Joint Ventures Between Japan and Thailand, and Technology Transfer in Thailand

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1. Introduction

Japan and Thailand are two countries which have had a long history of economic and diplomatic relations. The relationship between the two countries dates back to the Sukhothai period in the thirteenth century. Thailand shares some socio-cultural features with Japan.

In recent years foreign direct investment in Thailand has been rapidly developed. Many transnational and multinational corporations from developed countries have established joint ventures with Thai companies. Japan is the country which has had the most joint ventures in Thailand. They have played important roles in the socio-economic development and industrialization of Thailand for over thirty years.

The purpose of this paper is to provide a perception about the roles of joint ventures between Japan and Thailand and give some conclusions for Vietnam. In Section 2 we shall briefly examine the process of Japanese joint ventures and direct investment in Thailand. Section 3 will highlight some features of joint ventures between Japan and Thailand. Section 4 will examine the socio-economic impact of Japanese direct investment in Thailand. Section 5 will examine the major issues relating to Japanese technology transfer into Thailand. The final section will give some conclusions for Vietnam.

2. Process of joint ventures and direct investment of Japan in Thailand

Thai Government policy towards import substitution began in 1960 with the establishment of the Board of Investment (BOI) and the enactment of the first investment promotion act. In 1962, the Industrial Investment Promotion Law was promulgated, and direct investment by foreign firms has been encouraged by the Thai Government. Japan and the United States became the most important direct investors in Thailand.

The largest Japanese firms established joint ventures in the Thailand in the early 1960s. The Matsushita Corporation began joint ventures in 1961. In 1963 Toyota Motor started a joint venture in Thailand. The electronic industry was mainly dominated by five Japanese joint ventures with local firms, which were very small (20-50 workers). The five were Sanyo Universal Electric (Sanyo), National Thai (Matsushita), Kan Yong Electric Manufacturing (Mitsubishi), Hitachi Consumer

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Products (Hitachi) and Thai Toshiba Electric Industry (Toshiba). In the textile sector Marubeni Corporation and Toukai Bouseki commenced operations in this period. Thai Steel Pipe Industry Co. Ltd. is also a Thai-Japanese joint venture which has been implemented since 1963.

In the period from 1959 to 1969 Japanese direct investment in the manufacturing industry of Thailand was Bt 652 million accounting for 10.55% of total private investment (6,180 million baht), and 33.05% of total foreign investment (1,933 million baht) in Thailand.

The share of Asia in Japanese global direct investment has declined much since the late 1970s, reflecting the rapid increase of Japanese direct investment in North America and Europe. But the absolute amount of Japanese direct investment in various countries in Asia has actually increased particularly in recent years. Among the Asian countries, the bulk of Japanese direct investment has been channeled to the newly industrializing economies (NIEs) and ASEAN member countries. In recent years, China has also received a significant amount of Japanese direct investment.

Although Japanese direct investment in Thailand has increased significantly over time, from 1970 to 1985 Thailand was relatively unimportant among major recipients of Japanese direct investment in Asia, accounting for less than 1 percent of Japan's global investment flows, and only around 5 percent of Japanese direct investment in ASEAN. However, there has been a surge of Japanese direct investment in Thailand in recent years. After 1988, in particular, the amount Japanese direct investment in Thailand was the highest, accounting for about 30% of total Japanese direct investment in ASEAN (see Table 1).

Table 1
Japanese Direct Investment in Thailand and Asia

(US$ million & Percent)

Country/ Region	1971-1975	1976-1980	1981-1985	1986	1987	1988	1989	1951-1988
Thailand	117	188	364	124	250	859	1276	1933
ASEAN	2412	4119	6450	855	1524	2713	4684	18669
Asia	3466	5613	9633	2327	4868	5569	8238	32227
World	13366	20554	47151	22320	33364	47022	67540	186356
Thailand in ASEAN	4.85%	4.56%	5.64%	14.5%	16.4%	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-

Source : Ministry of Finance, Japan.

From Thailand's viewpoint, Japan has always been an important investing country. The largest investing country in Thailand was the United States, which accounted for over 30% of the total net foreign direct investment inflows during the period between 1970 and 1985. In recent years, however, Japan has emerged as the most important source of foreign direct investment inflows in Thailand, accounting for more than 30% of the total net foreign investment inflows to Thailand, while U.S. investment accounted for only 18 percent (see Table 2).

