage in "preferred" activities, namely if it is primarily export-oriented and if the area is not adequately served by Filipino business. Moreover, a completely foreign owned firm has to divest equity to attain the status of Philippine national within a certain number of years. The preferred areas of investments are listed in the Investment Priorities Plan (IPP) and the Public Utilities Priorities Plan (PUPP) which are prepared annually by the Board of Investments (BOI), the main regulatory authority over foreign investments.¹⁷⁾

At the same time, the law provides for a basic principle of employing Philippine nationals in all foreign firms. However, in case foreign firms require technical and professional manpower who cannot be supplied in the local labour market, the law admits as an exception that they hire foreigners for a period not exceeding two years. And, if they are registered in the 'preferred' investment area, they can employ foreigners as engineers, supervisors or advisors within a period of five years after the registration.¹⁸⁾

In addition to the law, there are two other basic laws in effect serving to control foreign investment in the Philippines. One is the Export Incentives Act of 1970 to promote new types of export industries or utilize excess manufacturing for export, especially labour-intensive industries. Exportable products covered by this law are drawn up in the annual Export Priorities Plan (EPP) which is also prepared by the BOI. Under the law, the "export promotion enterprises" approved by authorities are entitled to the deduction of double the expenses for sales promotion from taxable corporate income, the exemption of tariffs which are to be levied on the imported machinery and equipment, and the extension of the normal five-year redemption period for foreign currency loans to eight years.¹⁹⁾

Another legislation for controlling foreign investment is the Foreign Business Regulation Act of 1968. It is an

act 'to require that the making of investments and the doing of business within the Philippines by foreigners or business organization owned in whole or in part by foreigners should contribute to the sound and balanced development of the national economy on a self-sustaining basis, and for other purposes'. Under the law, a foreign firm is permissible if it operates with a capital share of 30% or less. It is required to register at the BOI if the share exceeds 30%.²⁰⁾

Industrialization in the Philippines went slowly as compared with the other ASEAN countries. In fact, the value-added of Filipino manufacturing grew at the average rate of 4.6% during 1960 and 1969, the lowest growth rate in the ASEAN countries. Furthermore, the growth of domestic product in Filipino manufacturing was 7.0% on the average during 1970 and 1974, and it decreased to 3.5% in 1975. These rates of growth were also low for ASEAN countries. In terms of industrial distribution of GDP, however, the share of Filipino manufacturing increased from 17.5% in 1965 to 24.3% in 1975.²¹⁾

Obviously, foreign investment played a dominant role in the process of industrialization. In terms of foreign share in the total investment with foreign equity in the Philippines, it was only 24.4% in 1968 but jumped up to 54.9% in 1969. Later, it reached a peak of 64.4% in 1971 and then slightly lowered to 61.8% in 1974 with ups and downs.²²⁾

Table 6 indicates the aggregate amount of foreign investment registered at the BOI by country origin. As shown there, the aggregate amount was ₱3,777 million at the end of 1970, which moderately increased to ₱4,179 million at the end of 1977. By country origin, U.S. investment played an overwhelming part in 1970, registering 79.3% of the total. It continued to be dominant during the period, though the share declined to 33.1% in 1977. On the other hand, Japanese investment was negligible in 1970 but it enormously increased to ₱1,058 million or 25.3% of the total in 1977. Thus, if U.S. and Japanese investments are added together, they constituted a majority of foreign investments in the Philippines throughout the period.

Table 7 shows the aggregate amount of foreign investment by industry. Because of changed methods of industrial classification, it is divided into two parts. As is shown in Table 7-(1), 57.7% of foreign investment was directed to manufacturing, while 14.5% was invested in mining and 11.4% in service at the end of 1970. At the end of 1971, however, the share of manufacturing was down to 33.1%, while that of public utilities went up to 14.9%.

Meanwhile, Table 7-(2) indicates that agro-based industries attracted greater amounts of foreign investment increasing the share from 9.7% of the total to 14.3% from September 1973 to December 1977. The shares of other

Table 6 Foreign Investment in the Philippines*
by Country Origin

Unit: Million pesos/US\$ million;
(%)

Country Origin	1970 End of Dec. (M. Pesos)	1972 End of Jan. (M.US\$)	1973 End of Sep. (M.US\$)	1976 End of Mar. (M. Pesos)	1976 End of Dec. (M. pesos)	1977 End of Dec. (M. pesos)
U.S.A.	2,996 (79.3)	950.2 (51.9)	169.1 (24.8)	1,168 (30.2)	1,292 (33.6)	1,384 (33.1)
Japan	40 (1.1)	436.6 (23.9)	324.7 (47.5)	943 (24.4)	991 (25.8)	1,058 (25.3)
U.K.	101 (2.7)	90.4 (4.9)	n.a.	312 (8.1)	334 (8.7)	352 (8.4)
Switzerland	20 (0.5)	26.2 (1.4)	n.a.	157 (4.1)	185 (4.8)	195 (4.7)
Australia	n.a.	n.a.	n.a.	159 (4.1)	179 (4.7)	188 (4.5)
Others	620 (16.4)	326.5 (17.8)	189.2 (27.7)	1,129 (29.2)	862 (22.4)	1,002 (24.0)
TOTAL	3,777 (100.0)	1,829.9 (100.0)	683.0 (100.0)	3,868 (100.0)	3,843 (100.0)	4,179 (100.0)

* Aggregate foreign investment registered at the BOI since 1968.

Source: Same as in Table 2.

Table 7-(1) Balance of Foreign Investment in the
Philippines by Industry

Industry	Unit: Million pesos/US\$ million; (%)	
	1970 End of Dec. (M. Pesos)	1971 End of Dec. (M. US\$)
Manufacturing	2,179.3 (57.7)	693.7 (33.1)
Mining	547.7 (14.5)	25.6 (1.2)
Service	430.6 (11.4)	40.7 (1.9)
Commerce	404.1 (10.7)	127.8 (6.1)
Public Utilities*	200.2 (5.3)	311.2 (14.9)
Construction	11.3 (0.3)	11.6 (0.6)
Agriculture	3.8 (0.1)	27.1 (1.3)
Others	-	856.7 (40.9)
TOTAL	3,777.0 (100.0)	2,094.4 (100.0)

* Including transport, communication, electricity, etc.

Source: JETRO, op. cit., 1972-1973 editions.

Table 7-(2) Foreign Investment in the Philippines
by Industry

Unit: Million Pesos/US\$ million;
(%)

Industry	1973 ¹⁾ End of Sept. (M.US\$)	1976 ¹⁾ End of Mar. (M. pesos)	1976 ²⁾ End of Dec. (M. pesos)	1977 ²⁾ End of Dec. (M. pesos)
Mining & Mineral Processing	180.1 (26.4)	1,285 (33.2)	1,016 (26.4)	1,020 (24.4)
Chemical-based	242.8 (35.5)	592 (15.3)	639 (16.6)	705 (16.9)
Agro-based	66.2 (9.7)	590 (15.3)	572 (14.9)	597 (14.3)
Metal-based	183.8 (26.9)	427 (11.0)	457 (11.9)	573 (13.7)
Others	10.1 (1.5)	975 (25.2)	1,159 (30.2)	1,284 (30.7)
	683.0 (100.0)	3,868 (100.0)	3,843 (100.0)	4,179 (100.0)

Notes: 1) Balance of foreign investment in the "priority" industries registered at the BOI.

2) Aggregate investment of foreign firms registered at the BOI since 1968.

Source: JETRO, op. cit., 1975-1978/79 editions.

industries, however, all decreased during the period. In particular, the share of chemical-based industries declined from 35.5% to 16.9%, while that of metal-based industries declined from 26.9% to 13.7%.

Thus in the 1970's, the Philippines has shifted her industrializing policy from the 'import dependent import substitution' to more dynamic 'export substitution'. In the New 5-Year Plan (1978-82) she set the target of average 7.7% annual growth. Whether or not she will succeed in attaining this target is certainly dependent on the growth of her export industries. Furthermore, the economic development plan expected to attract foreign investment of U.S.\$ 598 million in total for the five years. This clearly implies that she will continue to rely on foreign capital and technology to a substantial extent in her efforts for industrialization.²³⁾

D. Singapore

Singapore had a long history of entrepôt trading like Hong Kong and it had been the main source of income for the economy up to the 1950's. Towards the end of the decade, however, she recognized that entrepôt trade could no longer be a viable vehicle for economic growth and in the 1960's, stepped down the path of industrialization.

Singapore also recognized that industrialization was

the only answer to her population explosion and rising unemployment at that time. She had and now has such economic disadvantages as lack of natural resources, virtually non-existence of the primary sector, and the smallness of the domestic market. The only productive assets she had to depend on were human resources.

On the other hand, Singapore had several economic advantages. Towards the end of the 1950's she had already developed fairly modern industries, so that she did not have to start from scratch as in the case of Indonesia and Thailand. As a free trade centre, she had already built up reasonably efficient services related to business activities including those in transport and communications, banking and insurance services, civil service, etc. What is more important, she did not suffer from the shortages of entrepreneurship and well-educated hard-working labour, which have often been the bottlenecks in the industrialization of other Southeast Asian countries. Besides, planning for industrial development in the city-state economy of Singapore is far more manageable than in a large country with a lagging rural sector. Geographically, Singapore is located at the strategic crossroads of international trade and traffic routes, and politically, she has been stable enough to attract foreign investors, especially since her independence in 1965.²⁴⁾

With these economic advantages, Singapore transformed the

entrepôt trade centre to a dynamic industrial city-state by actively developing her human resources through training and education. In making efforts for industrialization, she set up the Economic Development Board (EDB) in 1960 to engage in aggressive investment promotion with a whole package of incentives. Like her neighbouring countries, she initially passed the phase of import-substituting industrialization but it lasted only briefly from 1965 to 1969. The period was the most difficult time for the country's economic development, as serious problems arising from the political separation from Malaysia and the British military withdrawal were encountered. To solve these problems, the Government liberalized more economic incentives to stimulate industrial growth and tighten up industrial discipline (e.g., banning unlawful strikes). To overcome the limitations of the domestic market, Singapore heavily emphasized the development of export-oriented industries from the beginning, which in turn shortened the phase of import-substituting industrialization. By 1970, Singapore had weathered the difficult period and succeeded in creating a favourable institutional framework for attracting foreign capital.

Indeed, foreign capital has played a dominant role in the industrial growth of Singapore. Wong described it as follows:

In 1971, when Singapore's manufacturing sector

started to become export-oriented, wholly foreign-owned firms accounted for 75 per cent of total industrial value-added, 75 per cent of total direct industrial exports and 63 per cent of total industrial employment. In 1975, wholly owned firms, which constituted 17 per cent of the total industrial establishments in this city-republic, still accounted for 49 per cent of industrial value-added, 67 per cent of export sales and 36 per cent of employment. The most single important impact of foreign investment in Singapore's manufacturing sector lies in its contribution to export performance. By 1975 the wholly foreign-owned firms together with joint ventures accounted for 91.1 per cent of direct export sales, with wholly local firms contributing a mere 8.9 per cent.²⁵⁾

Table 8 indicates the balance of foreign investment in Singapore by country origin from 1971 to 1977. The total amount of foreign investment was S\$1,180 million at the end of 1971, which subsequently continued to increase and more than tripled to S\$4,145 million at the end of 1977. By country origin, the U.S.A. continued to be the largest investor in Singapore, though the share decreased from the peak of 37.6% in 1973 to 33.0% in 1977. On the other hand, Japan occupied only 6.9% of the total foreign investment in

Table 8 Balance of Foreign Investment in Singapore
by Country Origin

Unit: S\$ million; (%)

Country	1971 End of June	1972 End of June	1973 End of June	1974 End of June	1975 End of Dec.	1976 End of Dec.	1977 End of Dec.
U.S.A.	402 (34.1)	618 (33.0)	930 (37.6)	1,028 (35.8)	1,119 (33.1)	1,233 (33.0)	1,366 (33.0)
Japan	81 (6.9)	113 (6.0)	175 (7.1)	299 (10.4)	454 (13.4)	525 (14.0)	633 (15.3)
Netherlands	220 (18.6)	328 (17.5)	363 (14.7)	395 (13.8)	473 (14.0)	525 (14.0)	571 (13.8)
U.K.	246 (20.8)	344 (18.4)	377 (15.2)	406 (14.2)	481 (14.2)	555 (14.8)	566 (13.7)
West Germany	6 (0.5)	53 (2.8)	118 (4.8)	113 (3.9)	107 (3.2)	115 (3.1)	130 (3.1)
Others	225 (19.1)	418 (22.3)	510 (20.6)	628 (21.9)	746 (22.1)	786 (21.0)	879 (21.2)
TOTAL	1,180 (100.0)	1,874 (100.0)	2,473 (100.0)	2,869 (100.0)	3,380 (100.0)	3,739 (100.0)	4,145 (100.0)

Source: Same as in Table 2.

