Direct Foreign Investment and Capital Flow

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Direct Foreign Investment and Capital Flow

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PREFACE

Over the past few decades, the world has seen the growing importance of Countries' foreign capital flows in international economic relations. As a result, foreign capital has played an important role in the economic development of many developing countries--including Thailand. Here, foreign capital is defined broadly to include direct investment, portfolio investment, and loans.

This research report was prepared as part of the project "Thailand in the International Economic Community" (the theme of the 1989 TDRI Year-End Conference) and examines, at some length the foreign capital flow, patterns and the factor affecting the flow, as well as their impact on the Thai economy. Attention was also given to policy implications for the country in the management of foreign capital. The research was divided into four components: (1) Dr. Jeerasak Pongpisanupichit and Dr. Wisarn Pupphavesa were responsible for the work on foreign direct investment; (2) Dr. Somjai Phagaphasvivat and Dr. Pipat Pitayachariyakul worked on foreign portfolio investment; (3) Dr. Duangmance Vongpradhip worked on foreign loans; and (4) the three parts were then integrated by Dr. Jeerasak Pongpisanupichit.

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EXECUTIVE SUMMARY

Foreign capital, defined broadly to include direct and portfolio investment as well as loans, has played an important role in the development of the Thai economy by filling the country's savings gap. However, there were major changes in the role and pattern of net foreign capital flows into Thailand during the 1980s. The net flow share in net capital formation declined substantially from an average of 37.7 percent during 1980-1982 to about 10 percent during 1986-1987, and then went up again to 24.8 percent in 1988. The significance of foreign loans, especially long-term loans, declined over the 1980s, having been replaced by direct and portfolio investment. The foreign loan share in the total net foreign capital inflows declined drastically from over 90 percent in 1980 to only 13.9 percent in 1987, and then went up again to 44.4 percent in 1988. Within each capital formation group, foreign involvement increased for direct and portfolio investment and declined for loans. Over the period 1980-1988, the share of foreign direct investment in total private investment rose from 3.6 percent to 9.6 percent, and the share of foreign portfolio investment in all of the securities market trading volume went up from about 2 percent to 12.9 percent, while the share of foreign loans in total commercial credits declined from 43.1 percent to 13.7 percent.

Pattern of Foreign Capital Flows

Foreign direct investment (FDI) in recent years has come mainly from Japan, growing from 23.3 percent in 1980 to 51.7 percent in 1988. The next largest sources of FDI were the United States, Taiwan, and Hong Kong, each sharing about 11 percent of the total in 1988. The manufacturing sector attracted the largest share of FDI in recent years (over 50 percent in 1987 and 1988 compared to only about 30 percent in the early 1980s), especially such industries as electrical appliances, chemicals, metal based and non-metallic products, and textiles. Among non-manufacturing sectors, construction, trade, services, and financial institutions attracted a sizable share of FDI in recent years. Except for textiles, a similar pattern continues into 1989.

Foreign portfolio investment has become important in recent years and came originally from three major sources--the United Kingdom, the United States, and, recently, Japan. Sectors which found sizable shares of foreign funds were banking, finance and securities, commerce, construction materials, and textiles/clothing.

The pattern of foreign loans has changed from public-sector to private-sector predominance (92 percent of total foreign loans during 1986-1988 compared to only about one-third during 1980-1982). The switch is more dramatic when short-term foreign loans are considered. For public borrowings, there has been little change in loan sources except for the increase in bilateral sources, mainly from Japan.

Factors Affecting Foreign Capital Flows

About 60 percent of the promoted FDI projects approved during 1986-1988 were invested on the basis of the product-life-cycle hypothesis, i.e. to maintain or regain cost advantage. The motivation is the sourcing for cheap production sites from which the products can be exported to home country and/or to third countries. The major industries found under this motive were electrical appliances and parts; electronic and communication equipment and parts; toys and plastic products; and motor vehicle components and parts. Japan, Taiwan, and the Republic of Korea were among the leading sources of investment according to the product life cycle. Most of the other 40 percent invested in Thailand to make use of local natural resources and to gain the advantage of domestic demand.

The net inflow of foreign portfolio investment was influenced most by Thailand's economic prospects and market investment returns with about a one-year forward time lag. The elasticities of foreign portfolio investment with respect to these two factors were 2.40 and 1.04, respectively.

The net private loan inflow in recent years was found to be influenced by the current account deficit and the exchange rate risk. The elasticities of demand for foreign private loans with respect to the two factors mentioned were -0.54 and 0.31 for short-term loans, and -0.23 and 0.09 for long-term loans.

Impact of Foreign Capital Flows

The impact of FDI in recent years is more far reaching. A dramatic shift of FDI from import-substitution industries to export-oriented industries will contribute substantially to the country's exports and will have a significant impact on production efficiency due to more technology transfer and training. Since, in recent years, most of the promoted FDI projects involve relatively labor-intensive activities, they will greatly contribute to the country's employment. Aside from the contributions just mentioned, some local entrepreneurs complain that FDI has caused a considerable increase in land prices, shortages of skilled labor (in such fields as engineering and science), and has also had crowding-out effect on local producers (in the domestic market and for local sources of materials).

We found that foreign portfolio investment, the increasing participation of foreigners in securities transactions in Thailand, has contributed positively to the Thai economy. It has improved the efficiency of capital allocation by reducing the cost of funds and increasing the return on investment.

Policy Implications

Since the impact of FDI is far-reaching, it should be dealt with case by case. It has been found that FDI in manufacturing has, in general, contributed positively to the Thai economy. However, issues concerning research and development, ownership structure, and crowding-out effects on local producers are still debated. The BOI has already begun to remedy some of these shortfalls by encouraging more local research and development activities and joint-ventures with Thais in majority ownership. However, the ownership issue in export-oriented projects should be handled carefully as these projects can be located in other countries; indeed there are more countries competing for FDI than countries looking for areas in which to invest. Foreign firms can compete from anywhere against Thai producers on the export market, whether they produce in Thailand or in other countries and, as far as the nonmanufacturing sectors (particularly such services as banking and insurance) are concerned, the question is how liberal Thailand should be.

Since foreign portfolio investment was found to contribute positively to the Thai economy by increasing capital allocation efficiency, it should be encouraged by having a more efficient stock listing system. In addition, a double-taxation agreement with a country like the United States would help promote US investment in the Thai securities market. However, certain preventive measures should be implemented to avert any crisis.

As the government already has a sound system for managing foreign public loans, attention should be paid to foreign private loans, as they have become quite important in recent years. The government should monitor foreign private loans in order to assure that the loans are not diverted into speculative or nonproductive areas and that they do not create any adverse effect on the Thai economy, especially on price levels.

DIRECT FOREIGN INVESTMENT AND CAPITAL FLOWS

1. INTRODUCTION

Foreign capital, defined broadly to include direct and portfolio investment as well as loans, has played an important role in the development of the Thai economy. When domestic savings have been insufficient to finance investment activities in the country, foreign capital has filled the gap. During the period 1980-1985, net capital inflows accounted for more than one-third of the net capital formation of Thailand. The percentage share dropped to be about 10 percent in 1986 and 1987, but picked up again in 1988 to be about 25 percent, with a historic high of over 70 billion baht, a 179 percent jump over the preceding year.

During the first half of the 1980s (1980-1985) foreign loans contributed the most to the net capital inflows with a percentage share between 75-90 percent, while direct investment accounted for about 10 percent and portfolio investment contributed marginally. The pattern, however, changed significantly after 1985: direct and portfolio investment picked up noticeably, whereas foreign loans declined drastically to merely 14 percent in 1987 and 44 percent in 1988.

The purpose of this study is to examine the role of foreign capital in the development of the Thai economy in recent years, i.e. during the 1980s. The foreign capital is divided into direct investment, portfolio investment, and loans (including both the public and private sector). This report begins by presenting an overview of the findings of the study. It next examines the role of each type of foreign capital by analyzing the pattern, factor affecting the inflow and its impact on the Thai economy.

2. OVERVIEW[1]

2.1 Recent Patterns of Foreign Capital Flows

The inflow of foreign capital has played an important role in financing investment needs in Thailand. During the first half of the 1980s (1980-1985) foreign loans contributed the most to net foreign capital inflows with a percentage share of 75-90 percent direct investment accounted for about 10 percent, and portfolio investment contributed marginally. The pattern, however, changed significantly after 1985. Foreign direct and portfolio investment picked up noticably. Together they accounted for 65.68 percent, on the average, of the total net foreign capital inflows during 1986-1988, compared to an average of only 11.28 percent during 1980-1982 and 18.24 percent during 1983-1985. The percentage share was much higher--at 112.03 percent--when short-term loans were excluded (Table 2.1).

As a matter of fact, the size of foreign direct investment (FDI) and foreign portfolio investment (FPI) was moderate until 1987 and 1988. In 1988 FDI grew by 212.3 percent (to become 28,243.8 million baht) and foreign portfolio investment increased by 411.0 percent (to become 12,861.7 million baht) in 1987 (Table 2.2).

Within each group of capital formation, degree of foreign involvement increased for direct and portfolio investment and declined for loans. Between 1980 and 1988, the share of foreign direct investment in gross private domestic investment rose from 3.6 percent to 9.6 percent and the share of foreign portfolio investment in all securities market trading volume went up from about 2 percent to 12.9 percent, while the share of foreign loans in total commercial credits declined from 43.1 percent to 13.7 percent (Table 2.3).

The largest source of FDI in recent years has been Japan. The Japanese share in the total FDI net inflow grew from 23.3 percent in 1980 to 51.7 percent in 1988. Other important sources of FDI were Taiwan, the United States, and Hong Kong; each country accounted for about 11 percent of the total in 1988. The share of the European Community declined from an average of more than 10 percent during the early 1980s to only 8 percent in 1988. A similar structure has continued into 1989 (Table 2.4).

The manufacturing sector share of FDI in the total net FDI inflow increased from less than one-third during 1980-1986 to 52.5 and 57.9 percent in 1987 and 1988. Within the manufacturing sector, the industries which have attracted the largest FDI share in recent years have been electrical/electronic products, chemicals, metal based and

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1/ For more details, see Chapters 3-5.

Table 2.1: Structure of Foreign Capital Inflows

(Percentage)

	1980-1982	1983-1985	1986-1988
1.Direct Investment			
(a)	10.13	15.40	41.02
(b)	14.56 b/	18.43	69.97
2.Portfolio Investment			
(a)	1.15	2.84	24.66
(b)	0.85 b/	3.40	42.06
3.Foreign Loans			
(a)	88.72	81.75	34.31
(b)	84.59 b/	78.17	(12.03)
3.1 Private a/			
(a)	37.24	45.47	91.86
(b)	19.49 c/	24.54	145.23
3.2 Public a/			
(a)	62.76	54.53	8.14
(b)	80.51 c/	75.46	(45.23)

Notes: (a) Refer to share of Foreign Capital Inflows.
(b) Refer to share of Foreign Capital Inflows without Short-Term loans.
a/ : Refer to share of total foreign loans.
b/ :Data refer to 1981-1982.

Source: Bank of Thailand.

Table 2.2 : Growth and Structural changes of Capital Flow

(Million baht)

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Total net capital flow	50,798.80	55,181.40	38,338.00	34,713.70	58,378.40	51,455.90	11,381.50	25,443.70	70,907.10
-% in total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
-inflow	128,357.00	157,934.60	160,933.00	157,361.00	199,883.30	208,360.20	149,812.10	172,098.60	254,744.50
-outflow	77,558.20	102,753.20	122,595.00	122,647.30	141,504.90	156,904.30	138,430.60	146,654.90	183,837.40
Net flow as share of net capital formation	37.41	40.77	34.19	24.99	34.44	31.66	7.69	11.80	24.83
Direct investment	3,878.20	6,414.40	4,331.40	8,224.80	9,638.00	4,402.20	6,908.10	9,043.70	28,243.80
-% in total	7.63	11.62	11.30	23.69	16.51	8.56	60.70	35.54	39.83
-inflow	9,259.00	9,341.80	9,596.50	13,944.20	16,970.20	10,167.50	10,525.60	12,541.30	32,960.50
-outflow	5,380.80	2,927.40	5,265.10	5,719.40	7,332.20	5,765.30	3,617.50	3,497.60	4,716.70
Portfolio investment	1,033.30	18.90	609.80	339.90	(86.60)	3,858.50	2,516.80	12,861.70	11,191.20
-% in total	2.03	0.03	1.59	0.98	(0.15)	7.50	22.11	50.55	15.78
-inflow	1,096.00	276.80	614.50	419.80	2,416.10	4,079.70	3,053.50	17,148.30	27,760.00
-outflow	62.70	257.90	4.70	79.90	2,502.70	221.20	536.70	4,286.60	16,568.80
Loans	45,887.10	48,748.10	33,396.80	26,149.00	48,827.00	43,195.30	1,956.60	3,538.30	31,472.10
-% of total	90.33	88.34	87.11	75.33	83.64	83.95	17.19	13.91	44.38
-inflow	118,002	148,316	150,722	142,997	180,497	194,113	136,233	142,409	194,024
-outflow	72,115	99,568	117,326	116,848	131,669	150,917	134,277	138,870	162,552

Table 2.2 :(continued)

(Percentage)

	Annual growth rate			
	1980-85	1985-86	1986-87	1987-88
Total net capital flow	0.21	(77.88)	123.55	178.68
-% in total				
-inflow	8.07	(28.10)	14.88	48.02
-outflow	11.74	(11.77)	5.94	25.35
Net flow as share of net capital formation	(2.78)	(75.70)	53.42	110.37
Direct investment	2.11	56.92	30.91	212.30
-% in total				
-inflow	1.56	3.52	19.15	162.82
-outflow	1.15	(37.25)	(3.31)	34.86
Portfolio investment	21.96	(34.77)	411.03	(12.99)
-% in total				
-inflow	21.91	(25.15)	461.59	61.88
-outflow	21.01	142.63	698.70	286.53
Loans	(1.01)	(95.47)	80.84	789.47
-% of total				
-inflow	8.30	(29.82)	4.53	36.24
-outflow	12.31	(11.03)	3.42	17.05

Source: Balance of Payments Section, Bank of Thailand.

Table 2.3: Share of Capital Flow in Capital Formation

(Million Baht)

	1980	1985	1986	1987	1988
1. Direct foreign investment					
1.1 Net direct foreign investment a/	3,878.20	4,402.20	6,908.10	9,043.70	28,243.80
1.2 Private investment b/	107,104.00	148,363.00	153,869.00	213,010.00	293,441.00
1.3 Share of net direct foreign investment in private investment (% of 1.1/1.2)	3.62	2.97	4.49	4.25	9.63
2 Direct Portfolio Investment					
2.1 Total securities transacted by foreigners c/	238.35 d/	1,596.05	4,617.20	25,501.10	40,276.07
2.2 Market trading volumes	5,965.72 d/	16,482.86	29,848.22	123,420.90	156,649.36
2.3 Share of foreign activity in market e/ (% of 2.1 / 2.2)	2.00 d/	4.84	7.73	10.33	12.86
3 Foreign loan					
3.1 Change in domestic credits f/	60,802.00	80,637.00	76,345.00	144,054.00	198,806.00
3.2 Net foreign loan inflows	45,887.00	43,196.00	1,956.00	3,559.00	31,472.00
3.3 Total (3.1 +3.2)	106,389.00	123,833.00	78,301.00	147,593.00	230,278.00
3.4 Share of net foreign loans in total loans (% of 3.2 / 3.3)	43.10	34.90	2.50	2.40	13.70

Notes: a/ does not include net capital outflow of thai investers (equity invesment)
b/ does not include depreciation.
c/ total = purchases + sale.
d/ data refer to 1982.
e/ calulated by {(perchaes +sale)/2 }/trading volume.
f/ in financial survey (consolidated accounts of all banks and other financial institutions i.e. bank of Thailand, commercial banks , finance companies, government housing bank , government saving bank, bank of agriculture and agriculture co-operatives and the industrial finance corporation of Thailand.

Sources: 1. Bank of Thailand,Monthly Bulletin, various issues.

2. Securities Exchange of Thailand.

Table 2.4: Foreign Direct Investment Patterns a/ by Country of Origin

(Percentage)

Country	Percentage Share b/					
	1980	1985	1986	1987	1988	1989p c/
U.S.A	18.9	54.2	18.7	20.1	11.3	14.2
Japan	23.3	34.8	44.1	36.1	51.7	50.2
EEC.	20.0	9.7	7.4	10.4	8.0	9.3
U.K	2.1	2.8	3.6	3.6	3.1	3.6
W.Germany	6.8	3.8	2.3	5.0	2.2	1.5
France	0.3	3.3	1.3	1.5	1.0	3.0
Netherlands	0.6	(1.0)	(0.8)	0.8	1.0	0.3
Italy	4.0	0.3	1.1	0.1	0.1	0.4
Australia	1.0	(1.8)	2.1	0.3	0.1	0.4
Canada	(1.1)	0.8	0.5	0.1	0.2	0.1
Switzerland	1.9	1.8	4.0	8.7	2.0	3.5
Asian NIEs	36.2	(6.9)	21.7	22.6	28.4	20.2
Hong Kong	28.7	14.7	13.8	8.8	10.8	10.1
Korea	0.3	(0.1)	0.1	0.2	1.1	0.5
Singapore	7.2	(25.5)	5.8	5.9	5.4	(0.9)
Taiwan	0.0	3.9	1.9	7.6	11.2	10.5
Asean-4	4.0	0.9	(0.6)	(0.0)	0.3	0.0
Brunei	0.0	0.1	0.1	0.0	0.0	0.0
Indonesia	0.1	0.2	0.1	0.1	0.1	-
Malaysia	3.9	0.4	0.1	(0.1)	0.2	0.0
Philippines	(0.0)	0.2	(0.9)	0.0	0.0	(0.1)
Other	2.1	6.5	2.1	1.7	1.9	2.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Total amount (Million baht)	3,878.2	4,402.2	6,908.1	9,043.7	28,243.8	17,132.8
Annual growth rate	-	2.6	56.9	30.9	212.3	36.5

Notes: a/ Equity and loans from parent or related companies including capital funds of foreign commercial banks.

b/ The calculations are based on net inflow of foreign direct investment, do not include net capital outflow of Thai investors (equity investment).

c/ Data refer to January-June.

p Preliminary

Source: Bank of Thailand

non-metallic products, and textiles. This differs from the previous make-up of manufacturing FDI to Thailand in which light consumer goods industries predominated. In the nonmanufacturing sectors, construction, trade, and services attracted sizable FDI shares during the 1980s and financial institutions have recently received more attention (Table 2.5). Indeed, Foreign portfolio investment was not important until recently, particularly until 1987. The main sources of foreign portfolio investment were Singapore, the United Kingdom, the United States, Hong Kong, and lately, Japan. However, a significant proportion Singapore and Hong Kong portfolio investment funds originally came from other countries (Table 2.6). The sectors which have been attracting significant shares of total foreign portfolio investment are banking. finance and securities, construction materials, commerce, and textiles/clothing (Table 2.7).

The foreign loan pattern has changed from public-sector to private-sector predominance, especially when short-term loans are included. The share of foreign private-sector loans increased from about one-third during 1980-1982 to 92 percent during 1986-1988. The change is more dramatic when short-term foreign loans are considered. The share of the private sector jumped from 18.1 percent during 1980-1982 to 121.8 percent during 1986-1988. Over the same period, we also observed that the share of short-term foreign loans increased from 24.0 percent to 120.6 percent. There has been little change in public loan sources during the 1980s. The share of multilateral sources has declined while the share of bilateral sources has increased (Table 2.8).

