The Changing Pattern of Japanese Direct Investment in Thailand

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1. Introduction

Over the years, Japan has maintained a substantial surplus in its current account, and oveaseas investment from Japan has also registered considerable growth. Faced with trade protectionist restraints in other industrialized countries and rapid appreciation of the yen, many Japanese companies have sought to relocate their production overseas. More recently since late 1985, the dramatic appreciation of the yen has prompted a new wave of Japanese investment all over the world, as more and more industries in Japan have been forced to find alternative sites of investment as a result of rising domestic costs.[1)]

Statistics of Japanese direct investment in various regions of the world indicate that most investment flows from Japan have been channeled to industrialized countries. But Japanese investment in developing countries in Asia, including Thailand, has also increased significantly over the last 2-3 years. Blessed with favorable growth prospects and economic stability, Thailand seems to be a popular site for Japanese investment in the late 1980s. Statistics from both the Bank of Thailand and the Board of Investment show that Japanese direct investment in Thailand has sharply increased in the last three years, and Japan has now emerged as the most important investing country in Thailand.

Although there exist a few studies on Japanese direct investment in Thailand, the recent change in Japanese investment and its possible impact on the Thai economy have not been explored. This paper will therefore investigate this changing pattern of Japanese direct investment and assess the implications of the rapid increase of such investment in Thailand. Following this brief introduction, Section 2 presents some facts and figures on the volume of Japanese direct investment (JDI) in Thailand and its sectorial distribution. In Section 3, the changing investment climate in Thailand in recent years is discussed. Section 4 describes the changing characteristics of Japanese investment in Thailand utilizing data obtained from the Board of Investment (BOI). In Section 5, the final section, the possible impacts of the "new wave" of Japanese investment on the Thai economy in terms of industrial structure and potential for technology transfer are assessed.

2. Japanese Direct Investment in Thailand

(1) Volume of Investment

Japanese direct investment (JDI) in various parts of the world has increased at a very rapid rate over the last three decades. The cumulative amount of Japanese overseas investment on an approval basis was 3.6 billion U.S. dollars in 1970, increasing to 36.5 billion U.S. dollars in 1980. During the 1980s, Japanese investment abroad continued to increase at an even more rapid rate. The amount of JDI was particularly high after the Plaza Accord in late 1985. The cumulative value of JDI between 1951 and 1989 was 253.9 billion U.S. dollars. Of this amount, 170.2 billion U. S. dollars was invested in the last four fiscal years (1986 through 1989).

The share of Asia in global JDI has declined much since the late 1970s, reflecting the rapid increase of JDI in North America and Europe. But the absolute amount of JDI in various countries in Asia has actually increased, particularly in recent years. Among the Asian countries, the bulk of JDI has been channeled to the newly industrializing economies (NIEs) and ASEAN member countries. In recent years, China has also received a significant amount of JDI. Among these major recipients of JDI in Asia, Thailand was relatively unimportant, accounting for less than 1 percent of Japan's global investment flows, and only around 5 percent of JDI in ASEAN between 1971 and 1985. However, there has been a surge of JDI in Thailand in recent years. In 1988, in particular, the amount JDI in Thailand was the highest in ASEAN, accounting for 31.7 percent of total JDI in ASEAN for that year. In 1989, JDI in Thailand continued to grow. But the share of Thailand in ASEAN dropped somewhat to 27.2 percent, reflecting a sharp increase in JDI in Singapore in the same year (see Table 1).

From Thailand's viewpoint, Japan has always been an important investing country. JDI accounted for over a quarter of the total net foreign direct investment (FDI) inflows between 1970 and 1985. The largest investing country in Thailand was the United States, which accounted for over 30 percent of the total net investment inflows during the same period. Due to the rapid increase of JDI in recent years, however, Japan has emerged as the most important source of FDI inflows in Thailand

Table 1

Japanese Direct Investment in Thailand, ASEAN and Asia

(Million U.S. dollars and percent)

Country/Region	1971-75	1976-80	1981-85	1986	1987	1988	1989	1951-88
Thailand	117	188	364	124	250	859	1,276	1,993
ASEAN	2,412	4,119	6,450	855	1,524	2,713	4,684	18,669
Asia	3,466	5,613	9,633	2,327	4,868	5,569	8,238	32,227
World	13,366	20,554	47,151	22,320	33,364	47,022	67,540	186,356
% Thailand in ASEAN	4.85	4.56	5.64	14.50	16.40	31.66	27.24	10.68
% Thailand in World	0.95	0.91	0.77	0.56	0.75	1.83	1.89	1.07
% ASEAN in World	19.51	20.04	13.68	3.83	4.57	5.77	6.94	10.02
% Asia in World	28.03	27.31	20.43	10.43	14.59	11.84	12.20	17.29

Source: Ministry of Finance, Japan.

during the last decade. Between 1979 and 1989, FDI inflows from Japan accounted for 38.5 percent of the total net FDI inflows to Thailand, while U.S. investment accounted for only 18.1 percent. Japan has also been the most important foreign investing country in industries under the Board of Investment (BOI) promotion program. At the end of 1989, foreign capital accounted for 38.1 percent of the total registered capital of all BOI-promoted companies, and Japanese capital accounted for a full 54.6 percent of the foreign capital. Taiwanese and American investments in BOI-promoted industries were next in importance, but respectively accounted for only 11.2 percent and 9.7 percent of the foreign registered capital.

(2) Sectoral Distribution

JDI in Thailand has been distributed in various economic sectors. Of these, manufacturing is the most important, accounting for about one half of the net JDI inflows over the last two decades. JDI in trade and construction is also significant. Between 1978 and 1988, JDI accounted for 63.9 percent of direct investment inflow to Thailand in the construction sector, 45.6 percent in the manufacturing sector, and 32.4 percent in the trading sector (Table 2). Although the volume of JDI in agriculture and services is still relatively small, it has increased rapidly in recent years.