1971 but steadily continued to increase to 15.3% in 1977. The Netherlands and the U.K. were substantially large investors in 1971 but later decreased their shares to 13.8% and 13.7% in 1977 respectively, though their absolute investment amounts more than doubled during the period.

Table 9 shows the balance of foreign investment in Singapore by industry. As is indicated there, 53% of foreign capital was invested in the petroleum industry in 1971. Afterwards the share declined to 39.0% in 1977, though the amount itself increased about 2.6 times during the period. On the other hand, foreign investment in the electric and electronic industry increased its share from 9.1% in 1971 to 12.2% in 1977. Similarly, the shares of foreign investment in machinery, metals and textiles all increased during the period. Foreign investments in transport equipment, chemicals, precision equipment and photographic goods and food and beverage, however, decreased their relative shares, though they increased in amount in all the industries.

Such a large inflow of foreign capital as described above was certainly attributable to the active outward-looking and open door policies of Singapore. In retrospect, the Pioneer Industries (Relief from Tax) Ordinance of 1959 was the first deliberate action of the Government to promote industrial growth with a package of tax relief measures. Under the law, the investors, both local and foreign,

Table 9 Balance of Foreign Investment in Singapore
by Industry

Unit: S\$ million; (%)

Industry	1971 End of June	1972 End of June	1973 End of June	1974 End of June	1975 End of Dec.	1976 End of Dec.	1977 End of Dec.
Petroleum	625 (53.0)	917 (48.9)	1,228 (49.7)	1,285 (44.8)	1,426 (42.2)	1,520 (40.7)	1,617 (39.0)
Elec./Electronic products	107 (9.1)	177 (9.5)	262 (10.6)	357 (12.4)	354 (10.5)	412 (11.0)	505 (12.2)
Machinery	-	80 (4.3)	105 (4.2)	150 (5.2)	327 (9.7)	336 (9.0)	385 (9.3)
Transport equipment	124 (10.5)	89 (4.7)	101 (4.1)	162 (5.6)	209 (6.2)	247 (6.6)	287 (6.9)
Metals	-	62 (3.3)	66 (2.7)	78 (2.7)	96 (2.8)	113 (3.0)	261 (6.7)
Textiles	52 (4.4)	125 (6.7)	162 (6.6)	212 (7.4)	236 (7.0)	230 (6.2)	255 (6.2)
Chemicals	72 (6.1)	130 (6.9)	126 (5.1)	136 (4.7)	171 (5.1)	202 (5.4)	176 (4.2)
Precision equip./ photographic goods	-	-	115 (4.7)	105 (3.7)	142 (4.2)	150 (4.0)	172 (4.1)
Wood & cork	-	73 (3.9)	-	144 (5.0)	159 (4.7)	153 (4.1)	162 (3.9)
Food & beverage	47 (4.0)	58 (3.1)	75 (3.0)	102 (3.6)	123 (3.6)	130 (3.5)	143 (3.4)
Others	153 (13.0)	163 (8.7)	233 (9.4)	138 (4.8)	137 (4.1)	246 (6.6)	182 (4.4)
	1,180 (100.0)	1,874 (100.0)	2,473 (100.0)	2,869 (100.0)	3,380 (100.0)	3,739 (100.0)	4,145 (100.0)

Source: Same as in Table 2.

who were approved for 'pioneer' status were provided with tax exemptions over a certain period of years.

In 1967, the Government enacted the Economic Expansion Incentives Act to further its open door policy towards foreign investment by extending tax relief measures to not only pioneer industries but also to export-oriented industries and other industries which had already been in existence. As industrialization in Singapore subsequently advanced more rapidly than had been expected, the Government revised the law in 1970 to admit tax exemptions on a more selective basis. As a result, a number of consumer goods industries where local-capital firms considerably succeeded in import-substitution were dropped from the list of pioneer industries. Furthermore, foreign-capital firms directed to only the domestic market came to be deprived of their eligibility to apply for pioneer status. On the other hand, such technology-intensive and high value-added industries as precision machinery and component parts for electronic goods and aircrafts were newly added to the list of pioneer industries. Finally, foreign investment projects applicable for pioneer status have been required to increase their capital size to S\$1,000,000 at the minimum, which was raised four times from the previous minimum of S\$250,000.²⁶⁾

As is implied by the entrepôt tradition, Singapore has been more liberal to foreign investment than any other ASEAN

countries. She has laid down virtually no regulation or control over the foreign capital share of manufacturing industries, the hiring of foreigners and the local contents of manufactured products. Furthermore, she has allowed utmost freedom for foreign investors to exchange foreign currencies, buy Asian-dollars (after June 1978) and remit profits overseas.

Such a liberal open door policy has thus greatly contributed to the phenomenal success of industrialization in Singapore. As she is expected to develop more technology-intensive and high value-added industries, she will increasingly need a continuous inflow of foreign capital and technology, especially emanating from the advanced industrial countries. At the same time, she will also have to expand her exports for her survival in the international economy. To raise her competitive advantage in the international market, she will have to continue her efforts to increase the productivity of workers by further skill training, and motivating them to work for her next phase of industrialization.

E. Thailand

In contrast with Singapore, Thailand has been predominantly an agricultural economy. Since World War II the main source of economic growth in Thailand has been derived from increased primary products: rice, maize, sugar, rubber and tin. Before

her modern industrialization, rice and lumber milling and the production of cottage and handicraft type products such as pottery, and home-woven textiles were the two major types of manufacturing activities, both of which were operating on a small scale. Thus Thailand started her industrial development from a very low level.

The modern industrialization in Thailand may be said to have begun in 1954 with the passing of the Industrial Promotion Act. This law was intended to provide tax exemptions, tariff protection and other forms of preferential arrangements to potential industrialists, thereby laying down the preconditions for import-substitution. However, it did not work as well as had been expected, and manufacturing industries did not mushroom in Thailand as in the Philippines. This was partly due to the vague provisions of the law and inadequate administrative machinery of the Government. More fundamentally, it was because Thailand was in acute shortages of such basic factors as capital, technology, power, infrastructure and entrepreneurs, which are commonly regarded as the indispensable prerequisites of modern industrialization.²⁷⁾

Towards the end of the 1950's, the Government became aware of the poor performance of Thai industries and decided to adopt the recommendations of the World Bank Mission in 1958 calling for a radical change in the existing restrictive industrialization policies. Then, based on the recommendations,

the Government launched the First Economic Development Plan (1961-66) to provide more effective incentives to the private sector while indiscriminately using the entrepreneurship of the Chinese minority in the country.

Along with the deliberate policy for industrialization, the Board of Investment (BOI) was established in 1959 as a major regulatory government office over foreign investment and the Investment Promotion Act was newly enacted in 1962 to drastically change the previous Industrial Promotion Act. This new law laid down the groundwork for attracting and controlling foreign investment in Thailand until it was revised in 1972. As a matter of fact, it gave impetus to the subsequent rapid growth of foreign investment in the country.

The law of 1962 was designed to provide incentives to the 'promoted' firms as follows: (1) The 'promoted' firms approved by the BOI operate in the industries not competing with the state-owned corporations. (2) The 'promoted' firms will not be nationalized. (3) They can own the land necessary for their business activities. (4) They can freely remit capital and profits overseas. (5) They are given facilities for employing alien technical and skilled manpower required for their operations. (6) Their corporate income is non-taxable for five years after the start of their operations. (7) They are also entitled to tax exemptions on their imported

machinery, parts and raw materials. More specially, these 'promoted' firms are classified into three categories (A, B and C) in terms of the local contents of their products, their backward-linkage effect in Thai industries, their employment effects, etc. Thus, the preferential treatment is to vary with the degree of contributions that the 'promoted' enterprises may make to the economic development of the country.²⁸⁾

As shown in Table 10, the number of promoted firms continued to increase after 1960 and it increased enormously in the early 1970's. It should be noted that the promoted enterprises of Thai nationals numbered 29 out of the total 64 (45.3%) in 1960-62, which increased to 447 (50.9% of the total 878) in 1975. On the other hand, the total amount of capital registered for the promoted firms was 994.31 million baht in 1960-62, which subsequently increased about 13.3 times to 13,184.98 million baht in 1975. During the same period, the aggregate amount of Thai capital increased about 12.6 times, while that of foreign capital rose about 15.1 times. Thus, the relative share of foreign capital slightly increased from 24.9% in 1960-62 to 28.5% in 1975.

More recent trends in foreign investment in the promoted firms is shown by country origin in Table 11. As is indicated there, the aggregate amount of foreign investment was 2,036 million baht at the end of 1971 and it increased to 3,776 million baht at the end of 1977. By country origin, Japan

Table 10 Aggregate Amount of Investment in Promoted Firms in Thailand

	<u>1960/62</u>	<u>1963/65</u>	<u>1966/68</u>	<u>1969/71</u>	<u>1971/74</u>	<u>1975*</u>
Firms Approved	77	154	202	201	421	1,067
Firms Invested	64	131	181	150	346	878
Thai	29	47	82	73	214	445
Foreign	1	1	13	3	5	23
Joint Venture	34	83	86	74	127	404
Capital Registered						
(Unit: Million baht)						
Total	994.31	1,274.38	2,112.62	2,679.20	5,831.30	13,184.98
Thai	746.33	773.85	1,437.87	1,794.12	4,424.94	9,429.51
Foreign	247.98	500.53	674.27	885.08	1,406.36	3,775.47
Thai Employees	30,590	26,380	24,984	36,115	125,844	245,036

* Aggregate as of the end of April, 1975.

Source: BOI as cited in Japan Institute of Labour, op. cit., p. 83.

Table 11 Foreign Investment in Thailand*
by Country Origin

Unit: Million Baht; (%)

Country Origin	1971 End of Dec.	1972 End of Dec.	1974 End of June	1975 End of Dec.	1976 End of Dec.	1977 End of Dec.
Japan	845 (41.5)	965 (37.5)	1,324 (41.5)	1,518 (38.5)	1,521 (38.2)	1,321 (35.0)
U.S.A.	408 (20.0)	356 (13.9)	469 (14.7)	547 (13.9)	622 (15.6)	615 (16.3)
Taiwan	372 (18.3)	403 (15.7)	483 (15.2)	451 (11.4)	465 (11.7)	460 (12.2)
Hong Kong	33 (1.6)	36 (1.4)	53 (1.7)	224 (5.7)	225 (5.7)	226 (6.0)
U.K.	135 (6.6)	135 (5.3)	135 (4.2)	198 (5.0)	189 (4.7)	189 (5.2)
Others	243 (11.9)	675 (26.3)	723 (22.7)	1,004 (25.5)	959 (24.1)	965 (25.6)
TOTAL	2,036 (100.0)	2,570 (100.0)	3,187 (100.0)	3,942 (100.0)	3,981 (100.0)	3,776 (100.0)

* Aggregate foreign investment in promoted firms approved by the BOI.