2.2 Factors Affecting Foreign Capital Flows

FDI in Thailand as a promoted project in recent years has increased, mainly as a result of actions by foreign firms to: maintain or regain cost advantages (following the product life cycle hypothesis); to make use of local natural resources, and to gain the advantage of local demand. According to the product life cycle the FDI percentage share increased from 46.5 percent in 1986 to 64.2 percent in 1988 in terms of number of projects, and from 59.4 percent to 69.3 percent in terms of FDI value (Table 2.9). The motivation is the sourcing for cheap production sites from which the products can be exported to home country and/or to third countries. The production facilities which relocated in Thailand under this motive were mostly (relatively) labor-intensive activities. The most obvious cases of product-life-cycle investment are electrical appliances and parts; electronic and communication equipment and parts; toys and plastic products; and motor vehicle components and parts. The countries whose FDI was substantial (in order to maintain or regain cost advantages) were Japan, Taiwan, and the Republic of Korea--countries which have recently found their competitive and comparative advantage in some industries diluted by rising domestic labor costs and currency appreciation, and who have been affected by the spread of international protectionism. As a result, they have relocated some of their industries or activities to foreign countries, including Thailand. In addition, firms (Japanese and American) have been

Table 2.5 : Foreign Direct Investment Patterns a/ by type of Business

(Percentage)

Type of Business	Percentage Share b/					
	1980	1985	1986	1987	1988	1989p c/
1 Financial institution	(4.5)	(29.1)	7.4	4.9	9.6	11.5
2 Trade	19.4	24.6	25.8	9.4	13.9	17.7
3 Construction	20.2	36.0	17.9	14.9	6.9	9.2
4 Mining & quarrying	15.4	11.7	3.5	2.1	1.7	1.8
4.1 Oil exploration	11.4	9.8	3.4	2.8	1.4	1.7
4.2 Other	4.0	2.0	0.1	(0.7)	0.3	0.1
5 Agriculture	5.4	1.8	2.9	3.2	1.1	(0.1)
6 Industry	26.2	30.9	30.7	52.5	57.9	47.1
6.1 Food	2.4	9.0	4.2	4.8	4.4	3.5
6.2 Textiles	(0.0)	1.4	1.2	11.0	4.0	(1.1)
6.3 Metal based and non-metallic	1.2	(2.9)	(0.3)	4.0	6.9	7.0
6.4 Electrical appliances	11.6	6.4	8.9	12.6	22.3	18.9
6.5 Machinery & transport equipment	2.4	0.7	(0.2)	1.8	2.6	2.2
6.6 Chemicals	5.5	11.1	7.0	9.6	6.9	6.7
6.7 Petroleum products	0.1	0.0	0.1	(0.2)	3.0	0.0
6.8 Construction materials	0.1	0.9	0.1	0.1	0.1	0.3
6.9 Other	3.1	4.3	9.8	8.8	7.8	9.8
7 Services	18.0	24.2	11.8	13.0	8.9	12.7
7.1 Transportation & travel	5.5	4.5	3.7	2.4	1.4	1.0
7.2 Housing & real estate	3.9	6.9	0.6	3.6	3.2	4.8
7.3 Hotels & restaurants	2.3	5.1	1.5	1.1	2.0	4.9
7.4 Other	6.3	7.7	6.0	5.8	2.4	2.1
Total	100.0	100.0	100.0	100.0	100.0	100.00
Total amount (Million baht)	3,878.2	4,402.2	6,908.1	9,043.7	28,243.8	17,132.8
Annual growth rate	-	2.6	56.9	30.9	212.3	36.5

Notes: a/ Equity and loans from parent or related companies including capital funds of foreign commercial banks.

b/ The calculations are based on net inflow of foreign direct investment, do not include net capital outflow of Thai investors (equity investment).

c/ Data refer to January-June.

p Preliminary.

Source: Bank of Thailand

Table 2.6: Portfolio Investment Patterns by Country of Origin

(Million Baht)

Source	1981-1985 a/				1986				1987			
	Inflow	Outflow	Net	Share	Inflow	Outflow	Net	Share	Inflow	Outflow	Net	Share
Hong-Kong	1454.1	790.6	663.5	12.7	1,320.9	453.0	867.9	34.5	8,597.6	885.7	7,711.9	60.0
Japan	74.7	58.4	16.3	0.3	5.4	13.1	(7.7)	(0.3)	254.1	149.6	104.5	0.8
Singapore	475.7	64.5	411.2	7.9	351.6	41.8	309.8	12.3	2,536.7	1,345.7	1,191.0	9.3
United Kingdom	4160.6	40.8	4119.8	79.0	795.3	16.4	778.9	30.9	4,347.3	1,575.0	2,772.3	21.6
United Stated	232.7	98.0	134.7	2.6	518.2	8.2	510.0	20.3	1,213.2	232.2	981.0	7.6
Other	272.5	402.8	-130.4	(2.5)	62.1	4.2	57.9	2.3	199.4	98.4	101.0	0.8
Total	6670.3	1455.1	5215.1	100.0	3,053.5	536.7	2,516.8	100.0	17,148.3	4,286.6	12,861.7	100.0

Table 2.6: (Continued)

(Million Baht)

Source	1988				1989 b/			
	Inflow	Outflow	Net	Share	Inflow	Outflow	Net	Share
Hong-Kong	2,050.4	2,090.6	(40.2)	(0.4)	2,844.8	22.3	2,822.5	20.8
Japan	1,385.0	197.6	1,187.4	10.6	74.5	37.8	36.7	0.3
Singapore	10,172.4	6,201.1	3,971.3	35.5	9,196.0	2,916.1	6,280.0	46.2
United Kingdom	9,984.7	6,180.2	3,804.5	34.0	6,199.7	2,638.6	3,561.1	26.2
United Stated	3,064.4	727.5	2,336.9	20.9	884.3	653.5	230.7	1.7
Other	1,103.1	1,171.8	(68.7)	(0.6)	943.7	278.0	665.7	4.9
Total	27,760.0	16,568.8	11,191.2	100.0	20,143.0	6,546.3	13,596.7	100.0

Notes: a/ Total 1981-1985
b/ Only quarter 1, 2

Source: Balance of Payment Section, Bank of Thailand.

Table 2.7: Foreign Portfolio Investment Patterns by Sector

(Million baht)

Sector	1987	Share(%)	1988	Share(%)
Banking	10,024.88	32.69	11,633.21	20.56
Finance and Securities	2,734.41	8.92	4,271.48	7.55
Insurance	389.24	1.27	826.40	1.46
Commerce	2,689.89	8.77	10,796.43	19.08
Service	437.23	1.43	327.88	0.58
Industrial	1,483.81	4.84	2,182.85	3.86
Construction Materials and Interior Furnishing	6,457.39	21.06	14,224.36	25.14
Automotive	258.08	0.84	465.83	0.82
Texttiles / Clothing	1,789.88	5.84	2,823.13	4.99
Mining	964.25	3.14	1,604.56	2.84
Food / Beverage	1,271.90	4.15	2,192.97	3.88
Electrical Equipment	61.91	0.20	265.58	0.47
Other	2,103.50	6.86	4,971.52	8.79
Total	30,666.37	100.00	56,586.20	100.00

Source: Securities Exchange of Thailand

Table 2.8: Foreign Loan Patterns

	Cumulative values			Percentage Share (%)		
	1980-82	1983-85	1986-88	1980-82	1983-85	1986-88
Net inflow of foreign loans(million baht)	128,032	118,171	36,967	100.00	100.00	100.00
-Public	80,358	64,437	3,010	67.10 a/	54.50	8.10
: Long term	74,668	71,276	3,438	61.20 a/	60.30	9.30
:Short term	5,690	(6,839)	(428)	5.90 a/	(5.80)	(1.20)
-Private	47,674	53,733	33,957	32.90 a/	45.50	91.90
: Long term	12,167	23,179	(11,040)	14.80 a/	19.60	(29.90)
: Short term	14,833	30,554	44,997	18.10 a/	25.90	121.80
-Net long term	62,441	94,455	(7,602)	76.00 a/	79.90	(20.60)
-Net short term	19,704	23,715	44,569	24.00 a/	20.10	120.60
Source of public loans (Debt outstanding in million U.S $)	15,051	23,696	36,189	100.00	100.00	100.00
-Multilateral	4,101	7,909	9,256	27.25	33.38	25.58
-Bilateral	4,020	6,401	11,377	26.71	27.01	31.44
-Private credit	6,645	8,583	14,130	44.15	36.22	39.05
-Suppliers credit	285	803	1,426	1.89	3.39	3.94
Net inflow of public foregn loans (million)	86,357	64,437	3,010	100.00	100.00	100.00
-Central Government	22,269	39,122	13,374	25.79	60.71	444.32
-State enterprises	58,837	40,519	(10,840)	68.13	62.88	(360.13)
-Short-term loans	5,689	(6,839)	(428)	6.59	(10.61)	(14.22)
-Other long-term loans	(438)	(8,365)	904	(0.51)	(12.98)	30.03

Note: a/ Data refer to 1981-1982.
Source: Balance of Payments Section,Bank of Thailand.

Table 2.9: Factors Affecting FDI in Thailand's Promoted Projects (Application Approved) 1986-1988 a/

Type of Motive	Number of Projects			Value of FDI : Registered Capital (million baht)		
	1986	1987	1988	1986	1987	1988
1. Resource utilization	37	44	190	431.9	1,232.0	2,201.8
	(32.5)	(13.3)	(27.5)	(14.6)	(15.0)	(9.0)
1.1 Primary products	9	5	20	133.1	24.8	95.9
	(7.9)	(1.5)	(2.9)	(4.5)	(0.3)	(0.4)
1.2 Resource-based industries	28	39	170	298.8	1,207.2	2,105.9
	(24.6)	(11.8)	(24.6)	(10.1)	(14.7)	(8.6)
2. To regain or maintain cost advantage along dynamic comparative advantage	53	244	444	1,756.7	5,485.9	16,972.3
	(46.5)	(73.9)	(64.2)	(59.4)	(66.7)	(69.3)
2.1 To regain or maintain cost advantage: export	50	222	411	1,296.4	4,799.1	10,101.2
	(43.9)	(67.3)	(59.5)	(43.9)	(57.7)	(41.2)
2.2 To regain or maintain cost advantage: export base (industrial organization pattern) b/	1	3	16	430.0	345.0	2,740.5
	(0.9)	(0.9)	(2.3)	(14.5)	(4.2)	(11.2)
2.3 To regain or maintain cost and demand advantages	2	19	17	30.3	391.8	4,130.6
	(1.8)	(5.8)	(2.5)	(1.0)	(4.8)	(16.9)
3. To gain or maintain demand advantage	21	38	53	646.7	1,450.6	5,282.0
	(18.4)	(11.5)	(7.7)	(21.9)	(17.6)	(21.6)
4. Capital stock adjustment	3	4	4	120.8	55.5	47.9
	(2.6)	(1.2)	(0.6)	(4.1)	(0.7)	(0.2)
Total	114	330	691	2,956.1	8,224.0	24,504.0
	100.0	100.0	100.0	100.0	100.0	100.0

Notes : a/ Figures in paretheses are percentage share of the total
b/ Based on selective investigation

Source : Compiled from data from the Office of the BOI.

investing in an increasing number of projects which indicate some intention to adopt Thailand as a production and export base--to make Thailand a part of their global industrial organization--mainly in electrical appliances (which includes parts and components) and electronic communication equipment and parts. Also, a large number of projects (an average of 24 percent) have come to Thailand to utilize domestic natural resources; however, in recent years only about 10 percent of the firms investing in promoted FDI projects did so to gain the advantage of domestic demand and only a very small percentage of FDI firms confirmed that their investment being consistent with the capital stock adjustment considerations.

Based on SET's (the Securities Exchange of Thailand) monthly records during 1984-1988, the net inflow of foreign portfolio investment was influenced most by Thailand's economic prospects and the market-investment-return potential of a 14-month forward time lag. The elasticities of foreign portfolio investment with respect to gross domestic product (GDP) and realized market investment return were 2.40 and 1.04, respectively (Table 2.10).

The recent net private foreign loan inflow was found to be influenced by current account deficit and the exchange rate risk (measured by a one-month premium or discount on the US dollar sales in the forward market offered by commercial banks in Thailand). The elasticities of demand for foreign private loans with respect to the current account deficit and the forward premium or deficit were -0.54 and 0.31, respectively, for short-term loans, and -2.38 and 0.09 for long-term loans (Table 2.11). Several other factors were tested to examine their influence on the net inflow of foreign private loans. The regression results indicate that the interest rate differential, the domestic liquidity situation, and the withholding tax were insignificant factors.

2.3 The Impact of the Inflow of Foreign Capital

The impact of foreign direct investment has been far-reaching. Several studies suggest that FDI has contributed positively to the Thai economy.1/ However, the impact of FDI in recent years is much more far reaching. First, there has been a dramatic shift of FDI from import-substitution industries to export-oriented industries. The share of export-oriented projects in the total number of promoted FDI projects increased from about 10 percent in 1984 to more than 80 percent in 1988. This further raises the share of foreign firms in the country's total and in manufactured exports. Second, if all projects approved for promotion during 1986-1988 go forward, it is estimated that 18,200 million baht in exports will be generated in 1989, and the amount will increase to 141,000 million baht in 1993.2/

1/ For more details, see Chapter 3.

2/ Business Economics Club of Thailand, Foreign Investment and Impact of Investment promotion (1989-1994), (in Thai), Mimeo 1989, p.70.

Table 2.10 : Factor Inducing Foreign Portfolio Investment (NFPt) :Elasticities a/

Factor	Indepentdent	Elasticities
Economic prospects	: GDPt	0.30
Return potential combined	: Rt	0.72

Notes: a/ Elasticities are computed by (dy/dx)*(x/y).

NEPt 1/ Monthly net inflow of portfolio. (Jan 1984,Dec 1988)

Rt 2/ = Monthly market rate of return. (Jan 1984,Dec 1988)

GDP 3/ = Monthly gross domestic production. (Jan 1984,Dec 1988)

Sources : 1/ Balance of Payments Section, Department of Economic Research Bank of Thailand.

2/ Securities Exchange of Thailand.

3/ General Economic Section, Department of Economic Research Bank of Thailand.

Table 2.11 : Factors Affecting Private Foreign Loans

Factors	Elasticities	
	Net Foreign Private Short-Term Loans	Net Foreign Private long-Term Loans
- Current account balance (CAD)	(0.544)	(2.380)
- Exchange rate risk (forward premium or discount)	0.310	0.089
- Interest rate differential	n.s	n.s
- Domestic liquidity situation	n.s	n.s
- Regulations (withholding tax)	n.s	n.s

Note: n.s = Not significant
Source: Bank of Thailand

Of this total amount, FDI projects contribute a substantial proportion. Third, since most of the recently promoted FDI projects (1986-1988) involve relatively labor-intensive activities, they will greatly contribute to the country's employment. If all of these projects go forward, about 300,000 persons will be directly employed--a number that is more than twice that of the cumulative total up to 1986. Finally, the export-oriented nature of most of the projects means that product quality is important. Thus, this will have a significant impact on production efficiency due to more technology transfer and training.

Aside from the contributions discussed above, some local entrepreneurs complain that FDI caused a considerable increase in land prices and shortages of skilled labor in such fields as engineering and science. In addition, they believe that FDI had a crowding-out effect on local producers in the domestic product market and on local sources of raw materials.1/ Furthermore, some local entrepreneurs and academicians have also expressed concern about the increasing predominance of Japanese FDI in Thailand.

The increasing participation of foreigners in securities transactions was found to contribute positively to the Thai economy. It improved efficiency of capital allocation by reducing the cost of funds and increasing the return on investment. During 1984-1988, on the average, fund users paid less than loan rates for funds mobilized from the securities market in Thailand: debenture, 10.4 percent; dividend yield, 6.7 percent; MOR, 12.6 percent; and MLR, 12.2 percent. During the same period, investors received an average of 67.5 percent from stock investments, significantly higher than the 8.1 percent average rate earned on fixed deposit accounts (Table 2-12). In addition, except for the two-week period immediately following Black Monday (19-30 October 1987), there was not a strong evident that foreign portfolio dealings had a destabilizing effect on the Thai stock market.

2.4 Policy Implications

Since the impact of FDI is far-reaching, FDI should be dealt with "industry by industry" and "case by case." Except for research and development, ownership structure, and crowding-out effects on local producers, FDI in manufacturing has contributed positively to the Thai economy. The BOI has already started to remedy these shortfalls. Incentives are provided for equipment imported for local research and development activities. Joint-ventures with Thais in majority ownership is encouraged even in export-oriented projects in which Thai producers are capable. However, the ownership issue in export-oriented project should be handled carefully as these projects can be placed in other countries; indeed, there are more countries

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1 Ibid.

Table 2.12 : The Cost of Capital and the Return on Investment.

(Percentage)

	Comparison of Cost of Capital				Comparision of Return On Investment	
Year	MOR	MLR	Debenture	Dividend Yield	Fixed Deposit Rate	Stockholders Return
1984	16.5	16.5	-	8.3	13.5	6.9
				8.1a/		7.6a/
1985	15.5	15.5	13.2	6.3	11	12.3
1986	13.5	13.4	-	9.3	8.6	140.2
1987	11.6	11.5	9.2	5.3	7.3	65.7
				5.5a/		75.9a/
1988	11.6	11.6	10.3	6	7.4	101.5
Average	12.6	12.2	10.4	6.7	8.1	67.5

Note: a/ = average of all stock returns in 2 year period.

Source: Compiled from SET Statistics .

competing for FDI than there are countries looking for areas in which to invest. And the crowding-out effects on local producers, they should be compared with the competition and efficiency gained through the presence of foreign firms, and government can make the some adjustments to have them remedied. In addition, foreign firms can compete against Thai producers in the export market from anywhere, whether they are producing in Thailand or in other countries.

There are still certain entry limitations in the nonmanufacturing sectors--particularly such nonfactor services as banking and insurance. More liberal policy toward FDI in these sectors can enhance domestic competition and increase efficiency. The question is how liberal Thailand should be in this case.

As mentioned earlier, foreign portfolio investment did contribute positively to the Thai economy by reducing the cost of funds and increasing the return on investment. Foreign portfolio investment should be further encouraged by having a more efficient stock listing system. In addition, a double-taxation agreement with a country like the United States would help promote US investment in the Thai securities market. However, certain preventive measures should be implemented to avert any crisis; these include: close monitoring; diversifying sources; discouraging single ownership of large funds; and establishing more "close-end" funds.

Given the fact that Thailand still needs far more foreign loans and other capital inflows, government policy should be directed at making certain that these monies are used efficiently and not diverted into speculative or nonproductive areas. Because government already has a sound system for managing foreign public loans, attention should be paid to loans brought in by the private sector, as they have become quite important in recent years. In addition to the "no government guarantee" measure, the government should also monitor foreign private loans and should assure that the loans do not create adverse effects on the Thai economy, especially on price levels.

3. FOREIGN DIRECT INVESTMENT

3.1 Introduction

Foreign direct investment (FDI) can serve not only as an important source of capital funds to fill the developing countries' savings gap, it can also be an important channel of technological and managerial resources as well as provide foreign market access in a package form for the developing host countries. The impact of FDI may be far-reaching and can be complicated.

In Thailand, foreign direct investment has actively been encouraged, and its role in the past few decades has become increasingly important. The FDI net inflows increased from only about 1 percent of the annual private capital formation in 1960 to 4.25 percent and 9.62 percent in 1987 and 1988, respectively.

The purpose of this chapter is to examine the recent development of FDI in Thailand, factors affecting the development and its impact on the Thai economy, and propose a policy and strategy to deal with the FDI more effectively. Section 2 of the chapter presents an overview of FDI patterns in Thailand in terms of size, sources, sectoral distribution and market orientation. Section 3 briefly summarizes Thailand's foreign investment policy. Factors affecting the FDI in Thailand are identified and analyzed in Section 4. Section 5 discusses some issues concerning the contribution of FDI through the characteristics and performance of foreign affiliates in Thailand, particularly local participation and technology transfer. Concluding remarks and policy recommendations are presented in the final section.

3.2 Pattern of FDI in Thailand

Magnitude

According to the figures for direct investment compiled by the Bank of Thailand, the size of direct investment inflows increased from only 72 million baht in 1960 to stand at 9,259 million baht in 1980. The FDI inflow grew moderately, at an annual rate of 5.2 percent, between 1980-1987, but in 1988 it increased dramatically by 162.9 percent, and reached an all time peak of 32,960 million baht. This upward trend of FDI inflows continued into the first half of 1989 with a 34.4 percent growth rate (Table 3.1). A similar trend is seen in the net inflow figures, where a record 212.3 percent growth rate was registered in 1988 (Table 3.2). Moreover, the FDI boom was also noted in promoted projects which in 1987 and 1988, grew at 166.9 and 281.5 percent respectively in terms of foreign registered capital and 189.5 and 109.4 percent in terms of number of FDI projects approved by the BOI (Table 3.3). The expansion of promoted FDI is slow down in 1989 in terms of applications and application approved.

Table 3.1: Private Direct Investment Inflows, 1960-1989

(Million baht)

Year	Equity investment	Direct investment loans a/	Total Direct investment	Annual growth rate(%)	% Share of equity in total
1960	n.a.	n.a.	72.00	n.a.	n.a.
1965	860.30	50.00	910.30	66.00	94.50
1970	685.30	328.80	1,014.10	2.20	67.60
1975	1,654.10	1,737.30	3,391.40	27.30	48.80
1980	3,703.80	5,555.20	9,259.00	22.30	40.00
1981	4,127.00	5,215.00	9,342.00	0.90	44.20
1982	3,884.00	5,712.00	9,596.00	2.70	40.50
1983	7,255.40	6,688.80	13,944.20	45.30	52.00
1984	7,612.50	9,357.70	16,944.20	21.70	44.90
1985	6,339.90	3,826.40	10,166.30	(40.10)	62.40
1986	6,304.50	4,221.10	10,525.60	3.50	59.90
1987	10,621.00	1,915.00	12,536.00	19.10	84.70
1988	23,068.10	9,892.40	32,960.50	162.90	70.00
1989 pb/	15,293.90	5,004.30	20,298.20	34.40	75.50

Notes: p Preliminary.

a/ Medium - and long-term loans from parent or related companies including capital funds of foreign commercial banks.

b/ Data refer to January-June.

Source: Bank of Thailand.