3. Features of Joint Ventures between Japan and Thailand

Before 1988, the share holdings of the Thai side in joint-venture firms has been more than the Japanese side. A 1980 survey by Thailand's Board of Investment revealed that only two of 134 Japanese-related firms were under 100% Japanese ownership - the majority ranged from about 30% to 50% ownership. The Bank of Thailand's survey of promoted joint-venture firms in the same year put the figures for pattern of ownership distribution as: Japanese 40.2%; Thai 57.4%; and others 2.4%. BOI figures for 1986 show that the situation did not change much: Japanese 45.1%; Thai 52.2%; and others 2.6%. BOI data for 1987 up to June 30 shows: Japanese 33.3%; Thai, 65.9%; and others 0.8%. The pattern of these figures indicates the high share of the Thai side in textiles (83%) as compared to the Japanese side (16.8%). After 1988, however, joint-venture projects between Japan and Thailand has concentrated in the sector comprising mechanical, electrical and electronic machinery and components, and Japanese-equity holdings have been more than of the Thai side. BOI data for promoted firms show that the Japanese share rose to 72.7%, while the Thai share dropped to 23.2%. About 18 percent of approved projects had 100% percent Japanese ownership in this period.

Table 2
Net Flows of Foreign Direct Investment in Thailand, by Country (1987-1992)

(US$ Million)

Country/ Region	1987	1988	1989	1990	1991	1992
Total	**361.7**	**1118.5**	**1827.9**	**2587.3**	**2055.6**	**2159.4**
Japan	130.7	584.3	750.5	1117.2	623.7	515.5
U.S.A.	72.6	127.4	208.8	246.2	236.7	291.0
Hong Kong	31.8	111.8	228.8	281.1	462.6	537.9
Taiwan	27.5	125.5	202.5	286.4	110.1	96.3
Switzerland	31.4	22.3	49.1	29.4	48.9	52.7
Singapore	21.4	62.9	109.9	245.4	258.8	274.5
U.K.	13.2	35.4	8.9	45.2	10.3	96.1
Germany	17.9	24.9	32.7	46.0	33.7	22.9
France	5.3	11.3	15.7	27.3	49.8	63.5
Netherlands	3.0	11.5	65.2	26.0	29.9	25.1
Italy	0.3	1.2	3.1	1.8	2.9	-
Belgium	0.7	4.0	4.6	18.9	28.5	23.8
Republic of Korea	0.9	12.2	10.2	19.5	11.8	11.0
Australia	1.0	1.7	4.5	4.5	73.0	57.4
Canada	0.4	2.4	6.7	3.9	6.1	6.3
Indonesia	0.3	0.9	0.4	2.6	3.5	3.2
Malaysia	0.4	1.9	2.2	18.3	0.7	0.5
China	2.5	7.7	5.5	4.1	1.6	1.1
Others	3.7	32.5	96.2	160.1	59.4	80.6

Source : Bank of Thailand

Note: Direct investment = equity and loans from parent or related companies including capital funds of foreign commercial banks.

The new wave of investment by small and medium firms in Thailand contributed significantly to the growth of total investment. The majority of joint-venture firms are in the small and medium size category (80%). Investment (in millions of baht) in 1986 seems to be concentrated in larger firms (figures in parentheses are Japanese shares) :

– Thai Plastic & Chemical Co.,	3,103	(20%)
– Thai Honda Manufacturing Co.,	784	(60%)
– Thai Suzuki Motor Co.,	1,472	(48.9%)
– Siam Yamaha Co.,	970	(13%)
– Thai Ferrite Co.,	597	(48%)
– Sharp Appliances,	639	(100%)

- Thai Silk Reeling Industries, 520 (20%)
- Nissan and Siam Motor, 1,471 (16%)
- Toyota and Siam Cement Co., 1,222.5 (16%)
- Isuzu, Mitsubishi, Mazda, Ford, Mr. Wan Chansue 1,667 (16%)

The average size of investment in 1986 registered an average of 422 million baht as compared with 146 million baht in 1987, and 143 million baht in 1988 (see Table 3).

Table 3
Average Total Size of Investment and Distribution of Firm Size (1986 - 1989)

Capitalization Year	Small Size (1-100 m.Bt)	Medium Size (101-200 m.Bt)	Large Size (201+ m.Bt)	Average Size of investment (m.Bt)
1986	56%	6%	38%	422
1987	67-	12-	20-	146
1988	65-	22-	13-	143
Average 1986-1988	65-	15-	20-	291

Source : BOI, Thailand

Average Thai employment per firm was 149 in 1986, 111 in 1987 and 208 in 1988.

Thai-Japanese joint ventures have been concentrated mainly in the manufacturing and services sectors. The services sector has accounted for about 60%. In earlier years, most Japanese companies investing in Thailand were producing consumer products or engaged in the assembly of consumer durables. In recent years, there have been more Japanese-related projects in capital goods and intermediate goods industries, particularly in the machinery or engineering products categories.

