

JAPANESE INVESTMENT IN THAI DEVELOPMENT:  
NIC OR NAIC?

by

NOBUKO ICHIKAWA

B.A. CHUO UNIVERSITY  
(1981)

M.A. HOSEI UNIVERSITY  
(1983)

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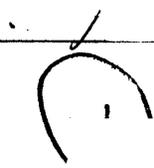
Signature of the Author: \_\_\_\_\_

Department of Urban Studies and Planning  
May 15, 1990

Certified by: \_\_\_\_\_

  
Karen R. Polenske  
Thesis Supervisor

Accepted by: \_\_\_\_\_

  
Chairperson, Master of City Planning Program  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

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### ABSTRACT

Thailand seems to be a promising site for foreign investment because of Thailand's recent economic success. Despite this performance, economic planners and government officials in Thailand are currently facing a major decision: whether to encourage a NIC's (Newly Industrialized Country) type of strategy based on manufacturing exports from the urbanized central region, which will probably require increasing dependence on foreign investment and technology, especially from Japan; or follow a NAIC's (Newly Agro-Industrialized Country) type of strategy based on agro-industry exports, which will probably mean less rapid growth overall but an improvement in rural conditions as well as more independence through investment from internal sources. This thesis examines this choice facing Thailand from the perspective of Thailand's biggest investor and foreign-aid donor -- Japan -- in order to understand the probable course of economic development in Thailand as well as the impact of Japanese public and private investment on Thai development. It argues that a combination of manufacturing and agro-industrial investments are probably necessary to insure continued economic development in Thailand, and that this will require more cooperation between Thailand and Japan as well as more assistance from Japan.

Thesis Supervisor: Karen R. Polenske

Title: Professor of Regional Political Economy and Planning

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## SECTION 1

### INTRODUCTION

Economists as well as foreign investors often consider Thailand to be the country most likely to catch up with Asia's Newly Industrialized Countries (NICs), primarily Korea and Taiwan, which have grown rapidly since the 1960s by exporting manufactured goods rather than agricultural products.<sup>1</sup> Thailand has been successful as one of the fastest growing countries in the world, averaging real annual growth rates in gross national product (GNP) of 7% from 1970 to 1980, 5% in the first half of the 1980s, and 10% a year from 1987 to 1989 (Bank of Thailand, 1980; National Economic and Social Development Board, 1981). This high growth has been supported by manufacturing investments and output (Table 1).

Japan has led the way in these investments, focusing on export-oriented manufacturing sectors, such as electrical and electronics products as well as chemical and non-metal goods. For example, total new and additional investment (unadjusted for inflation) from Japan rose from \$48 million in 1985 to \$859 million in 1988 (Ministry of Foreign Affairs, 1988; Keizai Koho Center, 1989). The total stock of Japanese investments in Thailand by mid-1989 had reached \$3.5 billion, leading all other foreign investors in Thailand by a wide margin (Table 2). Thailand also seems to be a promising site for future investment from Japan as well as other countries because it has achieved its high growth without much inflation, unstable exchange rates, or political turmoil, at least in comparison to many other developing countries.

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<sup>1</sup> Singapore and Hongkong are also considered to be NICs although they are both small city states. In analyzing Thailand and the NICs, Korea and Taiwan are more appropriate comparisons because of their larger populations and comparable mixtures of large rural and urban areas suitable for agricultural or industrial development.

**Table 1: Gross Domestic Product by Industrial Sector (1975 and 1988)**

( U.S.\$1,000,000,000 nominal values, % )

	1975	1985	1988
Gross Domestic Product	\$303	\$1,014	\$1,466
<b>Breakdown by Sector (%)</b>			
Agriculture	26.9	16.8	16.9
Manufacturing	18.7	22.1	24.4
Trade	19.2	15.1	15.8
Services	11.1	14.1	13.4
Others	24.1	31.9	29.5
Total	100.0	100.0	100.0

Source: Thailand Development Research Institute Foundation (1989), p. 4.

**Table 2: Value of Foreign Investments in Thailand by Country (July 1989)**

( U.S.\$1,000,000 )

Country	Investment Stock
Japan	\$3,537
Taiwan	871
Italy	663
Hong Kong	563
United States	551
Britain	486
Singapore	408
Switzerland	184
South Korea	171
W. Germany	125
France	97
Australia	92
Malaysia	71
Netherlands	52
Belgium	31
Canada	9

Source: Board of Investment, cited in Sanger (1990), p. D9.

Despite this record of success, however, economic planners and government officials in Thailand, as well as Japanese government agencies, research institutes, and companies, have found themselves in a debate of critical importance to the future of Thailand: whether to encourage a NIC's type of development based on manufacturing exports from the urbanized central region, or encourage a NAIC's (Newly Agro-Industrialized Country) type of development based on exports from "agro-industries" (the processing of agricultural products). Each alternative represents potentially different tradeoffs as well as conflicting interests.

Japanese company and government officials responsible for industry policy seem to support an export-manufacturing or NIC's type strategy because this would assist Japanese efforts to move production to low-cost areas as well as reduce manufacturing exports from Japan. In contrast, Thai specialists in Japan argue that an agro-industry or NAIC's type of strategy is more appropriate given the historical characteristics and current needs of Thai development. Among Thai economic planners and government officials, some support direct transformation of the Thai economy along the lines of Asian NICs by promoting export-oriented manufacturing sectors as well as heavy industrialization, similar to the Korean model.<sup>2</sup> Others, supporters of the NAIC's strategy, argue for indirect industrialization by first promoting agro-industry as an export sector and then gradually encouraging heavier manufacturing for export (Suehiro, 1987a). Although the two approaches need not be mutually exclusive, the dilemma within the Thai government is that many officials want to take

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<sup>2</sup> The Korean model is clearly described by Amsden (1989), as follows: state intervention with subsidies first distorts relative prices to stimulate exports of labor-intensive products; the firms re-invest surplus created by these exports in higher-valued products, and the government gradually reduces its protection for these firms and helps them become internationally competitive; through this process, a national economy can upgrade its industrial mix.

advantage of Japanese investment, which is concentrated in manufacturing sectors located in the central region of Thailand, but this type of investment tends to worsen urban problems already existing in the Bangkok area and does little to solve equally pressing problems related to rural poverty. In addition, Thailand may not have the economic resources to build sufficient infrastructure needed for industrial-based development such as required by Japanese manufacturing investments.

Proponents of the NAIC's strategy emphasize the special benefits of this approach, such as utilization of domestic resources, improvement of farmers' income, and reduced dependence on foreign investment and technology. The risk, however, is that, if Thailand concentrates too much on agro-industries, development of the economy may take so long that Thailand may not take advantage of the recent boom in foreign investment or achieve the level of economic progress seen in the Asian NICs. A continuation of rural poverty and urban problems may then threaten the economic and political stability that has helped Thailand grow internally and attract foreign investors.

This thesis examines the conditions and policies influencing the course of Thailand's economic development primarily from the perspective of Thailand's biggest investor and foreign-aid donor -- Japan -- in order to understand the probable course of economic development in Thailand as well as the impact of Japanese public and private investment on Thai development. The major argument is that a combination of elements are pushing Thailand in potentially opposite directions, with Japanese investments especially making a heavier emphasis on export-oriented manufacturing a likely path for Thailand, even though domestic conditions suggest a slower, mixed approach, combining agrobusinesses with some manufacturing, may actually be the wisest strategy to follow. A key challenge for Thailand and its Japanese investors is thus to

cooperate and select a balanced combination of investments that will help Thailand grow enough to solve pressing problems, such as rural poverty and urban congestion, as well as maintain some economic independence, such as through agro-based industries, but still become an even more attractive market for Japan and site for future Japanese manufacturing investments, which are a valuable source of capital, employment, and technology.

The organization of the thesis is as follows. Section 2 focuses on two internal factors that have especially promoted a mixed approach to development in Thailand: political stability, which has attracted large amounts of Japanese manufacturing investments, and the agricultural sector, which has supported new agro-industries as well as manufacturing industries in indirect ways, such as through providing surplus capital and cheap labor. Section 3 analyzes two external factors that have influenced Thai development toward more advanced manufacturing: the growth of Japanese overseas investments in manufacturing, in particular to Thailand and Southeast Asia; and the larger trend toward economic integration and industrial reorganization in East and Southeast Asia, where ASEAN<sup>3</sup> countries are gradually specializing in different types of products to overcome the small sizes of their individual domestic markets. This latter trend has been encouraged further by recent political pressures on Japan to reduce exports and import more manufactured goods from its Asian neighbors (as well as from other trading partners). Thailand and Southeast Asia have thus become increasingly important as bases for multinational corporations, especially from Japan, that wish to move outside Japan many assembly and other manufacturing operations that are both relatively capital-intensive and difficult to automate. Section 4 compares the different costs and benefits of the two

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<sup>3</sup> ASEAN is an abbreviation for the Association of Southeast Asian Nations. Members, in addition to Thailand, include Indonesia, the Philippines, Malaysia, Singapore, and Brunei.

strategic alternatives open to Thailand as well as evaluates the implications of each approach. The final section summarizes the main conclusions of this research as well as outlines key issues for Thai and Japanese cooperation.

## SECTION 2

### INTERNAL FACTORS INFLUENCING THAI DEVELOPMENT

Two internal factors have had an important impact on Thai development and encouraged a mixture of manufacturing-based and agriculture-based development. One, political stability, has helped make Thailand the most attractive location for Japanese investors moving production operations to Thailand. A second, the Thai agricultural sector, has contributed cheap labor and food as well as surplus capital to support manufacturing investments while also providing raw materials and finished products for agro-industries.