Table 3.2: Foreign Direct Investment Patterns a/ by Country of Origin

(Percentage)

Country	Percentage Share b/						Annual Growth Rate b/				
	1980	1985	1986	1987	1988	1989p c/	1980-85	1985-86	1986-87	1987-88	1989p c
United States	18.9	54.2	18.7	20.1	11.3	14.2	26.7	(65.5)	7.2	(44.0)	77.9
Japan	23.3	34.8	44.1	36.1	51.7	50.2	11.2	26.7	(18.1)	42.9	42.1
EEC.	20.0	9.7	7.4	10.4	8.0	9.3	(7.7)	(23.8)	41.1	(23.4)	112.4
United Kingdom	2.1	2.8	3.6	3.6	3.1	3.6	8.1	31.9	0.0	(14.0)	390.8
W.Germany	6.8	3.8	2.3	5.0	2.2	1.5	(6.4)	(38.6)	113.8	(55.6)	0.1
France	0.3	3.3	1.3	1.5	1.0	3.0	61.7	(59.4)	11.4	(32.0)	140.2
Netherlands	0.6	(1.0)	(0.8)	0.8	1.0	0.3	(23.8)	(14.6)	(200.0)	24.4	(2.5)
Italy	4.0	0.3	1.1	0.1	0.1	0.4	(14.0)	360.0	(93.0)	25.0	335.4
Australia	1.0	(1.8)	2.1	0.3	0.1	0.4	(24.7)	(217.8)	(86.8)	(46.4)	169.1
Canada	(1.1)	0.8	0.5	0.1	0.2	0.1	13.1	(38.1)	(76.9)	75.0	(15.8)
Switzerland	1.9	1.8	4.0	8.7	2.0	3.5	1.3	121.7	117.8	(77.1)	177.0
Asian NIEs	36.2	(6.9)	21.7	22.6	28.4	20.2	(12.3)	(412.1)	4.2	26.1	(0.1)
Hong Kong	28.7	14.7	13.8	8.8	10.8	10.1	(7.2)	(6.2)	(36.4)	22.8	23.4
Korea	0.3	(0.1)	0.1	0.2	1.1	0.5	(10.5)	(187.5)	257.1	324.0	(23.6)
Singapore	7.2	(25.5)	5.8	5.9	5.4	(0.9)	(38.2)	(122.9)	1.4	(9.1)	(116.7)
Taiwan	0.0	3.9	1.9	7.6	11.2	10.5	145.1	(50.5)	295.8	47.2	45.4
Asean-4	4.0	0.9	(0.6)	(0.0)	0.3	0.0	(11.7)	(165.9)	(100.0)	0.0	(39.3)
Brunei	0.0	0.1	0.1	0.0	0.0	0.0	999.9	(37.5)	(60.0)	(100.0)	(28.6)
Indonesia	0.1	0.2	0.1	0.1	0.1		11.8	(37.5)	(30.0)	14.3	255.0
Malaysia	3.9	0.4	0.1	(0.1)	0.2	0.0	(13.4)	(74.4)	(190.9)	(270.0)	(296.2)
Philippines	(0.0)	0.2	(0.9)	0.0	0.0	(0.1)	52.8	(473.9)	(100.0)	0.0	26.1
Other	2.1	6.5	2.1	1.7	1.9	2.2	28.5	(67.8)	(17.3)	(213.4)	(20.1)
Total	100.0	100.0	100.0	100.0	100.0	100.0					
Total amount (Million baht)	3,878.2	4,402.2	6,908.1	9,043.7	28,243.8	17,132.8	2.6	56.9	30.9	212.3	36.5

Notes: a/ Equity and loans from parent or related companies including capital funds of foreign commercial banks.

b/ The calculations are based on the net inflow of foreign direct investment, and do not include net capital outflow of Thai investors (equity investment).

c/ Data refer to January-June.

Source: Bank of Thailand

Table 3.3 Application, Certificates and Starting Projects In Number and Baht
1985 - October 1989

Item	1985		1986		1987		1988		1989 a/	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
1. Applications										
- No. of Applications	325		431		1,058		2,127		967	
- Total Investment (Baht mn.)	59,583		59,688		209,029		530,761		319,102	
- Total Registered Capital (Baht mn.)	14,997		15,804		57,198		139,454		81,797	
Thai	10,148	67.7	10,962	69.4	31,963	55.9	79,048	56.7	51,296	62.7
Foreign :	4,849	32.3	4,842	30.6	25,235	44.1	60,406	43.3	30,501	37.3
Japan	443	9.1	1,690	34.9	9,386	37.2	21,292	35.2	10,002	32.8
Taiwan	445	9.2	602	12.4	2,078	8.2	9,610	15.9	5,384	17.7
United States	2,732	56.3	546	11.3	1,870	7.4	5,059	8.4	772	2.5
Others	1,229	25.4	2,004	41.5	11,900	48.2	24,445	40.6	14,343	47.0
- Cost of Machinery and Equipment (Baht mn.)	22,603		25,019		113,895		260,881		124,890	
- No. of Thai Employee	76,420		100,681		332,568		532,422		314,976	
2. Applications Approved										
- No. of Applications	210		295		626		1,463		994	
- Total Investment (Baht mn.)	54,197		34,610		67,752		201,812		221,885	
- Total Registered Capital (Baht mn.)	7,421		9,203		18,878		60,418		52,241	
Thai	5,537	74.6	6,064	65.9	10,500	55.6	28,397	47.0	31,640	60.6
Foreign :	1,884	25.4	3,139	34.1	8,378	44.4	32,021	53.0	20,601	39.4
Japan	169	9.0	1,675	53.4	3,665	43.7	18,288	57.1	8,823	42.8
Taiwan	111	5.9	46	1.5	1,540	18.4	3,983	12.4	3,652	17.7
United States	737	39.1	143	4.6	574	6.8	1,851	5.8	829	4.0
Australia	45	2.4	291	9.3	112	1.3	1,651	5.2	180	0.9
United Kingdom	163	8.7	230	7.3	350	4.2	894	2.8	871	4.2
Hong Kong	12	0.6	4	0.1	107	1.3	530	1.7	897	4.4
Singapore	37	2.0	97	3.1	54	0.6	524	1.6	969	4.7
India	13	0.7	16	0.5	38	0.5	240	0.7	369	1.8
Korea, Rep. of	97	5.1	130	4.1	16	0.2	228	0.7	376	1.8
Netherlands	11	0.6	121	3.9	31	0.4	179	0.6	206	1.0
Malaysia	12	0.6	27	0.9	52	0.6	106	0.3	62	0.3
Germany, Fed, Rep. of	21	1.1	37	1.2	54	0.7	30	0.1	269	1.3
Others	456	24.2	322	103.0	1,785	21.3	3,518	11.0	3,098	15.0
- Cost of Machinery and Equipment (Baht mn.)	16,892		18,508		36,599		103,652		86,756	
- No. of Thai Employee	59,374		60,231		204,113		352,827		282,953	
3. Projects Started Operation										
- No. of Applications	78		145		171		224		249	
- Total Investment (Baht mn.)	8,201		20,809		18,683		18,862		21,601	
- Total Registered Capital (Baht mn.)	2,275		3,932		5,022		8,254		8,923	
Thai	1,417	62.3	2,387	60.7	3,473	69.2	3,463	42.0	3,478	39.0
Foreign :	858	37.7	1,545	39.3	1,549	30.8	4,790	58.0	5,445	61.0
Japan	21	2.4	685	44.3	508	32.8	3,037	63.4	3,545	65.1
United States	319	37.2	136	8.8	148	9.5	192	4.0	203	3.7
Taiwan	78	9.1	73	4.7	49	3.2	276	5.8	639	11.7
Others	440	51.3	651	42.1	835	53.9	1,286	26.8	1,060	19.5
- Cost of Machinery and Equipment (Baht mn.)	4,109		8,428		7,905		7,347		8,753	
- No. of Thai Employee	14,401		26,178		38,102		47,996		44,452	

Note: a/ Data refer to January - October.
Source: Office of the BOI.

For FDI inflows during 1980-1984, less than half was invested in equities; the rest came as loans from parent or related companies abroad and as capital funds from foreign commercial banks. The proportion of equity investment increased its share to about 60 percent of the total during 1985-86, then to about 75 percent during 1987-89 (see Table 3.1). The upward trend of equity-loan ratio reflects foreign firms' financial strategy and their confidence on the Thai government, particularly concerning foreign exchange remittance. The new wave of FDI by small-and medium-size firms and the increasing proportion of sale and majority foreign ownership also contribute to the change in equity-loan combination.

Investing Countries

Japan, the United States, the EEC and Asian NIEs are the major sources of FDI funds to Thailand. The Japanese share of the total increased during the 1980's and clearly became the largest source since over taking the United States in 1986. The Japanese share remained high, at over 50 percent in 1988 and 1989. The relative role of the US's direct investment has been declining since 1985, to a mere 11 percent share in 1988. The EEC and Asian NIEs were unstable sources in terms of net FDI inflows with an average of 9 and 24 percent share, respectively, during 1986-1988. Among Asian NIEs, Taiwan and South Korea have showed an increasing role since 1986 (Table 3.2).

Similar trends were also seen among promoted FDI--of which the Japanese share was about half in terms of registered capital and about one-third in terms of number of projects during 1987 and 1988. Other important sources were Taiwan, the United States, Hong Kong, the United Kingdom, South Korea, and Singapore (Table 3.3 and 3.4).

This pattern is not surprising since Japan has become the World's largest direct investor over the past few years, although most of the Japanese FDI was made in North America and Europe during period 1985-88, with only 10-15 percent in Asia. The whole of ASEAN's share of Japanese FDI during this period was around five percent and this has steadily declined throughout the 1980's. Thailand's share of Japanese FDI amounts to less than 1 percent but it has been increasing since 1985 to become over 1 percent in 1988 (Table 3.5).

Sectoral Distribution

FDI in Thailand was diversified. The manufacturing sector's share was just less than one-third of total net direct investment inflows during 1980-86. This sector increased significantly in 1987 and 1988 and amounted to 52.5 and 57.9 percent, respectively. Construction, trade and services also attracted sizable FDI during the 1980's, and financial institutions received more attention recently. The trade sector's share of FDI appeared to increase steadily during 1980-86, but declined in 1987 and started climbing up again. FDI in

Table 3.4: Foreign Investment in Promoted Projected,1987-1989

(million baht)

Country	Applications					
	1987		1988		1989(Jan-June)	
	No	Total Inv	No	Total Inv	No	Total Inv
Total investment a/	1058	209,029.0	2125	530,292.0	524	197,185.2
Total foreign Investment b/	630	163,321.8	1271	394,211.5	336	144,317.6
Japan	200	46,986.5	389	148,221.1	95	64,151.3
Taiwan	178	14,641.9	400	54,287.3	84	1,313,916.7
United States	61	19,214.1	136	92,766.8	22	3,882.9
Hong Kong	46	7,035.0	126	20,108.3	34	13,186.6
Korea,Rep.of	16	2,303.4	40	3,678.5	18	2,429.6
Australia	22	7,330.5	30	29,850.9	5	228,084.0
Canada	6	639.1	13	661.3	0	0.0
Europe	110	33,131.2	148	73,569.3	46	17,718.0
-United Kingdom	20	4,230.5	45	12,597.8	15	9,233.0
-German	14	720.3	25	5,611.8	8	5,936.8
-Swistzerland	14	2,272.7	25	3,406.9	7	1,084.7
-France	7	59.1	18	29,926.8	4	259.5
-Belgium	12	15,406.7	15	3,615.5	2	89.9
-Italy	4	1,203.8	13	44,437.7	3	364.0
-Netherlands	9	1,194.4	10	1,780.6	3	206.7

Table 3.4: (continued)

(million baht)

Country	Applications Approved c/					
	1987		1988		1989(Jan-June)	
	No	Total Inv	No	Total Inv	No	Total Inv
Total investment a/	625	67,290.0	1454	200,894.0	625	151,679.0
Total foreign Investment b/	385	50,063.5	888	156,419.0	400	110,511.3
Japan	136	24,363.4	265	77,019.3	124	65,682.1
Taiwan	102	7,699.6	308	21,498.4	115	10,602.6
United States	34	4,431.3	106	17,027.8	37	8,337.4
Hong Kong	32	3,143.0	86	11,415.6	29	3,004.3
Korea,Rep.of	7	333.0	36	2,757.8	15	1,656.4
Australia	12	984.4	19	1,325.0	13	2,034.4
Canada	1	500.0	11	558.3	1	33.1
Europe	51	6,900.6	110	26,257.3	64	13,675.7
-United Kingdom	16	2,643.1	44	8,387.0	14	6,992.3
-German	7	337.1	17	3,512.6	12	1,660.8
-Swistzerland	10	1,669.8	19	1,600.2	13	2,714.4
-France	3	31.8	14	1,289.2	7	666.0
-Belgium	4	1,472.0	15	11,647.1	6	408.1
-Italy	3	585.1	4	368.5	4	330.0
-Netherlands	5	363.6	3	250.0	6	545.6

Table 3.4:(continued)

(million baht)

Country	Project Started Operation					
	1987		1988		1989(Jan-June)	
	No	Total Inv	No	Total Inv	No	Total Inv
Total investment a/	172	18,577.0	224	17,930.0	143	10,302.9
Total foreign Investment b/	86	12,160.1	136	14,013.0	103	8,464.8
Japan	30	5,623.1	46	7,521.0	48	5,039.0
Taiwan	8	399.0	23	719.6	31	1,242.9
United States	10	1,562.8	15	2,135.7	10	1,329.4
Hong Kong	11	2,467.2	17	2,030.0	7	584.2
Korea,Rep.of	0	0.0	0	0.0	2	23.5
Australia	4	157.7	4	296.5	1	8.4
Canada	0	0.0	0	0.0	0	0.0
Europe	15	1,113.2	31	2,913.4	9	789.3
-United Kingdom	9	627.2	14	1,725.5	2	130.2
-German	2	106.8	4	272.9	2	29.5
-Swistzerland	0	0.0	4	348.1	0	0.0
-France	0	0.0	3	275.1	1	9.1
-Belgium	0	0.0	1	82.8	0	0.0
-Italy	0	0.0	0	0.0	1	70.2
-Netherland	3	370.0	4	140.3	1	63.2

Notes: a/ Total investment figures are of Thai as well as foreign investors.
Firms with their foreign investment from more than one country are double counted
b/ Foreign registered capital
c/ Most of applications approved in 1989 are those which submitted in 1988

Source: International Division ,Office of the BOI.

Table 3.5: Distribution of Japannese Foreign Direct Investment by Country

(Percentage)

	1981	1983	1985	1986	1987	1988
North America	28.24	33.16	44.98	46.78	46.03	47.48
Europe	9.84	12.15	15.80	15.54	19.71	19.39
Asia	37.38	22.68	11.75	10.43	14.59	11.84
China	0.29	0.04	0.82	1.01	3.68	0.63
ASEAN	31.79	11.97	7.66	3.84	4.57	5.77
Brunei	0.06	0.02	0.01	0.00	-	-
Indonesia	27.25	4.59	3.34	1.12	1.63	1.25
Malasia	0.35	1.72	0.65	0.71	0.49	0.82
Philippines	0.81	0.80	0.50	0.09	0.22	0.28
Singapore	2.98	3.95	2.77	1.35	1.48	1.59
Thailand	0.35	0.88	0.39	0.56	0.75	1.83
Others	25.44	32.01	27.47	27.25	19.67	21.29
Total	100	100	100	100	100	100
Total Amount (US$ Million)	8931	8145	12217	22320	33364	47023
Annual Growth Rate (%)		(2.28)	22.47	82.70	49.48	40.94

Source: Ministry of Finance, Japan

agriculture and services were fluctuating during 1980-1988, and the share of mining and construction has been declining (Table 3.6).

Within the manufacturing sector, electrical appliances, chemicals, and food were the leading industries accounting for a large share of FDI. In 1987 and 1988, there was a noticeable rise in the share of the so-called "engineering/machinery" industries, especially electrical/electronic products, metal and non-metallic products, and machinery and transport equipment. This is different from earlier FDI to Thailand when the predominance of light consumer goods industries was observed (Table 3.6).

Recent changes in the structure of FDI and a rising share in the manufacturing sector in 1987 and 1988 was mainly due to FDI from Japan and the Asian NIEs. Japanese FDI, which had swung from one major sector to another during 1980-86, became concentrated on the manufacturing sector in 1987 and 1988. The FDI structure of Asian NIEs also shifted more towards manufacturing, but the funds were taken mainly from the financial sector which was predominant during 1980-86. In 1987 and 1988, particular industries which attracted a substantial amount of FDI from Japan were electrical appliances, metal-based, non-metallic and chemical industries, while those obtaining a large proportion of FDI from the Asian NIEs were chemicals, electrical appliances, textiles, and food (Tables 3.7 and 3.8).

As far as American FDI is concerned, the sectors gaining the largest share during the 1980's were manufacturing, services and trade. Manufacturing's share fluctuated by around 30-40 percent during the 1980's, while the share of trade increased and that of services declined. Within manufacturing, American FDI concentrated in processed food, electrical appliances, and chemicals. However, the share of chemicals has declined since 1985 to a merely 1 percent in 1988.

The FDI share of the U.S. in mining and quarrying, which dominated the early 1980's, has also declined in recent years (Table 3.9).

As for European FDI, the sectors attracting the largest share during the 1980s, particularly in the last few years (1986-1988), were manufacturing, financial institutions and trade. Manufacturing's share increased from less than 20 percent in the early 1980 to an average over 50 percent during 1986-1988, while the share of financial institutions and trade was about 24 and 18 percent, respectively, in 1988. Within manufacturing, industries which consistently attracted a significant amount of FDI during the 1980s were processed food and chemicals, textiles in 1987 and 1988, and metal based and non-metallic products in 1986 and 1987. The share of European FDI in construction and mining and quarrying has declined over the 1980s, while the share in services fluctuated around 12-22 percent, and agriculture never topped 2 percent (Table 3.10).

Table 3.6 :Distribution of Foreign Direct Investment a/ by sector

(Percentage)

Type of Business	Percentage Share b/						Annual Growth Rate b/				
	1980	1985	1986	1987	1988	1989p c/	1980-85	1985-86	1986-87	1987-88	1989p c/
1 Financial institutions	(4.5)	(29.1)	7.4	4.9	9.6	11.5	(49.2)	139.9	(13.2)	515.1	166.3
2 Trade	19.4	24.6	25.8	9.4	13.9	17.7	7.6	64.9	(52.2)	360.9	102.5
3 Construction	20.2	36.0	17.9	14.9	6.9	9.2	15.2	(22.1)	9.2	43.7	109.2
4 Mining & quarrying	15.4	11.7	3.5	2.1	1.7	1.8	(2.6)	55.4	(20.1)	146.1	19.7
4.1 Oil exploration	11.4	9.8	3.4	2.8	1.4	1.7	(0.5)	(45.0)	6.3	58.8	23.8
4.2 Other	4.0	2.0	0.1	(0.7)	0.3	0.1	(7.7)	(95.6)	(1,660.5)	(224.1)	(23.4)
5 Agriculture	5.4	1.8	2.9	3.2	1.1	(0.1)	(10.3)	162.9	41.4	7.5	(111.5)
6 Industry	26.2	30.9	30.7	52.5	57.9	47.1	6.0	56.4	123.6	244.2	2.7
6.1 Food	2.4	9.0	4.2	4.8	4.4	3.5	34.1	27.3	52.2	181.6	45.2
6.2 Textiles	(0.0)	1.4	1.2	11.0	4.0	(1.1)	109.0	43.1	1,061.8	12.4	(166.3)
6.3 Metal based and non-metallic	1.2	(2.9)	(0.3)	4.0	6.9	7.0	(29.3)	82.0	(1,715.5)	436.9	13.9
6.4 Electrical appliances	11.6	6.4	8.9	12.6	22.3	18.9	(6.6)	120.4	84.2	455.1	(15.8)
6.5 Machinery & transport equipment	2.4	0.7	(0.2)	1.8	2.6	2.2	(10.6)	(146.6)	973.2	354.8	(9.0)
6.6 Chemicals	5.5	11.1	7.0	9.6	6.9	6.7	18.0	(0.8)	79.4	124.3	59.7
6.7 Petroleum products	0.1	0.0	0.1	(0.2)	3.0	0.0	(14.8)	999.9	(292.7)	(5,375.9)	100.0
6.8 Construction materials	0.1	0.9	0.1	0.1	0.1	0.3	93.8	(85.9)	16.7	325.4	1,166.9
6.9 Other	3.1	4.3	9.8	8.8	7.8	9.8	9.7	254.0	18.2	175.1	40.1
7 Services	18.0	24.2	11.8	13.0	8.9	12.7	8.8	(23.5)	44.0	115.5	110.6
7.1 Transportation & travel	5.5	4.5	3.7	2.4	1.4	1.0	(1.5)	29.2	(13.7)	85.0	7.1
7.2 Housing & real estate	3.9	6.9	0.6	3.6	3.2	4.8	15.2	14.0	668.6	171.4	267.7
7.3 Hotels & restaurants	2.3	5.1	1.5	1.1	2.0	4.9	20.5	55.0	(5.6)	490.0	243.8
7.4 Other	6.3	7.7	6.0	5.8	2.4	2.1	6.7	23.0	27.3	26.3	(14.4)
Total	100.0	100.0	100.0	100.0	100.0	100.00					
Total amount (Million baht)	3,878.2	4,402.2	6,908.1	9,043.7	28,243.8	17,132.8	2.6	56.9	30.9	212.3	36.5

Notes: a/ Equity and loans from parent or related companies including capital funds of foreign commercial banks.
b/ Calculations are based on net inflow of foreign direct investment; and do not include net capital outflow of Thai investors (equity investment).
c/ = Data refer to January-June.
p = Preliminary

Source : Bank of Thailand.