In the 1960s and through most of the 1970s, Japanese investment in Thailand was largely confined to import substituting industries. 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. As such, the contributions of Japanese investment in terms of foreign-exchange burdens and savings were considered to be limited. Among the Japanese-related projects promoted by the BOI in recent years, there is a high promotion of export-oriented projects. About 80% of number projects have targeted more than 70% of their products for export and so contribute significantly to the development of the international competitiveness of industries and to the foreign-exchange earnings of Thailand.

Joint-venture firms between Japan and Thailand rely heavily on loans for import of plant, equipment, raw materials, so the Japanese partners dominate joint ventures through credit leverage. These loans normally are procured by the Japanese side and sometimes are possible mainly because the parent Japanese company stands behind them. Often the loans come directly from the parent company itself, which enables the company to earn interest at the expense of its subsidiary.

Japanese-Thai joint ventures have been influenced by Japanese management style. Of the management of the head office, factory directors, technical advisors, accounting managers and sale managers, the majority are Japanese.

Before setting up factories Japanese - related firms have trained and educated local employees through on-the-job-training and off-the-job-training programs including practice and study at the parent company's factories in Japan.

At the seminar organized by the Japanese Studies Project of Thammasat University (1987), a prominent and knowledgeable Thai businessman commented that, though a large number of joint-venture firms with 60 or 70% Thai equity participation exist, they are still under Japanese control. He complained of Japanese dominance in joint ventures because they are much less cooperative toward or even withhold credit lines from firms that register marked increases in Thai shares.

4. Socio-economic impact of Japanese direct investment in Thailand.

The impact of foreign direct investment in general and, in particular, of Japanese direct investment on the Thai economy is very important. They have put much capital into the host country. The contribution of Japanese direct investment to the Thai economy has been in various respects, as such employment, income and cheap consumer goods, earnings or savings of foreign exchange, technology transfer, economic growth, linkages with the local economy, and helping to diversify the industrial structure of Thailand.

According to the results of a survey of 114 Japanese firms taken by JETRO in 1987, 28.8% of the total believed that they had contributed to an increase in employment opportunities; 26.9% indicated a contribution to transferring technology to Thailand; 15.8% indicated the purchase of local materials and parts; and 15.5% indicated a contribution to the increase in Thai exports. At the same time, Japanese investment also increased the degree of competition among existing local firms and the international competitiveness of Thai industries in the world market.

Japanese-related firms have contributed significantly to socio-economic development and the industrialization process of Thailand for over thirty years and, in particular, in the last ten years. Economic growth in the past three decades was at an annual average rate of about 8 percent. Moreover, at the same time, with a rapid increase of Japanese direct investment, a double-digit growth rate during 1987-1990 and low inflation, the share of manufacturing in exports was over 60%. The per capita GDP increased from US$ 95 in 1960 to US$ 2085 in 1993 (see Table 4).

Table 4
Economic Growth of Thailand, 1960-1993

	1960	1970	1980	1988	1989	1990	1991	1992	1993
Population (m.per)	27.2	33.5	38.8	54.9	55.8	56.3	56.9	57.8	58.6
GDP (US$ m.)	2563	7185	32365	60280	71040	85328	97890	109800	122191
Per capita GDP (US$)	95	214	834	1098	1273	1579	1718	1899	2085
Growth rate real GDP (% per year)	7.8	7.9	7.9	13.2	12.0	10.0	8.1	7.4	7.7

Source : NESDB & Bangkok Bank Monthly Review No 1/1994

The negative impacts of Japanese direct investment have been economic distortions. Land prices have increased. From 1988 to 1989, land values in some areas in Bangkok have increased by two or three times. Living costs in Bangkok have thus risen rapidly. There is a serious shortage of engineers and other skilled workers. Japanese-related firms have attracted skilled manpower (engineers, technicians) from local firms. Moreover, they have engaged in the destruction and poisoning of the environment.

At the same time, Japanese investors have introduced the "demonstration effect" of Japanese way of life, Japanese food and Japanese culture. Since the number of Japanese who reside in Thailand has increasing to over ten thousand (mostly in Bangkok), Japanese restaurants, Japanese-style clubs and Karaoke bars are also increasing in number.

5. Technology transfer

One of the important purposes of attracting foreign direct investment is advanced technology transfer from the foreign country to the host country. The types of technologies are production technology, administration technology and management know-how.

Machinery and equipment are a major form of technology. Manuals and other written documents are another major form. This is information on how to operate machinery and equipment and the source of know-how regarding factory administration or the management of various operations of the firm. Another form is human technology. The human resources in which technologies are embodied comprise engineers, experts, managers and top management.

According to the general assessment of experts and scholars there has been technology transfer from Japan to Thailand during the past 30 years. Japanese firms were pioneers in the development of industry, playing the major role in the introduction of technology into Thailand. However, engineers working in joint ventures have felt that technology transfer has been limited. Transfer has comprised only inferior and medium level technologies; advanced and sophisticated technologies were ignored. Compared with wholly Thai-owned firms, the machinery and equipment of Japanese-Thai joint-venture firms have been more advanced and modern, but they are still less advanced and up-to-date when compared to wholly Japanese-owned firms.