Source: Same as in Table.

continued to top the relative share, though it decreased from 41.5% to 35.0% during the period.²⁹⁾ The U.S.A. occupied 20.0% of the total in 1971, which also decreased slightly to 16.3% in 1977. Thus, when Japan and the U.S.A. are added together, they continued to occupy the majority share during the period, as in the case of Indonesia and the Philippines. It should be noted here that the relative shares of Hong Kong and other countries increased to a great extent during the period.

Table 12 indicates the aggregate amount of foreign investment by industry. As the data with an industrial classification was not available for 1971-77, the table refers to the data for 1976 and 1977 only. As is shown there, at the end of 1977, 26.7% of the foreign capital was invested in the Thai textile industry; 20.0%, in the mining industry; 18.6%, in the petroleum and chemical industries; and 13.5%, in the machinery and electric industries. Meanwhile, investment in agriculture and fishery occupied 9.5% of the total and that in service, 8.6%. It is noticeable that the total amount of foreign investment slightly decreased from 1976 to 1977.

This enormous expansion of foreign investment in Thailand should not be taken to imply that her industrialization has proceeded quite smoothly to realize the self-sustained growth of a modern manufacturing sector. On the contrary,

Table 12 Foreign Investment in Thailand*
by Industry

Unit: Million baht; (%)

Industry	1976 End of Dec.	1977 End of Dec.
Textile	1,067 (26.8)	1,007 (26.7)
Mining	755 (19.0)	755 (20.0)
Petroleum/ Chemical	840 (21.1)	703 (18.6)
Machinery/ Electric	513 (12.9)	509 (13.5)
Agriculture/ Fishery	367 (9.2)	360 (9.5)
Service	321 (8.1)	325 (8.6)
Construction	30 (0.8)	30 (0.8)
Others	88 (2.2)	87 (2.3)
TOTAL	3,981 (100.0)	3,776 (100.0)

* Aggregate foreign investment in promoted firms approved by the BOI.

Source: JETRO, op. cit., 1978/79 edition.

she has not averted many standard structural problems that commonly plague import substitution. As in the Philippines, finished products industries in Thailand were promoted at the expense of the traditional export sector through high protection and an overvalued currency. Thus the import-substitution process was also import dependent. Wong observed the Thai situation as follows:

The promoted firms, especially those foot-loose industries, tended to cash in short-term gains in the sheltered domestic market. Most firms were small and inefficient, producing for the urban enclave rather than for the mass rural market, while a few large ones were too capital-intensive in the local context, with heavy dependence on imported capital equipment and even raw materials. Much of the 'untidy' nature of the manufacturing sector of Thailand today, in the sense of structural and regional imbalances, could in fact be traced to the unimaginative promotional activities of the 1960's, which was really a period of great industrial laissez-faire!³⁰⁾

Thus in the 1970's, the Government has taken a number of remedial measures to promote exports and to discourage excessive industrial imports. Along with this line of policy, the promotional incentive scheme has been reviewed to make it more

rational and selective. In this context, the new Investment Promotion Act was laid down to promote export-oriented industries, heavy-chemical industries and industries highly utilizing locally processed parts and materials.

Also in 1972, the Alien Business Law was enacted to restrict the types of business in which foreigners can operate in Thailand. Under the law, they are prohibited from newly entering in a number of business operations designated by the Government. Those foreign firms which had been operating prior to the enforcement of the law are required to suspend their operations within two years if they operate in prohibited types of business or if foreign investors own the majority of the capital.

In 1973, the Alien Occupation Law was enacted to control the types of occupations in which foreigners can engage in Thailand and to restrict the employment of aliens in foreign firms operating in the country. This law basically aims at replacing foreign managers and engineers by Thai nationals to man the foreign-capital and joint-venture companies doing business in Thailand.³¹⁾

As mentioned above, the Government has more selectively designated the areas of industry for its promotional purposes and at the same time it has virtually laid down the majority principle for Thai capital and various restrictions on the types of business and occupations in which aliens can engage

in Thailand. In the future, it is expected to increasingly emphasize the 'export-substitution' type of industrialization to produce durable consumer goods or even capital goods for exports. At the same time, however, it will also have to increase primary products for exports, especially through the development of agriculture and agro-based industries. To ensure success, the political stability of Thailand will be of prime importance.

Summary of the Overview

In this section, it has been made clear how foreign investment increased in the industrialization process of five ASEAN countries, what kind of policies the Governments have taken towards foreign investment, and what role foreign investment has played in the industrial development of these countries.

Of course, it is dangerous to make generalizations from such a sketchy description of industrial development in ASEAN countries, but some observations are presented here for a summary.

First, it can safely be said that foreign investment has played a vital role in the industrialization of all ASEAN countries. In particular, it seems to have made valuable contributions to supplying sizable amounts of capital for the development of modern industries, transferring advanced

technologies to local people and developing export-oriented or high value-added industries.

Secondly, virtually all ASEAN countries appear to have started their industrialization process in the 1950's but their main thrust for industrialization tend to have come in the 1960's. Obviously, all the countries have begun with the import-substitution type of industrialization, though the length of the period for such type of industrialization varied from country to country.

Thirdly, all the countries tend to have shifted their emphasis to the development of export-oriented industries and higher value-added industries in the 1970's. This does not imply, however, that they have come to neglect the development of their primary sector or traditional small-scale industries.

Fourthly, in line with their industrialization process, all ASEAN countries initially tend to have taken an open door policy towards foreign investment, which subsequently has turned into a more selective policy to make foreign investment contribute more effectively to their economic development. They have often come to restrict the types of industry for foreign investment, the relative share of foreign capital in investment projects, the amount of local material procurement in manufactured products, the hiring of foreigners in the foreign firms, etc.

Finally, all ASEAN countries will continue to rely on foreign capital inflow to further their industrialization process. For their survival in international competition, it is essential for them to keep a good balance between attracting more foreign capital and sorting out foreign capital really contributory to their industrialization.

Notes

- 1) John Wong (1979), p. 58.
- 2) Japan Institute of Labour (1976a), pp. 22-24.
- 3) Wong, op. cit., pp. 166 and 169.
- 4) Ibid., pp. 177-78.
- 5) JETRO (Japan External Trade Organization) (1972), pp. 63-64.
- 6) Japan Institute of Labour (1976a), op. cit., pp. 25-26.
- 7) Ibid., pp. 19-22.
- 8) JETRO, op. cit., 1978/79 edition, p. 109.
- 9) Idem, pp. 109-11.
- 10) Wong, op. cit., pp. 62-63.
- 11) Malaysia Government (1976), p. 2.
- 12) JETRO, op. cit., 1972 edition, p. 61. For this purpose, the Malaysia Government demanded the employer to hire his employees according to the following racial distribution: Malays (47%), Chinese (34%), Indians (9%) and Others (10%).
- 13) Wong, op. cit., p. 178.
- 14) JETRO (1978), op. cit., 1978/79 edition, pp. 103-104.
- 15) Subido, Chita Tanchoco (1978), pp. 30-33.
- 16) Wong, op. cit., pp. 68-69.
- 17) Subido, op. cit., pp. 35-36.
- 18) JETRO, op. cit., 1978/79 edition, p. 191.
- 19) Ibid., p. 190.
- 20) JETRO, op. cit., 1972 edition, pp. 64-65.
- 21) Wong, op. cit., pp. 166-168.

- 22) Ibid., p. 178.
- 23) JETRO, op. cit., 1978/79 edition, p. 98.
- 24) Wong, op. cit., pp. 71-73; Chwee-Huant Tau (1976), pp. 126-128.
- 25) Wong, op. cit., pp. 74-75.
- 26) JETRO, op. cit., 1972 edition, pp. 62-63; Japan Institute of Labour (1976b), pp. 31-38.
- 27) Wong, op. cit., pp. 76-77.
- 28) Japan Institute of Labour (1976b), pp. 84-85.
- 29) It should be remembered that Japan continued to be the largest investor only in terms of investment in the 'promoted' firms approved by the BOI. In terms of net direct foreign investment, however, U.S.A. continued to top the share during the period except 1973 and in 1975, the amount of net U.S. investment was almost double the size of Japanese investment. See Tambunlertchai Somsak (1977), p. 11.
- 30) Wong, op. cit., p. 79.
- 31) Japan Institute of Labour, op. cit., pp. 191-197; JETRO, op. cit., 1978/79 edition, pp. 193-194.

PART II. Employment Effects of Direct Foreign Investment

A. An Overview

Before touching upon the problem of foreign investment and its employment effects in ASEAN countries, it appears to be appropriate here to go into a general discussion of the problem in developing countries as a whole and to review the points at issue.

There are now two conflicting views as to how foreign investment would affect the local labour market of developing countries. That is to say, on one hand, there is a view of defenders supporting the inflow of foreign capital into developing countries and advocating that foreign investment will contribute to the absorption of surplus labour in the host country. From this viewpoint, foreign firms are considered to bring about capital, technology and know-how of market development to the host country and to form a nucleus to absorb the surplus labour which has afflicted the host country so far.

On the other hand, there is a contrasting view that gives little credit to the role of foreign investment. In this view, foreign investment is only to function as a replacement of local investment and employment which have already existed in the host country, so that it does not yield any net growth of employment by itself. If foreign companies take over the management of local firms or employ skilled workers and material resources in short supply from

local enterprises, it follows that they only replaced the local enterprises already existing in the host country. Moreover, if they enter the host country aiming at the local market that local enterprises have served so far, it will make local capital more idle and increase the unemployment of local workers.

The background for these conflicting views on the role of foreign investment may lie, as Todaro (1977) pointed out, in a fundamental disagreement about the nature, style and character of a desirable development process of the Third World.¹⁾ To find out a definitive answer to the conflicting views, we have to wait for the results of empirical studies in this field. At present, however, it can hardly be said that a definite conclusion has been reached, as will be discussed later in this report.

The following points, however, can be stated. The centre of arguments is that the technology brought by foreign firms into developing countries is capital-intensive in most cases with limited employment effects and that they tend to seek for a wage policy that may have been affected strongly by factors other than economic rationality.²⁾

The gist of the argument on this point can be outlined as follows: Foreign companies normally tend to bring their technologies to the host country which they developed to adapt to the capital-abundant and labour-shortage situation of

their home country, and seldom bring the technologies suitable to the actual situation of the host country. The technologies are thus inappropriate to such developing countries that generally tend to suffer from the shortage of capital and the surplus of labour. Furthermore, competing for survival in the local market, local enterprises may sometimes imitate or introduce such technologies as foreign firms often bring in, and may adversely affect the local employment situation.

Moreover, as often pointed out, foreign firms generally tend to pay higher wages than local counterparts. The reasons may be that foreign companies have to attract and retain skilled workers and must mitigate the antipathy of local people and maintain favourable labour-management relations for the benefit of their operations in the host country. Once they set a high wage level, however, it tends to gradually raise the wage level of local enterprises at large, which will subsequently encourage local enterprises to use more capital in place of labour. Singer (1975) observed that everything is now distorted to go in the direction of capital-intensive technologies rather than labour-intensive ones so that it serves to reduce the possibilities for employment creation with the limited capital available in the developing country.³⁾

It is true, however, that the relationship between

technologies and their employment effects brought about by direct foreign investment tends to vary from industry to industry and so does the nature of the investment projects. As a result, it is difficult to generalize the relationship. There are such labour-intensive industries as woodworks and textiles, while there are many capital-intensive industries like water-power generation, steel manufacturing and aluminium refining. Furthermore, as is often the case of electric and textile industries, relatively labour-intensive production processes only tend to be transferred to developing countries.