#### **Political Stability**

In 1988, the Japanese Chamber of Commerce in Bangkok recorded the largest number of registered members among the ASEAN countries (Japanese Chamber of Commerce in Bangkok, 1989). This reflects the attractiveness of Thailand to Japanese firms as a place for investment in Southeast Asia. Abundant, cheap, and hard-working labor, a history of successful economic performance with stable exchange rates and low inflation, the foreign-investment promotion policies of the Thai government, and cultural traditions familiar to the Japanese are among the reasons frequently cited for Thailand's popularity. Also cited as a reason has been Thailand's political stability, at least in comparison to other countries in Southeast and East Asia.

In the 1980s, the Philippines, Korea, Taiwan, and China all faced strong political challenges against state control and political corruption. Malaysia and Indonesia encountered less political turmoil in this decade, although they faced internal problems stemming from racial and religious conflicts among their ethnically diverse populations. In contrast to these neighboring countries,

Thailand's constitutional monarchy, harmony between ethnic Chinese and native Thai, and Buddhism as the dominant religion, seemed to create a more stable social and political environment. These characteristics of Thailand, especially Buddhism as the dominant religion and a constitutional monarchy system dating back to 1932, which consists of the king, an upper house appointed by the king, and a lower house elected by popular vote, have old roots in Thai history. As seen in the apparent reluctance of foreign companies to remain or invest in China after the government crushed a democratic movement in 1989, it is difficult to overestimate the importance of political stability in host countries for foreign investment (do Rosario, 1989). This may be especially true for firms, including many Japanese companies, that make investments based on long-term return expectations.

Recent events in the 1970s have also contributed to Thailand's present stability. The 1970s were a relatively chaotic decade politically, since a civilian government existed for less than three years because military leaders seized power on several occasions and ruled for most of this period. At the same time, however, an urban middle class created by the process of industrialization occurring from around 1960 as well as university students increased their demands for a democratic system. In addition, urban workers and farmers joined a popular political movement for the first time in Thai history. International attention for the Vietnam War also encouraged many in the Thai middle class to oppose their government's involvement. With mounting opposition from the middle class as well as workers and farmers, the military government was unable to continue as a dictatorship and reluctantly accepted democratic political reforms (Morell and Chai-anan, 1981).<sup>4</sup>

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<sup>4</sup> Thai people use their given names for official and unofficial occasions. This paper, following this custom, uses their given names.

The ouster of the military dictators in 1973 brought fundamental changes in the Thai political system in that organized political groups, such as university students, urban workers, and farmers, which historically had been silent in Thailand, suddenly gained political influence. Even though the country experienced another military takeover in 1976, Thailand successfully reduced the influence of the military on decision making for economic and social planning. For example, Thai bureaucrats, which acquired new skills in project planning and management as Thailand industrialized in the late 1970s and 1980s, has gained considerable independence from the military and the civilian government. In the financial sector, since 1972 the Bank of Bangkok has moved away from its previous reliance on military patronage and successfully transformed itself into an internationally competitive financial institution (Suehiro, 1985). As a result of these and other developments, unlike Korea and Taiwan, where military governments have imposed stability on the country by controlling labor and other groups, Thailand produced a political stability that resulted from a gradual shift from a military dictatorship to a system (although somewhat fragile in nature) of multiple interest groups represented by political parties, independent businessmen, and the king, as well as the military. Supported by the popularity of the civilian Chatichai administration that came to power in 1988, the public political role of the military has continued to decline (Tasker, 1989).

As part of this political evolution, it also appears that a consensus has emerged among these different groups that democratization as well as economic development are necessary for Thailand to prosper in the future. Related to this consensus is the growing role of local businessmen, whose numbers and influence have expanded through joint ventures with foreign investors. Though most of them are ethnic Chinese, they have been well integrated into Thai society by inter-marriages and achieved a high social status as businessmen.

They have become increasingly able to influence many of the decisions affecting economic development and even send their members to Thailand's parliament.<sup>5</sup>

There have been, however, two potential threats to this political stability. One has been resentment against the growing Japanese presence in Thailand, although Japan has managed to reduce this criticism through a series of measures. Another more serious problem is the social and economic costs of rapid industrialization and urbanization.

During the political struggles of the 1970s, Japanese businesses became a target of criticism as an overly influential foreign presence. In 1972, for example, student activists organized an anti-Japanese products campaign intended to foster nationalistic criticism of the foreign powers in Thailand while the students prepared themselves for direct criticism of the military government (Morel and Chai-anan, 1981). The anti-Japanese campaign turned out to have wide appeal, because many Thai people were afraid of economic control of Thailand by Japanese businesses and angry at the military government that had let Japanese products dominate Thai markets. Also, in 1972 Japanese foreign investment in Thailand began to accelerate due to the Japanese government's liberalization of foreign investment policies.

After experiencing public criticism as well as huge demonstrations against Japanese economic dominance when the Japanese Prime Minister Kakuei Tanaka visited Thailand and Indonesia in 1974, Japanese government officials gradually acknowledged the need for special diplomatic efforts to soothe their relations with Southeast Asian countries. In 1977, Prime Minister Takeo Fukuda then announced a new doctrine that promised to offer \$1 billion in assistance for ASEAN development projects (Yasutomo, 1986). Since early 1980, helped by the

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<sup>5</sup> A famous example is a banker, Boonchu Rojanastien, who used to be the Minister of Finance and now is an elected member of the lower house.

growth of the Thai economy, the introduction of a more democratic system (at least indirectly supported by Japanese aid and investment), and Japanese efforts to promote economic cooperation with the Thai government, Japan has not only received little criticism, but some Thai groups now see many positive elements in the Japanese role in Thailand.

First, because they were violently repressed by the Thai military during the 1970s and observed the poverty and refugee problems of other Indochinese countries after communist revolutions, Thai opposition groups became more careful in choosing their positions and have pursued not radical change but gradual democratization, which Japanese government aid and company investments have tended to encourage.<sup>6</sup> Recent administrations have been relatively tolerant of public criticism against the government and have allowed different views to appear in the mass media. Even in remote rural areas there appear to have been no anti-government activities during the late 1980s, at least partly due to successful development efforts promoted by the Thai military as an anti-insurgency measure (McBeth, 1986). Thai labor unions have also cooperated with government labor policies and focused on activities to improve their living conditions (Paisal, 1986). Meanwhile, Thai academics, especially graduates from Japanese universities, have tried to learn about the Japanese political system and how Japan achieved economic success after the destruction of World War II and then relative economic equality in society. Many of these academics would like the Thai economy to develop in a similar way to reduce existing poverty. Therefore, for Thai intellectuals and many other groups, Japan is no longer an enemy but a country that can provide a model of economic

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<sup>6</sup> This type of cautious attitude was apparent in interviews with several Thai professors from Thammasat University in Bangkok conducted during July 1989. These included Professors Banyat and Suvinai (Economics Department) and Surichai and Wai (Commerce Department).

development as well as a source of aid, investment capital, and technology.<sup>7</sup>

In the 1980s, under the Prem administration, the Thai government remained intact despite two attempted coups. The new Chatchai administration has also succeeded in getting the various political parties, local business groups, the military, and the king to cooperate. There seems, as a result, to be no immediate threats to Japanese investors operating in Thailand. To the contrary, a boom in Japanese investments in the late 1980s has become a key force driving Thai industrialization. In particular, the increasing importance of Thailand as an offshore production base for Japanese manufacturers has brought significant changes to the Thai economy in the form of an expansion of manufacturing production and exports as well as new employment opportunities in manufacturing sectors.

At the same time, however, rapid industrialization and urbanization, particularly in Bangkok and surrounding areas, has caused serious problems for the Thai government that may threaten this economic success and political stability. Poor housing conditions, crowded buses (the only form of public transportation), air and water pollution, and recurrent floods worsened by land sinking from the digging of deep industrial wells, are everyday realities for many urban dwellers. According to government data, for example, in 1984, 21% of the housing stock in Bangkok still consisted of poor canal houses, slums, and squatter settlements. Although this proportion represented a decline from 29% in 1974, the absolute number of slum and squatter units increased by 46% between 1974 and 1984, excluding high-rise tenements, factory dormitories, construction site lodging, and similar residences, which may have constituted

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<sup>7</sup> The positive image of Japan's role in Thai economic development is described more in detail by Suvinaï (1988) in a paper submitted to the international symposium on Japanese direct investment and trade from ASEAN perspectives in November 1988 at Kyushu University in Japan.

large share of low-income housing. Aerial photography interpretation also indicates that there were 780 slums in the Bangkok Metropolitan Area in 1974 and 1003 in 1984 (National Economic and Social Development Board, 1986a).<sup>8</sup> In 1983, the most serious and prolonged flood in recorded Thai history occurred and about 350 square kilometers of the Bangkok Metropolitan Area and the surrounding five prefectures were flooded, some areas for three months or longer. The measurable average annual loss in the Bangkok Metropolitan Area due to flooding was estimated at 975 million baht<sup>9</sup> in 1984, even excluding significant additional environmental costs as well as productivity losses (National Economic and Social Development Board, 1986a). Expansion of the urban population without solving these housing and other infrastructure problems is likely to cause further tensions in the city. The number of factory workers in Thailand has also steadily increased. In the Bangkok Metropolitan Area, for example, employment in manufacturing sectors increased from 214,000 (19% of total employment) in 1970 to 427,900 (21%) in 1980 and 663,000 (26%) in 1985 (National Statistical Office, 1970, 1980, 1985).<sup>10</sup> Their demand for better living conditions is likely to become a demand for increases in wages, social services, and infrastructure, such as better public transportation and housing.