In manufacturing, JDI has concentrated in activities promoted by the Board of

Table 2

Net FDI and JDI Inflows by Industry, 1978-1988

(Million Baht)

	Net FDI Amount	Inflows	Net JDI Amount	Inflows	% JDI/FDI
1. Financial institutions	3,013.4	3.62	1,335.4	4.21	44.32
2. Trade	13,860.3	16.63	4,495.7	14.16	32.44
3. Construction	11,196.3	13.43	7,160.0	22.56	63.95
4. Mining & Quarrying	8,930.5	10.71	18.2	0.06	0.20
4.1 Oil exploration	7,947.9	9.54	11.3	0.04	0.14
4.2 Others	982.6	1.18	6.9	0.02	0.70
5. Agriculture	1,207.2	1.45	513.9	1.62	42.50
6. Manufacturing	36,271.6	43.54	16,524.2	52.06	45.56
6.1 Food	2,731.1	3.28	184.1	0.58	6.74
6.2 Textiles	3,230.6	3.88	1,198.9	3.78	37.11
6.3 Metal based and Non-metallic	3,663.0	4.39	2,725.0	8.58	74.39
6.4 Electrical appliances	12,062.5	14.47	6,799.0	21.42	56.36
6.5 Machinery & Transport equipment	1,987.7	2.38	1,238.1	3.90	62.29
6.6 Chemicals	5,057.8	6.07	1,029.1	3.24	20.35
6.7 Petroleum products	3,074.4	3.69	2,046.0	6.45	66.55
6.8 Construction materials	(4.5)	-0.01	13.8	0.04	-306.67
6.9 Others	4,469.0	5.36	1,290.2	4.06	28.87
7. Services	8,867.6	10.64	1,695.4	5.34	19.12
7.1 Transportation & Travel	2,436.1	2.92	445.5	1.40	18.29
7.2 Housing & Real estate	1,929.9	2.32	461.0	1.45	23.89
7.3 Hotels & Restaurants	1,429.6	1.72	240.9	0.76	16.85
7.4 Others	3,072.0	3.69	548.0	1.73	17.84
Total	83,346.9	100.00	31,742.8	100.00	38.09

Source: Bank of Thailand.

Investment (BOI). Food, textiles, chemicals, metal products and machinery, transportation equipment, and electronic and electrical products are industries with significant amounts of JDI. There are also Japanese-related companies engaged in agricultural and service activities under BOI promotion.

(3) Recent Trends

Statistics of FDI inflows from the Bank of Thailand indicate that net FDI inflows increased considerably in the 1980s. During the period 1970-1979, net FDI inflows totalled only 16.4 billion baht. Between 1980 and 1987, annual FDI inflows ranged from 3.9 billion baht to 9.6 billion baht, averaging 6.6 billion baht a year, compared to an average of 1.6 billion baht a year in the 1970s. In 1988, net FDI inflows registered a record high level of 28.2 billion baht and the amount of net FDI inflows in this year alone surpassed the total inflow during the 1970s. In 1989, there was another big increase in FDI with net inflows being 44.7 billion baht. Total net FDI inflows to Thailand during the period 1980-1989 were 125.8 billion baht, which was 7.7 times of more than the net FDI inflows during the 1970s.

Direct investment inflows from Japan also increased significantly in the 1980s. In the 1970s, annual JDI inflows had never exceeded 1 billion baht, and averaged only 0.5 billion baht a year. The average JDI inflows between 1980 and 1988 were about 12 times this large, 6.2 billion baht a year. Since 1981, net JDI inflows have exceeded 1 billion baht every year. And during the last four years, annual JDI inflows have exceeded 3 billion baht. In 1988, net JDI inflows reached a record high of 14.6 billion baht, accounting for 51.7 percent of the total net FDI inflows in that year. In 1989, JDI inflows increased still further to 17.8 billion baht, accounting for 39.9 percent of total net FDI inflows in the same year.

The statistics on projects applying for BOI promotion also show a dramatic increase in Japanese investment in recent years. In 1985, there were 30 Japanese investment-related projects[2)] applying for BOI promotion. The number of JDI -related projects applying for BOI promotion increased to 54 in 1986, 200 in 1987, and 389 in 1988. In 1989, there were 233 Japanese-related projects applying for BOI promotion, much less than in 1988. But the number of Japanese-related projects approved by the BOI was not much different from 1988, and the amount of projected Japanese investment in the projects was actually higher than in 1988 (see Table 3).

The BOI statistics in Table 3 should be interpreted with considerable caution, since there exist significant discrepancies between the number of projects applying for BOI promotion and those actually approved by the BOI. In addition, not all projects approved by the BOI are actually implemented. For example, the numbers of applications involving Japanese investment in 1986, 1987 and 1988 were 54, 200, and

Table 3

Number of Projects and Amount of Projected Investment of BOI-Promoted Firms, 1987-1989

(Million Baht)

Country	Applications						Applications Approved					
	1987		1988		1989		1987		1988		1989	
	No.	Total Inv.	No.	Total Inv.	No.	Total Inv.	No.	Total Inv.	No.	Total Inv.	No.	Total Inv.
All Investment	1058	209,029.0	2127	530,292.0	1284	461,051.8	625	67,290.0	1463	201,811.9	1175	281,843.9
Foreign Investment	630	163,321.8	1273	394,211.5	856	341,496.3	385	50,063.5	888	156,419.0	752	205,495.1
Japan	200	46,986.5	389	148,221.1	233	135,768.9	136	24,363.4	265	77,019.3	223	90,568.6
Taiwan	178	14,641.9	400	54,287.3	207	30,272.8	102	7,699.6	308	21,498.4	214	22,304.7
U.S.A.	61	19,214.1	136	92,766.8	76	31,496.9	34	4,431.3	106	17,027.8	68	14,122.5
Hong Kong	46	7,035.0	126	20,108.3	106	36,171.6	32	3,143.9	86	11,415.6	65	14,429.5
Singapore	16	2,303.4	90	16,953.5	45	18,482.5	7	333.0	59	6,924.2	47	10,569.6
Australia	22	7,330.5	30	29,850.9	9	380.3	12	984.4	19	1,325.0	17	2,342.1
Canada	6	639.1	13	661.3	3	320.3	1	500.0	11	558.3	3	223.1
Europe	110	33,131.2	148	73,569.3	134	53,861.7	51	6,900.6	110	26,257.3	126	41,222.3
U.K.	26	4,230.5	45	12,597.8	40	15,847.8	16	2,643.1	44	8,387.0	31	12,493.4
Germany	14	720.3	25	5,611.8	22	16,105.7	7	337.1	17	3,512.6	21	3,220.1
Switzerland	14	2,272.7	25	3,406.9	20	3,460.0	10	1,669.8	19	1,600.2	22	4,747.2
France	7	59.1	18	29,926.8	18	4,892.6	3	31.8	14	1,289.2	17	2,487.0
Belgium	12	15,406.7	15	3,615.5	9	735.8	4	1,472.0	15	11,647.1	10	818.5
Italy	4	1,203.8	13	44,437.7	5	589.0	3	585.1	4	368.5	9	16,970.0
Netherlands	9	1,194.4	10	1,780.6	9	4,694.8	5	363.6	3	250.0	11	1,852.4

Note : Total investment figures are of Thai as well as foreign investors. Firms with foreign investment from more than one country are counted twice. Investment projects from some countries which are not major investors in Thailand are not listed.

Source: BOI.

389, respectively, while the numbers of projects approved were 130, 136 and 265. Again, some of the projects approved by the BOI may eventually not be implemented. The exact proportion of projects which fall in this category is not known. The amount of investment shown in Table 3 may also not reflect the real situation since these figures represent projected investment at the time of application or approval of the projects.