With foreign companies, on the other hand, the technology and management know-how they bring to developing countries tend to have been developed in most cases to adapt to the conditions of advanced countries. Also on the part of developing countries, they tend to have wanted or encouraged investments in capital-intensive type manufacturing industries in their eagerness to promote industrialization. For this purpose, they prepared various incentive measures for investment projects such as generous depreciation rates, tax reductions or tax holidays for particular industries and special reductions of import tariffs on machinery and equipment. In this regard, Singer warned that such preferential treatment is based on the volume of used capital and not on the volume of created employment, and that the general or macro-economic goals of capital accumulation cannot necessarily

be attained by applying the principle to the micro-economic level or each investment project.⁴⁾

Here is a problem, however. If the conventional protection policies are suspended so that market prices may reflect the scarcity of capital and labour in the country, the attraction of investing in capital-intensive manufacturing industries will be lost and the inflow of foreign capital will decline.

To most developing countries this will also lead to the abandonment of their policy for import-substituting industrialization which they thought to be the main pillar of their development policy. Then, what is most feasible appears to be their promotion of labour-intensive export industries and it is thus most likely that they follow a policy of inducing foreign investment in this area. Development in this direction is evidenced to some extent by the cases of Korea, Taiwan, Hong Kong and Singapore.⁵⁾

The above argument is of course limited to export-oriented manufacturing industries. With regard to the primary sector including agriculture, forestry, fishery, mining, etc., it is generally considered that direct foreign investment does not have a high employment-absorptive capacity. Therefore, as far as the employment aspect is concerned, it does not seem to be effective to work upon foreign firms for their employment creation in the primary sector.

Also in the tertiary sector involving service, commerce,

finance, insurance, etc., foreign investment generally tends to occupy a relatively small share in developing countries and its employment effects are considered to be limited on the whole.

B. Direct Employment Effects

1. Actual State of Employment Creation by Foreign Companies

The ASEAN countries, though Singapore has now become exceptional, have uniformly set up the goal of "employment creation" as one of the major targets of their economic development plans in an attempt to reduce their unemployment. When they introduce foreign capital they expect it to play a part in employment creation. In reality, however, the extent to which it has had employment effects is not exactly known yet. Even if the discussion is confined only to the direct employment effects of foreign capital, comprehensive and concrete data are seldom available. The data that we know of are limited to the following.

In Indonesia, the BKPM reported that during the period from 1967 to 1978 a total of 589 foreign companies invested US\$3,478 million employing 406,141 persons in total, while a total of 1,272 Indonesian companies invested 1,137,400 million rupia (approximately US\$2,740 million) employing 1,356,058 persons.⁶⁾ Here it estimated from the past trend in the employment effects of Indonesian companies that the

amount of investment necessary to create employment of one person would be US\$2,000 to 2,200.⁷⁾

In Thailand, the total employment created by foreign firms is not clear. A study report⁸⁾ based on the surveys of the Board of Investment, however, took up the cases of Japan and the U.S.A., both of which are major investors in the country, and clarified that in 1975 the Thai work force employed by 70 Japanese firms was 34,582 and the employment of Thai work force in 19 U.S. firms totalled 7,515. The Thai work force employed by the Japanese companies was equivalent to only 0.25 per cent of the total work force in the country or 1.57 per cent of employment in the manufacturing sector. On the other hand, the Thai work force employed by the U.S. firms accounted for only 0.06 per cent of the total labour force and 0.36 per cent of employment in the manufacturing sector. The study report mentioned as a conclusion that although the absolute amount of employment of these foreign firms appeared to be rather substantial, it really occupied a small fraction of the total work force in the country.⁹⁾ It should be noted here that these foreign firms were sampled out for the study so that they did not represent all the Japanese and U.S. firms operating in Thailand.

In the Philippines, the result of a joint survey in 1970 by the Central Bank, the Board of Investment and the National Economic and Development Authority shows that 208 large foreign

companies with capital share 60% or more were estimated to employ 102,939 persons in total.¹⁰⁾ As the total labour force in 1970 was 11,235,000, the work force employed by the foreign companies accounted for only 0.92 per cent of the total labour force in the country.¹¹⁾ Moreover, 209 foreign companies with less than 60% capital share were estimated to hire 118,389 persons on the assumption that the number of employees increased in proportion to the share of foreign capital. Thus, even if both were added together, they only accounted for 1.05 per cent of the total labour force.¹²⁾ Also in this case, it should be noted that such a low share of foreign capital in employment levels was also the case in 1970, when it was also based on a sample survey. As a matter of fact, foreign investments in the Philippines greatly increased after 1970 and the balance of foreign investments registered and approved by the Board of Investment since 1968 amounted to 3,632 million pesos or 61 per cent of the total investment amount (5,950 million pesos) in 1975.¹³⁾ Furthermore, the Philippines' policy towards foreign investment has controlled the capital share of most foreign companies below 40 per cent. (In fact, most Japanese companies operating in the country have a capital share less than 40 per cent.¹⁴⁾) Therefore, if their employment creation is proportional to their capital share as was assumed above,¹⁵⁾ the volume of their employment

creation must not be negligible.

It can be said, however, that, considering labour-intensive industries only, foreign firms doing business in South-East Asia tend to have higher capital equipment ratios per employee than local firms so that the former's employment effects may be smaller than those of the latter per unit investment amount when leaving out the effects on the output or value added. This is a point that will be referred to below in the case of Malaysia.

In Malaysia, there is an argument advocating that foreign firms tend to create a smaller volume of employment than local firms. The Survey of Manufacturing Industries in West Malaysia 1970 mentioned that "For the whole manufacturing sector, foreign-owned firms usually account for about a third of total manufacturing employment while Malaysian-owned firms account for the remaining two-thirds". Based on this observation, it is argued on one hand that "Because of their greater capital intensity, foreign-owned firms do not generate as much employment as Malaysian-owned firms".¹⁶⁾ In contrast, Table 1 compares the employment effects by type of industry between the companies in which 51 per cent of the shares are owned by foreigners and those in which 51 per cent of the shares are owned by Malaysians and implies the following conclusion: "Thus, data at the industry level show that in the majority of industries, foreign-owned firms employ more people per firm

Table 1 Relative Employment Share, Relative Size and Relative Numbers in the Malaysian Manufacturing Sector 1970

	S_f/S_m	$\frac{E_f/N_f}{E_m/N_m}$	N_f/N_m
Rubber Remilling	1.25	1.67	.76
Rubber Smoking	2.50	10.00	.33
Coconut Oil	.14	2.00	.03
Pickles	.07	1.43	.06
Bisquits	1.43	10.00	.14
Bakery Products	.12	2.00	.06
Noodles	.09	1.67	.05
Ice	.54	.50	.77
Animal Feeds	1.25	2.50	.44
Beverages	.71	3.33	.21
Tobacco	.62	10.00	.10
Textiles	1.25	5.00	.22
Clothing	1.11	3.33	.32
Furniture	.10	1.67	.06
Paper	.77	2.50	.31
Printing	.20	1.43	.20
Leather Products	.19	1.11	.17
Rubber Products	.83	2.00	.42
Chemicals 1	2.50	3.33	.69
Chemicals 2	.38	2.50	.15
NMMP 1	.20	2.50	.06
NMMP 2	1.43	5.00	.29
Metal Products 1	.09	2.50	.03
Metal Products 2	.11	1.11	.11
Metal Products 3	1.43	1.11	1.27
Machinery 1	.02	1.67	.02
Machinery 2	.04	1.11	.03
Electrical Machinery	1.67	3.33	.58

KEY:

Chemicals 1 = Medicinal & Pharmaceutical products
 Chemicals 2 = Miscellaneous chemicals
 NMMP 1 = Structural products & Pottery, China & Earthenware
 NMMP 2 = Cement & Concrete products
 Metal Products 1 = Architectural metal products
 Metal Products 2 = Wire & wire products
 Metal Products 3 = Tin cans & metal boxes
 Machinery 1 = Industrial machinery & parts
 Machinery 2 = General engineering & machinery repair workshops
 Electrical Machinery = Electrical machinery, apparatus, appliances and supplies

S_i = share of total employment of i firms
 E_i = number of people employed by i firms
 N_i = number of i firms
 f^i = firms in which 51% or more of the shares are owned by foreigners
 m = firms in which 51% or more of the shares are owned by Malaysians

Source: Tan (1978), pp. 2-3.

compared with Malaysian firms. This is because foreign-owned firms, in spite of higher capital industry, are usually much larger compared to Malaysian-owned firms. Rather than generating less employment, foreign-owned firms in fact generate more employment per firm compared with Malaysian-owned firms. Their share of total manufacturing employment is smaller in many industries because their number are small in comparison with the number of Malaysian-owned firms in these industries".¹⁷⁾ This point will be partly illustrated in the case of Singapore below. It should be added that the volume of employment potentially generated by foreign manufacturing companies in Malaysia is estimated to number 106,460 persons in total during the period from 1971 to 1978 (See Table 2).

Singapore, on the other had, has no substantial agriculture sector but it is well known that it has now become a newly industrializing country by its positive policy to introduce foreign capital for industrialization. It is said that in 1970 foreign companies in Singapore accounted for less than 10 per cent of the total number of enterprises but that they employed 45 per cent of the total employed persons in the country.¹⁸⁾ As is clear from this, employment creation by foreign firms in Singapore appears to show an extremely different picture as compared with the cases in the other four countries described above. The Census of Industrial

Table 2 Potential Employment in Manufacturing Projects Approved with Foreign Equity Participation in Malaysia 1971-1978

Type of Projects	1971	1972	1973	1974	1975	1976	1977	1978	Total
Wholly Foreign Owned Projects	616	18,487	12,309	8,995	624	2,026	424	4,802	48,283
Joint-Ventures with Majority Foreign Equity Participation	4,806	3,065	20,330	7,064	3,228	4,630	7,624	6,261	57,008
Joint-Ventures with Equal Foreign and Local Equity Participation	-	-	-	-	-	7	400	762	1,169
TOTAL	5,422	21,552	32,639	16,059	3,852	6,663	8,448	11,825	106,460

Source: Malaysian Industrial Development Authority

Production 1975 indicates that even if foreign firms are defined as those with foreign capital share 50 per cent or more, they occupied 52 per cent of the manufacturing employment in Singapore.¹⁹⁾ It is observable from Table 3 that the higher the share of foreign capital, the more workers tend to be employed per company.

However, as mentioned before from the findings of various surveys, the direct employment effects of foreign capital in the host countries are more limited in general. Such employment effects as in Singapore may be rather exceptional.

In contrast to this, it is generally viewed by foreign investors that foreign firms operating in the host countries are contributing to the expansion of employment opportunities in these countries. For example, as shown in Table 4, 25.5 per cent of the Japanese firms surveyed answered that they contributed to the "expansion of employment opportunities" among the optional items that they thought have contributed to the host countries, and it was the most widely chosen answer.

The above is all that is available on the actual state of direct employment effects of foreign capital. However, it does not present a total picture of direct employment effects of foreign capital. To grasp the total picture, it will be necessary to tabulate all the workers employed

Table 3 Number of Enterprises and Workers
by Capital Share in Singapore

Capital Structure	Number of Establish- ment	Number of Workers	B/A
	A	B	
Wholly local	1,595 (66.9)	62,903 (32.8)	39.4
More than half local	265 (11.1)	29,038 (15.2)	109.6
Less than half local	228 (9.6)	29,211 (20.5)	172.0
Wholly foreign	297 (12.8)	60,376 (31.5)	203.3
TOTAL	2,385 (100.0)	191,528 (100.0)	80.3

Note: Rubber Processing is excluded.