The activism of Thai labor unions tended to decrease during the late 1970s and the 1980s, although there were signs that this trend might not continue. In 1973 after the student revolution in 1972, Thailand reported 501 cases of strikes with 177,887 participants. Between 1977 and 1986, the most strikes

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<sup>8</sup> In 1972, the Bangkok Metropolitan Area was created to combine the cities of Bangkok and Thon Buri and expand their municipal boundaries.

<sup>9</sup> The value of the baht has been relatively stable during the 1980s at approximately 25 per U.S.\$1.00.

<sup>10</sup> The data for 1970 refer to the total for Phra Nakhon and Thon Buri, later incorporated into the Bangkok Metropolitan Area.

occurred in 1981, when there were 54 cases and 22,008 workers participating; 1985 had the least number of cases, with 4 strikes reported and only 648 workers participating (International Labor Organization, 1987). As of 1986, unions had organized merely 6.6% or 300,00 members of the total non-agricultural worker population, one of the lowest rates of unionization among Asian countries (Paisal, 1986). Thailand's labor movement traditionally has been weakened by factional squabbles through manipulation by outside elements, particularly the military. More than half of Thai organized labor also consisted of members of state-enterprise unions, which have in the past cooperated with government policies (Paisal, 1988).

State-enterprise unions, however, were facing a serious problem in that the Thai government planned to reduce its loan commitments and budget requirements by privatizing several state enterprises. These have played an important role as implementation agencies for public infrastructure construction projects but have become heavily dependent on external loans (about 50% of their investments during 1982-1984) (Tasaka, 1989). During February 1990, Bangkok port workers launched a four-day strike to protest against plans to privatize Thailand's new deep sea port at Laem Chabang, while the electric-power workers union requested the government to drop its privatization plan for ten power stations or face a major protest campaign. The union of telephone workers also has voiced opposition to the government's privatization plans (Handley, 1990).

Thus, there is considerable potential for organized labor in Thailand to become more active as state enterprises become private and general employment grows in private industry, where the majority of workers are not unionized. Unions may also become more popular among private-sector workers, who regained their right to strike only in 1981, after losing it during a previous

military rule, especially since the attitudes and background of Thai workers appeared to be changing. Although in the past they seemed to have few skills and little political awareness, and to depend heavily on the patronage of their employers, new workers in manufacturing now have more basic education and are moving into larger scale factories (Tasaka, 1989).

### **The Agricultural Sector**

The Thai agricultural sector has supported industrialization in several ways. Increases in agricultural production have helped expand national income and government revenues, creating surplus capital for investment. The agricultural sector has also provided cheap food and cheap labor for the manufacturing sector.<sup>11</sup> In addition, Thai agriculture has carried out a unique role as a source of increasingly diversified exports, beginning with traditional products such as rice and rubber; post-World War II products, such as maize, tapioca, kenaf, and sugar; and then recent products, such as canned fruit and frozen chicken. In fact, Thailand is one of only a few food exporters among developing countries. In 1988, 105 billion baht worth of agricultural products out of 248 billion baht in gross domestic agricultural output were exported (42% of agricultural output). Agricultural and marine product exports were decreasing in their share of total exports, but represented 43% in 1985 and 31% in 1988. In terms of export items, in 1988, rice (35 billion baht), rubber (26 billion), and tapioka (22 billion) occupied second, third, and fourth positions, respectively, following textile products (58 billion) (Thailand Development Research Institute Foundation, 1989).

Yet the traditional and the post-war agricultural exports seemed to have

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<sup>11</sup>. The agricultural sectors in Korea and Taiwan as well as Japan contributed in similar ways to industrialization. See Amsden 1989, Ishida 1988, and Nakamura 1965, for discussions of Korea, Taiwan, and Japan, respectively.

reached a limit in the 1980s, because some countries that formerly imported large quantities of food achieved self-sufficiency; this increased competition among food exporters. For example, in the case of the Taiwanese agricultural sector, sugar and rice exports had earned foreign currency to support import-substitution industrialization by the mid-sixties, but their role declined significantly with the development of an export-oriented strategy based on manufactured goods (Ishida, 1988). In the case of Thailand, companies and government officials were trying to manage this situation by further diversifying Thailand's agricultural products as well as attempting skillful marketing efforts. Recent increases in the export of chicken, shrimp, and other canned foods suggest that this approach has worked and Thailand has the potential to increase agro-industry exports even further, which would help bring needed income to farmers in rural areas as well as earn foreign currency.

According to Shigetomi (1987), two recent phenomena have greatly increased Thailand's potential for further developing new agricultural products and processing industries. One has been the emergence of large plantations, especially for palm cultivation, actively promoted by the Thai government's Board of Investment and run by agro-businesses owned by Thai or by joint ventures with foreign investors. These provide an example of how the government has encouraged the development of agro-businesses in Thailand. Another has been the formation of integrated production and distribution organizations that have made serious efforts to improve production technology and international marketing, as observed in the chicken (broiler) industry.

Unlike the Philippines and Malaysia, where plantations are a common form of agricultural organization because of their colonial heritages, plantations are new in Thailand, which was never colonized by a foreign power. Though palm plantations were only recently started and production volumes are still small,

plantations of at least 10,000 rai in size (1 rai equals 0.16 hectares) accounted for 45% of total palm fields in 1984. The growth of these large plantations was due to economic advantages and government policy: Palm oil requires quick processing and thus processing plants need to be beside the palm fields; and the Thai government has promoted the formation of these large-scale palm plantations and processing plants by granting tax breaks to their owners (Shigetomi, 1987).

In frozen chicken production, nine vertically integrated conglomerates, such as the highly successful Charoen Pokphand (C.P.) Group, Thailand's first multinational company, controlled both chicken production and distribution, including the import of breeding stock, feed supplement, and drugs; manufacture of feed; production of chickens; operation of slaughterhouses and packaging lines; and local as well as export marketing. Each of the conglomerates has affiliated farms under contract that are obligated to purchase young chickens and feed. The conglomerates also provide technology to farmers to raise chickens (Viraphong, 1989).

As a result of these efforts, frozen chicken exports have increased rapidly, from 1.2 thousand tons valued at 49.4 million baht in 1976 to 96.4 thousand tons valued at 4,917 million baht in 1988 (nominal values). Japan, in addition to investing heavily in Thailand, has also contributed to Thai development by becoming its most important frozen chicken market; in 1988, fully 92% of Thai exports went to Japan (Ministry of Agriculture, 1976/77 and 1988/89). Thailand also represented 62% of the total boneless chicken market in Japan, compared to 13% and 12% for the United States and Brazil, respectively, in 1987 (Japan External Trade Organization, 1988).

Many joint-venture projects with foreigners supported these successes. In 1970, for example, the C.P. Group started a joint venture with the world's

biggest chicken breeder, the U.S.-based Arbor Acres Farms, Inc., to adopt technology to breed chickens more efficiently, and later introduced this technology throughout Thailand. The C.P. Group in 1973 entered into a sales contract with the Japanese supermarket chain, Seiyu, and later formed joint ventures with several other American and Japanese companies to start new businesses, such as shrimp cultivation and meat processing in Thailand and fertilizer production in China (Suehiro, 1987b).

Although the agricultural sector has contributed to the development of the Thai economy in various ways, rural poverty has continued and this has caused problems not only in agricultural areas but in urban areas as well, due to the migration of farm workers. One problem is that government policies have kept prices of food low and manufactured goods high, a process that tends to transfer surplus capital from agriculture to manufacturing sectors. In spite of rapid increases in productivity for manufacturing relative to agriculture, the government protects import-substitution manufacturing products through a high import tax and regulation of the number of companies in one field; this keeps prices for these manufactured goods high, while there are no similar measures for agricultural products.

In addition, although the government's official policy changed from supporting import-substitute industrialization to export-orientated industrialization in the early 1970s, among manufacturing sectors, so far only the textile industry has been able to compete internationally, partly because of measures favoring import-substitution industries. Nonetheless, in 1987, the average monthly wage for private employment in the agricultural sector was merely 1,106 baht, compared to 2,137 baht in the manufacturing sector (National Statistical Office, 1987). As seen in Table 3, the producers' price index for the manufacturing sector has also been consistently higher than that for agriculture.

Thus, while favoring domestic manufacturing over agriculture may have concentrated capital useful for industrial investments, Thailand has yet to develop its own manufacturing exports, while this policy may also have prevented the agricultural sector from increasing prices and accumulating capital it needs for further investment.

**Table 3: Producers' Price Index (1984-1988)**

( Index, with 1976 = 100 )

	1984	1985	1986	1987	1988
Total	169.1	169.0	168.4	178.4	193.0
Agricultural and Food Products	155.2	141.6	145.6	163.5	181.4
Manufactured Products	179.2	183.9	178.1	184.0	194.9
Fuel	279.8	280.2	249.0	236.8	238.8
Construction Materials	184.2	187.8	185.7	193.1	214.0

Source: Japanese Chamber of Commerce in Bangkok (1989a), p. 7.

Investment in agriculture is important because this sector is still the major source of employment in Thailand, accounting for 67% of total employment as late as 1986, the last year for which complete data are available (Table 4). Although the percentage of employment in agriculture has been declining, the absolute number of people working in this sector was still increasing, rising from just under 16 million in 1980 to approximately 17.8 million in 1986. Furthermore, according to the sixth National Social and Economic Development Plan (1986-1991), approximately 3.9 million new workers are expected to enter

the labor market (National Economic and Social Development Board, 1986b). It is unlikely that non-agricultural sectors can provide enough employment to absorb these new workers as well as people expected to leave rural areas, especially if productivity and incomes in the agricultural sector do not improve. As seen in a comparison of Tables 1 and 4, for example, agriculture, which occupied more than two-thirds of the employed population, accounted for less than 17% of Thailand's gross domestic product in the mid-1980s, as opposed to more than 20% for manufacturing, which accounted for merely 8% of the employed population.