Table 3.7 : Distribution of Net Inflow of Direct Investment from Japan a/ by sector

(Percentage)

Sector	1980	1985	1986	1987	1988
1 Financial institution	(3.03)	1.02	2.11	13.70	4.65
2 Trade	39.83	23.08	34.65	(11.33)	7.92
3 Construction	34.77	52.13	28.30	27.12	9.07
4 Mining & quarrying	0.19	0.00	0.07	0.00	0.04
4.1 Oil exploration	0.17	0.00	0.07	0.00	0.00
4.2 Others	0.02	0.00	0.00	0.00	0.04
5 Agriculture	0.16	0.31	4.68	3.80	1.21
6 Industry	20.50	10.63	23.07	57.33	72.08
6.1 Food	1.72	7.68	1.83	(0.43)	2.23
6.2 Textile	(4.39)	1.49	2.42	0.54	2.17
6.3 Metal based and non-metallic	2.30	(9.57)	(3.43)	6.86	11.21
6.4 Electrical appliances	3.17	7.65	10.49	25.29	32.10
6.5 Machinery & transport equipment	8.75	0.47	(1.20)	4.78	4.57
6.6 Chemicals	7.32	2.41	1.35	9.09	2.42
6.7 Petroleum products	0.18	0.00	0.00	0.00	13.91
6.8 Construction materials	(0.25)	0.35	0.00	(0.07)	0.02
6.9 Others	1.71	0.16	11.63	11.26	3.45
7 Services	7.60	12.84	7.11	9.39	5.03
7.1 Transportation & travel	4.59	4.84	1.12	1.07	1.03
7.2 Housing & real estate	0.44	0.00	0.14	5.40	1.86
7.3 Hotels & restaurant	0.00	0.53	0.04	0.00	1.59
7.4 Others	2.57	7.46	5.81	2.92	0.56
Total	100.0	100.0	100.0	100.0	100.0
Total amount (Million baht)	902.9	1,534.0	3,049.0	3,268.7	14,591.3

Note: a/ The calculations are based on net inflow of foreign direct investment, and do not include net capital outflow of Thai investors (equity investment) to the Japan.

Source : Bank of Thailand.

Table 3.8: Distribution of of Net Inflow Foreign Direct Investment from Asian NIEs a/ b/ by Sector

(Percentage)

Sector	1980	1985	1986	1987	1988
1. Financial Institutions	15.23	(555.48)	25.14	(147.47)	11.77
2. Trade	18.96	108.54	15.41	11.28	15.36
3. Construction	2.21	173.63	16.05	6.05	4.74
4. Mining & Quarrying	6.95	46.61	4.98	0.26	1.61
4.1 Oil exploration	0.00	45.21	4.81	1.09	1.49
4.2 Others	6.95	1.40	0.03	(0.84)	0.11
5. Agriculture	4.72	1.04	0.29	1.11	0.64
6. Industry	31.81	82.69	25.68	22.16	56.86
6.1 Food	0.18	27.12	1.80	2.32	4.90
6.2 Textile	1.01	10.07	(0.51)	3.89	7.46
6.3 Metal based and non-metallic	0.08	1.47	(1.55)	0.29	3.03
6.4 Electrical Appliances	16.15	7.89	17.83	4.07	15.80
6.5 Machinery and Transport Equipment	0.66	(0.59)	0.72	(0.06)	0.25
6.6 Chemicals	9.50	18.94	0.85	6.35	10.46
6.7 Petroleum Products	0.00	0.00	0.00	0.17	0.00
6.8 Construction Materials	0.29	9.88	0.36	0.12	0.04
6.9 Others	3.94	7.92	3.82	5.02	14.92
7. Services	20.13	42.96	12.45	6.61	9.02
7.1 Transportation and Travel	2.60	4.76	3.59	(0.81)	0.97
7.2 Housing and real estate	9.76	14.96	1.36	1.81	4.04
7.3 Hotel and Restuarant	6.48	1.66	4.99	0.86	2.89
7.4 Others	1.27	21.58	1.13	2.07	1.12
Total	100.00	(100.00)	100.00	(100.00)	100.00
Total amount (million baht)	1,286.9	(306.8)	1,466.4	(4,512.1)	7,953.9

Note: a/ The calculations are based on net inflow of foreign direct investment, do not include net capital outflow of Thai investors (equity investment) to Asian NIEs.

b/ Asian NIEs include Hong Kong, Singapore, the Republic of Korea and Taiwan.

Source:Bank of Thailand

Table 3.9 : Distribution of Net Inflow of Direct Investment from U.S.A. a/ by Sector

(Percentage)

Sector	1980	1985	1986	1987	1988
1 Financial institutions	(63.33)	18.33	1.15	(6.35)	4.75
2 Trade	9.24	11.09	25.10	25.43	27.53
3 Construction	24.90	3.12	9.15	7.45	2.84
4 Mining & quarrying	52.44	10.72	9.36	11.40	8.21
4.1 Oil exploration	51.72	8.18	8.77	9.72	7.11
4.2 Others	0.72	2.54	0.59	1.67	1.10
5 Agriculture	0.83	2.04	3.31	3.93	1.90
6 Industry	42.41	28.33	31.03	44.15	33.36
6.1 Food	4.85	4.44	11.15	5.38	6.47
6.2 Textiles	2.14	0.15	0.12	18.69	1.61
6.3 Metal based and non-metallic	0.93	(0.00)	0.83	1.63	1.33
6.4 Electrical appliances	27.65	7.25	2.22	6.29	9.89
6.5 Machinery & transport equipment	0.53	1.08	0.39	0.18	1.05
6.6 Chemicals	0.29	12.49	9.40	4.84	1.08
6.7 Petroleum products	0.08	0.00	0.00	0.07	0.00
6.8 Construction materials	0.00	0.00	0.00	0.45	0.65
6.9 Others	5.94	2.91	6.91	6.62	11.28
7 Services	29.81	26.37	20.90	14.00	21.39
7.1 Transportation & travel	3.74	5.51	10.71	2.56	2.43
7.2 Housing & real estate	0.82	10.25	0.46	0.17	4.96
7.3 Hotels & restaurants	0.59	6.96	0.09	0.59	1.45
7.4 Others	24.66	3.66	9.65	10.68	12.55
Total	100.00	100.00	100.00	100.00	100.00
Total amount (Million baht)	732.40	2,387.50	1,293.70	1,815.70	3,178.60

Note: a/ The calculations are based on net inflow of foreign direct investment, and do not include net capital outflow of Thai investors (equity investment). to U.S.A.

Source: Bank of Thailand.

Table 3.10: Distribution of Net Inflow Foreign Direct Investment from Europe a/ b/ by Sector

(percentage)

Sector	1980	1985	1986	1987	1988
1. Financial Institutions	(0.65)	1.75	0.07	13.00	24.19
2. Trade	8.75	30.81	15.56	9.13	17.57
3. Construction	37.94	3.64	1.08	1.01	1.16
4. Mining & Quarrying	15.78	16.03	4.27	(0.21)	2.29
4.1 Oil exploration	8.49	12.84	4.80	1.31	2.02
4.2 Others	7.31	3.20	(0.52)	(1.52)	0.27
5. Agriculture	0.00	2.07	1.34	1.77	0.14
6. Industry	15.57	33.39	65.65	59.43	43.09
6.1 Food	5.75	11.22	4.05	13.34	10.63
6.2 Textile	1.23	0.07	0.49	26.49	5.19
6.3 Metal based and non-metallic	2.12	0.83	5.66	6.45	0.55
6.4 Electrical Appliances	1.44	(5.87)	0.75	0.51	1.49
6.5 Machinery and Transport Equipment	0.06	0.22	0.39	0.12	0.28
6.6 Chemicals	3.73	12.00	35.00	9.88	22.19
6.7 Petroleum Products	0.00	0.00	0.59	0.00	0.00
6.8 Construction Materials	0.00	0.00	0.00	0.02	0.00
6.9 Others	1.21	14.91	18.72	2.63	2.75
7. Services	22.60	12.31	12.04	15.87	11.55
7.1 Transportation and Travel	16.43	(4.98)	2.00	3.26	2.42
7.2 Housing and real estate	2.46	2.53	0.15	3.02	4.43
7.3 Hotel and Restuarant	0.00	6.46	2.87	2.33	1.77
7.4 Others	3.69	8.33	6.95	7.26	2.92
Total	100.00	100.00	100.00	100.00	100.00
Total amount (million baht)	617.3	588.2	844.5	1,739.1	2,869.3

Note: a/ The calculations are based on net inflow of foreign direct investment, do not include net capital outflow of Thai investors (equity investment) to Europe.
b/ = EC + EFTA

Source: Bank of Thailand

Some Characteristics of Recent FDI

Aside from the patterns discussed above, there have also been changes in the character of FDI, particularly among promoted projects in Thailand during the past few years, as follows:

1. There has been a shift from import-substituting industries to export-oriented industries among promoted projects with FDI. Export-oriented FDI, with 80 percent or more of production exported, has increased sharply since 1984, with Japan and Asian NIEs contributing substantially to this export drive. The share of export-oriented projects in total promoted FDI projects (as well as in total FDI of both Japanese and Asian NIEs) increased from about 10 percent in 1984 to more than 80 percent in 1988 (Table 3.11).

2. There is a declining trend of joint ventures as a proportion of total FDI projects, particularly those with registered capital from Japan and the Asian NIEs. The proportion of wholly foreign-owned projects increased from merely 4.55 percent in 1980 to 36.79 percent in 1987 and 26.77 percent 1988. Among the joint ventures, the share of majority foreign-owned projects in the overall total rose from 6.82 percent in 1980 to 22.14 percent in 1988, while that of minority foreign-owned projects declined from a dominant 88.63 percent to 51.08 percent (Table 3.12). This is particularly true among promoted export-oriented projects where 100 percent foreign ownership is allowed. The export-oriented projects which were wholly foreign-owned increased as proportion of total FDI projects from 0 percent in 1980 to 12.87 percent and 24.89 percent in 1985 and 1988, respectively (Table 3.13).

3. There is an increasing number of investments in small and medium-size companies, particularly those from Japan. Among these Japanese companies, most are sub-contractors for the large Japanese multinationals.1/ As a result, this will lead to vertical integration among foreign affiliates in Thailand, particularly those from Japan.

1/ Pasuk Phongpaichit, "The New Waves of Japanese Direct Investment and Thailand," in Juanjai Ajanant and Jittapatr Kruavan (eds.) External Capital and the Role of Japan, Bangkok: Chulalongkorn Printing House, 1988, p. 179-197, and comment on the paper by Atchaka Sibunruang; Jutathip Earmjitmetta, "A Comparison of Characteristics and Impact of Foreign Investment in Thailand between Different Period," (in Thai), Thammasat Economic Journal, Vol. 7, No. 3, September 1989, p. 5-64; and JETRO. 1989 JETRO White Paper on World Direct Investments--New Phase of Foreign Direct Investments and Strategic Alliances: Summary, Tokyo, 1989.

Table 3.11: Pattern of Market Orientation Among Promoted Projects with FDI, 1980-1988

(percentage)

Year	% of Production Exported				Total
	0	1-39	40-79	80-100	
1980	52.27	6.82	2.27	38.64	100.00
1984	85.59	5.08	0.85	8.47	100.00
1985	19.80	2.97	4.95	72.28	100.00
1986	35.09	1.75	3.51	59.65	100.00
1987	8.79	3.33	6.06	81.82	100.00
1988	8.83	2.46	4.34	84.37	100.00

Source: Compiled from data from the Office of the BOI.

Table 3.12: Ownership Pattern of Promoted Projects with FDI, 1980-1988

(percentage)

Year	Foreign Ownership(%)				Total
	10-24.9	25-49.9	50-99.9	100	
1980	22.73	65.90	6.82	4.55	100.00
1984	16.10	54.24	14.41	15.25	100.00
1985	8.91	55.45	20.79	14.85	100.00
1986	9.65	65.79	13.16	11.40	100.00
1987	5.66	34.91	22.64	36.79	100.00
1988	8.68	42.40	22.14	26.77	100.00

Source: Compiled from data from the Office of the BOI.

Table 3.13: Distribution of Promoted Projects with FDI by Percentage of Export and Foreign Ownership, 1980-1988

(Percentage)

Export % / Ownership %	0	1-39.9	40-79.9	80-100	Total
1980					
10-24.9	13.64	0.00	2.27	6.82	22.73
25-49.9	29.55	4.55	0.00	31.82	65.91
50-99.9	4.55	2.27	0.00	0.00	6.82
100	4.55	0.00	0.00	0.00	4.55
Total	52.27	6.82	2.27	38.64	100.00
1985					
10-24.9	0.99	0.99	0.00	6.93	8.91
25-49.9	14.85	0.99	3.96	35.64	55.45
50-99.9	2.97	0.99	0.00	6.93	20.79
100	0.99	0.00	0.99	12.87	14.85
Total	19.80	2.97	4.95	72.28	100.00
1988					
10-24.9	1.74	0.00	1.01	5.93	8.68
25-49.9	5.79	1.74	2.60	32.27	42.40
50-99.9	0.43	0.14	0.29	21.27	22.14
100	0.87	0.58	0.43	24.89	26.77
Total	8.83	2.46	4.34	84.37	100.00

Source : Compiled from data from the Office of the BOI

3.3 Thailand's Foreign Investment Policies

Thailand generally maintains an open-door policy towards direct foreign investment, with the exception of ownership restrictions in certain businesses. While trying to attract more foreign investment into the economy, the country is also making certain that the benefits derived from this type of investment are maximized and costs are minimized. As a result, a wide range of measures have been introduced in order to more efficiently handle foreign investment.

Areas of Business for Foreign Investment

In general, all business activities in Thailand are open for foreign investment except in the areas of basic infrastructure, public utilities, saving banks, rural banking, insurance, and production of certain military goods. There are also certain areas in which the extent of foreign ownership is restricted. Thailand has listed some industrial priorities both in the form of broad categories as set out by the NESDB, and in a more specified list of promoted industries issued by the BOI. In the latter, foreign investors can apply for privileges by meeting certain requirements.

Policies About Ownership and Control

Thailand, like most host countries, prefers to attract joint ventures of Thai and foreign capital rather than accepting 100 percent foreign ownership, but this preference was not enforced until 1972. A great deal of foreign investment or so-called "alien" businesses were being established in the country and that number was increasing steadily. Because of this trend, coupled with the fact that Thais were now capable, both technically and financially, of undertaking various business activities, an Alien Business Law (National Executive Council Announcement No. 281) was announced by the government in 1972. The main purpose of the law is to limit legal ownership and control by foreigners in designated businesses in Thailand. A list of these businesses are presented in Appendix 1.

In practice, however, the Law has proved to be redundant or at best ineffective. Many of the listed businesses were not really of interest to foreign investors. Moreover, foreign investors were still able to control the companies by using other means. As a result, the Law had very little effect on the level of FDI in Thailand.

Together with Alien Business Law, there are certain ownership conditions specified for some industrial activities as a requirement for obtaining promotional privileges. A majority or total foreign ownership is allowed for export-oriented projects whereas in industries manufacturing mainly for the domestic market, only a minority foreign ownership is allowed.

Here again, because management control is not linked to ownership, such ownership requirements by the BOI have had little effect. The impact of these BOI conditions seems to be more evident in the increase of FDI in export-oriented projects.

Basic Investment Guarantees

To reduce uncertainty for foreign investors, Thailand has offered some guarantees. Foreigners are usually accorded national treatment, unless specified otherwise. The major guarantees are summarized in Table 3.14. Guarantees against expropriation and nationalization, government competition, and freedom to export and remit investment capital, profits and other payments in foreign currency were offered during the early period of investment promotion. To further encourage potential investors, more guarantees were added in the 1977 Investment Promotion Act. These are the guarantees against state monopolization on the sale of a similar product, against price controls, and towards the freedom from privileged treatment of any government agency or state enterprise which opposes the interests of the foreign investors. In fact, foreign investors are not as concerned about the guarantees themselves as about the probability that the host government may not keep them. Thailand can be considered a fairly reliable host in this respect. In the last few decades there have been no serious incidents of broken promises.

Besides these basic guarantees, foreign investors are also guaranteed the rights of access to all investment and export incentives, local sources, and awards for government work or supply contracts, unless otherwise specified.

Investment Incentives

In general, both FDI and local investments are accorded similar treatment in Thailand. That fact alone, could be considered a special incentive. There are also some fiscal and other incentives provided, the extent of which depends on the perceived contribution to the Thai economy. The current emphasis is placed on foreign exchange earnings, location outside Greater Bangkok, employment, and agricultural linkage. As shown in Table 3.14, agro-based projects exporting no less than 80 percent of production, or those which have saved or earned foreign exchange of at least US$ 1 million per year, if they are located in Investment Promotion Zones and employ at least 200 persons, may be subject to practically no tax at all for 8 years. The tax incentives proportionally decrease for projects satisfying fewer of these development objectives. There have been changes in the incentive scheme since 1960 from an emphasis on import substitution to export promotion; investment policy on one hand has become more restrictive in terms of increasing numbers of conditions imposed and, on the other hand, has become more open-ended, allowing some room for authorities to negotiate with investors. Although improvements and adaptations have been made in incentive schemes regarding foreign exchange earnings, these have yet to be applied to other requirements,

Table 3.14 : Thailand's Incentive Measures in 1987

Incentive Measures	Details of Incentives
1. Fiscal	
1.1 Tax on machinery	
A. Promoted projects located in Bangkok and Samut Prakarn a/	No exemption, except projects which export not less than 80% or are classified under category 5.49 (production primarily for export).
B. Promoted projects located in Nakhon Pathom, Nonthaburi, Pathum Thani, and Samut - Sakhon b/	50% reduction, except the following projects which will be granted full exemption : 1. export not less than 80% or are classified under category 5.49; 2. locate their factories in industrial estates.
C. Investment Promotion Zones (the remaining 67 provinces)	
C.1 Target activities c/	Full exemption.
C.2 General activities	Full exemption.
1.2 Import duty and business tax on raw or essential materials	
A. Promoted Projects located in Bangkok and Samut Prakarn a/	Exemption will be provided for one year or more to promoted projects exporting at least 30% of total production, covering only the proportion of imports used in production for export.
B. Promoted projects located in Nakhon Pathom, Nonthaburi, Pathum Thani, and Samut - Sakhon b/	Same as A.
C. Investment Promotion Zones	
C.1 Target activities c/	50% reduction for 1 year for those used in production for domestic market: and full exemption for a period of 5 years for the manufacture of exports.
C.2 General activities	Same as A.
1.3 Import duty and business tax on goods imported for re-export	Exemption on a case-by-case basis, as appropriate, for promoted projects mainly producing for export.
1.4 Export duty and business tax on export	Exemption on a case-by-case basis, as appropriate, for promoted projects mainly producing for export.
1.5 Corporate income tax	
A. Promoted Projects located in Bangkok and Samut Prakarn a/	No exemption, except projects which satisfy two or more of criteria below, in which case exemption for three years will be granted : 1. export not less than 80% or are classified under category 5.49;

Table 3.14 (continued)

Incentive Measures	Details of Incentives
	2. save or earn net foreign exchange of at least US$ 1 million a year; 3. employ at least 200 full-time persons.
B. Promoted projects located in Nakhon Pathom, Nonthaburi, Pathum Thani, and Samut - Sakhon b/	Exemption for 3 years, extendable yearly up to maximum of 5 years for projects which satisfy one or more of the following criteria : 1. save or earn net foreign exchange of at least US$ 1 million a year; 2. are agro-based activities, or encourage the use of domestic agricultural products, or use agricultural products as the main raw material, or use domestic supplies for at least 60% of the total value of raw material usage; 3. employ at least 200 full-time persons; 4. locate their factories in industrial estate.
C. Investment Promotion Zones C.1 Target activities c/	Exemption for 4 years, extendable yearly up to maximum of 8 years for projects which satisfy one or more of the following criteria : 1. save or earn net foreign exchange of at least US$ 1 million a year; 2. are agro-based activities, or encourage the use of domestic agricultural products, or use agricultural products as the main raw material, or use domestic supplies for at least 50% of the total value of raw material usage; 3. employ at least 200 full-time persons; 4. are considered by the Board to have special importance; 5. locate their factories in industrial estate. Under section 35 of the Investment Promotion Act B.E.2520, the following special privileges concercing corporate income tax are provided: 1. reduction of corporate income tax by 50% for 5 years after the exemption period; 2. the following, to be granted on a case-by case basis: (a) double deduction from taxable income of water, electricity and transport costs for 10 years from the date of income earning; (b) deduction from net profits of 25% of the costs of installation or construction of the project's infrastructure facilities.