The main modes of transferring technology mentioned by the sampled firms are technical assistance contracts and the training of local personnel in the parent country. The training of local production workers and technicians as well as professional staff was mentioned as the most suitable way to transfer technology from the parent company to Thailand. Most of the Japanese-related firms had conducted training programs, usually held overseas, for local technicians, engineers, and managerial staff before the start of production operations. Japanese firms seemed to use this approach more extensively than other foreign firms. Overseas training by Japanese-related firms was usually held at the parent company's headquarters.

Manuals and other written documents from Japan are less popular because Japanese-style management shows a trend toward job-training in the working place.

The transfer of managing technology at high managerial levels has not been smooth. This is referred to as technology at the head office level. After 30 years of implementation of joint ventures, the President, Vice-President, Accounting Manager and Sale Manager are still Japanese. According to a survey by JETRO in 1985, the ratio of Japanese to Thais working in Japanese affiliated manufacturing firms was 0.81%. A survey by the American Chamber of Commerce in Thailand showed that, in the same year, the ratio of Americans to Thais in American affiliated firms was 0.12%. This situation suggests that Japanese firms tended to send more expatriates to Thailand than American firms.

However, technology transfer depends on the willingness of the transferor and the receptiveness of the host country. The lack of qualified personnel and the language barrier between Japanese expatriates and local staff are cited as the main constraints on technology transfer.

6. Some conclusions for Vietnam

Japanese investors began to invest in Vietnam in direct and indirect forms in 1989. Since 1992 Japanese direct investment in Vietnam has increased rapidly (see Table 5). From 1989 to June of 1994 the cumulative amount of Japanese direct investment approved by SCCI of Vietnam was US$ 524 million with 54 projects. Among foreign countries directly investing in Vietnam, Japan has ranked fifth after Taiwan, Hong Kong, Australia and France. Generally, the Japanese joint-venture projects have been mainly small and medium-scale firms.

Table 5
Japanese direct investment in Vietnam 1989-1994 (June)

Year	Number projects	Amount investment (US$ million)
1989	5	3.0
1990	5	3.6
1991	11	16.6
1992	8	287.4
1993 and first six months of 1994	25	214.0
Total	**54**	**524.0**

Source : SCCI and Review of Economic Development No 33/1993

Japanese direct investment into Vietnam has been minimal because of, on the one hand, the economic embargo of the United States but, on the other hand, and more importantly, the lack of advantageous conditions in the investing environment, which has provided little attraction.

As in Thailand, the source of cheap labor in Vietnam has been a strong attraction for Japanese investors, in particular, in the small and medium-scale firms. However, Japanese investors usually pay attention to the professional skills of workers, technicians, engineers and experts. Therefore, it is necessary to provide foreign experts (specialists) in professional training and retraining centers in joint ventures.

The Vietnamese market with more than 70 million persons has a large capacity. However, the purchasing power of consumers, particularly in rural areas, is limited, so the market potential has not yet provided much attraction. Therefore the government has created conditions for the improvement in people's income in order to increase their purchasing power. Following the experience of Thailand and some other Southeast Asian countries, government policy should be to encourage joint-venture firms to export to third countries, in particular, exports which return to the home country.

On the one hand, the government should invest in the improvement of infrastructures, especially electricity, water supply, highways, airports, telephones, telecommunications, etc. On the other hand, the government should encourage negotiations with the governments of developed countries, in particular with the Japanese government for ODA to invest in infrastructures. At the same time, the government should also encourage foreign Banks set up branches in Vietnam to provide services to the investor enterprises in general and to joint ventures in particular.

The improvement of the legal environment by making laws and acts more clear, precise and comprehensive, and making procedures of examination and approval of projects, investing licenses, customs and visas, etc., less complex and less bureaucratic is also a necessary requirement to provide incentive for foreign investors in cooperation, joint ventures and investment. At the same time, the policies of government should encourage and require foreign-related firms to give priority to using local raw materials and to limit the import of raw materials from foreign countries into Vietnam.

In order to raise receptiveness to the transfer of advanced and modern technologies, the government should take active steps, first, the promotion and improvement of education and training to people's level of education and knowledge.

In the negotiation of cooperative and joint-venture agreements, the Japanese have usually exercised careful deliberation, adaptability and optimism, but also immoral pragmatism and fatalism. Vietnamese businessmen should take the initiative to make preparations for negotiations. Partners in joint ventures have to show purpose and ability and make requirements of other partners and their implementation plans, etc. in the negotiation process.