**Table 4: Employment by Sector, Selected Years (1975-1986)**

( 1,000, % of total employed in parentheses )

	1975	1980	1983	1986*
Total Population	41,390	46,720	49,730	52,650
Total Labor Force	18,255	22,728	25,849	27,660
Total Employed	18,181	22,524	25,184	26,691
Agriculture	13,270 (73)	15,943 (71)	17,401 (69)	17,815 (67)
Manufacturing	1,356 (7)	1,789 (8)	1,843 (7)	2,069 (8)
Others	3,555 (20)	4,792 (21)	5,939 (24)	6,807 (27)
Unemployed	74	204	614	969

\*Note: 1986 figures are estimates.

Source: Asian Development Bank (1989), pp. 318-319.

Data on the level of urbanization (defined as the ratio of population living in municipal areas compared to the total population) and domestic population immigration, land tenancy, the amount of virgin land available for cultivation,

as well as land productivity, all indicate that neglecting rural development has created serious problems for Thailand in both rural and urban regions, with dramatic increases in the number of people moving into metropolitan Bangkok from agricultural areas. For example, even in 1985, Thailand was a relatively rural society compared to other ASEAN countries, where the level of urbanization was 25% in Indonesia, 38% in Malaysia, and 40% in the Philippines. In Thailand it was merely 18% (Asian Development Bank, 1989), although this represented an increase from approximately 13% in both 1970 and in 1960 (National Statistical Office, 1960 and 1970). Furthermore, according to census data examined by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), only 8% of the Thai population five years of age or over had moved during the five years preceding 1970 (these could be permanent, temporary, or seasonal movements). Of people moving between 1965 and 1970, only about 10% moved from rural to urban areas, while over 70% moved from one rural area to another, and the rest moved from urban to rural or to other urban areas (Economic and Social Commission for Asia and the Pacific, 1982). These data thus provide additional evidence of relatively slow urbanization in Thailand.

Since equivalent data on migration between rural and urban areas are not available from the 1980 census, adequate comparisons cannot be made with the 1970 census. The 1980 data, however, show clearly that there was far more migration from rural and urban communities to the Bangkok Metropolitan Area and the surrounding region than from one rural area to another or from urban to rural areas. For example, the net inflow of migrants to the Bangkok Metropolitan Area and the surrounding five prefectures accounted for 90% of the country's net migrants from 1975 to 1980. Of the migrants to the Bangkok region, no less than 50% originated from the agricultural Northeast. This is in

clear contrast to the 1970 census, in which, of the immigrants to Bangkok, 52% came from the more industrialized Central Region and only 15% from the Northeast Region (National Statistical Office, 1980 and National Economic and Social Development Board, 1986a). The total population in the Bangkok Metropolitan Area (including Thon Buri) thus increased from 2.1 million in 1960 to 5.8 million in 1986, only part of which came from natural population growth. From 1970 to 1986, the annual population growth rate in the Bangkok Metropolitan Area averaged 3.5%, compared to 2.5% for the whole nation. In addition, between 1970 and 1980, roughly 44% of the population growth in the Bangkok Metropolitan Area can be attributed to migration (National Economic and Social Development Board, 1986a).<sup>12</sup>

Other evidence of the rise in rural poverty has been growing land tenancy (the percentage of agricultural land rented rather than owned by those who worked it), which rose 42% in area nationwide from 1975 to 1986 (Table 5). In 1975, in the Central Region, 41% of all farms consisted of rented land; these percentages were 27% in the North Region, 17% in the South, and 9% in the Northeast (Suehiro, 1980). By region, the Northeast, the major source of immigrants into Bangkok according to the 1980 census, experienced the largest increase after 1975, estimated to be as much as 152%. Because Thai farm statistics exclude non-land holders who are rural residents, these numbers suggest a shift of farmers from land-holding levels adequate to feed a family (generally considered to be 25 rai for an average family) to levels that appeared insufficient.

Responding to the increase in land tenancy, in 1975 the Thai government

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<sup>12</sup> Data for 1960, 1970, and 1980 are from the annual censuses. Data for 1986 are from projections by the Working Group on Population Projections, comprising NESDB, NSO, and the Institute of Population Studies, Chulalongkorn University.

issued a land reform law that gave farmers cultivating land owned by the government legal title as well as purchased land for distribution. Land affected amounted to 7.6 million rai, of which 5 million was public land and 2.6 million was privately owned. By 1989, the reforms had transferred 3.1 million rai or 40% of the targeted land. The Agricultural Land Reform Office (ALRO) also earmarked 2.7 million rai or 54% of all public land for distribution to poor farmers. In addition, ALRO has purchased 361,830 rai or 14% of the privately owned targeted land and rented 67% of it to farmers while reselling 12% on a "hire-purchase" basis and leaving 21% not allocated (Preyaluk, 1989a).

**Table 5: Farm Land Rented (1975 and 1986)**

( rai [1 rai = 0.16 hectare], % )

Land Area	Year	Rented Land	Change (%)
<b>Nationwide</b> 320,696,888 (100%)	1975	13,592,363	
	1986	19,240,941	+41.6
<b>South</b> 44,196,992 (18.8)	1975	399,059	
	1986	686,181	+71.9
<b>North</b> 106,027,680 (33.1)	1975	3,408,576	
	1986	5,928,489	+73.9
<b>Northeast</b> 105,533,963 (32.9)	1975	1,289,577	
	1986	3,247,668	+251.9
<b>Central</b> 64,923,253 (20.2)	1975	8,495,151	
	1986	9,378,603	+10.3

Source: Preyaluk (1989a), p. 233.

This effort, however, has had limited results. Privately owned land

targeted for distribution to farmers, which reduces their rent payments to landlords, amounted to merely 14% of total land under tenancy in 1986 (Preyaluk, 1989a). In addition, much of the publicly owned land that was distributed merely legalized the position of farmers illegally cultivating land, and so the incomes of these people did not change. The land reform also did not solve the problem of high land rents in certain areas. For example, while in the Central Region, non-resident landlords dominate and there is a high concentration of land tenancy but with relatively low rents, in part of the North, there are more resident landlords, but they continued to impose higher rents on tenants (Suehiro, 1980).

At the same time, distribution of publicly owned land along with increases in the rural population as well as extensive commercial logging have destroyed Thailand's forests, which covered 53% of the nation in 1961 and perhaps as little as 29% in the late 1980s (Suehiro, 1980; Norani, 1989). This was the lowest figure among the ASEAN countries, with the exception of the heavily urbanized Singapore (Economic and Social Commission for Asia and the Pacific, 1988). The destruction of forests causes various problems: damaged watersheds, increased possibilities for flooding and soil erosion, reductions in the quantity and quality of water, as well as potential damage to animals dependent on the forests. These problems became so serious that in January 1989 the Thai government officially banned commercial logging, although this has been difficult to enforce. In addition, once logging companies move out of an area, landless villagers tend to move in and prevent re-forestation, since the government will acknowledge the ownership of illegal settlers who have lived on a piece of land (Norani, 1989).

Furthermore, while land has become scarcer for farmers, rural incomes have suffered from little growth in output and agricultural productivity. For

example, total paddy production in Thailand between 1976 and 1985 grew from 15 million metric tons to only 20 million. At the same time, the average yield in paddy fields rose from 1,825 kilogram per hectare in 1975 to merely 2,052 kilogram per hectare in 1986. In contrast to the total output growth of 35%, land yield grew only by 12%. Meanwhile, cultivated land per capita has stayed the same, at 0.38 hectares in both 1970 and 1985. This suggests that the increase of rice production came mainly from the expansion both of the population cultivating rice fields and land area available for cultivation, not from productivity. In fact, Thailand had one of the lowest levels of productivity in paddy cultivation among developing countries, with output levels that were less than half that of China and merely a third of South Korea, as well as behind countries such as Afghanistan and India (Table 6). In addition, Thai farmers in the 1980s suffered from sharp declines in the international market price for rice, which fell from about \$424 per metric in 1980 to \$216 in 1985 (nominal values), as well as for maize, casaba, and sugar cane (Asian Development Bank, 1989).

**Table 6: Paddy Yield Comparison, Selected Years (1975-1988)**

( kilograms of rice produced per hectare )

Country	1975	1980	1986	1987	1988
Afghanistan	2,071	2,174	2,243	2,252	2,290
Bangladesh	1,853	2,020	2,178	2,178	2,190
Burma	1,816	2,774	3,028	2,957	3,000
Cambodia	1,429	1,084	1,176	1,200	1,250
China	3,518	4,134	5,338	5,423	5,344
India	1,858	2,000	2,202	2,099	2,412
Indonesia	2,630	3,293	3,943	4,075	4,202
South Korea	5,324	4,308	6,369	6,019	6,420
Malaysia	2,661	3,645	2,932	2,981	3,034
Philippines	1,721	2,233	2,669	2,623	2,749
Taiwan	4,135	4,837	5,338	5,428	5,344
<i>Thailand</i>	<i>1,825</i>	<i>1,909</i>	<i>2,052</i>	<i>1,986</i>	<i>2,145</i>

Source: Asian Development Bank (1989), p. 18.