Table 3.14 (continued)

Incentive Measures	Details of Incentives
C.2 General activities	Exemption for 4 years, extendable yearly up to maximum of 7 years for projects which satisfy one or more of the same criteria mentioned in C.1. The special privileges concerning corporate income tax mentioned in C.1 are provided.
	A deduction from taxable income of 5% of the increment in export earnings over the preceeding year is available for all promoted cases.
1.6 Withholding tax	
A. Fees for goodwill, royalties or fees remitted abroad	Full exemption for up to 5 years for promoted firms.
B. Dividends	Exclusion from taxable income of dividends derived from promoted enterprises during the income tax holiday.
2. Credit	
2.1 Export credit	A rediscount facility set up by the Bank of Thailand, which allows exporters to pay 7% interest rate at commercial banks for their export bills and contracts.
2.2 Investment credit	Low interest loans offered by the Industrial Finance Corporation of Thailand (IFCT) and the Small Industries Finance Office (SIFO).
3. Others	
3.1 Guarantees	Guarantees for promoted foreign-investors in Thailand : 1. against nationalization; 2. against competition of new state enterprises; 3. against state monopolization of the sale of products similar to those produced by promoted investor; 4. against price controls; 5. permission to export; 6. against imports by government agencies or state enterprises with taxes exempted.

Table 3.14 (continued)

Incentive Measures	Details of Incentives
3.2 Protection measures (subject to justifications and needs)	In addition to the regular import tariff and import control protection, the BOI can provide the following protections : 1. Impossition of surcharge on foreign products at a rate not exceeding 50% of the c.i.f. value for a period not more than 1 year at a time; 2. import ban on competitive products; 3. authority by the Chairman to order any assisting actions or tax relief measures for the benefit of promoted projects.
3.3 Permissions	Promoted firms are permitted the following rights : 1. to bring in foreign nationals to undertake invesment feasibility studies; 2. to bring in foreign technicians and experts to work under promoted projects; 3. to own land for carrying out promoted activities; 4. to take or remit abroad foreign currency; 5. to get assistance from the Investment Service Centre.

Note : a/ Excluding those located in Industrial Estates.

b/ Including all industrial estates in Bangkok and Samut Prakarn.

c/ Target activities are those activities, which meet one of the following criteria :

(a) export at least 80% or are classified under category 5.49 (production primarily for export);

(b) use agricultural products or natural resources as raw materials, are agro-based industries, or support the use of domestic agricultural products;

(c) manufacture engineering products;

(d) are considered by the Board to have special importance.

Source : Office of the BOI, Procedures for the Implementation of Promoted Projects, 1987 including technology transfer. The incentive scheme has not been changed in recent years, with the exception of a reduction in tax incentives to those projects located in Greater Bangkok. This adjustment aimed to enhance rural industrialization.

Thailand also has double-taxation treaties with several countries. Negotiations are still taking place with the U.S. Under these double-taxation treaties, profits shall only be taxable if the taxpayer has a "permanent establishment" in Thailand. Reduced rates of tax are provided for certain dividends, interest, royalties, and other income, and provisions are available for visiting experts. A system of tax credits has also been introduced to avoid double-taxation.

Since FDI is treated very much like local investment, export and investment credits with a low interest rate are available for foreign investors. Moreover, special permissions have been provided to promoted foreign-owned firms allowing them to bring in foreign nationals for the purpose of undertaking investment feasibility studies, as well as work in the promoted projects. Promoted firms are further permitted to own land and to take or remit foreign exchange abroad.

In order to encourage more research and development activities in Thailand, the BOI recently offered an import tariff and sales tax exemption on imported machinery and equipment for use in such activities. In addition, there has been some effort made by the Office of BOI to alter the ownership structure in order to encourage more joint ventures between Thai and foreign investors among those projects which have applied for promotional privileges.

3.4 Factors Affecting FDI in Thailand

In an analysis of factors affecting FDI in Thailand, foreign investors' motives can be classified into four groups: (1) resource utilization; (2) maintaining or regaining cost advantage through dynamic comparative advantages or product life cycle; (3) gaining or maintaining demand advantage; and (4) capital stock adjustment.

In the case of resource-utilization FDI, the host countries often show an absolute advantage by having an available supply of raw materials or of intermediate products. This supply may be non-existent, exhausted, seriously depleted and/or relatively expensive in the home country. Where there is a strong demand in the home country, or in the international market, the MNCs also show firm-specific advantages in the form of technical and other capacities needed to exploit these available resources abroad. FDI in this case is undertaken in order to ensure regular supplies of the natural resource and its products. Resource-utilization FDI is defined as those investments undertaken in the primary sectors (agriculture, forestry, fishery and mining), as well as resource-based industries; where non-primary products use raw materials from the primary sectors. For the purpose of this study, they are defined as investments in those industries whose direct and indirect input account for 20 percent or more of domestic raw materials from the four primary sectors. (I-O sections 001-041). An input-output table for 1985 is used to identify these resource-based industries. Some updated input coefficients for specific products are also used to supplement this table. A list of industries that have been classified as resource-based in this study is presented in Appendix 2.

In order to maintain or regain competitiveness or a cost advantage, investors relocate their production facilities for the products in which the home country is losing a comparative advantage, to host countries that are gaining a comparative advantage and that often have abundant resources. This particularly applies in the case of labor-intensive industries or activities. Relocation sites will be established in a country where a supply of plentiful and relatively cheap unskilled labor is available. A revealed comparative advantage (RCA) index taken over the period 1980-1987 was used to indicate the trend of comparative advantage for each of the four-or five-digit SITC products where FDI is involved. A RCA index was computed for Thailand and for the home countries of major foreign investors, in each of the relevant products.

Among the foreign direct investments which are undertaken to maintain or regain cost advantage, some take place in order to maintain or regain cost advantage in the international market where there is a strong demand and keen competition. On the other hand, domestic demand in the host country is relatively weak. As a result, this type of project is geared mainly towards export. For the purpose of this study, we have defined these export-oriented projects having FDI as those projects where at least 80 percent of their production is exported. Within this group, some firms may adopt Thailand as their production and export base--as a strategic part of their global industrial organization. In this case, a huge investment is committed and provides an extensive vertical investment network in the host country. Some foreign firms may invest abroad to take advantage both of lower costs and a strong local demand. These are FDI projects in which Thailand has gained, while the home country has lost a comparative advantage. Export percentage of these projects is in the range 40-79 percent.

A third group may come to Thailand in order to gain or maintain a demand advantage, or improve their access to Thailand's domestic market. This section includes those projects which are established mainly to serve the domestic market and therefore export less than 40 percent of their products.

The fourth group of investment takes place merely as an adjustment of capital stock for existing foreign affiliates in Thailand, and is often in accordance with the domestic economy. The capital-stock-adjustment FDI is, therefore, a horizontal investment of existing foreign affiliates in Thailand, and the expanded output is sold mainly in the domestic market, i.e. less than 40 percent is exported.

In order to identify the motives behind recent FDI in Thailand, the data on promoted projects whose application was approved during 1986-1988 were used. Only those projects with FDI funds were considered. Here FDI is defined as foreign registered capital from any single country which accounts for 10 percent or more of the firm's total registered capital. The distribution of the projects and value of FDI received according to the defined motives are presented in Table 3.15. The detailed data classified by I-O section are available in Appendix 3, and those classified by country in Appendix 4.

As shown in the Table, FDI in Thailand in recent years has largely followed the product life-cycle hypothesis, i.e. investment was made to maintain or regain cost advantage and, as such, their international comparative advantage. The main motivation is the sourcing for cheap production sites from which the products can be exported to home country and/or to third countries. The percentage share of this motive has increased from 46.5 percent in 1986 to 64.2 percent in 1988 in terms of number of projects, and from 59.4 percent to 69.3 percent in terms of value of FDI (Table 3.15). Although these are mainly export projects, only 17 of them (or 2.5 percent of the total) in 1988 indicated some intention to adopt Thailand as a production and export base as part of their industrial organization's global strategy. Since huge investments are involved in these projects, their percentage share of total FDI was quite high, at 11.2 percent in 1988.

On the other hand, a very small percentage of FDI was found to be consistent with the capital stock adjustment hypothesis. The percentage share here was between 0.6 and 2.6 in terms of number of projects, and 0.2 and 4.1 in terms of FDI value, and this sector showed an overall declining share during 1986-1988. A larger proportion of promoted projects made use of natural resources in Thailand. In 1988, the percentage share of this motive was 27.5 and 9.0 in terms of number of projects and FDI value, respectively, but this was lower than the share in 1986 (Table 3.15).

Details of the FDI under each motive are discussed in the following paragraphs.

Resource Utilization

Among the resource-based FDI, only a small proportion was found in primary sectors. In 1988 FDI in the primary sector accounted for less than 1 percent of the total, while FDI in resource-based industries was 8.6 percent. Although FDI in primary sectors rose in terms of number of projects, it fell in terms of FDI value. At the same time, resource-based industries enjoyed a steady growth both in terms of number of projects and FDI value; overall, however, their significance relative to the total FDI dropped in 1988. FDI in non-resource-based sectors grew much faster.

Table 3.15: Factors Affecting FDI in Thailand's Promoted Projects (Application Approved), 1986-1988 a/

TYPE OF MOTIVE	Factors Effecting DFI Decision: Push Factors	Factors Effecting DFI Decision: Pull Factors	Number of Projects 1986	Number of Projects 1987	Number of Projects 1988	Value of DFI: Registered Capital (million baht) 1986	Value of DFI: Registered Capital (million baht) 1987	Value of DFI: Registered Capital (million baht) 1988	Major Type of Products	Major Investing Countries
1. Resource utilization			37 (32.5)	44 (13.3)	190 (27.5)	431.9 (14.6)	1,232.0 (15.0)	2,201.8 (9.0)		
1.1 Primary products	- Strong demand for products - Supply non-existent or shortage	- Resources available - Favorable gov't policy	9 (7.9)	5 (1.5)	20 (2.9)	133.1 (4.5)	24.8 (0.3)	95.9 (0.4)	- Concentrated latex & skimmed crepe	- Taiwan, China, Malaysia, Singapore
									- Tiger Prawn	- Taiwan, US, Australia, Japan, Hong Kong, Canada
									- Livestock	- Japan, Denmark
									- Non-ferrous metal	- Malaysia, Korea, Australia
									- Marble	- UK
1.2 Resource-based industries	- Strong demand for products - Raw material supply:non-existent or shortage	- Primary products available as inputs - Favorable gov't policy	28 (24.6)	39 (11.8)	170 (24.6)	298.8 (10.1)	1,207.2 (14.7)	2,105.9 (8.6)	- Canning & preserving of meat	- US, Taiwan, Malaysia, W.Germany
									- Canning & preserving of fruit & vegatable	- Taiwan, Japan, Singapore
									- Canning & preserving of seafood	- Japan, Taiwan, Malaysia, Australia
									- Fish meal & animal feed	- Taiwan
									- Crude palm oil	- Taiwan, Malaysia, Hong Kong
									- Flour	- Japan, US
									- Parawood furniture parts	- Japan, Taiwan, Hong Kong
									- Rubber globes	- Taiwan, US, Hong Kong, Malaysia, Japan, China, UK
2. To regain or maintain cost advantage along dynamic comparative advantage			53 (46.5)	244 (73.9)	444 (64.2)	1,756.7 (59.4)	5,485.9 (66.7)	16,972.3 (69.3)		

Table 3.15: (Continued)

TYPE OF MOTIVE	Factors Effecting DFI Decision: Push Factors	Factors Effecting DFI Decision: Pull Factors	Number of Projects 1986	Number of Projects 1987	Number of Projects 1988	Value of DFI: Registered Capital (million baht) 1986	Value of DFI: Registered Capital (million baht) 1987	Value of DFI: Registered Capital (million baht) 1988	Major Type of Products	Major Investing Countries
2.1 To regain or maintain cost advantage: exports	- Increasing labor cost - Home country currency appreciation (Japan, Taiwan, S. Korea) - Relaxing gov't controls on outward FDI (S.Korea and Taiwan) - Keen international price-based competition - Technology imitation lag becomes shorter - Presure from major importing countries' trade policy	- Relatively cheap unskilled labor - The possibility for the workforce to acquire skill is high - Infrastructure - Positive attitude toward DFI - No racial conflict - Political stability	50 (43.9)	222 (67.3)	411 (59.5)	1,296.4 (43.9)	4,799.1 (57.7)	10,101.2 (41.2)	- Electrical appliances and parts - Computer parts & components - Electronic and communication equipment and parts - Motor vehicle parts and components - Textiles - Toys and plastic products - Jewelry and related articles - Watch & clock and parts	- Japan, Taiwan - Japan, Taiwan, US, S.Korea, Hong Kong - Japan, Taiwan, US, S. Korea - Japan - Japan, Taiwan, India, Hong Kong, S. Korea - Taiwan, US, S.Korea Hong Kong, Japan - Belgium, France, Taiwan - Japan, Swiss, Taiwan
2.2 To regain or maintain cost advantage: export base (industrial organization pattern) b/	- Increasing labor cost - Home country currency appreciation (Japan, Taiwan, S. Korea) - Keen international price-based competition - Technology imitation lag becomes shorter - Presure from major importing countries' trade policy	- Relatively cheap unskilled labor - The possibility for the workforce to acquire skill is high - Infrastructure - Positive attitude toward DFI - No racial conflict - Political stability	1 (0.9)	3 (0.9)	16 (2.3)	430.0 (14.5)	345.0 (4.2)	2,740.5 (11.2)	- Electrical appliances and parts - Electronic and communication equipment and parts - Computer part & component - Mechanical parts	- Japan - Japan, US - Japan, US - Japan
									- Textiles - Paper & paper products - Chemicals & chemical products	- Japan, China, Taiwan - Japan - India, S.Korea Netherlands, Taiwan

Table 3.15: (Continued)

TYPE OF MOTIVE	Factors Effecting DFI Decision: Push Factors	Factors Effecting DFI Decision: Pull Factors	Number of Projects 1986	Number of Projects 1987	Number of Projects 1988	Value of DFI: Registered Capital (million baht) 1986	Value of DFI: Registered Capital (million baht) 1987	Value of DFI: Registered Capital (million baht) 1988	Major Type of Products	Major Investing Countries
2.3 To regain or maintain cost and demand advantages	- Increasing labor cost - Home country currency appreciation (Japan, Taiwan, S. Korea) - Keen international price-based competition - Technology imitation lag becomes shorter - Presure from major importing countries' trade policy	- Relatively cheap unskilled labor - The possibility for the workforce to acquire skill is high - Infrastructure - Positive attitude toward DFI - No racial conflict - Political stability - Increasing domestic demand	2 (1.8)	19 (5.8)	17 (2.5)	30.3 (1.0)	391.8 (4.8)	4,130.6 (16.9)		
3. To gain or maintain demand advantage	- Keen international competition - Technology initation lag becomes shorter	- Increasing domestic demand - Favorable gov't policy	21 (18.4)	38 (11.5)	53 (7.7)	646.7 (21.9)	1,450.6 (17.6)	5,282.0 (21.6)	- Processed food - Fabricated metal and metal products - Chemical products - Petrochemicals - Synthetic yarn - Textile printing+dyeing - Motor vehicle part and component - Hotel - Industrial estate - War transportation - Warehouse	- Taiwan, Swiss - Japan, China - Japan, W.Germany, UK, Belgium - Japan, US, UK - Japan - Taiwan, Japan - Japan - France, UK - Japan, Taiwan, UK - Hongkong, Japan, - Sweden
4. Capital stock adjustment		- Increasing domestic demand - Favorable gov't policy	3 (2.6)	4 (1.2)	4 (0.6)	120.8 (4.1)	55.5 (0.7)	47.9 (0.2)	- Electronic parts - Paper - Artificial leather and products	- Japan - Taiwan - Taiwan
TOTAL			114 100	330 100	691 100	2,956.1 100	8,224.0 100	24,504.0 100		

Notes : a/ Figure in parentheses are percentage share of the total
b/ Based on selective investigation
Source : Compiled from data from the Office of the BOI.

There were several resource-based sectors of particular interest to foreign investors, although the interest seemed to shift from year to year. The sectors that strongly attracted foreign investors are listed in Table 3.16.

In the primary sectors, 35 projects were approved during 1986-1988. The most popular sectors were in agriculture, where 103.9 million baht was invested in 23 projects, accounting for about 58 percent of the total FDI in primary sectors during 1986-1988. The remaining investments were mostly in mining. Clearly, in these sectors, FDI shifted to renewable resources, such as food supply for export, particularly tiger prawn farming. These activities were first initiated by Japanese investors and followed in subsequent years by Taiwanese and other foreign nationals in response to the growing external market for fish and shrimp. Investments in this sector were also helped by a favorable government policy which provided generous promotional privileges.

In resource-based industries, 237 projects were spread over 20 Input-Output sectors. Rubber gloves and other rubber products drew the most attention, with some 93 projects being set up during 1986-1988. Also highly popular were wood and parawood furniture (43 projects), canned fruits and juices and canned and frozen seafood (33 projects). Other listed industries in this sector included animal feed, crude palm oil and flour production.

Although FDI in resource-based sectors came from many countries, in 1988, Taiwan, Japan, and the United States were the leading sources (Table 3.17). Taiwan emerged as the largest source in 1988 with 80 projects worth 835.3 million baht and thus surpassed Japan, which had been the leader in 1986 and 1987. Together these three countries accounted for about 70 percent of total FDI in the resource-based sector both in terms of number of projects and FDI value. Other prominent sources included China, Malaysia, Hong Kong, Singapore, and Canada.

Different countries showed a variety of interests when investing in the resource-based sector (Tables 3.18 to 3.22). All the major sources except Japan showed the strongest interest in rubber products. Taiwan's interest was much more diversified and included wood products, animal feed, ceramics, tiger prawn farming, and furniture. Its FDI in this sector accounted for 34.6 percent of its total FDI in 1988 in terms of number of projects and 26.4 percent in terms of registered capital.

Japan also diversified its interest. Its FDI extended over several industries such as food products, rubber products, ceramics, canned fruits and juices, canned and frozen seafood, and furniture. However, Japan's total FDI share only came to 15.7 percent of all projects and 3.6 percent of total FDI value in 1988.

Tablel 3.16: Sectoral Distribution of Foreign Direct Investment In Domestic Resource Sector

(million baht)

Sector	No.of Project 1986	1987	1988	Foreign Registered Capital 1986	1987	1988
Primary Sector						
17 Other agricultural products	1	-	-	9.80	-	-
22 Poultry products	-	2	-	-	4.02	-
28 Ocean and coastal fishing	-	2	17	-	5.56	54.33
29 Inland water fishing	3	1	-	86.00	8.00	-
35 Other non- ferrous	1	-	3	0.45	-	41.65
38 Salt	2	-	-	13.80	-	-
40 Stone quarrying	2	-	-	23.00	-	-
41 Other mining & quarrying	-	1	-	-	7.20	-
Sub total	9	11	20	133.05	24.78	95.98
Resource based industry						
42 Slaughtering	-	1	1	-	70.00	124.00
43 Canning & Preserving of meat	-	1	-	-	16.45	-
44 Dairy	1	1	1	44.00	500.00	4.00
45 Canning & Preserving of fruits & vegetable	5	4	8	51.24	62.75	62.85
46 Canning & Preserving of fish sea food	4	5	7	16.75	19.25	78.15
47 Coconut oil	6	-	90	-	-	-
50 Tapioca milling	1	-	2	7.35	-	6.00
52 Flour & other grain	-	1	-	-	14.70	-
59 Coffee & Tea processing	-	1	-	-	9.00	-
60 Other food products	1	6	8	0.60	111.35	160.58
61 Fish meal	-	1	17	-	4.00	119.77
67 Spinning	1	-	-	20.00	-	-
79 Wood and cork	3	1	16	32.00	1.20	132.15
80 Wooden furniture	1	6	16	0.60	62.19	164.73
93 Premium gasoline	-	-	1	-	-	24.50
96 Rubber sheet & block	4	2	16	36.40	20.20	150.47
97 Other rubber products	-	5	66	-	37.14	859.76
99 Ceramic and earthen wares	-	3	7	-	29.00	188.91
104 Other non-metallic	1	-	2	0.02	-	20.18
107 Non-ferrus metal	-	1	2	-	250.00	9.80
Sub total	28	35	170	298.80	1,207.23	2,105.85
Total	37	44	190	431.85	1,232.01	2,201.83

Source: Compiled from data from the Office of the BOI.