Source: Singapore (1976), p. 16

Table 4 Contributions of Japanese Firms to Host Countries in Asia

	Upper: Number of Answers Lower: %														TOTAL	
	Agriculture, Forestry & Fisheries	Mining	Manufacturing	Food	Textile	Wood, Paper & Pulp	Chemical	Iron & Steel	Nonferrous Metal	General Machinery	Electrical Machinery	Transport Equipment	Precision Machinery	Miscellaneous Others		Commerce
Expansion of Employment opportunities	27 (21.9)	6 (28.6)	624 (26.4)	27 (25.2)	124 (29.6)	22 (24.4)	65 (20.6)	35 (28.9)	16 (22.9)	14 (20.3)	155 (28.9)	43 (28.7)	16 (26.2)	107 (25.5)	99 (19.2)	766 (25.5)
Import-Substituting effects	1 (0.8)	0 (0.0)	239 (10.1)	6 (5.6)	39 (9.3)	5 (5.5)	56 (17.8)	21 (17.4)	6 (8.6)	11 (15.9)	38 (7.1)	23 (15.3)	3 (4.9)	31 (7.4)	36 (7.0)	276 (9.2)
Export growth	28 (22.8)	2 (9.5)	360 (15.3)	18 (16.8)	74 (17.7)	16 (17.8)	26 (8.3)	9 (7.4)	8 (11.4)	8 (11.6)	96 (17.9)	11 (7.3)	14 (23.0)	80 (19.0)	107 (20.7)	507 (16.9)
Utilization of local primary goods	19 (15.4)	1 (4.8)	80 (3.4)	18 (16.8)	12 (2.9)	14 (15.6)	15 (4.8)	1 (0.8)	0 (0.0)	1 (1.4)	3 (0.6)	1 (0.7)	1 (1.6)	14 (3.3)	26 (5.0)	126 (4.2)
Development of natural resources	17 (13.8)	6 (28.6)	22 (0.9)	5 (4.7)	0 (0.0)	8 (8.9)	2 (0.6)	0 (0.0)	1 (1.4)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	6 (1.4)	4 (0.8)	49 (1.6)
Development of local industries	7 (5.7)	3 (14.3)	350 (14.8)	17 (15.9)	65 (15.5)	10 (11.1)	56 (17.8)	22 (18.2)	11 (15.7)	12 (17.4)	65 (12.1)	24 (16.0)	5 (8.2)	63 (15.0)	71 (13.8)	431 (14.3)
Training of skilled workers & managers	10 (8.1)	1 (4.8)	329 (13.9)	9 (8.4)	60 (14.3)	6 (6.7)	36 (11.4)	19 (15.7)	14 (20.0)	9 (13.0)	71 (13.2)	27 (18.0)	13 (21.3)	65 (15.5)	30 (5.8)	370 (12.3)
Promotion of technology transfer	9 (7.3)	1 (4.8)	287 (12.1)	5 (4.7)	36 (8.6)	8 (8.9)	48 (15.2)	8 (6.6)	9 (12.9)	13 (18.8)	90 (16.8)	17 (11.3)	8 (13.1)	44 (10.5)	38 (7.4)	333 (11.1)
Transfer of management know-how	2 (1.6)	0 (0.0)	50 (2.1)	1 (0.9)	8 (1.9)	1 (1.1)	9 (2.9)	5 (4.1)	4 (5.7)	0 (0.0)	12 (2.2)	3 (2.0)	1 (1.6)	6 (1.4)	52 (0.1)	104 (3.5)
Others	3 (2.4)	1 (4.8)	19 (0.8)	1 (0.9)	1 (0.2)	0 (0.0)	2 (0.6)	1 (0.8)	1 (1.4)	1 (1.4)	7 (1.3)	1 (0.7)	0 (0.0)	4 (0.9)	53 (10.3)	76 (2.5)
TOTAL	123 (100.0)	21 (100.0)	2,360 (100.0)	107 (100.0)	419 (100.0)	90 (100.0)	315 (100.0)	121 (100.0)	70 (100.0)	69 (100.0)	537 (100.0)	150 (100.0)	61 (100.0)	420 (100.0)	516 (100.0)	3,008 (100.0)

Note: Respondents were asked to choose three items.

Source: Ministry of International Trade and Industry (1978), p. 139

by foreign firms with due consideration to the breakdown by the type of industry, the type of machinery or equipment used, the level of technologies, the level of labour productivity, etc. It is practically very difficult to do so and it is nearly impossible. It is, however, possible to roughly grasp the volume of employment directly generated by foreign companies. Furthermore, as already presented above, the average number of employees per company was estimated from some sample surveys and the employment effects were analyzed in a comparison between foreign and local companies. This aspect will be discussed more in detail in the following section.

2. Investment Amount to Create an Employment Opportunity and Number of Employees per Company

As mentioned in the previous section, the investment amount necessary to hire a worker anew was estimated to range from US\$2,000 to 2,200 in the case of Indonesia. On the other hand, a survey report of Taiwan indicates, though the evidence is not clear, that one new worker can be directly employed by the foreign firm with every additional investment of US\$2,470 and that another worker can be indirectly employed anew with every additional investment of US\$1,383.²⁰⁾ Even if it is the case of Taiwan, it cannot be uniformly applied to other Asian countries. It is because the employment

effects may differ with the stage of economic development of the country, the nature of the investment project and the industrial sector in which foreign capital is invested under the guidance of the Government policy towards foreign investment, or whether it is an investment in a labour-intensive or capital-intensive industry. Therefore, it is necessary to definitely figure out the employment effects for each country and each type of industry. It should be also considered that when foreign capital was invested for the new entry into the local market and the introduction of new machinery or equipment, the volume of employment generated by unit investment amount may appear to be less than in the regular year.

Though the available data is limited, a case of Japanese firms in Thailand will be analyzed by type of industry and the extent to which they generally effected employment creation in relation to their paid-in capital will also be compared with a case of Taiwan.

Table 5 shows the total paid-in capital of 100 Japanese companies (103 companies in 1977) which were selected for a survey among the member companies of the Japanese Chamber of Commerce in Bangkok. On the other hand, Table 6 indicates the number of Thai workers employed by these Japanese companies. From these two tables, their paid-in capital per Thai employee is derived and presented in US dollars in Table 7. As shown

Table 5 Total Paid-in Capital of Japanese Firms in Thailand

Unit: Million baht

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Textile	706	856	908	1,057	1,309	1,314	1,349
Automobile	166	183	246	358	385	395	410
Iron & Steel	100	158	218	264	226	229	231
Food	84	133	93	113	191	210	221
Chemical	157	146	131	265	353	496	546
Others		67	112	150	175	205	212
TOTAL	1,213	1,543	1,708	2,207	2,637	2,849	2,969

Note: The aggregate at the end of each year.

Source: Bangkok Nihonjin Shoko Kaigisho (1978), p. 133

Table 6 Number of Thai Workers Employed by
Japanese Firms

Unit: persons

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Textile	16,270	18,119	22,741	23,116	31,238	32,096	31,086
Automobile	1,961	2,521	2,971	3,390	3,909	4,693	5,484
Iron & Steel	2,016	2,324	2,899	3,006	2,687	2,947	3,058
Food	1,664	2,140	2,123	2,774	3,218	3,162	3,196
Chemical	2,982	2,042	2,632	3,102	3,655	3,923	4,075
Others		2,326	3,215	3,473	3,619	4,061	4,296
TOTAL	24,893	29,472	36,581	38,861	48,326	50,882	51,195
	(207)	(226)	(284)	(330)	(311)	(377)	(460)

Note: Figures in the parentheses indicate the amount of sales per employee in 1,000 baht.

Source: Same as in Table 5, p. 134

Table 7 Paid-in Capital per Thai Employee in
Japanese Firms

Unit: US\$

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Textile	2,170	2,361	1,996	2,286	2,095	2,046	2,170
Automobile	4,230	3,629	4,140	5,280	4,925	4,208	3,738
Iron & Steel	2,480	3,399	3,760	4,391	4,205	3,885	3,777
Food	2,524	3,107	2,190	2,037	2,968	3,320	3,457
Chemical	2,632	3,575	2,489	4,271	4,829	6,322	6,699
Others		<u>1,440</u>	<u>1,742</u>	<u>2,160</u>	<u>2,418</u>	<u>2,524</u>	<u>2,467</u>
TOTAL	2,436	2,618	2,734	2,840	2,728	2,800	2,900

Note: Converted at the rate of 20 baht to US\$1.

Source: Derived from Tables 5 and 6.

in the table, the amount of paid-in capital per Thai employee tends to vary with the type of industry. In the textile industry which is certainly labour-intensive, it was US\$2,170 in 1977, while in the chemical industry which is typically a process industry, it was US\$6.699. At any rate, it is possible from this table to see a general relationship between the amount of paid-in capital per local employee and type of industry. Looking at the six types of industry in aggregate and the trend in time series, it can be said that one local worker was employed with additional investment ranging from US\$2,400 to 2,900, which roughly approximates the estimates for Taiwan. If the general machinery, electrical equipment, agriculture and fishery are added to the six industries, Japanese firms in Thailand numbered 145 as of June 1975 with the total paid-in capital of 3,515,250,000 baht (or about US\$175,760,000).²¹⁾ Thus, the amount of their paid-in capital per Thai employee was US\$2,840 in the year. Then, it is deduced from this that about 62,999 Thai workers were employed by the 145 Japanese firms. Furthermore, it is said that there were 269 Japanese firms (162 of them engaged in manufacturing) operating in Thailand by the end of 1976. Besides, if Japanese liaison offices and wholly Japanese-owned corporations are added, Japanese firms were estimated to amount to about 400.²²⁾ Therefore, the volume of employment actually generated by Japanese companies must be much larger than the above-

mentioned figure.

It should be noted that the average number of employees per company tends to be larger in foreign firms than in local firms as had been implied by the data of Malaysia and Singapore. In retrospect, Table 3 showed that in Singapore, it was 39.4 persons in "wholly local" establishments and 109.6 persons in "more than half local" establishments, while it was 172 persons in "less than half local" establishments and 203.7 persons in "wholly foreign" establishments. Furthermore, it should be added that, as shown in Table 8, the larger the share of foreign capital, the greater tends to be per head input, output and sales of the establishment in Singapore. Every year the National Wage Council recommends a wage guideline with an expectation that every company in the country should follow it. The level of employees remuneration tends to be higher in foreign firms than in local companies.

According to a survey report published annually by the Japanese Ministry of International Trade and Industry,²³⁾ as of March 1977, the average number of employees in 1,128 Japanese overseas corporations surveyed was 304 persons (Table 9). The Japanese overseas corporations in the survey were the subject for direct foreign investment, and it was not questioned how much was the capital share of the Japanese parent companies. This figure exceeds the average number of employees per "wholly foreign" establishment in Singapore.

Table 8 Principal Statistics of Manufacturing by
Singapore:- Capital Structure - 1975

Unit: Singapore dollar

	<u>Input</u>	<u>Output</u>	<u>Value added</u>	<u>Sales</u>	<u>Employees' Remuneration</u>
Wholly local	21,015	36,190	13,169	36,066	5,526
More than half local	29,357	46,361	15,301	42,461	6,327
Less than half local	24,281	48,493	13,297	47,362	6,161
Wholly foreign	89,941	117,364	26,784	116,640	6,751

Note: Rubber processing is excluded.

Source: Derived from Table 9, Singapore (1976), p. 16

Table 9 Number of Employees per Japanese Overseas Corporation
Singapore:

Unit: Persons

<u>Industry</u>	<u>Asian Region</u>	<u>All Regions*</u>
Agriculture & Fishery	318	180
Mining	603	420
Manufacturing	358	351
Food	266	207
Textile	521	491
Lumber, paper & pulp	91	311
Chemical	101	98
Iron & Steel	188	505
Non-ferrous metal	130	365
Machinery	170	186
Electric	604	514
Transport equip- ment	330	338
Precision Machinery	216	167
Miscellaneous & Others	227	210
Commerce	<u>45</u>	<u>56</u>
TOTAL	304	228

*The average of North America, Central and South America, Asia, Middle East, Europe, Oceania and Africa.