The cultivation of different cash crops has diversified Thai agriculture and created valuable export items, while skillful operations and marketing by Thai agro-businesses have furthered increased Thai agricultural production and exports. Yet the limited results of these efforts, as well as land reform, have failed to solve problems such as land tenancy, low productivity in agriculture, and massive migration to Thailand's capital city. The Thai government is aware of these problems but has placed more emphasis on developing Thailand's urban and industrial infrastructure rather than agriculture. This policy has been especially evident in expensive examples such as the government's on-going

Eastern Seaboard projects, which contain a natural-gas refinery, a fertilizer plant, two ports, and two industrial parks. Some Thai government officials have also insisted that large migrations from rural areas, especially from the Northeast, together with the expansion of cultivated land, have prevented land fragmentation and raised per capita rural incomes, because migrants are generally surplus agricultural workers. This view acknowledges the Bangkok Metropolitan Area and the surrounding five prefectures as the center of growth in Thailand and emphasizes the benefits of improving this urban area, where most industry and growth are concentrated, at the expense of agricultural regions (National Economic and Social Development Board, 1986b).

## SECTION 3

### EXTERNAL FACTORS INFLUENCING THAI DEVELOPMENT

Whether export-oriented industries can create enough employment to absorb rural migrants is not clear, and this is why government officials and others see external investment from countries such as Japan as critical to Thailand's continued economic development and perhaps political stability as well. Japanese investment, however, has not only grown over time but gradually shifted from an emphasis on agriculture and natural resources to manufacturing. Related to the Thailand's appeal and the increase in manufacturing-oriented investments has been growing political pressure on Japan to import more manufacturing goods and the emergence of Thailand as well as other countries in Southeast Asia as manufacturing bases for multinational firms from Japan and other developed countries as well as from the NICs.

#### **The Growth and Character of Japanese Investments**

For the first two decades after World War II, Japan concentrated on the reconstruction of its domestic economy and restricted foreign direct investment due to the scarcity of capital. Japanese overseas investments started to grow mainly after the late 1960s, along with rapid economic growth at home, movement of Japanese companies into international markets, improvement in Japan's balance of payments, and decisions in the Japanese government to allow more foreign investment. In the 1980s, however, Japanese foreign investments to all countries increased dramatically. While in the second half of the 1970s, Japanese direct investments abroad ranged between \$3 and \$5 billion per year, in the first half of the 1980s, they jumped to approximately \$8 billion per year (nominal values) as the yen rose in value and made overseas assets appear

relatively inexpensive and production costs in Japan high. Japanese direct investment overseas in 1986 alone increased by 83% to over \$22 billion and in 1988 reached 47 billion dollars.

Japanese investment from 1961 to 1976 accounted for only 2.4% of the world's direct investment flows, compared with the 61% for the United States. During 1980-1983, however, Japanese investment accounted for 34.5%, exceeding other countries, though in existing investment stock the United States still exceeded Japan (Organization for Economic Cooperation and Development, 1987). Japan is now a very important source of foreign direct investment and is expected to play a larger role in the future because of its huge trade surpluses. Even with declines in the value of the yen, factors such as threats of protectionism that would restrict sales of Japanese goods overseas, as well as the need to reduce trade surpluses created by Japanese exports from Japan, have both encouraged Japanese firms to invest abroad.

By region, during the 1980s, Japanese investments shifted from developing to developed countries. Whereas the percentage of Japanese investment in developing countries was 64% in 1976, this had decreased to 33% in 1986 (Ministry of International Trade and Industry, 1987). In terms of Japan's foreign investment stock, as of July 1989, North America represented the biggest share (40%), followed by Asia (17%) (Table 7). The overall character of Japanese direct investment stock also varied over the past decades. In manufacturing, investments decreased from 36% in 1960 to 25% in 1987. Agriculture and natural resources, which once dominated Japanese foreign investments, also dropped, from 44% in 1960 to 12% in 1986. Meanwhile, investments in service and commercial sectors increased from 20% in 1960 to 63% (Toyo Keizai 1990). These figures reflect several changes.

**Table 7: Japan's Overseas Investment Stock by Region and Industry (1989)**

( U.S.\$1,000,000, % )

Industry	North America	Latin America	Asia	Middle East	Europe	Oceania & Africa	Total
Metals	2,553	1,933	2,268	66	328	522	7,670
Chemicals	2,311	590	1,785	1,128	594	133	6,541
Elec. Machinery	5,952	491	2,414	14	1,261	63	10,196
Trans. Equip.	3,030	1,050	1,183	4	913	776	6,956
Textiles	493	439	1,380	4	303	50	2,669
General Machinery	2,610	378	1,036	11	626	55	4,716
Lumber & Pulp	1,377	200	389	--	5	128	2,099
Other Manufacturing	5,618	356	1916	46	826	238	8,997
<b>Total Manufacturing</b>	<b>23,944</b>	<b>5,437</b>	<b>12,371</b>	<b>1,273</b>	<b>4,857</b>	<b>1,961</b>	<b>49,843</b>
Mining	1,647	1,557	6,912	393	1,103	2,337	13,949
Commerce	11,693	1,508	1,913	20	3,955	922	20,011
Finance & Insurance	12,370	10,990	2,509	123	14,853	1,031	41,876
Transportation	239	9,235	584	2	101	2,181	12,342
Others	25,198	2,890	7,938	1,527	5,295	5,487	48,335
<b>Total</b>	<b>75,091</b>	<b>31,617</b>	<b>32,227</b>	<b>3,338</b>	<b>30,164</b>	<b>30,919</b>	<b>186,356</b>

Source: Japanese Ministry of Finance, cited in Keizai Koho Center (1989), p. 57.

Before 1970, Japanese direct investment was in agriculture and natural resources to ensure supplies for Japan's growing economy. Only to a lesser extent was emphasis given to labor-intensive light manufacturing for the domestic markets in host countries. In the manufacturing sector, direct investment shifted from labor-intensive sectors to technology-oriented industries. A typical example is the textile industry, which accounted for 22.7% of direct manufacturing investment flows from 1970 to 1974 but decreased to 2.1% during 1985-1987. From 1985 to 1987, electrical appliances and transport equipment accounted for the biggest shares, 28% and 20.9%, respectively (World Bank, 1989). At the same time, the depreciated dollar values of foreign assets led to huge Japanese investments in the United States, especially real estate (Economic Planning Agency, 1989).

Although North America remained the most important target of Japanese investment in terms of value, Asia was the most important region in terms of the number of companies investing and the relative concentration of manufacturing investments. In terms of the cumulative number of Japanese firms investing abroad, as of 1988, Asia accounted for 37%, compared to 29% in North America (Toyo Keizai, 1990). In absolute terms, Japanese investments in Asia increased from \$1.4 billion in 1985 to nearly \$5.6 billion in 1988, primarily due to investments in the Korea, Taiwan, other NICs, as well as Thailand and China. From 1986 to July 1989, out of 1,437 new cases of Japanese firms expanding into Asia, 829 were in manufacturing and 262 in commercial, finance, and service sectors. Among the manufacturing cases, electrical and electronic appliances and equipment had the highest concentration (193 firms), followed by chemicals (94) and automobiles and auto parts (73) (Toyo Keizai, 1990).

In general, these numbers reflected the growing tendency of Japanese companies to invest overseas and expand their operations abroad due to the

high cost of operating in Japan. According to the leading Japanese economic weekly, Toyo Keizai, among 1,307 manufacturing companies listed in the first section of the Tokyo stock exchange in July 1989, 56% had already invested overseas. In terms of the scale of companies, 71% or 10,198 were listed in the first section of the stock exchange, indicating that they were among the largest Japanese companies; the remaining 29% or 4,281 were relatively small and medium-scale, although their numbers were increasing (Toyo Keizai, 1990).<sup>13</sup> While the overseas production of these firms accounted for merely 2.6% of Japan's total output in 1986, for firms with overseas subsidiaries, the figure was 7.9%. By 1992, the Japanese Economic Planning Agency expected these numbers to increase to 6.2% and 12.1%, respectively (Economic Planning Agency, 1989). Although these percentages were not huge, because Japan's gross national product was so large (nearly \$3 trillion in 1988), the absolute amount of Japanese overseas investments and their production value was significant enough to have a major impact on the economies of host countries.

Breaking down Japanese investments by the number of firms entering individual countries, since 1986 indicates that Thailand has enjoyed the largest number of cases. Thailand also ranked second in the world (behind only the United States) in the number of new investment cases from January 1988 through July 1989 (Toyo Keizai, 1990). In addition, although other ASEAN countries, such as Indonesia and Singapore, tended to be the object of larger projects and surpass Thailand in terms of the value of Japanese investments, in 1988, Japanese investments in Thailand for the first time were the largest in

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<sup>13</sup> The Japanese government in recent years has especially encouraged small and medium-sized corporations, which were severely affected by the appreciation of the yen as larger firms passed on price reductions to their subcontractors, to invest in Asia to lower their costs. They appeared to respond to this encouragement, placing fully 45% of their new overseas investments in 1986 in Asia, compared to only 26% for all Japanese companies investing in Asia (JETRO, 1989).

value among all the ASEAN countries (Keizai Koho Center, 1989). This reflected both increasing labor costs in the Asian NICs (Clifford and Moore, 1989) as well as the general appeal of Thailand to Japanese investors. This appeal seemed to result from several factors, especially Thailand's relative political stability in combination with other elements, such as tax policies of the Thai government, which allow firms to remit most of their profits back to their home countries (Smith, 1989a). In addition, economic growth stimulated by the Vietnam War created a high demand in Thailand during the 1960s and early 1970s for Japanese goods, which Japanese firms had to produce locally because of the Thai government's import-substitution policies. Compared to most other countries in East and Southeast Asia, Japan also maintained relatively good political relations with Thailand, which it did not colonize during World War II (Yamashita et al., 1989).

Although more recent data is unavailable, data from 1983, even prior to the large increases in Japanese investments in Thailand, indicate the degree of importance Japanese firms have come to occupy in various Thai manufacturing sectors. As seen in Table 8, based on estimates from a survey by the Japanese Chamber of Commerce in Bangkok, Thai firms affiliated with Japanese companies accounted for more than half of all domestic shipments (by value) in the electrical equipment and automobile industries and one-fourth or more of all shipments in steel and textiles.