Table 3.17: Foreign Direct Investment in Domestic Resource Based Sector a/

(Million baht)

Home Country	Primary Sector						Resource Based Industry						Total Domestic Resource Based Project					
	1986		1987		1988		1986		1987		1988		1986		1987		1988	
	no. of project	value	no. of project	value	no. of project	value	no. of project	value	no. of project	value	no. of project	value	no. of project	value	no. of project	value	no. of project	value
Tiwan	2	12.8	-	-	9	30.2	8	61.8	18	165.6	70	805.1	10	74.6	18	165.6	80	835.3
Japan	3	86.0	-	-	1	1.1	4	65.2	9	300.4	29	455.1	7	151.2	9	300.4	30	456.2
USA	-	-	2	12.2	-	-	2	7.4	5	108.7	21	266.2	2	7.4	7	120.9	21	266.2
China	2	13.8	1	7.2	2	12.0	1	1.8	-	-	14	214.5	3	15.6	1	7.2	16	226.5
Malaysia	1	0.5	-	-	1	31.2	5	78.5	3	9.3	11	94.6	6	78.9	3	9.3	12	125.8
Hongkong	-	-	2	5.4	2	14.0	4	25.5	2	4.0	18	98.4	4	25.5	4	10.4	20	99.8
Singapore	-	-	1	15.3	-	-	-	-	-	-	5	17.0	-	-	1	15.3	5	17.0
Canada	-	-	-	-	2	4.2	-	-	-	-	5	11.0	-	-	-	-	7	15.2
Other countries	1	20.0	-	-	6	15.8	7	58.6	8	603.0	15	144.0	8	78.6	8	603.0	21	159.8
Total	9	133.1	6	40.1	23	108.5	31	298.8	45	1,191.0	188	2,105.9	40	431.8	51	1,232.1	212	2,201.8

Notes: a/ Number of projects approved by BOI and foreign registered capital .

Source: Compiled from data from the Office of the BOI.

Table 3.18: Sectoral Distribution of Taiwan's Foreign direct Investment in Domestic Resource Sectors in Thailand

(million baht)

Sector	Registered Capital a/ 1986		1987		1988	
Primary Sector						
17 Other agricultural products	9.80	(1)				
28 Ocean and coastal fishing					30.19	(9)
40 Stone quarrying	3.00	(1)				
Sub total	12.80					
Resource based industry						
45 Canning & Preserving of fruits & vegetable	26.00	(3)	46.50	(4)	17.10	(4)
46 Canning & Preserving of fish sea food	9.75	(3)	5.20	(1)	28.40	(3)
60 Other food products					50.00	(1)
61 Fish meal					86.50	(10)
79 Wood and cork	26.00	(2)	1.20	(1)	37.05	(13)
80 Wooden furniture			53.59	(5)	29.08	(5)
95 Rubber sheet & block rubber						
97 Other rubber products			34.14	(4)	488.91	(28)
99 Ceramic and earthen wares			25.00	(3)	62.91	(5)
104 Other non-metallic					1.56	(1)
Sub total	61.75	(8)	165.63	(18)	805.11	(71)
Total resource based FDI	74.55	(10)	165.63	(18)	835.30	(80)
Total FDI	327.10	(25)	1,696.80	(101)	3,167.90	(231)
Resource based FDI/total FDI(%)	22.80	40	3.90	18	26.40	35

Note: a/ Figure in parenthesis refer to number of project

Source: Compiled from data from the office of the BOI.

Table 3.19: Sectoral Distribution of Japan's Foreign Direct investment in Domestic Resource Based Sectors in Thailand

(Million baht)

Sector	Registered Capital a/ 1986		1987		1988	
Primary sector						
28 Ocean and coastal fishing					1.09	(1)
29 Inland water fishing	86.00	(3)				
Sub total	86.00	(3)			1.09	(1)
Resource based industry						
44 Dairy	44.00	(1)				
45 Canning & Preserving of fruits & vegetable					32.75	(4)
46 Canning & Preserving of fish sea food					22.00	(4)
50 Tapioca milling					6.00	(2)
52 Flour & other grain			14.70	(1)		
60 Other food products	0.60	(1)	28.10	(4)	106.58	(5)
61 Fish meal					4.00	(1)
67 Spinning	20.00	(1)				
79 Wood and cork					36.00	(2)
80 Wooden furniture	0.60	(1)	6.60	(2)	20.50	(4)
97 Other rubber products			1.00	(1)	82.60	(4)
99 Ceramic and earthen wares					126.00	(2)
104 Other non-metallic					18.62	(1)
107 Non-ferrus metal			250.00	(1)		
Sub total	65.20	(4)	300.40	(9)	455.05	(29)
Total resource based FDI	151.20	(7)	300.40	(9)	456.14	(30)
Total FDI	1,709.20	(25)	3,480.90	(106)	12,765.00	(191)
Resource based FDI(%)	8.80	28	8.60	9	3.60	16

Note: a/ Figure in parenthesis refers to number of projects
Source: Compiled from data from the office of the BOI.

Table 3.20 : Sectoral Distribution of US's Foreign Direct Investment
in Domestic Resource Related Sectors In Thailand

Sector	Registered Capital a/					
	1986		1987		1988	
Primary Sector						
28 Ocean & Coastal Fishing			4.20	(1)		
29 Construction			8.00	(1)		
Sub total			12.20	(2)		
Resource Based Industry						
42 Slaughtering			70.00	(1)	124.00	(1)
43 Canning & Preserving of Meat			16.45	(1)		
45 Frozen Pineapple			16.25	(1)		
46 Canning & Preserving of Fruits & Vegetable					20.40	(2)
50 Tapioca milling	7.35	(1)				
61 Fish Meal					16.00	(2)
80 Wooden Construction Material			2.00	(1)	38.00	(1)
95 Rubber Sheet & Block Rubber					9.25	(2)
97 Other Rubber Product					58.51	(13)
99 Ceramic and Earthen Wares			4.00	(1)		
104 Other Non-Matallic	0.02	(1)				
Sub total	7.37	(2)	108.70	(5)	266.16	(21)
Total resource based FDI	7.37	(2)	120.90	(7)	266.16	(21)
Total FDI	106.30	(10)	556.40	(30)	1,516.90	(52)
Resource based FDI/tota FDI(%)	6.90	20.00	21.70	23.30	17.50	40.40

Note: a/ Figure in parenthesis refer to number of projects

Source : Compiled from data from the Office of the BOI

Table 3.21: Sectoral Distribution of China's Foreign direct Investment
in Domestic Resource Sectors in Thailand

(million baht)

Sector	Registered Capital a/ 1986		1987		1988	
Primary Sector						
28 Ocean and coastal fishing					12.00	(2)
38 Salt	13.80	(2)				
41 Other mining & quarrying			7.20	(1)		
Sub total	13.80	(2)	7.20	(1)	12.00	
Resource based industry						
60 Other food products					1.50	(1)
79 Wood and cork					58.80	(1)
93 Premium gasoline					24.50	(1)
95 Rubber sheet & block rubber	1.84	(1)			68.92	(3)
97 Other rubber products					55.05	(7)
107 Non-ferrus metal					5.80	(1)
Sub total	1.84	(1)			214.57	(14)
Total resource based FDI	15.64	(3)	7.20	(1)	226.57	(16)
Total FDI	15.64	(3)	45.60	(6)	236.90	(20)
Total resource based FDI/total FDI(%)	100.00	100	15.80	17	95.60	80

Note: a/ Figure in parenthesis refer to number of projects
Source: Compiled from data from the office of the BOI.

Table 3.22 : Sectoral Distribution of Hongkong's Foreign Direct Investment
in Domestic Resource Related Sectors In Thailand

Sector	Registered Capital a/					
	1986		1987		1988	
Primary Sector						
22 Poultry Products			4.02	(1)		
28 Ocean & Coastal Fishing			1.36	(1)	1.40	(2)
Sub total			5.38	(2)	1.40	(2)
Resource Based Industry						
45 Frozen Pineapple	10.00	(1)				
47 Coconut Oil	15.50	(3)				
61 Fish Meal			4.00	(1)	13.27	(4)
79 Wood and Cork Products					0.30	
80 Wooden Construction Material					48.90	(3)
95 Rubber Sheet & Block Rubber			1.00	(1)	3.50	(2)
97 Other Rubber Product					28.40	(7)
107 Non-Ferrus Metal					4.00	(1)
Sub total	25.50	(4)	5.00	(2)	98.37	(18)
Total resource based FDI	25.50	(4)	10.38	(4)	99.77	(20)
Total FDI	52.50	(11)	282.28	(24)	766.83	(59)
Resource based FDI/tota FDI(%)	48.60	(36.40)	35.00	(16.70)	13.00	(33.90)

Note: a/Figure in parenthesis refer to number of projects

Source : Compiled from data from the Office of the BOI.

The United States was involved mainly in rubber products in terms of number of projects, but it did have the largest capital commitment in slaughtering projects. Otherwise, its interests were scattered thinly over a wide spectrum of resource-based industries. Its total interest became more significant in 1987 and expanded further in 1988, when its projects made up 40 percent in number and 17.5 percent in registered capital.

China and Hong Kong also participated in several sectors besides rubber products. China was committed to fewer projects but invested a larger amount of capital than Hong Kong. Both continued to show strong interest in rubber products. In 1988 China's total involvement was 80 percent in terms of number of projects and 95.6 percent of capital investment, while Hong Kong's was about 33.9 percent and 13 percent, respectively.

Overall, Taiwan, the United States, China, and Hong Kong invested in a higher ratio of resource-based FDIs to the total than did Japan. Taiwanese investors were more interested in non-resource based industries in 1987, but found greater opportunities in resource-based sectors in 1988. The United States also appeared to have continuing and increasing interest in resource-based sectors. In contrast, the sharp rise of Japan's FDI was found mainly in non-resource based sectors. China's FDI became significant in 1988 and was almost wholly invested in resource-based industries, while Hong Kong seemed to follow a pattern similar to Taiwan, but in much smaller proportions.

Regain or Maintain Cost Advantage

Among the push factors for this type of investment are increasing labor cost in the home country, home country currency appreciation (particularly in the cases of Japan, Taiwan and South Korea), keen competition in the international market, and shorter imitation lag of new technology. In addition, adverse pressure from the trade policies of major importing countries, like the United States, is also a factor. The pull factors are a relatively cheap pool of unskilled labor, the possibility that the workforce is able to acquire skill relatively easily, and the availability of infrastructure. Furthermore, political stability, lack of serious social conflict, and a positive public and governmental attitude towards foreign investment can also create a positive investment climate to further attract FDI.

The major products which attracted foreign firms to relocate their production facilities in Thailand during 1986-1989 were electrical appliances and parts, computer parts and components, electronic and communication equipment and parts, motor vehicle parts and components, textiles, toys and plastic products, jewelry and related articles, and watches, clocks and related parts. These are industries and activities which are relatively labor intensive and do not require the introduction of very advanced technology. Electrical and electronic products and parts (including computer components and communication equipment) alone accounted for 21.62 percent and 38.34

percent of the total FDI in terms of project numbers and FDI value, respectively (See Table 3.15).

Countries with substantial FDI participation in order to regain or maintain cost advantage were Japan, Taiwan and the Republic of Korea. Together in 1988 these three countries accounted for 66.9 percent of the total FDI (81.3 percent of the total number of projects) with this motive. Japan alone shared 52.3 percent in terms of FDI value, and 43.5 percent in terms of project number (Table 3.23). Their participation was found in almost every sector. This is not entirely surprising since these three countries recently have found their competitive and comparative advantages in some industries diluted by rising domestic labor costs and currency appreciation, as well as being affected by the spread of international protectionism. As they restructured their economies, they have relocated some of those traditional industries or activities, in which they are losing their comparative advantage to foreign countries. Thailand is one of the countries which has been able to host substantial amounts of such FDI.

Other major sources of FDI which came under the product life-cycle hypotheses were the United States in computer parts and components, communication equipment and parts, toys and plastic products; Hong Kong in computer parts, toys and plastic products; Belgium and France in jewelry and related articles; and Switzerland in watches, clocks and related parts.

Further examination indicated that there were a number of firms from Japan and the United States that showed an intention of using Thailand as a production and export base. They invested substantially through extensive vertical integration as well as total control of operations. The last characteristic can be judged from the number of 100 percent foreign ownership found in these industries, including: electrical appliances and parts, electronic and communication equipment and parts, computer parts and components, and mechanical parts. The firms included Seagate Technology (Thailand), Minebea Thai, Sharp Appliances (Thailand), Toshiba, and AT&T Telecommunications. Their share of the total FDI in 1988 was 2.3 percent in terms of projects and 11.2 percent in terms of FDI value.

Japan and Taiwan were also active in a number of those projects which came into Thailand to take advantage of both the costs and local demand. Other countries with this motive were China, the Republic of Korea and the Netherlands. The industries they invested in included textiles, paper and paper products, and chemicals and chemical products. The FDI in these cases was only 2.5 percent in terms of projects in 1988, but registered a relatively high 16.9 percent of overall value (Table 3.15).

Gain or Maintain Demand Advantage

Keen international competition and a shorter imitation lag when adopting new technology were among the most important push factors for FDI, which flowed in mainly to serve the host country market. It was

Table 3.23: Distribution FDI by Country : Gain or Maintain cost Advantage
Along Dynamic Comparative Advantage

Country	1986 % of FDI	1986 No. of Project	1987 % of FDI	1987 No. of Project	1988 % of FDI	1988 No. of Project
Japan	57.49	9	40.02	84	52.27	193
Taiwan	11.07	10	19.32	78	12.52	142
	0.00		0.00		0.00	
Korea, Rep.of	0.17	10	1.17	4	2.07	26
	0.00		0.00		0.00	
Hong Kong	3.60	6	3.22	19	3.45	33
	0.00		0.00		0.00	
Singapore	0.36	3	0.45	9	0.70	12
	0.00		0.00		0.00	
Malaysia	3.21	3	0.17	3	0.04	5
	0.00		0.00		0.00	
United States	3.60	6	6.40	21	5.90	28
	0.00		0.00		0.00	
United Kingdom	4.53	7	1.27	7	7.39	18
	0.00		0.00		0.00	
Other	15.96	3	27.98	44	15.66	57
Total	100.00	53	100.00	244	100.00	444

Note: a/The sum of all countries'project number may not be equal to the total due to multiple foreign nationalities in some projects.
Source: Compiled from data from the Office of the BOI.

also attracted by an expanding domestic demand, which resulted from Thailand's escalating economic growth and favorable government policies. During 1986-1988, the number of this type of FDI project grew at a slower pace than any other type, which resulted in a lower overall percentage share (7.7 percent of the total in 1988.) However, over the same period, this share was relatively stable at about 21 percent of FDI value (Table 3.15). The promoted projects listed were chemicals and chemical products, petrochemicals, synthetic yarn, textile printing and dyeing, processed food, fabricated metal and metal products, motor vehicle parts and components, and services (such as hotels, industrial estates, water transportation and warehousing). Countries accounting for a significant FDI participation in these industries were Japan, the United Kingdom, Taiwan, Singapore, France, and Sweden (Table 3.15)

Capital Stock Adjustment

During 1986-1988, there were a few foreign companies that increased their investment and production capacity in accordance with economic trends in Thailand mainly to serve domestic demand. These were existing foreign subsidiaries in electronic parts, paper, and artificial leather and products. All of them were from Japan or Taiwan. Given the recent fast growing trend of export-oriented FDI, the role of capital-stock-adjustment FDI has been declining to become almost negligible in 1988 with only 0.6 and 0.2 percent of the total in terms of projects and FDI value, respectively, (Table 3.15).

3.5 The Impact of FDI

The impact of foreign direct investment has been far-reaching. Several studies suggest that FDI has contributed positively to the Thai economy for the following reasons: (1) Although FDI has seldom contributed more than 5 percent to Thailand's gross private capital investment formation since 1960, its contribution to total private investment in the manufacturing sector has been significantly larger. (2) The share of Thailand's total domestic manufacturing production or sales accounted for by foreign subsidiaries was 36 percent in 1976, and increased to be 48.6 percent in 1986.1/ The share of foreign subsidiaries in primary (i.e. extractive) industry was even higher at 74.8 percent, while in tertiary (i.e. services) industry it was 30.3 percent.2/ (3) Foreign firms' share in total manufacturing employment in Thailand was estimated to be around 9 percent in 1985, considerably lower than that in most other developing countries. However, indirect

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1/ Jeerasak Pongpisanupichit, Private Direct Foreign Investment and Thai economy, Ph. D. Dissertation, Cornell University, 1985; and Atchaka Sibunruang and Peter Brimble, Data on Foreign Direct Investment, prepared for UNCTC, mimeo, 1989.

2/ Ibid.

employment through vertical linkages were found to have a much larger potential than the direct effects, both in terms of employment generated and in quality.1/ (4) Around 23 percent of the country's total exports and 39 percent of total manufactured exports in 1980 could be attributed to foreign firms. The average export share of foreign firms also increased remarkably from 10 percent to 33 percent during the period from 1971-1984.2/ (5) Although almost 90 percent of machinery and equipment and over 50 percent of raw materials are imported by FDI promoted firms, they have not caused any serious problems to the country's balance of payments. Table 3.24 compares the net inflow of private foreign capital to the outward remittance of profits and dividends, interest on private foreign loans, technical and management fees, and foreign payments for copyrights and patent royalties by major investing countries. The data reveal that over the period 1970 to 1988, the outward remittance of foreign exchange resulting from foreign investment was more than 71 percent of the net inflows of private foreign capital. Profits dividends and interest payments on private foreign loans were the two largest items in the total outward remittance, together accounted for over 86 percent of the total. The United States appears to receive the largest amount of outward remittance from Thailand, 30 percent of total, which far exceeds the net inflow of private capital from that country. For other countries, the amount of outward remittance is smaller than the net inflow. As a matter of fact, in this respect they fared better than local firms.3/ (6) There is some evidence to suggest that a certain amount of technology transfer is made by foreign investors,

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1/ Atchaka Sibunruang and Peter Brimble, The Employment Effects of Manufacturing Multinational Enterprises in Thailand, A report prepared for the International Labour Organization, 1988.

2/ Several studies also observed that the average export propensities of foreign firms were higher than those of local firms during the 1970s. However, by 1984, the export performance of local firms had surpassed that of foreign firms. Furthermore, among foreign firms, export propensities of American, European and LDC firms had far exceeded that of Japanese firms during the period from the late 1970s until 1984. See, for example, Atchaka Sibunruang and Peter Brimble, "Foreign Investment and Export Orientation: A Thailand Perspective," in S. Naya, V. Vichit-Vadakan, and U. Kerdpibule (eds.), Direct Foreign Investment and Export Promotion: Policies and Experiences in Asia, Southeast Asian Central Banks Research and Training Centre, and East-West Resource Systems Institute, 1987; and Jeerasak Pongpisanupichit, "A Comparative Study of Manufactures Export Performance of Foreign Affiliates and Thai Firms," Journal of Economics and Business Administration, Vol. 12, No. 2, May-August, 1985.

3/ See Pongpisanupichit (1985), op. cit.

Table 3.24: Outward Remittance and Net Inflows of Private Foreign Capital, by Country 1970-1988

(Million of baht)

Country	Profits and Dividends	Interest on Private Foreign Loans	Technical & Management Fees	Copyright & Patent Royalties	Total Outward Remittance	Net Inflows of Total Private Foreign Capital a/	Outward Remittance / Net Inflows x 100 (%)
Total	41,935.6	79,956.4	6,884.1	12,953.3	141,729.4	198,663.4	71.34
Japan	7,569.7	5,039.2	1,631.1	6,546.6	20,786.6	42,447.7	48.97
U.S.A.	17,562.5	20,352.1	2,086.2	3,096.0	43,096.8	28,808.4	149.60
U.K.	5,331.5	6,785.0	817.5	585.0	13,519.0	21,657.5	62.42
W. Germany	542.8	1,789.0	370.0	412.6	3,114.4	4,655.6	66.90
Hong Kong	3,007.8	20,566.1	532.5	245.3	24,351.7	41,871.4	58.16
Others	7,921.3	25,425.0	1,446.8	2,067.8	36,860.9	59,222.8	62.24

Note : a/Include direct investment, portfolio investment and other loans.

Source : Bank of Thailand

particularly to their local joint-venture partners, subcontractors and Thai employees in the form of training, when establishing those export-oriented projects. There is also a positive side-effect through the import technical manpower and the transfer of training practices from foreign to local firms.1/

However, the impact of FDI in recent years has shown a somewhat different pattern: (1) There was a dramatic shift of FDI from import-substitution industries to export-oriented industries. The share of export-oriented projects increased from about 10 percent in 1984 to more than 80 percent in 1988. This has further served raise the share of foreign firms in the country's total export of manufactured goods. (2) There has been a structural change in FDI within the manufacturing sector: investments in machinery, transport equipment, and electronic and electrical products and parts have become more important. These structural changes have allowed Thailand to become effectively involved in the recent economic restructuring and production relocation processes in such countries as Japan, Taiwan and South Korea, which is in accordance with establishing a dynamic comparative advantage. (3) Since most of FDI promoted projects in recent years (1986-1988) are relatively labor-intensive activities, they will contribute to a greater extent to the country's employment figures. If all these projects are successfully launched, about 300,000 Thais will be directly employed. This number is more than double the cumulative total up to 1986. (4) The export-oriented nature of most of the projects encourages higher product quality, a fact that will ultimately have a significant impact on local production efficiency in terms of greater technology transfer and labor training. There is evidence, particularly in those foreign firms which invest directly in Thailand as part of their global industrial organization, that an extensive training has been provided to their Thai employees.