Despite the fact that not all BOI-approved projects are eventually implemented, it is clear from the BOI statistics that Japanese investment in the BOI-promoted industries has increased dramatically in recent years. In this regard, the BOI statistics are consistent with the statistics on net investment flows compiled by the Bank of Thailand, which show the amount of foreign investment actually flowing into Thailand. From these statistics, there can be no doubt that FDI inflows to Thailand have increased greatly in the 1980s, and particularly in recent years, and that JDI has played a very important role in the recent surge of FDI inflows.

3. The Changing Investment Climate in Thailand

(1) Changing Economic and Political Conditions

The recent surge of JDI in Thailand has been due to the rapid increase of world-wide Japanese investment following the currency realignments since 1985. But the more rapid growth of JDI in Thailand compared to other ASEAN countries has also been due to the favorable investment climate enjoyed by Thailand in recent years. In fact, FDI inflows into Thailand accelerated in the first half of the 1980s despite the slowing down of FDI flows to most other developing countries. In recent years, not only FDI flows from Japan, but those from other sources, notably the Asian NIEs, have also increased rapidly in Thailand. This was in sharp contrast to the 1970s, when FDI in Thailand grew at a much slower rate than in most other ASEAN countries. Up until 1972, Thailand had the second largest share of JDI in ASEAN, next only to Indonesia. After that, JDI in other ASEAN countries increased at a more rapid rate, leaving Thailand as the smallest recipient of JDI in ASEAN (except Brunei) until recent years. This partly reflected the rapid growth of JDI in natural resource and energy sectors in Indonesia and the Philippines, and also the rapid increase in manufacturing investment in Singapore and Malaysia in the 1970s. Japanese perceptions of the unfavorable investment climate in Thailand during the 1970s also contributed to the slower growth of JDI flows to Thailand in that decade.

Thailand's economic development in the 1960s was characterized by considerable growth and stability. The economy was able to grow at an annual average rate of 8 percent, and the price level was very stable throughout the decade, with the consumer price index increasing at less than 2 percent for most years. Although the country's trade balance was in deficit, the magnitude of the deficit was not large, and increasing service incomes and capital inflows more than compensated for the trade deficit, meaning that there was no significant external-balance constraint. Since around 1960, numerous import-competing industries were set up. Inflows of FDI accelerated and a modern industrial sector was created in Bangkok and surrounding provinces. Average growth of the manufacturing sector accelerated from 6.5 percent in the 1950s to 10.9 percent in the 1960s.

In the 1970s, there was continued rapid growth in the industrial sector and in the economy as a whole. Like other oil-importing countries, Thailand was affected by the energy crises in this decade. During the first oil crisis (in 1973-74), the rate of inflation went up to double-digit levels, and Thailand was hit even harder by the second oil crisis (in 1979-80). The favorable terms of trade during 1972-74, which resulted from the world commodity boom, helped the country to generate foreign exchange to compensate for the large jump in oil prices following the first oil crisis. In the late 1970s the terms of trade were no longer favorable to Thailand, and the Thai economy encountered higher rates of inflation and a larger trade deficit. However, the Thai economy was still able to grow at a respectable rate of 7.9 percent per annum in the 1970s, with the manufacturing sector growing at a higher annual rate of 10.1 percent. Although import-competing industries continued to be promoted, manufactured exports expanded rapidly in this decade. The share of manufactured exports in total exports rose from 10 percent in 1971 to around 35 percent in 1980.

It was during the first half of the 1980s that economic growth slowed down substantially in Thailand. Economic growth between 1980 and 1985 decelerated to 5.6 percent per annum, with the manufacturing sector growing at a lower-than-average rate of 4.7 percent. In fact, the manufacturing sector experienced a negative growth of -0.6 percent in 1985, which was the first negative growth for this sector in over two decades' time. Besides slower growth, the Thai economy also suffered from higher rates of inflation during 1980-81 when the CPI index once again shot up to double -digit levels. The country's current account deficit was also aggravated by increased oil prices and depressed export commodity prices.

The decline of the rate of growth in the first half of the 1980s did not imply that the Thai economy performed poorly compared with other developing countries. A cross-country comparison of GDP gross rates would in fact indicate that Thailand's growth performance during 1980-85 was better than average for developing economies, and was also better than most ASEAN member countries.

Since 1986, there has been a strong rebound of the Thai economy as a result of several factors, including the sharp decline in oil prices, recovery in the prices of Thailand's major export commodities, continued export expansion, a tourism boom, and rapid inflows of foreign capital following the currency realigments in late 1985. Economic growth reached 9.5 percent in 1987 and then 13.2 and 12.2 percent in 1988 and 1989, respectively. As prospects for further export expansion are still good, and since there has been a surge in private investment in recent years, the medium-term growth prospects of the Thai economy are still quite favorable.

In sum, Thailand's economic performance in terms of growth and stability has been quite respectable over the last three decades. As the Thai government has continued to promote foreign direct investment with generous inventives and with few restrictions, there seems to be little reason for FDI inflows to have slowed down in the 1970s. In fact, FDI inflows in Thailand, including those from Japan, also increased substantially during the 1970s. But the rate of increase of FDI flows into Thailand was smaller than that in most other ASEAN countries. This was true particularly for JDI, which expanded rapidly throughout the world in the 1970s. The political instability in Thailand between 1973 and 1979 as perceived by some foreign investors may have contributed to the relative lack of interest in investment in the country. Between 1973 and 1976, there was considerable social and political unrest in Bangkok prompted by demonstrations, strikes, and interventions of the military and right-wing pressure groups in the country's politics. Worse still, the military conflicts in Thailand's neighboring Indochinese states also created the concern that Thailand's national security might be threatened. For Japanese investors, the anti-Japanese movements during Prime Minister Tanaka's visit to Thailand in early 1974 may also have contributed to their hesitation to invest in Thailand.

The political situation in Thailand improved greatly in the 1980s. Over time, foreign investors came to realize that despite the frequent changes in government in the past, the economic and social policies of the country have not changed : a free enterprise system has always been advocated and foreign investment is still warmly welcomed. The conflicts in neighboring countries have posed no threat to Thailand's security. The situation in neighboring states has also greatly improved, and the hope of changing war zones to market places has gradually been moving toward reality. The changing political conditions together with the much improved economic conditions have made Thailand the favorite sites in Asia for Japanese investors to relocate their industries in recent years.

(2) Thailand's Strengths and Weaknesses as a Host Country for Japanese Investment

ASEAN countries have been host to a significant amount of Japanese direct investment over the years. Although vastly different in size and level of economic development, all ASEAN countries have high rates of economic growth with relatively low rates of inflation. More importantly, an outward-looking industrialization strategy has been adopted by all ASEAN members. Foreign investment is encouraged with fiscal and other incentives, and all ASEAN countries except for Singapore are also well endowed with natural resources. Labor costs are relatively low and the quality of the labor force is quite good compared with other developing economies at a similar level of development. Infrastructural facilities are also quite well-developed in ASEAN compared with other developing countries. All these factors have enabled ASEAN countries to attract a significant amount of FDI inflows over the last three decades.