**Table 8: Share of Japan-Affiliated Firms in Thai Manufacturing Output (1983)**

( % )

Industry	Japan-Affiliated Firms*
Textiles	28.8
Automobiles	57.1
Steel	24.7
Foodstuffs	3.1
Chemicals	11.3
Electrical	56.2

\*Note: This share was calculated on the basis of a questionnaire sent to individual firms collecting data on total output and employment. The figures were then adjusted by total employment in each sector at Japan-affiliated firms. Sectoral value-added data were used to estimate total shipments and calculate the share of Japan-affiliated firms.

Source: Japanese Chamber of Commerce in Bangkok (1984), p. 10.

A comparison of Japanese investments with those of Taiwan, the second largest investor in Thailand (and about which there is more information than on other foreign investors, except Japan), illustrates the character of the Japanese investments. According to data from the Thailand Board of Investment (all manufacturing sectors), foreign direct investment in Thailand, led by Japanese and Taiwanese investors, increased dramatically since the second half of 1986. Based on applications to the Board of Investment (not all of which were approved in cited years), in 1986, total foreign investment consisted of 207 projects valued at 35.5 billion baht, of which Japan accounted for 53 projects valued at 8.1 billion baht (23% of the total), followed by Taiwan's 31 projects valued at 2.9 billion baht (8%). In 1987, of a total of 630 projects valued at 163.3 billion baht, Japan accounted for 199, valued 46.7 billion baht (29%), followed by Taiwan (178 cases valued at 14.6 billion baht or 9%). In 1988, the

total number of cases rose to 1,271, valued at 394.2 billion baht. In this year, Taiwan surpassed Japan with 400 versus 389 cases, although, in terms of value, Japan still led Taiwan, 148.2 billion baht (38%) versus 54.3 billion baht (14%) (Board of Investment, 1989a and 1989b).

Among the approved Japanese projects in 1988, 25% were 100%-owned by Japanese firms, compared to 29% of the Taiwanese projects, while approximately 90% of the investments from both countries were export-oriented. These solely owned ventures were a new, but relatively rare, phenomenon because the Thai government, which is anxious to increase exports to obtain foreign currency, has permitted 100%-foreign ownership only on the condition that the firm export 100% of its production. The appearance of investments solely owned by Japanese and Taiwanese firms suggests that companies in both countries were finding it increasingly expensive or difficult to export from Japan and Taiwan due to currency appreciation and protectionist measures. It is also possible that Japanese and Taiwanese investors, in their haste to maintain their export markets, did not have time to find appropriate Thai partners.

With regard to the size of investments, Japan's were much bigger than Taiwan's in 1988, 381 million baht compared to 138 million. The nominal value per investment for Japan increased nearly 150% and for Taiwan increased 43% between 1986 and 1988, which appeared fairly large compared to the level of inflation in Thailand indicated by rises both in the producer's price index and in the construction price index of merely 15% during 1986-1988 (Board of Investment, 1989a and 1989b; Japanese Chamber of Commerce in Bangkok, 1989a).

The Taiwanese investments were smaller in size, measured by capital or total employment per project, but they were more labor-intensive overall and thus large in terms of the number of jobs they generated given the amount of

capital invested. Among approved investments by Board of Investment in 1988, for example, Japanese investments will create 70,312 jobs when they go into operation, while the Taiwanese investments will create 76,007; these break down to 265 jobs for each Japanese investment and 247 jobs for each Taiwanese investment (Board of Investment, 1989a and 1989b). A Japanese investment of 1 million baht, however, will directly create merely 0.9 jobs, while a Taiwanese investment of 1 million baht will create 3.5 jobs. Japanese investments, therefore, are not as effective as Taiwan's in generating employment for the growing number of migrants entering Thailand's industrial areas.

On the other hand, Japanese investments covered a broad range of manufactured goods and had the potential of diversifying the Thai economy and stimulating greater transfers of advanced technology from Japan to Thailand. For example, data on products made from new investments approved by the Board of Investment from 1986 through the first half of 1988 indicate that Japanese investments fell into 187 out of a total of 241 categories representing all investors. In contrast, investments from Taiwan, the United States, and Korea covered merely 80, 29, and 10 categories, respectively. Japan concentrated its investments in electrical and electronic products (62 out of 72 separate items in this category), non-metals (25 out of 29 items), and transportation equipment (14 out of 16 items), while Taiwan focused on Christmas decorations (17 items), shoes (21), bags (13), and rubber gloves (14) (Japanese Chamber of Commerce in Bangkok, 1989b).

Though the Taiwanese cases, in general, were relatively small-scale and in the miscellaneous category, there were 15 instances of electrical and electronic products in 1988, suggesting that Taiwan was also contributing to the production of higher value-added products in Thailand, although to a much lesser extent than Japan (Japanese Chamber of Commerce in Bangkok, 1989b).

Korean investors were also showing increasing interest in Thailand, supported by the Korean government through the Korean Long-Term Credit Bank. Although in the late 1980s they had only a few investments, such as metal castings, loudspeakers, and toys, Korean manufacturers of auto parts, electronic equipment, and sports equipment were planning to invest in Thailand and export the bulk of these products back to Korea and the remainder to the United States and Europe (Bangkok Post, 1988).

In sum, as a percentage of total overseas investments, the geographical destination of Japanese investments has shifted from developing to developed countries, especially to the United States, although Japanese investment flows into Asia rapidly increased after 1985 in absolute terms. Japanese investments also shifted from labor-intensive light manufacturing and raw-materials processing to more technologically advanced, capital-intensive areas as well as service and commercial sectors. Furthermore, in contrast to the 1970s, when Japanese investments in Asia were primarily aimed at import substitution in the markets of the host countries, in the 1980s, Japan's Asian investments became more oriented toward manufacturing for export, including Japan.

### **Economic Integration in East and Southeast Asia**

The other factor encouraging Thailand to develop manufacturing industries has been economic integration and the reorganization of industrial structures and corresponding trade practices among Japan, the NICs, and the ASEAN countries. Previously, under import-substitution promotion, individual ASEAN governments tried to encourage foreign firms such as Japanese automakers to produce a majority of their components locally, that is, in the individual host country. This limited industrial development, however, because of the small size of domestic markets and limited capabilities for local components production.

Since the early 1980s, however, countries have increasingly specialized in different kinds of products as well as parts of the production process, according to their technological capabilities, wage levels, capital availability, and natural resources. At the same time, competition in low-cost manufactured goods between ASEAN countries and the NICs, and between the NICs and Japan, have pushed multinational companies to locate labor-intensive products from the NICs to ASEAN countries and some machinery and electrical or electronic products manufacturing from Japan to the NICs. Even for the same types of products, they have tried to produce higher-priced goods in the NICs as well as Japan.

Another incentive behind this reorganization has been the rising popularity of Japanese products around the world since the 1960s, Japanese restrictions on imports of manufactured goods into its domestic market, and Japan's accumulation of the world's largest trade surpluses during the 1980s. Its economic successes and trade practices made Japan the target of serious international criticism against its relatively closed markets as well as "vertical" trade structure, in which Japanese firms imported fuel and inexpensive raw materials and then exported high value-added finished goods. The type of imbalance occurred with developed countries, such as the United States, as well as with developing countries, especially in Asia, which provided resources for Japanese industries but lagged far behind Japan in industrialization and had few domestic firms capable of exporting manufactured goods to Japan (Watanabe, 1985).

The Japanese government responded positively to these criticisms by opening domestic markets to imports and encouraging Japanese firms to move more production operations overseas, to the United States, Europe, and Asian countries, as well as to buy more manufactured goods from these areas (Economic Planning Agency, 1989). By the end of the 1980s, Japanese direct

investment had in fact led to the export of goods from Japanese overseas subsidiaries not only to Europe and the United States but also to Japan. This was especially true for Japanese subsidiaries operating in Asia. According to a report on 178 firms to the Japanese Ministry of International Trade and Industry (MITI), Asian NICs accounted for 60% (\$707 million in current values) of total intra-company imports of manufactured goods by major Japanese firms in 1987. Asian NICs also accounted for 90% (\$351 million dollars) of total imports of manufactured goods by these Japanese firms based on overseas production contracts (Japan External Trade Organization, 1989).

Industrialization in the Asian NICs as well as ASEAN countries also included the growth of non-Japanese Asian firms able to supply manufactured products to Japan. For example, Japanese imports of manufactured products more than doubled between 1984 and 1988, increasing from \$40.6 billion to \$91.8 billion (unadjusted for inflation). Between 1987 and 1988, imports from Asian NICs increased 47%, from ASEAN countries 49%, and from China 58%. These three regions together accounted for 29% of total manufactured products imported into Japan in 1988 (Japan External Trade Organization, 1989).

Thailand was a major beneficiary of these trends, with Thai manufactured products imported by Japan increasing by 144% in only two years, from \$368 million in 1986 to \$897 million in 1988 (unadjusted for inflation). Manufactured products also accounted for 33% of all Japanese imports from Thailand in 1988, compared to 26% in 1986. The largest manufactured product Japan imported from Thailand during 1988 in terms of value, accounting for \$74 million, remained a processed item, precious stones, that did not require much skill or investment. The second largest item, however, was bearings (\$74 million), produced by a single Japanese firm, Minebea, Ltd. Thailand also exported \$8 million of business-machinery parts to Japan in 1987 (Japan External Trade

Organization, 1989). In addition, Thailand exported more than \$15 million worth of integrated circuits in 1987 to other countries (Thailand Development Research Institute Foundation, 1989).