Source: Derived from Table 57, MITI (1978), p. 83

If it is applied to Japanese firms in Thailand, it follows that they are assumed to hire a little over 120,000 employees. In the Philippines, on the other hand, since 425 Japanese companies seem to operate there as of March 1978, they are estimated to employ nearly 130,000 persons.²⁴⁾ These estimations, however, are only a criterion. Accurately estimating the actual volume of employment must be left to future, more sophisticated analytical studies.

Viewing from a different angle, we will make a comparative observation of various employment conditions between foreign and local firms on the basis of survey findings already available.

3. A Comparison of Actual Employment Conditions between Foreign and Local Firms

Unfortunately there are very few research studies that compared various employment conditions between foreign and local companies in South-East Asian countries. In this situation, a series of surveys conducted by the Japan External Trade Organization (JETRO) in 1974 is exceptionally useful. It covered Indonesia, the Philippines, Malaysia and Singapore and surveyed Japanese companies, U.S. and European firms and local enterprises with the cooperation of research organizations in these countries. In the following, the survey findings will be outlined with limiting the scope to the

methods of recruiting, working hours and wages. As for the employment conditions of foreign firms in Thailand, survey results of a separate study will be cited, as Thailand was not covered by the JETRO studies.

Indonesia²⁵⁾

JETRO actually surveyed 10 Japanese companies, 18 U.S. and European firms and 2 local companies in Indonesia. As will be also made clear in the other host countries, even if we say foreign firms for the sake of brevity, their personnel and labour management policies tend to differ in reality with their home countries. For example, there seem to be the following differences between Japanese companies and U.S. and European firms.

As regards the methods of recruitment, the proportion of Japanese companies which tend to rely on personal connections as well as the direct application of workers is high, while most of the U.S. and European firms tend to recruit new work force by advertising in newspapers with secondary use of personal connections. As for working hours, the regular working hours of Japanese companies tend to last 7 hours per day on the average with the weekly working hours ranging from 39 to 42 hours. On the other hand, many U.S. and European firms tend to practice 8 hours a day and 40 hours a week.

As regards wages of foreign firms, both Japanese and

U.S. and European firms rarely tend to differentiate wages between sexes. It should be noted, however, that a simple comparison of wage levels between Japanese and foreign companies may be misleading due to a lack of uniform standard. Taking for example the starting wage for male employees who finished primary education, some Japanese companies offer them higher wages than some U.S. and European firms or vice versa. Moreover, there are some cases in which Japanese companies provided information on the starting wage level of their employees in the survey, while U.S. and European firms replied with the average wage level of their employees. It is made clear, however, that comparing wage levels between foreign and local companies, the wage level of the former tends to be higher than that of the latter. What is remarkable is a difference in the relative importance of determinants of the basic wage. As a matter of fact, Japanese companies tend to be strongly conscious of the employee-related determinants (age, educational background and experience), while U.S. and European firms tend to stress the job-related determinants (job duty, job function and type of the job) (Table 10).

Meanwhile, local companies in Indonesia tend to rely on the direct job application of workers for employment. As for working hours, there seem to be two types. On one hand, there are local firms which adopt the working hours of 7 hours and 30 minutes a day and 41 hours a week. On the other,

Table 10 Determinants of the Basic Wage in Indonesia

	<u>No. of U.S. & European Firms</u>	<u>No. of Japanese Firms</u>
Set by job-related determinants only	6	1
Set by employee-related determinants only	0	0
Set primarily by job- related determinants	9	6
Set primarily by employee- related determinants	2	3

Source: JETRO, OEIC (1975a), p. 68

there are local companies which practise 7 hours a day and 42 hours a week. As regards wages, it is characteristic that the proportion of family allowance in the total wage payment tends to be high in Indonesian companies.

The Philippines²⁶⁾

JETRO's survey covered nine Japanese companies, 15 U.S. and European firms and six local companies in the Philippines. All companies tend to recruit new workers by newspaper advertisement which is a widely practised method of recruitment in the country. As regards working hours, most Japanese companies tend to adopt a system of working 8 hours a day but nearly half of them tend to practise 48 hours a week and the other half of them, 44 hours a week. On the other hand, U.S. and European firms tend to practise 8 hours a day with either 48 hours a week or 40 hours a week. All of the local companies surveyed in the Philippines adopt 8 hours a day and 48 hours a week with only one exception in which a local company practises 8 hours a day and 44 hours a week.

Unfortunately the survey of the Philippines did not refer to the wage levels but it clarified that job-related determinants tend to be emphasized in setting the basic wage irrespective of the nationality of foreign capitals (Table 11).

As implied above, it is difficult to find outstanding differences in these aspects of employment conditions between

Table 11 Determinants of the Basic Wage in the Philippines

	<u>No. of U.S. & European Firms</u>	<u>No. of Japanese Firms</u>	<u>No. of Local Firms</u>
Set by job-related determinants only	9	5	4
Set by employee-related determinants only	2	2	1
Set primarily by job- related determinants	4	2	1
Set primarily by employee- related determinants			

Source: JETRO, OEIC (1975c), pp. 23 & 26

foreign and local companies. This is also true with the aspects of paid vacation and welfare facilities.

Malaysia²⁷⁾

In Malaysia, three Japanese companies, six U.S. and European firms and one local enterprise were covered by JETRO's survey. The survey findings are given as follows.

As for the methods of recruitment, foreign firms mostly rely on newspaper advertisement as well as public and private employment offices. It is noticeable, however, that Malaysian companies do not use such employment offices at all. With regard to working hours, all companies tend to adopt 44 or 45 hours a week as a whole.

Since there is much variance in wage levels, it is difficult to compare them in a meaningful way. It seems, however, that U.S. and European firms tend to pay slightly more than Japanese companies in Malaysia. As regards the determinants of the basic wage, there seems to be a clear difference in that Japanese companies tend to set the basic wage primarily by employee-related determinants with secondary consideration to job-related determinants, while U.S. and European firms and Malaysian companies tend to set it primarily by job-related determinants with secondary consideration to employee-related determinants (Table 12).

Table 12 Determinants of the Basic Wage in Malaysia

	<u>No. of U.S. & European Firms</u>	<u>No. of Japanese Firms</u>	<u>No. of Local Firms</u>
Set by job-related determinants only	-	-	-
Set by employee-related determinants only	-	-	-
Set primarily by job- related determinants	6	-	1
Set primarily by employee- related determinants	-	3	-

Source: JETRO, OEIC (1975b), pp. 28 & 49

Singapore²⁸⁾

The JETRO survey covered 11 Japanese companies, five U.S. and European firms, seven Singaporean firms and one Indian company.

As regards the methods of recruiting, an overwhelming majority of Japanese and U.S. and European companies tend to use newspaper advertisement. On the other hand, many local companies tend to rely on personal connections. Working hours do not differ substantially with the nationality of foreign capital. It can be pointed out, however, that U.S. and European firms tend to operate slightly longer hours per day but instead adopt a five-day week more often than other companies. On the other hand, many Japanese companies tend to practise a five and half day system and most local firms tend to adopt a six-day week.

As for the wage level of foreign companies in Singapore, an ILO supplementary study on multinational corporations has already covered this area.²⁹⁾ The salient points of the study report are cited below.

When the starting wages are viewed by educational level and occupational category, U.S. and European firms tend to pay the highest wages throughout all occupational categories, the wage level of which is 20 to 30 per cent more than Japanese companies. On the other hand, local firms tend to pay slightly less than Japanese companies but the difference in the wage

level tends to be negligible or about 5 per cent less. Furthermore, the difference in the starting wages between Japanese and U.S. and European firms tend to widen as the educational level of the employee becomes higher. As a matter of fact, the starting wage for those employees who finished primary education is S.\$160 in U.S. and European firms, while it is S.\$145 in Japanese companies. Thus at this level of education, the difference is only about 10 per cent. In contrast, the starting salary for those engineers with college education is S.\$1,000 in U.S. and European firms, while it is S.\$750 in Japanese companies, giving rise to a wage gap of 30 per cent or more. Looking at the determinants of the basic wage, many U.S. and European firms tend to set it only by job-related determinants, while many local companies tend to set it only by employee-related determinants. Meanwhile, many Japanese companies tend to set it primarily by job-related determinants also taking into consideration employee-related determinants (Table 13).³⁰⁾

Thailand

As mentioned earlier, JETRO did not survey Thailand. There is, however, a survey on the personnel and labour management of Japanese companies in the country,³¹⁾ which was conducted approximately at the same time as the JETRO studies were made. Regarding the aspect of wages, it

Table 13 Determinants of the Basic Wage in Singapore

	<u>No. of U.S. & European Firms</u>	<u>No. of Japanese Firms</u>	<u>No. of Local Firms</u>
Set by job-related determinants only	3	2	1
Set by employee-related determinants only	-	-	3
Set primarily by job- related determinants	1	11	3
Set primarily by employee- related determinants	1	-	-

Source: JETRO, OEIC (1975d), p. 16

compared those of Japanese, U.S. and local firms. Looking only at wages, it is not easy to compare them among foreign companies and between foreign and local companies for the following three reasons: First, there are differences in the wage structure from company to company. Secondly, the types of industry are distributed differently between foreign and local companies. Thirdly, there is scarcity of data available for wages and salaries of employees in foreign and local firms. With understanding of these limitations, however, it is concluded as shown in Table 14, that U.S. firms tend to pay the highest starting wages, followed by Japanese companies and local firms in this order.³²⁾

In summary, two things can be said from what has been mentioned above. One is that the corporate policy or behaviour in the host country tends to vary not only with the nationality of the corporate capital but also with each country in which the corporation operates. The other is that employment conditions in foreign companies generally tend to be better than those in local enterprises.

C. Indirect Employment Effects

It is generally conceived that foreign capital invested in developing countries cannot only become an employer directly hiring local people but can also generate indirect employment effects in the host countries. To measure indirect employment

Table 14 Comparison of Starting Wages in Japanese,
American and Thai Companies (1974)

(1) <u>Tyres and Tubes for Automobiles</u>					
American Co.	A	P4 male workers	34.0 baht/day	(as of Jan.)	
Japanese Co.	B	P4 male workers	26.5 baht/day	(as of Jan.)	
		P7 male workers	29.5 baht/day	(as of Jan.)	
American Co.	C	P4 male workers	60.6 baht/day	(as of Aug.)	
(2) <u>Automobile Assembler</u>					
American Co.	D	P4, P7, MS3 male workers	800.0 baht/month	(as of Jan.)	
Japanese Co.	E	P4, P7 male workers	950.0 baht/month	(as of Jan.)	
		MS3 male workers	1,000.0 baht/month	(as of Jan.)	
(3) <u>Textiles</u>					
Japanese Co.	F	P4, P7 female workers	17.0 baht/day	(as of Jan.)	
		P4, P7 female workers	21.0 baht/day	(as of Aug.)	
Japanese Co.	G	P4 female workers	19.0 baht/day	(as of Jan.)	
		P7 female workers	20.0 baht/day	(as of Jan.)	
		P4 female workers	26.0 baht/day	(as of Aug.)	
		P7 female workers	27.0 baht/day	(as of Aug.)	
Thai Co.	H	P4, P7 female workers	16.0 baht/day	(as of Jan.)	
		P4, P7 female workers	20.0 baht/day	(as of Aug.)	

Note: Data collected by interviewing.