Among the ASEAN countries, Thailand stands out prominently in terms of growth and stability. Compared with other ASEAN countries, Thailand seems to possess the following advantages :

1. The size of the Thai economy is relatively large and its economic structure is well diversified. In terms of gross domestic product, Thailand is ranked second in ASEAN next only to Indonesia. With a population size of 56 million and a per capita income of around U.S. $ 1,200 in 1989, there exists substantial purchasing power for industrial products and services, particularly in areas surrounding Bangkok. The growth rate of the Thai economy between 1985 and 1989 was the highest among all ASEAN countries. The manufacturing sector has now surpassed the agricultural sector in terms of GDP share and exports. There also exists a large service sector which comprises about half of the total GDP, and this sector is also growing steadily.

2. Because of Thailand's well-diversified economic structure, fluctuations in GDP growth and export earnings have been smaller than in most ASEAN countries. The Thai economy is thus relatively stable. Over the years, the average rate of inflation in Thailand has been low compared with most ASEAN countries. Although the economic growth rate of Thailand was higher than most ASEAN countries in recent years, the rate of inflation was among the lowest in ASEAN. Thailand also has significant trade and current account deficits, but massive capital inflows have more than compensated for the deficit in the current account, and the country has had a significant surplus in the balance of payments for most years over the last decade. Although Thailand has to rely on external financing, the country's external debt service burden has significantly improved in recent years. The external value of the Thai currency has also been relatively stable over the years, and there is no significant pressure for revaluation as Thailand still has a large deficit in its current account. Thailand is thus a suitable place for the relocation of industries from countries which have suffered from significant cost increases as a result of currency revaluation.

3. The wage level is still low in Thailand compared with Brunei, Singapore, and Malaysia, although it is somewhat higher than that in Indonesia and the Philippines. Thai laborers are considered to be diligent and easily trained by foreign and local investors. The labor market has been quite peaceful and considering the existence of a large pool of unskilled labor in the agricultural sector, the pressure for increases in the wage level will not be too strong, although there will be upward adjustments in the wage level to accommodate the rising costs of living. Thailand thus still enjoys considerable comparative advantage in labor-intensive industries at the present time and will continue to do so in the near future.

4. There exist several types of natural resources which are suitable for the development of resource-based industries in Thailand.

5. There is generally a positive attitude toward foreign investment among the Thai people. Probably due to the fact that Thailand has never been under colonial rule,

adverse attitudes toward foreigners have been weak among Thai citizens.

6. As in other ASEAN countries, FDI has been warmly welcomed with generous incentives and few restrictions. The Thai government has been quite responsive to requests made by representatives of the private sector, including those from foreign chambers of commerce in Thailand. This is particularly true since the early 1980s when the Joint Public-Private Sectors Consultative Committee was established and chaired by the Prime Minister. The country's macro-economic and industrialization policies have also been gradually shifting from import substitution to export promotion, and export industries are now vigorously promoted by the BOI. Economic decision making has been in accordance with the market mechanism rather than with government interventions.

7. Infrastructural facilities for industrial investment are relatively well developed, particularly in provinces near Bangkok and in major cities in other regions. Infrastructural facilities in Thailand are not as well developed as those in Singapore, and probably not as good as those in Malaysia, but the adequacy of facilities for industrial investment should be ranked higher than that in Indonesia and the Philippines.

The advantages listed above are quite well known to Japanese investors. On the other hand, Thailand also has some weaknesses as a host country for foreign investment. However, most of the weaknesses Thailand has are not confined to that country alone but are frequently found in other developing economies at a similar level of development. Among the most publicized criticism of Thailand's investment climate by foreign investors are the presence of bureaucratic red tape, the lack of effective co-ordination among various governmental agencies, and the shortage of infrastructural facilities and skilled manpower.

The shortage of infrastructure is partly the result of the unexpected economic boom in recent years, which brought with it an increasing volume of investment, imports and exports, resulting in sharply increased demand for port facilities, electricity and water supplies, telecommunications services, etc. In the early 1980s, the Thai government was faced with serious financial constraints, and various infrastructural development projects were either cancelled or scaled down. With the recent improvement in the government's fiscal position, and with the realization of the seriousness of the shortage in infrastructure, the Thai government has in the past two years (1989-90) started to allocate more funds for the building up of additional infrastructural facilities, and there are various plans to upgrade existing facilities as well as build new ones in the remaining years of the presently-implemented Sixth National Economic and Social Development Plan (1987-1991). It is expected that the problem of infrastructural constraints will subside within the next few years.

The skilled manpower constraint was similarly the result of the sudden increase in demand for highly qualified engineers, technicians, chemists, etc., as FDI in more sophisticated industries flowed into Thailand in a big way in recent years. Up until the present time, university education in Thailand has produced many more students in social sciences and the humanities than in natural science and engineering. Although the Thai government has tried various ways to alleviate the manpower problem, it is apparent that the shortage of skilled manpower will remain for some years to come. However, the availability of qualified manpower in Thailand at the present time should still be better than Indonesia and the Philippines, and than most other developing economies with a similar level of income.

In 1979, Thomas Allen made a comparison of the investment climate in ASEAN countries based on various criteria such as political and economic stability, investment incentives and restrictions, market potential, and production costs, and came up with the result that Singapore was at the top and Thailand at the bottom of the overall ranking among the five ASEAN members[3). Since then the situation has changed considerably. A similar assessment using the same criteria made by Chee Peng Lim[4) recently put Thailand at the top of the list in overall investment climate, with Singapore having second place, and the Philippines at the bottom (see Table 4).

Table 4

Overall Ranking of Investment Climate in Original ASEAN Countries

Allen's 1970 Assessment Simple Score System	Allen's 1979 Assessment Complex Score System	Present Assessment by Chee
1. Singapore	1. Singapore	1. Thailand
2. Malaysia	2. Malaysia	2. Singapore
3. Philippines	3. Philippines	3. Malaysia
4. Thailand	4. Indonesia	4. Indonesia
5. Indonesia	5. Thailand	5. Philippines

Source: Chee Peng-Lim, "Foreign Direct Investment and the Changing Investment Climate in the ASEAN Region," CAPS Discussion Paper series 16, Tokyo: The Center for Asian and Pacific Studies, Seikei University, June, 1988.

This recent ranking is consistent with the various surveys cited in Chee's paper such as those by the Osaka Chamber of Commerce and by Grey Advertising. Although such rankings are somewhat subjective, varying with the particular criteria used in the study, there should be no doubt that the overall investment climate in Thailand has improved substantially since 1979 as a result of improved political stability and strong growth performance. The rapid inflows of FDI into Thailand since 1980 indicate that the favorable investment climate in the country has gradually been realized by foreign investors and particularly by Japanese and Taiwanese investors whose investment has increased greatly in recent years.