Japanese imports in 1988 of relatively advanced manufactured goods from other countries in East and Southeast Asia provided examples of the kinds of products that Japanese firms appeared to be considering for production in Thailand. Most required fairly high investments in capital equipment as well as large amounts of labor for assembly operations. These products included audio components (\$218 million) and video recorders (\$54 million) from Korea; battery-operated wrist watches (\$92 million) and portable radios (\$7 million) from Hong Kong; radio receivers (\$83 million), bearings (\$47 million), TV picture tubes (\$18 million), and watch components (\$15 million) from Singapore; chemical elements for electronic components (\$39 million), piezo-electric crystals (\$19 million), microcomputers and microprocessors (\$10 million), and camera parts (\$4 million) from Malaysia; and computer parts (\$25 million), diodes (\$6 million), and microphones (\$3 million) from the Philippines (Japan External Trade Organization, 1989).

Investments from the Asian NICs themselves contributed to development of manufacturing capabilities in ASEAN countries as well as China that were likely to encourage further investment in the region. In the 1980s, for example, direct investment from the Asian NICs approved by local governments in Malaysia, Indonesia, Thailand, the Philippines, and China (excluding NICs as host countries) accounted for 37% of the total approved investment in terms of value; this exceeded Japan's 28% share of this investment (World Bank, 1989).<sup>14</sup>

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<sup>14</sup> The time periods for counting approved direct investments are as follows: in the case of Malaysia, from 1982 to 1987; Indonesia, from 1982 to 1988; Thailand, from 1984 to 1989; Philippines, from 1982 to 1988; China, from 1983 to 1986.

Major factors behind the increase in NICs' foreign investments seemed to be currency appreciation in Korea and Taiwan, the Taiwanese trade surplus (second largest in the world, behind only Japan), increases in real wages in all NICs countries, maintenance of major markets despite protectionist measures, and the desire to secure natural resources (especially by Korean investors). Labor disputes both in Taiwan and Korea, as well as an environmental movement in Taiwan, also appeared to promoted overseas investments (Clifford and Moore, 1989). Government policy in Korea and Taiwan supported investments abroad as well but encouraged firms to retain production of more advanced products at home, as seen in the previous discussion of Taiwanese investments in Thailand, which focused on labor-intensive miscellaneous items.

Japanese companies were also leaders in promoting regional economic integration and the reorganization of production operations and trade. In the textile industry, Japanese companies in 1989 were planning to locate product design and development of production technology in Japan while moving more factory operations from the NICs to ASEAN countries and possibly to China (Perry, 1989). In the electronics industry, as seen in cases cited earlier, several Japanese multinationals as well as NIC's companies have already shifted various production operations from the NICs to ASEAN countries. In the automobile industry, Mitsubishi, Toyota, and Nissan were in the process of arranging a network to supply more parts from within the ASEAN countries.

The automobile initiative grew out of a proposal by Mitsubishi, which has an affiliated trading company with an extensive information and distribution network in Asia, to the governments of the four ASEAN countries where these Japanese car makers had already established manufacturing operations (Goldstein, 1990). The auto parts agreement, signed by the ASEAN members in October 1988, provides for a halving of tariffs on intra-regional trade of

components between units of the same manufacturers. Under a components-exchange scheme, Toyota plans to locate production of diesel engines, stamped parts, and electrical equipment in Thailand, steering gears and electrical equipment in Malaysia, engines and stamped parts in Indonesia, and transmissions in the Philippines. In Thailand, Toyota also has set up Siam Toyota Manufacturing Co. (STMC) to assemble diesel engines. The company has already shipped some engines to a Toyota affiliate in Portugal and plans in the future to ship to Toyota plants in ASEAN countries. Meanwhile, Mitsubishi Motors is assembling Japanese-designed cars in Thailand and shipping them to Canada. Japanese auto makers' have become involved in this scheme for several reasons; the potential growth of ASEAN markets, economies of scale created by a combined ASEAN market, freedom from duties applied to imported parts, avoidance of protectionism by exporting from non-Japanese factories, and preferential benefits for exports from developing countries (Smith, 1989b; Sanger, 1990).

In addition, Thailand is experiencing an increase of Japanese investment in parts manufacturing accompanied with the arrival of major Japanese manufacturers such as Sharp. Although there is a widespread feeling that the Japanese are just transferring vertically integrated manufacturing into Thailand and rely on Japanese affiliated parts manufacturers rather than local parts producers, there is evidence that the Japanese are increasingly using Thai producers for simpler plastic and metal parts, and teaching these suppliers how to upgrade their quality. While plastic mold-making has also advanced, the Thai government and local industry have neglected production of metal molds and dies. Nevertheless, several Japanese joint ventures associated with car makers have begun to export Thai-made molds and dies as well as supply the local market (Handley, 1988). In addition, the Thai government's Fifth National

Economic Development Plan announced a new focus on metal working as a priority sector and in 1986 established the Metalworking and Machinery Industries Development Institute with Japanese grant aid.<sup>15</sup>

These and other examples show how the increasing industrialization and economic integration in East and Southeast Asia constitute an exogenous factor beyond the control of Thai government and company officials that is strongly pushing Thailand to expand its manufacturing sector. In particular, company efforts to reorganize their production systems in Japan, the NICs, and ASEAN countries, taking advantage of different capital, labor, technology, and natural resources available in each country, as well as of political protectionism against Japanese exports from Japan, have led Thailand to become the largest site for new Japanese investment in Southeast Asia and an important processing base for firms from Japan as well as the NICs.

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<sup>15</sup> These comments are based on personal interviews with Mr. Nagae Tsutomu and Mr. Takeshi Izumi (Japan International Cooperation Agency experts), carried out at the Metalworking and Machinery Industries Development Institute in June 1989.

## SECTION 4

### STRATEGIC ALTERNATIVES AND IMPLICATIONS

The NIC's versus NAIC's debate can be seen not only in the general issues facing Thailand but also among the policy positions Thai planners have taken. By the end of the 1980s, two groups had clearly emerged: One supported industrial structural change that promotes labor-intensive export industries along with the improvement of import-substitution industries. The other supported rural development to increase agricultural income and expand the domestic market (Suehiro, 1987a). As shown here, the debate is complicated because each alternative presents a different set of costs and benefits. Furthermore, it is not clear that, in the long term, Thailand can afford not to pursue both strategies, although, in the short term, the government does not seem to have the financial resources to support both manufacturing and agro-business development.

To pursue increased foreign investment in heavy industries, for example, Thailand will need immediate and extensive investment to expand urban roads, water supplies, waste processing and port facilities, and similar types of infrastructure. The government has moved in this direction with the Eastern Seaboard Project, started in the 1970s initially to utilize natural gas in Siam Bay. The government once suspended the project in part because of high interest rates and slow growth in the Thai economy during the early 1980s. It later decided to continue, however, because of the requirements of new foreign investors, primarily the Japanese, and the need to reduce congestion in the port of Bangkok. The government also felt it was important to promote basic industries, such as petrochemicals and iron, that would create jobs as well as attract more advanced manufacturing investments. New ports at Laem Chabang

in Chonburi and Mab Ta Phut in Rayong are expected to be completed by 1991. The whole development of the Eastern Seaboard and the building of two deep-sea ports, Laem Chabang and Mab Ta Put, will cost 133.5 billion baht in a joint-venture investment between the national government and private concerns. All individual sub-projects are scheduled for completion by 1996 (Preyaluk, 1989b). The targeted areas, located about a one-and-a-half hour drive from Bangkok, will operate as a huge production and export zone. The Japanese government's financing organization for developing projects, The Overseas Economic Cooperation Fund (OECF), is a major financial supporter, investing in the construction of the two ports, water mains, gas-separation and fertilizer plants, as well as industrial real estate and engineering services (Overseas Economic Cooperation Fund, 1987).

Thailand also faces a shortage of engineers, which are essential for technology transfer and localization of production operations in developing countries, as seen in the cases of postwar Korea (Amsden, 1989) as well as Japan prior to World War II (Cusumano, 1985 and 1989). This problem cannot be solved quickly because of the small number of engineers produced in Thai colleges (approximately 2,500 in 1986) (Meyers and Chalongphob, 1989). There is already considerable competition to hire engineers among foreign and local businesses in Thailand, causing "job hopping" to seek better pay that makes it difficult for companies to retain their best people. Minebea, the Japanese precision-machinery parts and bearing manufacturer, has tried to solve this problem by recruiting Thai engineering students and sending them to Japanese graduate schools as well as hiring a few Thai engineers educated in Japanese universities and training them in Japan along with Japanese recruits.<sup>16</sup> This is

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<sup>16</sup> This observation is based on personal interviews conducted in the summer of 1989. See the Appendix for a discussion of sources.

a slow process, however, and not many Japanese companies have followed this strategy.

Along with a shortage of engineers, a low level of skilled labor and technological know-how in Thailand's small and medium-sized companies makes it difficult for them to serve as subcontractors in new manufacturing industries, especially for Japanese investors with high standards for quality and cost control. Japanese firms have helped solve this problem by making their own direct investments in components production to complement local suppliers, although, in the long run, Thailand will need to develop more domestic capabilities to attract further investment and increase manufacturing exports. As a result, the NIC's strategy requires the Thai government to support education and supplier industries as well as basic industries, such as steel, machinery, and chemicals, and to reduce Thailand's dependence on foreign imports of capital goods, intermediate goods, and basic industrial raw materials, especially from Japan.