P4 = Lower Primary Education
P7 = Upper Primary Education
MS3 = Lower Secondary Education

Source: Yoshihara (1974), p. 27

effects, however, is even more difficult than to measure direct employment effects. Consequently, there is still little known about indirect employment effects. In the case of developing countries, in particular, worthwhile data on indirect employment effects is virtually non-existent.

For the purpose of analyzing indirect employment effects, the input-output table developed by W. Leontief is useful-- especially if at the national level--and it is vitally necessary. Furthermore, to distinguish the influence of foreign capital from other factors, the input-output table is required to meet the following two conditions: 1) it should be an input-output table with industries classified by foreign capital vs. domestic capital, 2) it should be equipped with the matrix of unit labour requirements classified by the same criterion. Unfortunately, such a table satisfying these two conditions cannot be found in ASEAN countries and also seems to be non-existent even in advanced nations.

Despite this situation, there are a few studies that have been attempted in line with the purposes of our study project. These studies will be outlined in the following.

First, a study of Prof. Yasuhiko Torii on the economic effects of Malayawata Steel Berhad can be pointed out here (Torii, 1978). The MSB was inaugurated in September 1961 to establish the first full-scale, continuous steel-making plant in Malaysia. Construction work was started in April

1966, and the plant completed in August 1967. Prof. Torii, having noticed the impacts of MSB's business activities on the Malaysian economy, attempted to incorporate its input-output activities into a Malaysian input-output table.

The MSB is a so-called import-substituting steel plant with the purpose of utilizing domestic raw materials and satisfying the domestic demand for steel. As of June 1, 1969, the paid-in capital was M.\$37,875,000, which was invested by the Malaysian Government (11.1%), the Malaysian Industrial Development Finance Berhad (6.5%), the Malaysian Public (34.2%), the Nippon Steel Group (39.0%) and the International Finance Corporation (9.2%).

According to Prof. Torii, the economic significance of this steel plant can be summarised as follows:³³⁾

(1) The MSB has formed a centre of an industrializing spot in Penang-Butterworth district which has become a base for modern industrial manufacturing in Malaysia. Furthermore, the economic effects of the MSB have dispersed throughout the Malaysian economy via the "linkage effect".

(2) The MSB adopted the most advanced LD converter using charcoal instead of material coal, which seems to have had substantial economic effects. Import-substituting industries often tend to encounter the dilemma of increasing the import of raw materials in return for the import-substitution of finished products. The MSB, however, has

succeeded in avoiding such a dilemma by using charcoal (made from thrown-away rubber trees).

(3) The establishment of the MSB has remarkably heightened the utility value of Malaysian iron ore. The domestically produced iron ore used to be exported mainly to Japan but has weakened its competitiveness with Australian iron ore which was also developed for export. As a result, there had been the unwelcome possibility that steel demand would have to depend on the import of steel products which were made in Japan from iron ore imported from Australia. The inauguration of the MSB, however, has solved this problem and opened up a way for Malaysia to continuously manufacture steel products by using the domestically produced iron ore.

(4) The production scale of the MSB is only 10,000 tons per month, which is a small scale of production when compared with the standard of steel-making in advanced countries. Even with such a small scale of production, however, it succeeded in supplying nearly 80 per cent of the total steel demand of Malaysia in 1970 in terms of round bars and deform bars.

(5) It is true that the international competitiveness of the MSB is weak in view of its production scale. The emergence of the MSB, however, has stabilized the price of steel products in Malaysia.

(6) The establishment of the MSB has had sizable employment effects as well. As mentioned above, it is a continuous

steel-making plant with modern technologies and a unique refining process using charcoal. Its direct and indirect employment effects seem to have been substantial. In 1970, it directly employed 1,238 workers and the Malayawata Charcoal Company attached to the steel plant hired 672 persons. Thus, if both are added together, they generated employment for 1,910 persons in total. Moreover, the employment effects of the MSB did not end there. Through its backward and forward linkage effects, about 5,200 persons were estimated to have been employed indirectly. (Of them, 1,900 persons were assumed to have been indirectly hired by the MSB and 3,300 persons, by the Malayawata Charcoal Company.) The indirect employment effects of the MSB are 2.5 times as much as the direct employment effects. It can thus be said that indirect employment effects are extremely large as compared with direct employment effects.

This study focused on an analysis of economic effects of the MSB but also referred to other industries in analyzing the backward and forward linkage effects.

The backward and forward linkage effects are those that the production activities of an industry (or an industrial project) may have to promote the production activities of other industries. They are extremely important in the industrialization process of a country. It is more desirable if the industry has larger backward linkage effects to promote

rapid economic development.

According to Prof. Torii's estimation, the MSB has incomparably larger backward linkage effects than any other company in Malaysia. As the industries whose backward linkage effects are considerable, but much smaller than the MSB, he pointed out textile, food, clothing, footwear and leather, furniture and fixture, paper printing and publishing and rubber products.

Meanwhile, the forward linkage effects are also important. These are the effects that an industry may cause by supplying its processed materials or intermediate goods to other industries to promote their industrial activities.

The forward linkage effects of the MSB are also sizable. It has been made clear that they are of course substantial in the same industry sector, but also considerable in other sectors such as construction, miscellaneous manufacturing, furniture and fixture, metal products and machinery, electricity and water supply, etc.

Other industries that may have the forward linkage effects to a considerable extent besides the MSB have proved to be mining, chemical, petroleum and coal products, metal products and machinery, etc.

This study of Prof. Torii is a notable attempt to comprehensively grasp the economic effects of an industrializing project in a developing country that others have seldom

attempted to analyze. By the nature of the analysis, the results of the study cannot be applied directly to other industries or the economy as a whole. However, it has rightly singled out the indirect employment effects and made it clear that they tend to be more significant than the direct employment effects. Also methodologically, it is thought to have made a valuable contribution to analyzing indirect employment effects.

Next, we will present below some other studies which are noteworthy in the analysis of indirect employment effects, though they are quite limited in number.

Subido (1973) estimated the employment creation by foreign firms in 1970 on the basis of the CB-BOI survey on foreign companies in the Philippines.³⁴⁾ She estimated that a total of 118,389 persons were directly employed by foreign firms in 1970 on the assumption that the percentage of employment attributed to foreign investments is the same as the proportion of foreign investments to total investment (Table 15). This means that they constituted only 1.05 per cent of the total employment in 1970.

Torres estimated the changes in income and employment creation using the GNP multiplier. That is to say, he thought that the wages and salaries of workers employed by foreign firms, their rent, interest and profits are partly directed by respective beneficiaries to the purchase of

Table 15 Estimated Employment due to Foreign Investments,
Philippines: According to Percentage of Foreign Investment

<u>Sector</u>	<u>No. of Workers</u>	<u>Per Cent Distribution</u>
Total	118,389	100.00
Agriculture	5,310	4.48
Mining & Quarrying	8,886	7.51
Manufacturing	89,290	75.42
Commerce	8,688	7.34
Transportation, Com- munications & Utilities	2,155	1.82
Construction	187	0.16
Services	3,873	3.27

Source: Subido (1973), p. 255.

goods and services, which thereby led to an increase of national income and employment creation.

Torres figured out the GNP multiplier as 1.89. That is to say, the investment, consumption or export of one peso is to yield an income of 1.89 pesos. In 1970, 900 out of 1,000 major companies were estimated to have generated income of 7,089 million pesos in total (Table 16). By industry, 57.7 per cent of the income seems to have been attributable to manufacturing; 14.5 per cent, to mining; and 11.4 per cent, to services. Subido noted, however, that these figures should be regarded as a rough approximation of the potential contribution of foreign investments to the Philippine GNP and that their potential contribution cannot be exhibited to a full extent due to the limitations on the supply side.³⁵⁾

Subido also worked out the labour-output ratio for each industrial sector on the basis of the CB-BOI survey. Then, she multiplied it by the estimated value of potential income which appeared in Table 16 to calculate the manhours and deduced the number of workers employed in each sector. Looking at the number of workers, it is estimated that the total number of workers whose employment had been generated by the 900 companies amounted to 448,645 (Table 17). Also on this point, she noted that the figure did not show the real volume of employment but the potential volume of employment generated by the foreign firms because of constraints on

Table 16 Estimated Income Change Using GNP Multiplier
 Philippines: (In million pesos, at current prices)

<u>Sector</u>	<u>Direct Foreign Investment</u>	<u>Estimated Income Change</u>	
		<u>Amount</u>	<u>Per Cent</u>
Total	₱3,751.0	₱7,089.4	100.0
Agriculture	4.0	7.6	0.1
Mining & Quarrying	548.0	1,035.7	14.5
Manufacturing	2,236.0	4,226.0	57.7
Commerce	330.0	623.7	10.7
Transportation, Communications & Utilities	202.0	381.8	5.3
Construction	11.0	20.8	0.3
Services	420.0	793.8	11.4

Source: Subido (1973), p. 257

Table 17 Labor-Output Ratios and Estimated Potential
Philippines: Employment due to Foreign Investment, 1970

<u>Sector</u>	<u>Labor-Output (Manhours/ unit value of output)</u>	<u>No. of Manhours (Millions)</u>	<u>No. of Workers (000's)</u>	<u>Per Cent Distribution</u>
Agriculture	.36	2.736	1.368	0.31
Mining & Quarrying	.07	72.499	36.250	8.08
Manufacturing	.15	633.900	316.950	70.64
Commerce	.11	68.607	34.304	7.64
Transportation, Communications & Utilities	.05	95.256	47.628	10.62
Construction	.25	19.090	9.545	2.13
Services	.12	5.200	2.600	0.58
TOTAL		897.288	448.645	100.0

Source: Subido (1973), p. 259.

the production sector and imperfections of the labour market in the Philippines. However, she found it meaningful to know the orders of magnitude showing the potential contribution of foreign investment.³⁶⁾

Foreign investment also generates the backward and forward linkage effects centring around the foreign company.³⁷⁾ As mentioned before, however, it is extremely difficult to measure these effects with a shortage of the data available. Subido describes the Philippine situation as follows:

Employment may be generated from the formation of industrial linkages. However, because of the nature of the industrialization in the past which is geared towards import-substituting and import-using goods, the backward and forward linkages established may have been few and the income effects limited. Thus, the employment opportunities from this source may also have been minimal.

The indirect effects of foreign investments on employment also include manpower training and the development of entrepreneurs and other forms of human capital. The extent and value of this sort of assistance is hardly quantifiable. It is sufficient to point out these areas as possible sources of employment effects.

The unexplored employment opportunities due

to the concentration of foreign investments in capital-intensive industries constitute a loss to the economy. It stresses the necessity of restructuring our set of policies towards labor-intensive industries in order to anchor the industrialization base to our abundant indigenous resources.³⁸⁾

Her observation may be applicable not only to the Philippines but also to many other developing countries in Asia. A tendency in the concentration of foreign capital on capital-intensive industries, in particular, is readily observable from the Philippine data (Table 18). As she pointed out, if 10,000 pesos per worker is the border line in the capital/labour ratio (K/L) and if an industry with the capital-labour ratio exceeding the border line can be classified as a capital-intensive industry, about 85 per cent of the manufacturing industries can be called capital-intensive industries.³⁹⁾ This is a typical example showing the difficulty of expanding labour-intensive industries in developing countries.