4. Changing Characteristics of Japanese Direct Investment in Thailand

(1) Characteristics of Japanese Direct Investment in Thailand in Earlier Years

Besides the significant increase in the volume of investment, the characteristics of Japanese-related companies recently established in Thailand have also differed greatly from those established in an earlier period. In the 1960s and through most of the 1970s, Japanese investment in Thailand was largely confined to import substituting industries. Important manufacturing industries with Japanese investment in the 1960s were textiles, transport equipment, chemical products, and electrical appliances. Most of the products produced by Japanese-related companies were consumer goods catering to the domestic market. Japanese-related companies were found to rely heavily on imported capital equipment and intermediate inputs. Since Japanese investment was significant in assembly-type industries such as automobiles and electrical appliances, and as domestic machinery, parts and components industries were not developed, most Japanese-related companies had to import a substantial proportion of their material inputs from abroad, especially from Japan. As such, the contributions of Japanese investment in terms of foreign-exchange earnings and savings were considered to be limited[5]. The extent of technology transfer was also believed to be quite limited because of the assembly nature of the production process, and also because of the lack of absorptive capability of the local workforce.

In the 1970s Japanese investment in Thailand continued to concentrate in import -competing industries, although there was also a limited amount of investment in some parts and components industries such as those in the automobile industry as a result of local content regulations imposed by the Thai government. Some of the Japanese-related companies such as those in textiles also turned from the domestic market to a more export-oriented strategy. But by and large the response of the Japanese investors to the Thai government's export promotion policy was not very enthusiastic. Studies of Japanese investment in Thailand in the early 1980s still found that Japanese-related companies had a low export-to-sale ratio, and that a significant proportion of their inputs was imported from Japan[6]. Because of the nature of production, with the products sold to the domestic market and materials inputs secured overseas, most of the Japanese-related companies were located in Bangkok and nearby provinces, where they were able to save substantial transportation costs selling their products to the largest consumer market of Bangkok and securing their imported inputs from the main seaport in Bangkok. This locational pattern was seen to contribute to the concentration of industrial activities in Bangkok and adjacent provinces.

Blame for the above characteristics of industrial investment in Thailand does not necessarily lie with the Japanese investors. The overall industrialization policy of the Thai government up until the mid-1970s was still that of promoting import-substitution industries. The various promotional measures on tax and duty exemptions extended by the BOI might also have had some influence on the type of industries which invested in Thailand during that period. However, although the industrialization strategy since around the mid-1970s has gradually turned toward export promotion, Japanese investment projects in export-oriented industries were relatively uncommon until recent years.

(2) Characteristics of Japanese-Related Investment Projects in Recent Years

Japanese direct investment has not only increased greatly in recent years, but the characteristics of the Japanese investment projects have also been quite different from those coming to Thailand in the past. From the list of Japanese-related projects applying for BOI promotion in 1987 and 1988, we can see some interesting characteristics of the Japanese companies recently making investments in Thailand:

1. There are quite a few small- and medium-size companies, although large-scale companies with several thousand workers are not lacking. Out of 101 Japanese-related projects approved by the BOI in 1987 for which data on projected employment are available, 47 involved less than 100 workers. Of these, 30 involved less than 50 workers, and 6 involved less than 20. Of the 264 Japanese-related projects approved in 1988, 86, or 32.6 percent, were small-scale projects with less than 100 workers, and 33 of these, or 12.5 percent of the total Japanese-related projects approved, involved less than 20 workers. The BOI's own classification based on the proposed amount of investment or total assets also reveals that in 1988, 16 percent of the projects approved were small-scale projects with less than 20 million baht of investment, 39 percent were medium-scale projects with 20-100 million baht of investment, and only 20 percent were large-scale projects with investment exceeding 100 million baht.

Since the BOI statistics also include investment projects of existing companies which plan to expand their production, some of the small projects might simply represent such expansion rather than entirely new projects. But a more detailed investigation of the names of companies applying for promotion and the products they proposed to manufacture would reveal that many of these are indeed investment projects by Japanese companies newly investing in Thailand. This seems to be consistent with recent trends in Japanese overseas investment, in which quite a few small- and medium-size Japanese firms, faced with increasing costs as a result of

Table 5

Distribution of Export Sales of Japanese-Related Investment Projects Approved by the BOI in 1987 and 1988

Percentage of Export Sales	1987		1988	
	No.	%	No.	%
0	10	9.90	23	8.71
0.1 - 9.9	-	-	-	-
10.0 - 29.9	-	-	4	1.52
30.0 - 49.9	5	4.95	9	3.41
50.0 - 69.9	7	6.93	5	1.89
70.0 - 99.9	33	32.67	102	38.64
100	46	45.54	121	45.83
Total	101	100.00	264	100.00

Source: Board of Investment.

currency adjustments, have been forced to relocate their production overseas. Some of these are subcontractors of larger manufacturers who follow the investments of their parent companies. It is natural that these small-scale Japanese firms would move to developing countries in Asia, where labor costs are relatively cheap, currency values are stable, and the socio-cultural environments are not too different from those in Japan.

2. Among the Japanese-related projects promoted by the BOI in recent years, there is a high proportion of export-oriented projects. Table 5 shows that only 10 out of 101 projects approved in 1987 and 23 out of 264 projects approved in 1988 were entirely lacking export sales. Altogether, for the Japanese-related projects approved in the last two years, only 33 or less than 10 percent did not export their products at all. In contrast, 45.8 percent of the projects approved had 100 percent export sales. This is in sharp contrast to Japanese investment projects during the 1960s and 1970s, which were mostly in import-competing industries. Again, it should be noted that the percentage of export sales in Table 5 is based on the figures projected by the companies when they applied for BOI promotion, which might not reflect the true export figures. But the fact that there is such a high proportion of export-oriented projects indicates that new investment projects by Japanese companies are indeed quite different from projects in earlier years. The BOI's emphasis on promoting export-oriented industries in recent years may have had some influence on the high proportion of projects with export sales. But again this phenomenon reflects the recent trends of Japanese overseas investment, i.e., a significant number of Japanese companies which previously produced their products in Japan for export have recently moved out of Japan because of cost considerations.

3. There are more Japanese-related projects in capital goods and intermediate goods industries, particularly in the "machinery" or "engineering products" categories, which include parts and components for motor vehicles and electronic and electrical products. Again, this is in contrast with Japanese investment in earlier years when most of the Japanese companies investing in Thailand were producing consumer products or engaged in the assembly of consumer durables.