The intensified urbanization expected to accompany a NIC's type of development may also be too heavy a burden for the Thai government. Agriculture still represented 65% of total employment in 1987, a rather slow shift from 82% in 1960 compared to other countries in East Asia (National Statistical Office, 1960, 1987). For example, Korean agriculture's share of employment was only 59% in 1965 and fell to 26% in 1985, while in Taiwan it was 47% in 1965 and 18% in 1985 (International Labor Organization, 1965, 1985). Korea and Taiwan already had less agricultural employment and were more industrialized when rapid growth began in the mid-1960s, whereas industrialization has proceeded more slowly in Thailand, leaving the country heavily dependent on agricultural employment. On the positive side, this relatively slower pace of industrialization may have prevented more

confrontations between organized labor and management (Yasuda, 1987).

Nevertheless, a shift in non-agricultural employment to a level similar to Taiwan or Korea today would require Thailand to accelerate dramatically the speed of employment creation in manufacturing and services. A rapid transition from an agricultural to industrial society would also require massive migration from rural areas to central Thailand, which would then need massive infrastructure investments to accommodate these people. As discussed earlier, most industrial activities in Thailand are already concentrated in highly-congested Bangkok and the surrounding area, which produced 62% of Thailand's gross domestic industrial output in 1986. The central region, including Bangkok and the surrounding five prefectures, accounted for 82% (Thailand Development Research Institute Foundation, 1989). To improve deteriorating environmental conditions and over-congestion requires dispersing industrial activities outside of Bangkok rather than encouraging more investment there. A NIC's strategy that promotes foreign investment in the Central region may also worsen the economic gap between this and other regions, especially the disadvantaged Northeast, although Thai government officials seem to believe that the Eastern Seaboard Project will reduce urban problems by encouraging firms to move outside of the Bangkok area (National Social and Economic Development Board, 1981).

Another question is whether the fragile quasi-democratic system in Thailand will be able to support the political and social changes that a NIC's strategy might bring. Both Korea and Taiwan have experienced labor and political turmoil as their economies industrialized and the number of urbanized middle-class and working-class people increased. An accelerated transformation of Thailand from an agricultural to an industrial society, while improving income levels through new employment in manufacturing sectors, may also lead

to labor and political turmoil, especially if the government does not adequately seek solutions to major problems such as rural poverty and urban congestion.

If it follows a NAIC's strategy, the Thai government faces numerous challenges as well. It will still need more ports, rural roads, factories, and irrigation and waste-processing facilities, although perhaps less investment would be required than to support more advanced manufacturing industries. Even for agro-businesses, furthermore, Thailand must develop new foreign markets and marketing techniques to increase exports, especially with growing international competition in agricultural goods. There are nearby potential markets in Vietnam, Laos, and Cambodia, and thus a regional economic policy targeting the Northeast region of Thailand would probably aid Thailand's agricultural development. Politically, however, this policy seems difficult to carry out under present conditions.

Under the NAIC's strategy, improvement of rural income would have to come primarily from domestic investment and growth in the agricultural sector. Yet agricultural productivity in Thailand has been relatively low and not increasing. As a result, although new investment and agricultural technology may change this trend, economic growth under a NAIC's strategy and failure to take full advantage of foreign investment may be too slow to solve rural poverty, resulting in as much or more social and political unrest as under a NIC's approach. Also under a NAIC's approach, the government would have to intervene more in the economy to bring about a fairer distribution of land as well as profits among agro-businesses, wholesale merchants, and farmers; however, the traditional policy of the Thai government, reinforced in the 1987-1991 National Economic and Social Development Plan, has been to limit the involvement of the government in a free-market economy (National Economic and Social Development Board, 1987).

A policy to promote agro-industries, on which the NAIC's strategy is based, brings certain constraints as well. Technology accumulated for agricultural products processing is not easily applicable to other industries; forward and backward linkages in agro-industries are fewer, and less likely to create an expansion of jobs, than in manufacturing sectors such as iron, electronics, or automobile assembly; uncontrolled agricultural expansion will also contribute to the destruction of valuable natural resources such as Thailand's forests. Thus, a NAIC's strategy has both negative and positive aspects, and will probably not expand Thailand's industrial structure and economy enough to meet the future needs of its population and overcome rural as well as urban poverty.

## SECTION 5

### CONCLUSION

Thailand faces two potentially opposing alternatives for economic development: One is to follow a model similar to the NIC's and pursue development based primarily around manufacturing of increasingly advanced products for export. The other is to pioneer a new strategy, referred to as a NAIC's approach, that would concentrate on domestic rural development and then processing and export of agricultural products, with less emphasis on advanced manufacturing. Overall, the NAIC's approach appears to have many benefits: It would rely primarily on domestic resources, address most directly pressing problems in Thailand such as rural poverty by promoting agricultural development and employment in rural areas, and not encourage further urban congestion in the Bangkok area as much as a NIC's strategy.

Regardless of whether Thailand tries to become a NIC or NAIC, the country will have to construct an appropriate infrastructure for further industrial development as well as invest in support for rural areas, such as roads, utilities, education, housing, and health care. Because no other country is considered to be a "NAIC," however, Thailand does not have a clear model for this approach to development. For example, it is not clear how the type and cost of the infrastructure might differ with each alternative. The economic and social costs or benefits of each approach are also difficult to predict. In particular, agricultural productivity has lagged in Thailand, making the NAIC's strategy somewhat risky, while further manufacturing investments will require costly infrastructure investments without providing employment for the vast majority of Thailand's population, which remain largely in rural areas but may continue to migrate to Bangkok under a NIC's strategy, worsening existing problems

related to urban congestion.

Meanwhile, Japan's growing influence in Thailand, as well as industrialization and economic integration among the ASEAN countries in general, are providing strong incentives for Thailand to move closer to the NIC's model. In terms of economic activity and employment, the results of Japanese investments have been positive, generating the equivalent of millions of dollars in domestic production and export sales as well as 250,000 jobs by mid-1989 (Toyo Keizai, 1990). On the other hand, Japan has also encouraged the Thai government to invest in costly projects such as the Eastern Seaboard, at the expense of, for example, more investment in agriculture, land reform, education, public transportation, health care, or homes for the rural and urban poor. In the past, the Thai government has tried to put an equal emphasis on investment in both agricultural and non-agricultural industries, but its financial situation has made this increasingly difficult. According to its most recent five-year plan, the Thai government has decided not to promote manufacturing investments and large construction projects too aggressively and to concentrate more on promoting growth in agricultural productivity to reduce rural poverty, as in the NAIC's approach. The plan is vague, however, about how the government is going to assist rural development (National Economic and Social Development Board, 1987).

In conclusion, choosing either a NIC's or NAIC's strategy is probably not desirable for Thailand, since both approaches have different advantages. In the long run, in addition to agro-industries, Thailand will have to develop manufacturing sectors as called for in the NIC's approach, because it does not seem possible that agricultural productivity and agro-business markets will grow enough to solve Thailand's problems of rural poverty and halt migration into the industrialized Central region. The NAIC's alternative, therefore, does not

appear to be a final solution for Thailand but rather an intermediate strategy that, if balanced with gradual manufacturing investments, should help Thailand move from a primarily agricultural society to a mixed agricultural and industrial economy, utilizing its domestic natural and human resources rather than relying too heavily on foreign investment and influence, such as from Japan. Nor can Thai officials, planners, and people fully control what direction Thailand follows, unless the government completely excludes much-needed foreign investment and technology. The choice of Thailand's direction, therefore, will require a long period of decisions undertaken by multiple parties, especially the Japanese, which are the largest donors of aid and technological assistance to Thailand. The negotiations may be difficult, however, because Thai and Japanese interests do not necessarily coincide on all points.

From the Thai perspective, many people and government officials want and expect to receive benefits from Japanese investment, such as new employment, technology transfers, and access to foreign markets. From the Japanese perspective, government officials and companies want access to Thailand's resources, labor, and markets, especially as a production base from which to export. The Japanese also expect the Thai government to construct the infrastructure they need and to maintain the present political stability, and most of their aid has been in the form of loans for large-scale projects like the Eastern Seaboard Project (Overseas Economic Cooperation Fund, 1987). Furthermore, because of Thailand's recent economic growth levels, the Japanese government plans to cut off grants for Thailand and restrict its aid to loans (Duangkamol, 1989).

Given the benefits to Thailand of a mixed approach to development, and the benefits to Japan of a prosperous Thai economy and labor force, it is probably in the interest of Japanese government agencies and companies to help

Thailand solve its major problems, those of rural development and agricultural productivity, while also making progress in building up manufacturing industries and supporting infrastructure. Because Thailand does not appear to have the financial and technological resources to pursue both alternatives alone, Japanese government and company officials need to rethink their previous policies and become more aware of Thailand's domestic needs as well as Japan's long-term interests in Thai development. Through this process of seeking mutual benefits and understanding, Japan has an opportunity to become an even more important partner in Thai development.

## APPENDIX: A NOTE ON SOURCES

This research relied on primary and secondary materials, as well as site visits and interviews. For statistical background data, I used publications from the Japanese Ministry of International Trade & Industry (MITI), Bank of Thailand, and the Thai National Statistical Office. In the summer 1989, I also visited Thailand and Japan and interviewed Thai and Japanese from the following institutions: Thammasat University, Thai Department of Technical & Economic Cooperation and Board of Investment, Japan International Cooperation Agency, Metalworking & Machinery Industries Development Institute, Overseas Economic Cooperation Fund, Japan External Trade Organization, Honda Motor, Ltd., Minebea, Ltd., Matsushita Electric, Ltd., Japanese Ministry of Foreign Affairs, Japan International Financial Information Center, and the United Nations Development Office. In addition to factory tours at several companies, including Honda and Matsushita, I visited three factories in Thailand and one in Japan operated by Minebea, Ltd., that were training Thai workers.

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