Aside from the contributions discussed above, some local entrepreneurs complain that FDI caused a considerable increase in land prices and shortages of skilled labor in such fields as engineering and science. In addition, they believe that FDI had a crowding-out effect on local producers in the domestic product market and on local sources of raw materials. Furthermore, some local entrepreneurs and academicians have also expressed concern about the increasing predominance of Japanese FDI in Thailand.

1/ See Sibunruang and Brimble (1988), Op.cit.; and P.J. Brimble, "The Impact of Competition and Incentives on Efficiency and Productivity Change: Case Studies of Industrial Firms in Thailand," Mimeo, the World Bank.

3.6 Policy Implications

Since the impact of FDI is far-reaching, FDI should be dealt with "industry by industry" and "case by case." Except for research and development, ownership structure, and crowding-out effects on local producers, FDI in manufacturing has contributed positively to the Thai economy. The BOI has already started to remedy these shortfalls. Incentives are provided for equipment imported for local research and development activities. Joint-ventures with Thais in majority ownership is encouraged even in export-oriented projects in which Thai producers are capable. However, the ownership issue in export-oriented project should be handled carefully as these projects can be placed in other countries; indeed, there are more countries competing for FDI than there are countries looking for areas in which to invest. And the crowding-out effects on local producers are short-term matters, and government can make the some adjustments to have them remedied. In addition, foreign firms can compete against Thai producers in the export market from anywhere, whether they are producing in Thailand or in other countries.

There are still certain entry limitations in the nonmanufacturing sectors--particularly such nonfactor services as banking and insurance. More liberal policy toward FDI in these sectors can enhance domestic competition and increase efficiency. The question is how liberal Thailand should be in this case.

4. PORTFOLIO INVESTMENT

4.1 Overview

4.1.1 Foreign Portfolio Investment Flows

Foreign portfolio investment has been on the increase since 1987. In 1986, the total inflow was 3,053.5 million baht, which shot up to 17,148.3 million baht in 1987. By 1988, the amount of foreign portfolio investment in the SET was as high as 27,760 million baht, and during the first half of 1989, it had already reached 20,143.01 million baht (Table 4.1).

During the same period, outflow was eqully dramatic. From a more 536.7 million baht in 1986, the amount suddenly rose to 4,286.6 million baht in 1987. Following the stock market crisis in 1988, the outflow of foreign portfolio investment increased to 16,568.8 million baht. However, this declined to 6,546.3 million baht in the first half of 1989 (Table 4.2)

As a result, the net inflow of foreign funds in the SET jumped from 2,516.8 million baht in 1986 to 12,861.7 million baht in 1987, from 11,191.2 million in 1988 to 16,203.5 million baht for the first half of 1989.(Table 4.3)

In percentage terms foreign portfolio investment in 1987 grew by 462 percent and by only 62 percent in 1988. During the first half of 1989, the growth was extraordinary, nearly approaching the percentage amount for the whole year of 1988. Foreign outflow increased seven fold, or by 699 percent in 1987 (Table 4.3), compared to 1986. And in 1988, the increase was eqally spectacular, at 287 percent. Net inflow for 1987 increased by 412 percent, as compared to 1986. The massive outflow in 1988, however, caused the net inflow in that year to drop by 13 percent, only to pick up again in 1989, when the amount for the first half of this year has already exceeded that for the whole of 1988 (Table 4.4).

Between 1981 and 1987, Hong Kong portfolio investment headed the list with a combined value of 11,372.6 million baht, followed by the United Kingdom, Singapore, the United States of America and Japan, with 9,303.2, 3,364.0 1,964.1 and 334.2 million baht respectively. In the list of foreign portfolio outflow, Hong Kong again led with a combined amount of 2,129.3 million baht, followed by the United Kingdom, Singapore, and the United States, with 1,632.2, 1,452,1495.0 and 338.4 million baht respectively (Table 4.5).

Between 1981 and 1987, British and Hong Kong investment, alternated in the top-rank position with massive investments from Britain starting in 1984, and from Hong Kong since 1985. Singapore began to invest heavily begining in 1987. Foreign portfolio investment from the United States remained relatively small until 1987, when a new interest was noted. Japan's investment however, has continued to remain comparatively small.

Table 4.1: Inflow of Portfolio Classified by Countries

(million baht)

Inflow	1981	1982	1983	1984	1985	1986	1987	1988	1989 Q1	1989 Q2	1989 Q1+Q2
Total	276.8	614.5	419.8	2,416.1	4,079.7	3,053.5	17,148.3	27,760.0	6,979.8	13,163.2	20,143.0
Australia	-	-	-	0.3	46.5	8.4	8.2	88.7	224.4	3.7	228.0
Austria	26.9	40.2	-	-	0.2	-	-	-	-	-	-
Bahamas	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	0.1	-	-	-	2.5	339.3	49.4	42.7	92.1
Bermuda	-	-	-	-	-	-	24.0	-	58.1	14.3	72.4
British West Indies	-	-	-	1,150.0	-	-	-	-	-	-	-
Brunei	-	-	-	-	-	-	-	8.6	-	-	-
Canada	-	15.8	3.0	0.2	2.8	-	-	0.3	0.3	-	0.3
Denmark	-	-	-	-	-	-	-	0.8	-	-	-
Egyp, Arab Republic	-	-	-	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-	-	-
France	0.2	0.1	-	6.0	3.7	0.9	0.3	0.8	2.7	2.4	5.2
Greece	-	-	-	-	-	-	-	-	-	-	-
Hongkong	120.6	518.1	54.1	379.9	381.4	1,320.9	8,597.6	2,050.4	1,099.1	1,745.7	2,844.8
India	0.3	0.2	-	-	-	-	-	-	-	3.5	3.5
Indonesia	0.4	4.0	0.1	-	4.1	-	0.6	4.3	2.1	0.2	2.3
Italy	-	-	-	-	-	-	-	-	-	-	-
Jamaica	-	-	-	-	-	-	-	0.2	-	-	-
Japan	5.8	0.9	2.5	47.9	17.6	5.4	254.1	1,385.0	28.8	45.7	74.5
Jordan	-	-	-	-	0.2	-	-	-	-	0.3	0.3
Korea, Republic of	-	-	-	-	-	-	2.8	-	-	2.6	2.6
Kuwait	-	-	-	0.3	-	-	-	-	-	-	-
Lebanon	-	-	0.3	-	-	-	-	-	-	-	-
Liberia	-	-	36.0	-	-	-	35.7	-	-	-	-
Luxemberg	-	-	-	-	-	7.8	30.4	16.3	20.3	47.4	67.7
Macao	0.1	-	-	-	-	-	-	-	-	-	-
Malaysia	0.3	2.9	-	0.7	2.9	0.4	12.7	10.0	0.2	38.3	38.5
Netherlands	-	-	-	-	0.6	2.9	0.9	344.6	2.6	174.9	177.6
New Zealand	-	-	-	-	-	-	0.8	-	-	-	-
Norway	-	-	-	-	0.9	-	-	167.4	43.3	67.8	111.1
Pakistan	-	-	-	-	-	-	-	-	-	-	-
Panama	-	-	-	-	0.7	0.1	-	-	-	-	-
Philippines	0.4	0.4	0.2	-	-	-	0.5	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-	-	-
Qatar	-	-	-	-	-	-	-	-	-	-	-
Saudi Arabia	0.1	-	-	-	2.3	-	0.3	0.3	0.1	-	0.1
Singapore	5.2	4.6	307.8	83.1	75.0	351.6	2,536.7	10,172.4	3,088.6	6,107.4	9,196.0
Spain	-	-	-	-	-	-	-	-	-	-	-
Sri Lanka	-	-	-	-	-	-	-	-	-	-	-
Sweden	-	-	-	0.1	-	-	-	0.3	0.0	0.4	0.4
Switzerland	1.0	2.3	0.3	1.4	1.0	23.1	49.5	12.6	0.2	54.1	54.3
Taiwan	0.1	0.7	-	0.5	-	14.6	3.2	98.6	12.8	36.0	48.8
UK	4.9	0.6	0.2	672.6	3,482.3	795.3	4,347.3	9,984.7	2,094.3	4,105.5	6,199.8
United Arab Emirates	-	0.9	-	0.4	-	-	0.4	0.1	1.0	-	1.0
USA	108.7	12.1	9.6	47.0	55.3	518.2	1,213.2	3,064.4	228.8	655.5	884.3
USSR	-	-	-	-	-	-	-	-	-	-	-
West Germany	1.8	11.1	5.8	25.3	2.0	3.7	26.5	9.0	22.6	14.9	37.5

Source : Balance of Payments Section; Bank of Thailand

Table 4.2: Net Outflow of Portfolio, Classified by Countries

(milloin baht)

Outflow	1981	1982	1983	1984	1985	1986	1987	1988	1989 Q1	Q2	Q1+Q2
Total	257.9	4.7	79.9	2,502.7	221.2	536.7	4,248.9	16,568.8	2,488.1	4,058.2	6,546.3
Australia	-	0.1	0.1	0.1	-	-	-	4.5		0.2	0.2
Austria	-	-	-	-	-	-	-	-	-	-	-
Bahamas	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	0.8	0.8	0.8		26.9	929.0	4.9	22.1	27.0
Bermuda	-	-	-	-	-	-	-	5.7	-	-	-
British West Indies	-	-	-	1,495.0	-	-	-	-	-	-	-
Brunei	-	-	-	-	-	-	-	-	-	-	-
Canada	-	-	-	-	-	-	-	64.4	-	0.3	0.3
Denmark	1.4	-	0.5	-	-	0.2	-	-	0.8	1.9	2.8
Egyp, Arab Republic	-	-	-	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-	-	-
France	0.1	-	0.1	0.1	-	-	0.1	2.9	0.8	-	0.8
Greece	-	-	-	-	-	-	-	-	-	-	-
Hongkong	25.8	2.3	3.6	709.9	49.0	453.0	885.7	2,090.6	11.7	10.6	22.3
India	1.3	-	-	-	-	0.1	-	42.1	-	-	-
Indonesia	-	-	-	5.2	1.2	-	14.3	0.6	-	9.0	9.0
Italy	-	-	-	-	-	-	-	-	-	-	-
IFC	127.8	-	19.8	-	-	-	-	-	-	-	-
Jamaica	-	-	-	-	-	-	-	-	-	-	-
Japan	48.5	0.2	0.1	3.3	6.3	13.1	149.6	197.6	-	37.8	37.8
Jordan	-	-	-	-	-	-	-	-	-	-	-
Korea, Republic of	-	-	-	-	-	-	-	-	0.1	-	0.1
Kuwait	-	-	-	-	-	-	-	-	-	-	-
Lebanon	-	-	-	-	-	-	-	-	-	-	-
Liberia	5.8	-	-	-	-	-	-	-	-	-	-
Luxemberg	-	-	-	-	-	-	-	15.8	0.5	18.6	19.1
Macao	-	-	-	-	-	-	-	-	-	-	-
Malaysia	5.9	-	-	-	-	-	11.2	2.6	2.2	-	2.2
Netherlands	9.2	-	-	267.9	21.2	0.3	5.2	57.9	-	-	-
New Zealand	-	-	-	-	-	-	-	-	-	-	-
Norway	-	0.2	-	-	-	-	-	20.8	45.6	83.5	129.1
Pakistan	-	-	-	-	-	-	-	-	-	-	-
Panama	20.0	-	2.0	0.1	-	0.2	-	-	-	-	-
Philippines	-	-	-	-	-	-	-	0.9	-	-	-
Portugal	-	-	-	-	-	-	-	-	-	-	-
Qatar	-	-	-	-	-	-	-	-	-	-	-
Saudi Arabia	-	-	-	-	-	1.3	-	-	-	-	-
Singapore	3.4	0.1	-	0.3	60.7	41.8	1,345.7	6,201.1	1,265.5	1,650.5	2,916.1
Spain	-	-	-	-	-	-	-	-	-	-	-
Sri Lanka	-	-	-	-	-	-	-	-	-	-	-
Sweden	-	-	-	-	-	-	-	-	-	-	-
Switzerland	-	-	-	0.6	-	2.1	0.8	13.0	19.6	50.6	70.2
Taiwan	-	-	-	-	-	-	2.2	-	-	-	-
UK	2.1	0.3	-	-	38.4	16.4	1,575.0	6,180.2	1,017.3	1,621.3	2,638.6
United Arab Emirate	-	-	-	-	-	-	-	-	-	-	-
USA	6.6	1.5	52.9	19.2	17.8	8.2	232.2	727.5	119.1	534.5	653.5
USSR	-	-	-	-	-	-	-	-	-	-	-
West Germany	-	-	-	-	25.8	-	-	11.6	-	17.2	17.2

Source: Balance of Payments Section; Bank of Thailand

Table 4.3: Net Inflow of Portfolio, Classified by Countries

(milloin baht)

Net	1981	1982	1983	1984	1985	1986	1987	1988	1989 Q1	1989 Q2	1989 Q1+Q2
Total	18.90	609.80	339.90	(86.60)	3,858.50	2,516.80	12,899.40	11,191.20	4,491.68	9,105.02	13,596.70
Australia	-	(0.10)	(0.10)	0.20	46.50	8.40	8.20	84.20	224.35	3.49	227.84
Austria	26.90	40.20	-	-	0.20	-	-	-	-	-	-
Bahamas	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	(0.70)	(0.80)	(0.80)	-	(24.40)	(589.70)	44.44	20.62	65.06
Bermuda	-	-	-	-	-	-	24.00	(5.70)	58.12	14.27	72.39
British West Indies	-	-	-	(345.00)	-	-	-	-	-	-	-
Brunei	-	-	-	-	-	-	-	8.60	-	-	-
Canada	-	15.80	3.00	0.20	2.80	-	-	(64.10)	0.33	(0.33)	(0.00)
Denmark	(1.40)	-	(0.50)	-	-	(0.20)	-	0.80	(0.80)	(1.95)	(2.75)
Egyp, Arab Republic	-	-	-	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-	-	-
France	0.10	0.10	(0.10)	5.90	3.70	0.90	0.20	(2.10)	1.91	2.42	4.33
Greece	-	-	-	-	-	-	-	-	-	-	-
Hongkong	94.80	515.80	50.50	(330.00)	332.40	867.90	7,711.90	(40.20)	1,087.43	1,735.09	2,822.52
India	(1.00)	0.20	-	-	-	(0.10)	-	(42.10)		3.49	3.49
Indonesia	0.40	4.00	0.10	(5.20)	2.90	-	(13.70)	3.70	2.12	(8.85)	(6.73)
Italy	-	-	-	-	-	-	-	-	-	-	-
IFC	(127.80)	-	(19.80)	-	-	-	-	0.20	-	-	-
Jamaica	-	-	-	-	-	-	-	-	-	-	-
Japan	(42.70)	0.70	2.40	44.60	11.30	(7.70)	104.50	1,187.40	28.80	7.89	36.68
Jordan	-	-	-	-	0.20	-	-	-	-	0.31	0.31
Korea, Republic of	-	-	-	-	-	-	2.80	-	(0.08)	2.59	2.50
Kuwait	-	-	-	0.30	-	-	-	-	-	-	-
Lebanon	-	-	0.30	-	-	-	-	-	-	-	-
Liberia	(5.80)	-	38.00	-	-	-	35.70	-	-	-	-
Luxemberg	-	-	-	-	-	7.80	30.40	0.50	19.76	28.83	48.59
Macao	0.10	-	-	-	-	-	-	-	-	-	-
Malaysia	(5.60)	2.90	-	0.70	2.90	0.40	1.50	7.40	(1.93)	38.31	36.38
Netherlands	(9.20)	-	-	(267.90)	(20.60)	2.60	(4.30)	286.70	2.63	174.92	177.56
New Zealand	-	-	-	-	-	-	0.80	-	-	-	-
Norway	-	(0.20)	-	-	0.90	-	-	146.60	(2.30)	(15.78)	(18.08)
Pakistan	-	-	-	-	-	-	-	-	-	-	-
Panama	(20.00)	-	(2.00)	(0.10)	0.70	(0.10)	-	-	-	-	-
Philippines	0.40	0.40	0.20	-	-	-	0.50	(0.90)	-	-	-
Portugal	-	-	-	-	-	-	-	-	-	-	-
Qatar	-	-	-	-	-	-	-	-	-	-	-
Saudi Arabia	0.10	-	-	-	2.30	(1.30)	0.30	0.30	0.11	-	0.11
Singapore	1.80	4.50	307.80	82.80	14.30	309.80	1,191.00	3,971.30	1,823.12	4,456.84	6,279.95
Spain	-	-	-	-	-	-	-	-	-	-	-
Sri Lanka	-	-	-	-	-	-	-	-	-	-	-
Sweden	-	-	-	0.10	-	-	-	0.30	0.04	0.38	0.41
Switzerland	1.00	2.30	0.30	0.60	1.00	21.00	48.70	(0.40)	(19.46)	3.54	(15.92)
Taiwan	0.10	0.70	-	0.50	-	14.60	1.00	98.60	12.77	36.03	48.80
UK	2.80	0.30	0.20	672.60	3,443.90	778.90	2,772.30	3,804.50	1,077.00	2,484.17	3,561.17
United Arab Emirates	-	0.90	-	0.40	-	-	0.40	0.10	1.01	-	1.01
USA	102.10	10.60	(43.30)	27.80	37.50	510.00	981.00	2,336.90	109.70	121.04	230.75
USSR	-	-	-	-	-	-	-	-	-	-	-
West Germany	1.80	11.10	5.80	25.30	(23.80)	3.70	26.50	(2.60)	22.62	(2.29)	20.32

Source: Balance of Payments Section; Bank of Thailand

Table 4.4: Pattern of Portfolio Classified by Country

(million baht)

Net	1981 share(%)	1982 share(%)	1982 growth(%)	1983 share(%)	1983 growth(%)	1984 share(%)	1984 growth(%)	1985 share(%)	1985 growth(%)	1986 share(%)	1986 growth(%)	1987 share(%)	1987 growth(%)	1988 share(%)	1988 growth(%)
Total	100.00	100.00	3,126.46	100.00	(44.26)	100.00	(125.48)	100.00	4,555.54	100.00	(34.77)	100.00	412.53	100.00	(13.24)
Australia	-	(0.02)	-	(0.03)	-	(0.23)	300.00	0.33	23,150.00	1.21	(81.94)	0.06	(2.38)	0.75	926.83
Austria	142.33	6.59	49.44	-	(100.00)	-	-	-	-	0.01	(100.00)	-	-	-	-
Bahamas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	(0.21)	-	0.92	(14.29)	-	-	(0.02)	(100.00)	(0.19)	-	(5.27)	2,316.80
Bermuda	-	-	-	-	-	-	-	-	-	-	-	0.19	-	(0.05)	(123.75)
British West Indies	-	-	-	-	-	398.38	-	-	(100.00)	-	-	-	-	-	-
Brunei	-	-	-	-	-	-	-	-	-	-	-	-	-	0.08	-
Canada	-	2.59	-	0.88	(81.01)	(0.23)	(93.33)	-	1,300.00	0.07	(100.00)	-	-	(0.57)	-
Denmark	(7.41)	-	100.00	(0.15)	-	-	100.00	(0.01)	-	-	-	-	100.00	0.01	-
Egyp, Arab Republic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Finland		-	-	-	-	-	-	-	-	-	-	-	-	-	-
France	0.53	0.02	-	(0.03)	(200.00)	(6.81)	6,000.00	0.04	(37.28)	0.10	(75.68)	-	(77.78)	(0.02)	(1,150.00)
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hongkong	501.59	84.59	444.09	14.86	(90.21)	381.06	(753.46)	34.48	200.72	8.61	161.10	59.78	788.57	(0.36)	(100.52)
India	(5.29)	0.03	120.00	-	(100.00)	-	-	-	-	-	-	-	(100.00)	(0.38)	-
Indonesia	2.12	0.66	900.00	0.03	(97.50)	6.00	(5,300.00)	-	155.77	0.08	(100.00)	(0.11)	-	0.03	(127.01)
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IFC	(676.19)	-	100.00	(5.83)	-	-	-	-	-	-	-	-	-	-	-
Jamaica	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Japan	(225.93)	0.11	(101.64)	0.71	242.86	(51.50)	1,758.33	(0.31)	(74.66)	0.29	(168.14)	0.81	1,457.14	10.61	1,036.27
Jordan	-	-	-	-	-	-	-	-	-	0.01	(100.00)	-	-	-	-
Korea, Republic of	-	-	-	-	-	-	-	-	-	-	-	0.02	-	-	(100.00)
Kuwait	-	-	-	-	-	-	-	-	(100.00)	-	-	-	-	-	-
Lebanon	-	-	-	0.09	-	(100.00)	-	-	-	-	-	-	-	-	-
Liberia	(30.69)	-	100.00	10.59	-	-	(100.00)	-	-	-	-	0.28	-	-	(100.00)
Luxemberg	-	-	-	-	-	-	-	0.31	-	-	-	0.24	289.74	-	(98.35)
Macao	0.53	-	(100.00)	-	-	-	-	-	-	-	-	-	-	-	-
Malaysia	(29.63)	0.48	(151.79)	-	(100.00)	(0.81)	-	0.02	314.29	0.08	(86.21)	0.01	275.00	0.07	393.33
Netherlands	(48.68)	-	(100.00)	-	-	309.35	-	0.10	92.31	(0.53)	(112.62)	(0.03)	(265.38)	2.56	67,674.44
New Zealand	-	-	-	-	-	-	-	-	-	-	-	0.01	-	-	(100.00)
Norway	-	(0.03)	-	-	(100.00)	-	-	-	-	0.02	(100.00)	-	-	1.31	-
Pakistan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Panama	(105.82)	-	(100.00)	(0.59)	-	0.12	95.00	-	800.00	0.02	(114.29)	-	100.00	-	-
Philippines	2.12	0.07	-	0.06	(50.00)	-	(100.00)	-	-	-	-	-	-	(0.01)	(280.00)
Portugal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Qatar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Saudi Arabia	0.53	-	(100.00)	-	-	-	-	(0.05)	-	0.06	(156.52)	-	(123.08)	-	-
Singapore	9.52	0.74	150.00	90.56	6,740.00	(95.61)	(73.10)	12.31	(82.73)	0.37	2,066.43	9.23	284.44	35.49	233.44
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sri Lanka	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	-	-	-	-	-	(0.12)	-	-	(100.00)	-	-	-	-	-	-
Switzerland	5.29	0.38	130.00	0.09	(86.96)	(0.69)	100.00	0.83	66.66	0.03	2,000.00	0.38	131.90	-	(100.82)
Taiwan	0.53	0.11	600.00	-	(100.00)	(0.58)	-	0.58	(100.00)	-	-	0.01	(93.15)	0.88	9,760.00
UK	14.81	0.05	(89.29)	0.06	(33.33)	(776.67)	336,200.00	30.95	412.03	89.25	(77.38)	21.49	255.93	34.00	37.23
United Arab Emirates	-	0.15	-	-	(100.00)	(0.46)	44.44	-	(100.00)	-	-	-	-	-	(75.00)
USA	540.21	1.74	(89.62)	(12.74)	(508.49)	(32.10)	164.20	20.26	34.89	0.97	1,260.00	7.61	92.35	20.88	138.22
USSR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
West Germany	9.52	1.82	516.67	1.71	(47.75)	(29.21)	336.21	0.15	(194.07)	(0.62)	115.55	0.21	616.22	(0.02)	(109.81)