As Thailand still has considerable advantages in various resource-based and labor-intensive manufactures, there are also quite a few Japanese companies recently investing in Thailand which are engaged in these "traditional" activities. However, an investigation of the types of product produced by newly-established Japanese-related companies in these industries would reveal that many products they proposed to produce are quite new for Thailand. In the food industry, for example, besides canned fruits, canned vegetables and frozen seafoods, one also finds rice sauce, rice wine, rice crackers, raw bread crumbs, industrial salt, concentrated pineapple juice, etc. In

Table 6

Estimated Assets and Employment of Japanese-Related Investment Projects Approved by the BOI in 1987 and 1988, Classified by Industry

Industry	Number of Projects	Assets		Employment	
		million baht	%	persons	%
Agriculture, Fishery and Other Primary products	4	632.90	0.69	626	0.53
Food	32	2,236.35	2.45	6,652	5.68
Textiles, Textile products and Garments	23	5,996.18	6.56	29,312	25.01
Leather products	11	459.85	0.50	2,513	2.14
Wood products and Furniture	10	9,567.1	10.46	2,505	2.14
Paper products	3	131.04	0.14	98	0.08
Chemical products	19	9,615.70	10.52	2,076	1.77
Rubber products	14	2,120.44	2.32	1,890	1.61
Plastic products	21	1,350.10	1.48	3,601	3.07
Nonmetallic mineral products	3	620.80	0.68	758	0.65
Glass products	3	2,769.80	3.03	622	0.53
Metal products	46	8,495.48	9.29	5,790	4.94
Machinery and parts/components	20	6,170.30	6.75	4,569	3.90
Electronic & Electrical products and parts/components	84	27,285.60	29.84	34,691	29.60
Transport equipment and parts/components	15	2,910.29	3.18	6,583	5.62
Professional and Scientific equipment	23	7,616.60	8.33	6,948	5.93
Other manufacturing	28	1,933.99	2.12	7,331	6.25
Services	6	1,520.7	1.66	638	0.54
Total	365	91,433.23	100.00	117,203	100.00

Source: Board of Investment.

textiles, one finds ribbons, knitted headwear, and other textiles products in addition to spinning and weaving. These are simple products but most of them are rather new to Thailand, i.e., they have not been produced in the country before. Similarly, many types of machinery, parts, and components which Japanese-related companies proposed to produce in recent years have not been produced in Thailand previously.

The industrial distribution of Japanese-related projects approved in 1987 and 1988, together with the estimated assets and employment of these projects, is shown in Table 6. We can see that in terms of number of projects, the engineering product categories, which include electronic and electrical products and their parts and components, metal products, machinery and parts/components, transport equipment and parts/components, and professional and scientific equipment, have significant representation. But food, textiles, and chemical products also have significant amounts of investment or employment.

4. The average ownership share of Japanese investors is higher in recent investment projects. Japanese investments in Thailand, particularly those in BOI -promoted industries, are mostly in the form of joint ventures with Thai equity participation. In earlier years, a majority of Japanese-related companies in BOI -promoted industries were with an overall minority Japanese ownership, i.e., less than a 50 percent Japanese share. But for projects recently promoted by the BOI, there are more cases of wholly Japanese-owned and majority Japanese-owned companies, and this is particularly true for large scale export-oriented companies. Among the 264 projects approved by the BOI in 1988, 48 or 18.2 percent were with 100 percent

Table 7

Registered Capital of Japanese-Related Investment Projects Approved by the BOI in 1987 and 1988, Classified by Industry

Industry	Number of Projects	Registered Capital (Million Baht)			% of Japanese Capital
		Thai	Japan	Others	
Agriculture, Fishery and Other Primary products	4	68.90	34.16	10.20	33.08
Food	32	542.90	399.90	64.50	39.70
Textiles, Textile products and Garments	23	2,558.40	498.70	40.90	16.10
Leather products	11	56.60	112.80	30.70	56.37
Wood products and Furniture	10	482.00	1,887.50	19.50	79.01
Paper products	3	82.70	22.30	0.00	21.24
Chemical products	19	1,402.90	1,314.4	184.10	45.30
Rubber products	14	245.14	590.77	11.70	69.70
Plastic products	21	225.68	393.62	17.00	61.86
Nonmetallic mineral products	3	0.00	134.40	0.00	100.00
Glass products	3	316.20	164.80	147.00	26.24
Metal products	46	775.66	1,877.04	77.60	68.75
Machinery and parts/components	20	143.05	4,079.65	108.50	94.19
Electronic & Electrical products and parts/components	84	1,558.80	6,117.40	777.50	72.36
Transport equipment and parts/ components	15	175.35	265.65	22.00	57.38
Professional and Scientific equipment	23	326.00	2,947.70	13.50	89.67
Other manufacturing	28	135.00	570.46	37.70	76.76
Services	6	188.20	101.80	37.00	31.13
Total	365	9,283.49	21,517.99	1,599.40	66.41

Source: Board of Investment.

Japanese ownership, and 63 projects or 23.9 percent were with majority Japanese ownership. The Japanese ownership share is particularly high in the engineering product industries. The average Japanese ownership for projects with Japanese investment approved in 1987 and 1988 was 66.4 percent (Table 7). This was much higher than the average share of Japanese ownership in earlier years. For example, the average percentage of Japanese ownership was 40.2 percent for all Japanese -related projects under BOI promotion as of December 1980.

The higher percentage of Japanese ownership in recently-promoted projects reflects the policy of the BOI to allow export-oriented projects to have a majority foreign equity share, or even a 100 percent foreign share without local equity participation. In any case, Japanese investors are still quite responsive to the idea of having joint ownership with local investors as compared with foreign investors from other developed countries.

5. Although the majority of Japanese-related companies still prefer to locate their plants in Bangkok and adjacent provinces (Greater Bangkok), there are some newly -established Japanese-related companies which have proposed to have their plants located outside of Greater Bangkok. But they are still located not too far away from Bangkok. Provinces such as Ayuthaya, Sara Buri, Lop Buri, Chacheongsao, Chonburi, and Rayong are quite popular among Japanese and other foreign investors. There are also Japanese companies which locate their plants in other regions of Thailand. But these are few in number and are usually confined to major regional cities, except for a few investment projects in which proximity to raw material sources can save substantial costs and which are therefore located near the raw material sources.

These trends in location choice are quite natural. As Greater Bangkok becames more congested and as the price of land in this area increases rapidly, newly -established Japanese-related companies may find it uneconomical to locate their plant in Greater Bangkok, despite its proximity to Thailand's largest consumer market and the availability of other facilities. Provinces near Greater Bangkok are not much worse in terms of infrastructural facilities, and land prices there are much cheaper, so it is reasonable to move a bit out of the Greater Bangkok area. Moreover, the BOI has in recent years given more incentives to companies which locate their plants outside of Greater Bangkok. But as provinces far away from Bangkok generally lack adequate infrastructural facilities, besides being disadvantaged by their distance from the major market and major port, foreign-related as well as local companies under BOI promotion are reluctant to locate their plants there.