Although it was not directly related to foreign investment, a study of Hassan (1978) analyzed the relationship between the increasing size of the enterprise and the expanding employment opportunities in the industrialization process of Malaysia. Based on the 1968 Manufacturing Census of Peninsular Malaysia cross-data, he used the CES production function to estimate the elasticities of substitution between capital

Table 18 Capital-Labor Ratios and Distribution of Direct
Philippines: Foreign Investment in Manufacturing, 1970

Industry	K/L ^a (000's pesos) (1)	Per Cent Distribu- tion of Foreign Investment in Manufacturing (2)	Less than Cumula- tive Distribution of Foreign Investments (3)
Petroleum & Petroleum products	184.060	24.2	24.2
Basic Metal Industries	65.425	2.8	27.0
Nonmetallic Mineral	45.647	3.0	30.0
Chemical & Chemical Products	23.761	3.4	33.4
Drugs, Medicines & Cosmetics		9.1	42.5
Paper & Paper Products	22.915	7.2	49.7
Food	17.256	14.8	64.5
Transport Equipment	14.697	.7	65.2
Textile (exc. cordage, rope & twine)	12.757	2.0	67.2
Cordage, Rope & Twine		0.4	67.6
Beverages	12.648	7.7	75.3
Rubber Products	10.837	5.4002	80.7002
Machinery exc. electrical	10.144	3.3	84.002
Metal Products	8.287	4.2	88.2002
Electrical Household Appliances			
Electrical machinery exc. household appliances	8.175	0.9	89.1002
		3.6	92.7002
Miscellaneous manufacture	8.077	0.3	93.0002
Leather & Leather Products	7.964	0.0001	93.0003
Wood & Cork Products	7.560	2.8	95.8003
Printing & Publishing	7.032	0.2	96.0003
Furniture & Fixtures	5.522	0.0002	96.0005
Tobacco Products	5.078	3.2	99.2005
Footwear & wearing apparel	13.200	0.8	100.0005

^aThe capital-labor ratio is approximated by the book value of fixed assets over total employment.

Source: Subido (1973), p. 263

and labour. His study has made a tentative conclusion as follows:

Despite some of the weaknesses in the models, the following conclusions, tentative may be, were derived: that the elasticity of substitution between capital and labour, while uniformly greater than zero but less than unity, is different across firm sizes. Since the estimates of the elasticities were generally low irrespective of firm size, the policy to regulate wage movements relative to capital may not be as vital as sometimes assumed. And since large firms are characterized by high capital-labor ratios (i.e., having different production functions from the small firms), one may conclude that the decision to choose firm size is likely to be the more important factor than relative factor prices in influencing the growth of industrial employment.⁴⁰⁾

As the policy implications from these findings, he suggested that "the right technology is not the so-called 'advanced' technology but that technology which suits the factor endowments"⁴¹⁾ of the developing country. Then, he made the following recommendations for the current development stage of the Malaysian economy:

In the present phase the establishment of large firms

should be restricted to some selected industries which are natural resource and labour intensive (like plywood, tyres, electronics and some food industries) and probably essential industries like fertilizer and machine-making.⁴²⁾

Such a view as to technology and the size of the enterprise seems to be commonly accepted to a considerable extent for the industrialization of developing countries in recent years. When viewed in relation to foreign capital, foreign investment projects generally tend to be much larger in scale and more capital-intensive than domestic investment projects. For example, the Indonesian data (Table 19) presented by Rosendale (1977) shows that foreign investment projects tend to be nearly double the size of domestic investment projects in terms of investment capital per worker.

In view of the present development stages of industrialization in many developing countries, it is also clear that there exist certain industrial sectors in these countries that cannot be expected to develop without reliance on foreign capital or, on the contrary, enable foreign capital to be most active. The typical examples are oil, timber, copper, bauxite, liquid natural gas, coal and other natural resources development industries. Rosendale (1977) made the following remarks on the role of foreign capital in such industries:

Since exploitation of these resources is risky, and requires capital-intensive and

Table 19 Expected Employment Creation from Domestic and Foreign Investment Approvals^a
Indonesia:

	Domestic Investment			Foreign Investment		
	Number of Projects	Rp.b.	Number of Employees	Number of Projects	Rp.b.	Number of Employees
Mining	13	50.045	32,810	24	320.712	10,966
Forestry	265	174.885	91,236	84	207.127	86,235
Industry	1,668	966.413	386,061	451	800.287	132,520
(Textiles) ^b	(365)	(360.661)	(154,309)	(95)	(440.473)	(79,255)
Fisheries	21	15.351	5,998	21	18.634	n.a.
Transport & Communications	97	94.569	27,018	20	20.833	n.a.
Construction	10	80.958	2,359	51	32.578	21,884
Hotels/Tourism	102	79.029	21,188	12	43.824	9,995
Agriculture	67	59.205	122,373	67	50.091	83,956
TOTAL ^c	2,267	1,543.510	694,708	787	1,620.824	365,797
						4,431

^aCumulative through March 1975.

^bData for the textile industry is from Nota Keuangan and differs from the data in Pidato Kenegaraan Presiden.

^cIncludes miscellaneous services.

Source: Departemen Penerangan, Pidato Kenegaraan Presiden, 16 August 1975, Tables V-1, 3, 5, 6, 9 and Nota Keuangan 1976/77, Table VII-48.

Quoted from Rosendale (1977), p. 317.

sophisticated technology, foreign investment is the only avenue in the foreseeable future through which these resources can be exploited. But the direct employment opportunities they offer will continue to be fairly small. All these resources are in remote and relatively inaccessible locations (indeed most new oilfields are offshore) and they are exploited with the most advanced capital-intensive technology, using a high proportion of foreign staff. However, the indirect effects on employment, arising from various linkages, and for public works programmes or subsidies to other sectors, made possible by the increase in foreign exchange earnings, could be quite substantial.⁴³⁾

As is clear from the review made above, there lie many difficult problems in the future of industrialization of South-East Asian countries. To cope with these problems, it seems to be necessary to carefully review and consider how to develop industries in good balance as a whole, rather than to have a simple slogan of preferring export-oriented industries to import-substituting industries or labour-intensive industries to capital-intensive industries, all of which have often been advocated so far. In other words, it may be necessary to set up a guideline for industrialization

that is desirable under the particular conditions of the developing country and to make an industrialization plan with adequate consideration to the inter-industrial linkage structure that has often been neglected so far. Then, having recognized the overall perspective for the industrialization of the country, decisions should be made as to the specific industrial sectors, the choice of technologies, and the project scale for which domestic and foreign capital is to be mobilized. As for the problem of employment creation, it may be wrong to be concerned only about direct employment effects. It may be necessary to pay more attention to the indirect employment effects that are generated through the linkage structure. In this sense, the responsibility of economic development planners and policy makers in developing countries is indeed extremely great and important.

Notes

- 1) Todaro (1977), p. 328
- 2) There are many publications on this issue but see the following: Singer (1975), especially Chapter 8, Barnett (1974), Pickett, Forsyth and McBain (1974), Khan (1974) and Sen (1975).
- 3) Singer (1975), Chapter 8.
- 4) Ibid.
- 5) For example, Ahn (1979) surveyed Japanese enterprises which were operating in the free trade zone of Korea and made it clear that many of them were operating for export purpose and adopted labour-intensive production methods. In such a newly industrializing country as Korea, the Lewis model of "unlimited labour supply" cannot be applied and it is least probable that such Japanese enterprises in the free trade zone have created additional employment, he said [Ahn, pp. 194-196].
On the other hand, Liem (1979) investigated the Bataan Export Zone in the Philippines. From this survey, he pointed out that a total of 20,167 workers were registered in the export zone as of 1 September, 1977 partially absorbing the local surplus labour, but the socio-economic conditions were inadequate to improve the working conditions and welfare of local workers and residents in the area [Liem, pp.210-211].
- 6) The figures released from the Chairman of the BKPM (Badan Koordinasi Penanaman Moda). Kompas, Feb. 5 (1979).
- 7) Ibid.
- 8) Tambunlertchai (1977), p. 54.
- 9) Ibid.
- 10) Subido (1973), p. 253.
- 11) Ibid., p. 254.

- 12) Ibid., pp. 255-256.
- 13) Data derived from the Board of Investment, Philippines.
- 14) Business Day (Philippines) May 31 (1978). See the List of 425 Japanese Capital-Affiliated Joint Ventures in the Philippines.
- 15) Subido (1973), p. 255.
- 16) Hirschman, C. (1971), pp. 24 and 27, Lim Mah Hui (1975), p. 59.
- 17) Tan, Gerald (1978), p. 3.
- 18) Elliot, T. H. (1973), p. 1967.
- 19) Singapore, Department of Statistics (1975). See Table 9 on page 16.
- 20) Liu Jin Ching (1975), p. 13.
- 21) Based on a survey of the Japanese Chamber of Commerce and Industry in Bangkok.
- 22) Bangkok Nihonjin Shoko Kaigisho (Japanese Chamber of Commerce and Industry) (1978), p. 130.
- 23) Ministry of International Trade and Industry (1978)
- 24) Business Day (1978), p. 10
- 25) JETRO (Japan External Trade Organization), Overseas Economic Information Centre (1975a)
- 26) JETRO, OEIC (1975c)
- 27) JETRO, OEIC (1975b)
- 28) JETRO, OEIC (1975d)
- 29) International Labour Office (1976), pp. 27-28.
- 30) JETRO, OEIC (1975d), p. 4.
- 31) Yoshihara (1974), pp. 26-27.
- 32) Ibid.

- 33) Torii (1978), pp. 6-16.
- 34) This is the same survey of the CB-BOI on which Torres (1978) based his study.
- 35) Subido (1973), p. 257.
- 36) Ibid., p. 259.
- 37) Subido defined them as follows:
Backward linkages indicate the extent to which a particular industry depends on other industries for inputs to produce its output. This is measured statistically by the ratio of purchases of produced inputs or intermediate goods to the output of a given industry. On the other hand, forward linkages refer to the extent to which an industry's output is sold to other productive industries for further production. It is measured by the proportion of output that is distributed as intermediate rather than final sales. Ibid., p. 261.
- 38) Ibid.
- 39) Ibid., p. 262.
- 40) Hassan (1978). p. 1.
- 41) Ibid., p. 19.
- 42) Ibid.
- 43) Rosendale (1977), p. 318.

Table 20 Foreign Participation in the ASEAN Economics

Indonesia Private foreign capital as % of total capital investment, 1967-72

Total:	56.9
Agriculture & fisheries	69.5
Forestry	68.3
Mineral	92.5
Manufacturing	37.4

W. Malaysia Foreign shares in total capital investment in selected industries, 1972 (%)

Total:	51.5
Food & beverage	63.7
Textiles	32.9
Chemicals & chemical products	68.0
Petroleum & coal	81.6
Machinery & transport	59.8

Philippines Foreign shares in total investment with foreign equity (%)

1968	24.4
1969	54.9
1970	46.0
1971	64.4
1972	61.5
1973	63.3
1974	61.8
1968-74	58.7

<u>Singapore</u>	<u>Foreign assets* in manufacturing as a proportion of gross domestic fixed capital formation (%)</u>
1970	52.7
1971	63.7
1972	74.8
1973	74.7
1974	63.7
1975	69.4

<u>Thailand</u>	<u>Total number of firms granted promotion certificates</u>	<u>(1960 - mid-1976)</u>	<u>Total registered capital</u>
	<u>Firms</u>	<u>%</u>	<u>Million baht</u>
Thai	449	50.6	9,831
Foreign	21	2.4	4,034
Joint-venture	418	47.0	29.2
TOTAL	888	100.0	13,865
			70.8
			100.0

Note: *Foreign investment in terms of gross fixed assets.

Source: For Indonesia and Malaysia, International Development Centre of Japan, A Study of Industrialization in Five Countries in Southeast Asia (Tokyo, Mar 1974). For the Philippines, Board of Investment, 'Eight Investment Priorities Plan and Sixth Export Priorities Plan with Statistical Appendix', 1975. For Singapore, Economic Development Board, Annual Report 1975-76, and Yearbook of Statistics, Singapore, 1975-76. For Thailand, Office of the Board of Investment, Statistics in Summary, June 1976. Quoted in Wong (1979), pp. 178-179.

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