(3) Comparison of Some Characteristics of Japanese-Related Firms in Different Periods

So far we have assessed the characteristics of Japanese-related firms by using data estimated by these firms at the time when they applied for BOI-promotional status. As mentioned earlier, some firms or projects being promoted may not eventually start operation. Furthermore, the figures on employment and investment may not reflect the true situation when these firms or projects actually begin operation, since they are only estimated or projected figures. In this section, we will utilize data obtained from the annual survey made by the BOI in different years to assess the changing characteristics of Japanese-related companies in BOI-promoted industries. Since these data are reported by the companies themselves, they should more accurately reflect the true situation, although under- or over-estimation of some figures cannot be ruled out. A serious shortcoming of these survey data is that since only a fraction of companies respond to the survey in each year, the resulting figures are significantly influenced by the characteristics of the companies which responded to the survey. Thus the various characteristics noted below may not reflect the true

Table 8

Japanese-Related Manufacturing Firms Responding to the BOI Survey in 1973-74, 1985-86, and 1987-88, Classified by Industry

Industry	1973-74	1985-86	1987-88
Food	2	10	6
Tobacco	-	1	-
Textiles, Textile products and Garments	29	11	6
Wood products and Furniture	-	3	2
Paper products	2	2	2
Chemical products	7	11	6
Rubber products	5	1	2
Plastic products	-	-	2
Nonmetallic mineral products	4	2	1
Glass products	2	2	1
Metal products	11	14	9
Machinery and parts/components	-	8	2
Electronic & Electrical products and parts/components	8	9	5
Transport equipment and parts/components	9	7	8
Professional and Scientific equipment	-	-	2
Other manufacturing	1	2	3
Total	80	83	57

Source: Board of Investment Annual Survey of Promoted Firms.

Table 9

Average Size and Capital/Labor Ratio of Japanese-Related Firms, 1973-74, 1985-86, and 1987-88

(Million Baht)

Industry	Average Employment			Average Assets			Machinery/Employment		
	1973-74	1985-86	1987-88	1973-74	1985-86	1987-88	1973-74	1985-86	1987-88
Food	820.00	320.00	186.67	50.9	95.9	511.5	34.9	190.8	125.9
Tobacco	-	203.00	-	-	41.12	-	-	121.5	-
Textiles, Textile products and Garments	1,143.52	1,559.36	1,702.17	231.3	720.4	668.0	77.8	348.4	281.5
Wood products and Furniture	-	211.33	661.50	-	17.7	45.1	-	49.4	39.1
Paper products	95.50	104.00	194.50	50.0	95.3	208.8	211.5	630.6	721.3
Chemical products	477.71	103.27	91.67	630.6	56.1	58.6	669.4	300.6	380.5
Rubber products	377.00	292.00	164.00	161.9	178.3	133.7	197.4	489.1	650.3
Plastic products	-	-	46.00	-	-	20.7	-	-	172.1
Nonmetallic mineral products	220.75	95.50	357.00	37.4	52.0	23.6	58.0	482.6	7.5
Glass products	541.50	640.00	659.00	172.8	1,545.9	3,036.2	170.5	1,814.8	3,602.7
Metal products	405.36	189.07	163.56	211.1	156.4	215.7	239.7	621.7	664.6
Machinery and parts/components	-	266.13	255.00	-	220.8	198.3	-	471.2	529.0
Electronic & Electrical products and parts/components	336.13	497.33	320.00	71.6	116.9	134.7	47.1	126.6	235.8
Transport equipment and parts/components	102.56	196.577	293.50	94.0	105.7	154.6	84.1	343.3	345.5
Professional and Scientific equipment	-	-	565.50	-	-	168.6	-	-	113.3
Other manufacturing	639.00	1,105.00	237.67	108.9	262.3	76.5	479.6	152.9	126.4
Total	636.23	447.43	393.84	206.0	231.9	289.8	139.6	364.7	387.0

Source: Board of Investment Annual Survey of Promoted Firms.

characteristics of the population, or could be quite different from those obtained from a random-sampling survey. At any rate, we believe that the average figures from a large number of firms should have some relation to the real picture, although to what extent this is true is not known. The number of Japanese-related firms surveyed in 3 different periods is shown classified by industry in Table 8.[7]

Table 9 compares the average size and capital intensity (measured by the ratio of machinery to employment) of the respondents to the survey in three different periods, 1973-74, 1985-86, and 1987-88. We can see that the average size in terms of employment of firms in recent surveys was smaller, whereas the average size of investment was somewhat larger. The difference in average assets between 1973-74 and 1985-86 may not indicate an increase in the real average size of investment as prices of capital as well as other investment goods increased significantly between these periods. But the higher average investment size of the respondents to the surveys in 1987 and 1988 compared to that in 1985-86 should reflect the inclusion of newly -established companies in the 1987-88 survey, and hence the book value of assets is higher in the later years. This is also true in the case of the value of machinery per employee. It is worth noting that there exist significant variations in average employment, assets, and capital intensity as measured by machinery per employee in the same industrial groups in different time periods. This could be the combined result of various factors: a different product mix of firms in the same industry in different survey periods, a difference in the sizes of firms included in each survey, or the influence of very large-size firms in some industrial groups. Despite these shortcomings, the data in Table 9 seem to reveal the fact that newly-established Japanese companies are equipped with more modern machinery and equipment and are somewhat more capital-intensive on the average compared with those which operated in an earlier period.

We have seen that there have been many more export-oriented firms recently promoted by the BOI, and that most of the Japanese-related projects approved in 1987 and 1988 were export-oriented. Although most of these projects have still not begun operation, it is still interesting to see whether Japanese-related companies have become more export-oriented over the years. Table 10 shows such results based on

Table 10

Distribution of Japanese-Related Firms by Percent of Export Sales, 1973-74, 1985-86 and 1987-88

Percentage of Export Sales	1973-74		1985-86		1987-88	
	No. of Firms	%	No. of Firms	%	No. of Firms	%
0	29	36.3	22	26.5	17	29.8
0.1 - 9.9	29	36.3	4	4.8	8	14.0
10.0 - 29.9	9	11.3	7	8.4	5	8.8
30.0 - 49.9	5	6.3	9	10.8	4	7.0
50.0 - 69.9	2	2.5	6	7.3	5	8.8
70.0 - 99.9	2	2.5	17	20.5	9	15.8
100	2	2.5	13	15.7	9	15.8
Total	80	100.0	83	100.0	57	100.0

Source: Board of Investment Annual Survey of Promoted Firms.

the survey data. As could be expected, the proportion of firms with export sales is higher in recent surveys than in 1973-74. The proportion of firms with a high degree of export sales is also higher in 1985-86 and 1987-88. If we compare data in this Table with that in Table 5, however, we will find that the proportion of firms with export sales in the surveys is much lower than that in the projects approved in the last two years. This could be interpreted to mean that most of the export-oriented projects approved by the BOI during 1987 and 1988 are not yet in operation, while those which responded to the survey during the period 1985-88 were mostly companies established in earlier years. Nevertheless, the survey data still show the tendency of Japanese-related companies in Thailand to gradually become more export-oriented.

The data in Table 11 further confirm the above statement. We can see that the average percentage of export sales in 1973-74 was less than 10 percent, increasing to

Table 11

Imports and Exports of Japanese-Related Firms, 1973-74, 1985-86 and 1987-88

Industry	Percentage of Imported Materials			Percentage of Export Sale		
	1973-74	1985-86	1987-88	1973-74	1985-86	1987-88
Food	11.09	14.40	0.69	99.09	41.45	77.37
Tobacco	-	-	-	-	100.00	-
Textiles, Textile products and Garments	60.24	57.13	50.00	18.95	32.73	56.09
Wood products and Furniture		6.02	-	-	87.86	87.65
Paper products	84.86	52.30	6.73	-	0.50	-
Chemical products	94.55	27.72	21.96	0.19	43.19	45.90
Rubber products	70.61	50.39	73.72	1.71	-	21.07
Plastic products	-	-	77.55	-	-	100.00
Nonmetallic mineral products	87.97	30.79	40.67	0.38	90.77	26.00
Glass products	83.36	72.10	62.33	6.29	33.99	19.08
Metal products	66.61	60.94	91.78	4.00	4.08	4.28
Machinery and parts/components	-	49.02	41.50	-	1.30	0.37
Electronic & Electrical products and parts/components	71.15	84.44	76.74	1.66	26.67	50.34
Transport equipment and parts/components	85.89	69.34	69.32	0.18	2.05	2.20
Professional and Scientific equipment	-	-	47.87	-	-	9.72
Other manufacturing	73.65	77.57	57.70	0.06	12.50	93.44
Total	70.66	61.27	62.05	8.63	23.40	19.13

Source: Board of Investment Annual Survey of Promoted Firms.

23.4 percent in 1985-86. In 1987-88, the average percentage of export sales declined somewhat to 19.1 percent.

The percentage of imported materials shown in Table 11 reveals the dependence on imported materials of Japanese-related companies. The percentages of imported to total materials in the engineering product groups are high in all periods and there is no tendency for the import dependence in these industries to decline over the years, although the overall ratio of imported to total materials shows a declining trend which has been influenced by the inclusion of more resource-based companies in later years. Again the high fluctuations in either import or export ratios for the same -industry groups are quite disturbing. More careful investigation on various details of the firms included in each survey will have to be made before we can come up with any firm conclusions from the analyses of these survey results.

5. Some Implications of the Impact of Changing Patterns of Japanese Investment on the Thai Economy

Previous studies of foreign direct investment in general, and Japanese direct investment in particular, often indicate that the contribution of these investments in terms of income and employment generation, and in earnings or savings of foreign exchange, has been limited. Although FDI is important in some particular industries, it is not so important in terms of overall contribution to the Thai economy since the volume of FDI is not significant when we compare FDI inflows with total capital inflows or with gross domestic investment. In addition, some characteristics of foreign -related companies also tend to limit their potential contribution. For example, they are capital-intensive in nature, so the contribution to employment tends to be limited; and they are domestic-market oriented and heavily dependent on imports, so their contribution to earnings and savings of foreign exchange is limited.

The conclusions could be quite different for the new wave of JDI, not only due to the changing characteristics of the investment projects, but also due to their increased significance in terms of magnitude.

As shown by the data from the Bank of Thailand and Board of Investment, the magnitude of JDI in the Thai economy has increased substantially in recent years. Consequently, the contribution of JDI to the Thai economy in various respects, such as employment and income, should also have increased greatly in recent years, or will do so in the near future, when most of the Japanese investment projects recently promoted by the BOI have started operation.

The rapid inflows of JDI in recent years should also have much influence on

Thailand's production and trade structure. As we have seen, Japanese-related projects are now more export-oriented, but they are also still heavily reliant on imported inputs. The contribution of JDI to both exports and imports could increase greatly following the recent surge of JDI to Thailand. More importantly, JDI could contribute to the diversification and deepening of industrial structure in Thailand's manufacturing sector, as Japanese companies have introduced new products and also extended their operations to intermediate and capital goods industries. This could have some influence on the extent of technology transfer as well. It is noticed that in recent years quite a number of Japanese companies in Thailand have extended their production into some intermediate products, i.e., some of the intermediate products previously imported from Japan are now being produced directly in Thailand. In order to ensure acceptable quality of these intermediate products, some form of technology transfer, particularly in the area of quality control, is necessary. It is therefore hoped that the new wave of JDI will be helpful to the process of technology transfer. However, to what extent this has actually taken place remains to be investigated.

Amidst optimism regarding increased foreign investment in export-oriented industries and intermediate goods industries, there is also some concern as to the possible adverse impact of this new wave of FDI on the Thai economy. In the case of export-oriented FDI, the concern is regarding the possible adverse impact on local industries if some of these newly-produced products are sold to the domestic market. More importantly, increased exports in some industries may provoke protectionist restraints in the importing countries. In the case of JDI, as capital and intermediate inputs have to be imported from Japan, and the products produced are not necessarily sold to Japan, the trade imbalance between Thailand and Japan could worsen, even though the JDI in export-oriented industries should contribute positively to Thailand's overall trade balance. Regarding investment in intermediate goods industries and the intrusion of small-scale foreign companies, the concern expressed is that local firms which already exist in the same industries may be "crowded out". An investigation of the types of product which new JDI-related small-scale companies propose to produce, however, should reduce fears in this respect, as the products of Japanese companies are mostly different from those produced by local firms. In any case, more careful investigation will be needed before making any firm conclusions in this respect.

Notes

1) There is also a significant amount of Japanese investment in real estate, finance, and other services. But our concern here is with Japanese direct investment in the manufacturing sector.
2) The BOI statistics show the number of applicants by projects instead of companies. A project can be made by a company which has already received BOI promotional status, but which is expanding its existing production capacity either in the same product line or into a new production line.
3) Thomas W. Allen, *The ASEAN Report*, vol. 1, Hong Kong: The Asian Wall Street Journal, 1979.
4) Chee Peng-Lim, "Foreign Direct Investment and the Changing Investment Climate in the ASEAN Region," CAPS Discussion Paper series 16, Tokyo: The Center for Asian and Pacific Studies, Seikei University, June 1988.
5) On the characteristics of Japanese-related companies in Thailand's manufacturing industries in the 1960s and 1970s, see Somsak Tambunlertchai, *Japanese and American Investment in Thailand's Manufacturing Industries*, Tokyo: Institute of Developing Economies, 1977.
6) See, for example, Chulacheeb Chinwanno and Somsak Tambunlertchai, "Japanese Investment in Thailand and Its Prospects in the 1980s," in Sueo Sekiguchi (ed.), *ASEAN-Japan Relations : Investment*, Singapore : Institute of Southeast Asian Studies, 1983.
7) In each period, data from firms which responded to the survey during a two-year interval have been pooled together to produce a larger sample size. In the case of companies which responded to the survey in both years, data from the earlier year were deleted to avoid double counting. Data for 1988 represent only a fraction of the surveyed returns as they have only been partially compiled by the BOI.