Source : Bank of Thailand

Table 4.5: Portfolio Investment Patterns

(Million Baht)

Source	1981-1985 a/				1986				1987			
	Inflow	Outflow	Net	Share	Inflow	Outflow	Net	Share	Inflow	Outflow	Net	Share
Hong-Kong	1454.1	790.6	663.5	12.7	1,320.9	453.0	867.9	34.5	8,597.6	885.7	7,711.9	60.0
Japan	74.7	58.4	16.3	0.3	5.4	13.1	(7.7)	(0.3)	254.1	149.6	104.5	0.8
Singapore	475.7	64.5	411.2	7.9	351.6	41.8	309.8	12.3	2,536.7	1,345.7	1,191.0	9.3
United Kingdom	4160.6	40.8	4119.8	79.0	795.3	16.4	778.9	30.9	4,347.3	1,575.0	2,772.3	21.6
United Stated	232.7	98.0	134.7	2.6	518.2	8.2	510.0	20.3	1,213.2	232.2	981.0	7.6
Other	272.5	402.8	-130.4	(2.5)	62.1	4.2	57.9	2.3	199.4	98.4	101.0	0.8
Total	6670.3	1455.1	5215.1	100.0	3,053.5	536.7	2,516.8	100.0	17,148.3	4,286.6	12,861.7	100.0

Table 4.5 (Continued) : Portfolio Investment Patterns

(Million Baht)

Source	1988				1989 b/			
	Inflow	Outflow	Net	Share	Inflow	Outflow	Net	Share
Hong-Kong	2,050.4	2,090.6	(40.2)	(0.4)	2,844.8	22.3	2,822.5	20.8
Japan	1,385.0	197.6	1,187.4	10.6	74.5	37.8	36.7	0.3
Singapore	10,172.4	6,201.1	3,971.3	35.5	9,196.0	2,916.1	6,280.0	46.2
United Kingdom	9,984.7	6,180.2	3,804.5	34.0	6,199.7	2,638.6	3,561.1	26.2
United Stated	3,064.4	727.5	2,336.9	20.9	884.3	653.5	230.7	1.7
Other	1,103.1	1,171.8	(68.7)	(0.6)	943.7	278.0	665.7	4.9
Total	27,760.0	16,568.8	11,191.2	100.0	20,143.0	6,546.3	13,596.7	100.0

Notes: a/ Total 1981-1985
b/ Only quarter 1, 2

Source: Balance of Payment Section, Bank of Thailand.

During 1988, a continuing booming market was made possible by the increasing inflow of foreign investment. Singapore led the group with an inflow of 10,172.4 million baht, followed by the United Kingdom, the United States, Hong Kong and Japan with 9,984.7, 3,064.4, 2,050.4 and 1,385.0 million baht respectively. In terms of outflow in 1988, Singapore also topped the list, with an outflow of 6,201.1 million baht, followed by the United Kingdom, Hong Kong, the United States and Japan with 6,180.2, 2,090.6, 727.5 and 197.6 million baht respectively. As a result, Singapore also headed the net inflow list with 3,971.3 million baht, followed by the United Kingdom, the United States and Japan with net inflows of 3,804.5, 2,336.9 and 1,187.4 million baht. Hong Kong registered a net outflow of 40.2 million baht in 1988 (Table 4.5).

Also in 1988, quite a number of new comers were registered in the set. Among these were Belgium, the Netherlands and Taiwan, with inflows of 339.3, 334.6 and 99.6 million baht respectively.

During the first half of 1989, Singapore has again headed the foreign inflow list, with 6,279.95 million baht, followed by the United Kingdom's much smaller inflow of 3,561.12 million baht. Hong Kong was third with a net inflow of 2,822.52 million baht. The United States of America trailed behind with an inflow of 230.75 million baht. Australia entered the list for the first time at 227.84 million baht, while Japan had a net inflow of only 36.68 million baht.

In terms of sectorial distribution of foreign portfolio investment, in 1987, the banking sector came first with a total of 10,024.88 million baht. Massive investments were also rated in construction materials and the interior furnishing sectors, with a joint total of 6,457.39 million baht; these were followed by finance and securities and then commerce, with turnovers of 2,734.41 and 2,689.89 million baht respectively. In 1988, construction materials and interior furnishing came in first with a total value of 14,224.36 million baht, followed closely by banking with an 11,633.20 million baht turnover. Commerce ranked third at 10,796.43 million baht. Both textiles and insurance registered substantial increases, however, with the former valued at 2,823.13 in 1988 compared to 1,789.88 million baht in 1987, and the latter 826.40 million baht, compared to 389.24 million baht in 1987. Food and beverages also rose from 1,271.90 million baht in 1987 to 2,192.97 million baht in 1988 (Table 4.6).

4.1.2 Country Funds

Country funds can be divided between on-shore and off-shore funds. On-shore funds are those registered in Thailand; its investors are of Thai nationality, and are eligible to invest in the SET as Thai citizens. Off-shore funds are registered in foreign country, are considered to be of foreign nationality. As such, they are subject to a foreign limit.

The first country fund ever to invest in the SET started in 1985. The "Bangkok Fund" as it was called began with an initial registered capital of US$ 10 million. The second fund, registered in 1986 as an

Table 4.6: Pattern of Foreign Portfolio Investment Classified by sectors

(Million Baht)

Sector	1987	Share	1988	Share
Banking	10,024.88	32.69	11,633.21	20.56
Finance and Securities	2,734.41	8.92	4,271.48	7.55
Insurance	389.24	1.27	826.40	1.46
Commerce	2,689.89	8.77	10,796.43	19.08
Services	437.23	1.43	327.88	0.58
Industrials	1,483.81	4.84	2,182.85	3.86
Construction Materials and Interior Furnishing	6,457.39	21.06	14,224.36	25.14
Automotive	258.08	0.84	465.83	0.82
Textiles, Clothing	1,789.88	5.84	2,823.13	4.99
Mining	964.25	3.14	1,604.56	2.84
Beverage & Food	1,271.90	4.15	2,192.97	3.88
Electrical Equipment	61.91	0.20	265.58	0.47
Others	2,103.50	6.86	4,971.52	8.79
Total Amount	30,666.37	100.00	56,586.20	100.00

Source: Securities Exchange of Thailand

on-shore fund, was "The Thailand Fund", with registered capital of US$ 30 million. The only fund to be registered in 1987 was the off-shore Siam Fund, with initial registered capital of US$40 million. In 1988, five country funds were registered, four on-shore and one off-shore. During this period some older funds, for example the Siam Fund and Bangkok Fund, increased their capital.

Up to 1989, a total of nine country funds were registered, six on-shore: Thai-Euro Fund, Thailand Growth Fund, The Thai Fund, The Thailand Fund, Thai Prime Fund and Thailand International Fund, with a combined capital of US$ 525 million. The three off-shore funds were Siam Fund, Thai Investment Fund and Bangkok Fund with combined capital of US$ 167 million. Altogether, the total value of country funds' investment into the SET was US$ 692 million.

Of the nine funds, six are close-ended and three are of the open-ended type. Five of the funds have a maturity of 25 years, the remaining four have a maturity of 50 years.

4.1.3 Capital Market Development

Before 1986, the SET remained sluggish, with daily turnover of less than 100 million baht. In 1986, the volume picked up slightly to 101.19 million baht per day. The explosion started in 1987, when the daily trading turnover skyrocketed to 494.49 million baht; then it rose to 633.44 million baht in 1988 and 1,103.31 million baht between January and August 1989.

This burst of activity pushed the SET Index up to a peak at 472 in October 1987, only a few days before the dramatic stock market crisis of that year. This 1987 height was eventually exceeded in September 1989, with the SET Index hovering around the 724 level.

The number of quoted companies, after fluctuating marginally before 1986, began to make a big jump in 1987. In 1986, the number of quoted companies was 93, this figure rose to 109 in 1987, to 141 in 1988 and 150 in August 1989.

The number of stock issues also rose from 98 in 1986 to 125 in 1987, to 165 in 1988 and 188 for the month ending in August 1989.

Total capitalization also increased spectacularly. In 1986, market capitalization was 75.20 billion baht, this figure rose to 138.16 billion baht in 1987, shot up to 223.65 billion baht in 1988 and then rose to 436.16 billion baht in August 1989.

Activity in the primary market has been buoyant since 1987. In 1986 the total funds mobilized by quoted companies was 2,167.98 million baht. This substantially increased to 14,515.17 million baht in 1987, 10,880.64 million baht in 1988, and 18,439.0 million baht between January and August 1989.

Foreign activity as measured by foreign trading in SET recorded a substantial rise from 1987. In 1985, total foreign trading in SET amounted to 1,596.05 million baht, representing 4.84 percent of the turnover. In 1986, foreign activity increased to a turnover of 4,617.20 million baht, or 7.76 percent of the market. In 1987 the figure was 25,501.10 million baht, accounting for 10.36 percent of the market total. And in 1988, the amount of foreign trading skyrocketed to 40,276.07 million baht, and represented 12.86 percent of the total market turnover. From January to August 1989, foreign trading rose to 41,685.08 million baht, and accounted for 14.21 percent of the market total.

4.2 Factors Inducing Foreign Portfolio Investment

While several quantifiable and non-quantifiable factors have been cited as accounting for the recent influx of foreign investment in the SET, Thailand's economic prospects in general and the potential attractive returns on investment seem to be among the major factors.

To substantiate these claims, two regression analyses were performed to investigate the possible relationship between the net inflow of foreign investment funds (NFPI) and the gross domestic product (GDP), and the relationship between NFPI and realized market investment return (R). Monthly data recorded between 1984-1988 for NFPI and R was collected and the corresponding GDP figures were interpreted (from annual GDP and monthly export values) for the purpose. Surprisingly, it was found that the NFPI was correlated with GDP and investment returns 14 months later. In other words, variations in the NFPI of 14 months ago can be seen in either GDP or investment return figures of the current month, with explanatory power of 31 percent and 39 percent respectively. These functional relationships are illustrated in the following:-

Economic Prospects

$$NFPI_t = \underset{(-3.86)}{2381.03} + \underset{(4.63)}{0.028}\, GDP_{t+14}$$

$$R^2(adj) = 0.31$$

Return Potential

$$NFPI_t = \underset{(1.39)}{154.12} + \underset{(5.51)}{2,212}\, r_{t+14}$$

$$R^2(adj) = 0.39$$

As expected, the GDP and investment returns are highly correlated (with a coefficient of 0.7). As a result, a multiple regression using both GDP and R as independent variables showed little improvement in explaining the variation of NFPI, as shown below:

Economic Prospect and Return Potential Combined

$$NFPI_t = -1258.21 + 0.015 GDP_{t+14} + 1{,}535.11 R_{t+13}$$
$$(-2.93) \quad (3.48) \quad (3.81)$$

$$R^2(adj) = 0.41$$

$$D.W. = 2.33$$

$$F = 17.16$$

4.3 Implications On Set

4.3.1 Market Activities For Both Primary and Secondary Markets

It is evident that the surge in activity in the SET since mid-1986 has been in line with the influx of foreign portfolio investment funds (NFPI). One would therefore expect that such flows would have contributed more or less equally to both primary and secondary market activities. In order to substantiate this theory, two variables, representing primary and secondary market activities, were used to analyse their correlations with NFPI. The first variable (MC) is the capital mobilized by corporations listed on the SET through new share issues, the second variable (TV) is the trading volume of established issues. Figures for both these variables and for NFPI were collected on a monthly basis, covering the period from 1984-1988.

Findings from regression analysis indicate that while the NFPI can explain 26.45 percent of the variation in the trading volume of SET, its capacity to explain the variation in the primary market activities is almost nil, as demonstrated in the following equation:

$$MC_t = 496.95 + 0.2297 \; NFPI_t$$
$$(4.14) \quad (2.05)$$

$$R^2(adj) = 5.1\%$$

and

$$TV_t = 3559.4 + 3.318 \; NFPI_t$$
$$(4.727) \quad (4.713)$$

$$R^2(adj) = 26.45\%$$

4.3.2 Market Volatility

It is in the public interest to know whether foreign investors have had a stabilizing or destabilizing effect on the Thai stock market. To answer this question, a linear regression analysis was performed to investigate how the foreigners' purchase-sales ratio was related to SET Index's monthly closed and open ratio (IR). If these ratios are positively related, it would be fair to assume that foreign portfolio dealings have had a destabilizing effect.

Monthly data from the years 1986-1988 was used. It was found that correlation between these two proxies are in fact relatively weak, as shown in the following equation:

$$IRt = -7.74 + 10.05\ PSt$$
$$\qquad (-1.86) \quad (2.42)$$

$$R2(adj) = .1223$$

When using daily data from October and November 1987, the same conclusion was reached, with an explanatory power of virtually zero.

On the other hand, when the analysis focused on the two-week period immediately following Black Monday, i.e. 19-30 October 1987, it was found that the correlation coefficient between the two ratios was as high as 80 percent.

4.3.3 Corporate Cost of Funds

If foreign portfolio investment has contributed to the development of the SET in recent years, thereby reducing the cost of funds raised by listed corporations and leading to higher investment returns during such periods, can there then be any social benefits attributable to such investments?

Cost of Debt and Investors' Return

Since the amendment of the Securities and Exchange Act in 1984, which enabled listed and authorized companies to issue debentures up to 1986, only one company utilized this facility by floating 400 million baht in 1985. In 1987 and 1988, ten and eight issues of debentures were sold to public raising a total of 4,370 and 900 million baht respectively. Interest rates on all the issued debentures were, on average, approximately half way between MLR and one-year fixed deposit rate. This indicates that corporations during a booming market period enjoyed access to a relatively cheap source of funding. At the same time, investors also benefited from a virtually risk-free form of investment giving relatively high rates of return when compared to traditional bank deposits.

Cost of Equity and Investors' Return

The real cost of equity however is more difficult to determine. In order to simplify this calculation, only actual out-of-pocket costs will be used to determine the cost of equity comparison. Dividend payments for a period of approximately one year following the issuance of new shares are compared with the offering price to represent actual dividend yield or, in this case, the cost of equity. Between January of 1984 and January 1985, 35 listed companies were offered to the public by eight banks at an average cost of equity (as defined above) of 8.1 percent. Corresponding figures for 1986 (5 issues), 1987 and 1988 (21 issues) average 4.651 percent, 9.3 and 5.49

percent, respectively. Athough this method may be rather crude, the conclusion reached is that equity costs have been on the decline during the last few years, and a trend of declining dividend yields has been generally observed. The periods studied also coincided with a rising return on investments in the SET. Stockholders who invested in all the issues for a one year period would have earned an average return of only 7.6 percent during 1984-1985, 140.2 percent in 1986 and 75.9 percent during 1987-1988. As such, mutual benefits gained by both parties--the users and providers of funds--are similar to those of debentures.

4.4 Investment Behavior And Performances

4.4.1 Degree of Speculative Behavior

The market value of the SET grew from 82,120 million baht at the beginning of 1987 to 220,279 million baht at the end of 1988. During the same period, foreign ownership (excluding on-shore country funds) of quoted securities also rose from 17,347 million to 59,029 million baht. As a result, foreign ownership accounted for 21.12 percent of the market. The share of quarterly trading volume by foreigners amounted to 8184.65 million baht, 12.24 percent of the market. The ratio of quarterly trading volume initiated by foreigners to their initial holding, averaged 20.52 percent, while the corresponding figure for total market trading was as high as 39.90 percent (Table 4.7).

4.4.2 Investment Performances

From information of foreign ownership of listed stock, which was only made available on a quarterly basis between April 1987 and December 1988, a comparative analysis between foreign portfolio investment returns and the total market return was conducted. It was found from eight pairs of comparisons (Table 4.8) that foreigners had performed better than the average market performance for only four of the quarters. The average quarterly return on foreign investment portfolios was 14.16 percent and the total average market yielded 13.90 percent during the same period. It can therefore be concluded that foreign investors have not outperformed the Thai stock market.

4.5 Conclusions And Recommendations

4.5.1 Contribution of Foreign Portfolio Investment to Thai Capital Market Development

As demonstrated in this study, the influx of foreign portfolio investment in recent years was in line with the rapid expansion of the economy and the surge in market capitalization, trading volume and return performance. With foreign participation, the previously slow-moving market has grown beyond all expectations. During the past 2-3 years the number of local investors has risen from around 180,000 to over 400,000, and the number of quoted companies has increased at a rate of between 25-35 firms per annum. Corporations have been able to

Table 4.7: Percentage of Trading Volume

Quarter	Total trading volue(TV)	Foreign trading volue(TVf)	Foreign holding	Market value b/	TV*2	%(PM)	%(PF)
1	13,012.61	2,263.75	16,048.33	78,172.43	26,025.22	33.29	14.11
2	24,335.34	4,379.12	21,456.55	99,183.53	48,670.68	49.07	20.41
3	40,996.50	8,293.06	34,471.86	148,959.35	81,993.00	55.04	24.06
4	43,823.76	10,565.17	37,050.02	158,332.50	87,647.53	55.36	28.52
5	47,910.11	8,649.12	39,128.89	161,498.53	95,820.22	59.33	22.10
6	44,300.51	12,906.97	54,316.02	304,425.71	88,601.02	29.10	23.76
7	29,935.31	11,249.55	59,424.27	331,186.36	59,870.63	18.08	18.93
8	23,036.79	7,170.43	58,391.03	230,902.45	46,073.57	19.95	12.28
					Average	39.90	20.52

Notes: a/= Computed by (MVqt + MVqt+1) / 2

b/= Computed by (FHqt + FHqt+1) / 2

Table 4.8: Return on Investment During 1987-1988

(Percentage)

	Market Return(RM)	Foreign Return(RF)
Quarter 1	0.13	0.16
Quarter 2	0.32	0.32
Quarter 3	0.60	0.54
Quarter 4	(0.34)	(0.34)
Quarter 5	0.37	0.40
Quarter 6	0.20	0.22
Quarter 7	(0.03)	(0.01)
Quarter 8	(0.13)	(0.14)
Average	0.1390	0.1417
% of Return a/	13.90	14.17

Note: Average Quarter 1-8

Source: Securities Exchange of Thailand

obtain retatively cheap sources of funding, considering their cash payment obligations, while investors have reaped high returns from rising stock prices. As the debt-equity ratio has dropped, the balance sheets of many corporations have been significantly strengthened.

4.5.2 Contribution of Foreign Portfolio Investment to Market Efficiency

As foreign interest in the Thai stock market has increased, competition in terms of research has intensified. Thorough economic analysis by Thai and foreign researchers has led to a revaluation of stock prices which more closely reflects the companies' potential. Research results show that stock prices have adjusted quickly to economic change, even on those activities where official figures have not yet been announced. Fundamentally inclined behavior of investment by foreigners, as shown in the study, not only resulted in their improved market performance, but has also reduced the likelihood of wildly fluctuating prices as seen in less active markets.

4.5.3 Crisis Prevention Measures

Foreign investment has, in general, not had a destabilizing effect on the market. In the time of market panic, however, the situation may be quite different. Certain preventive measures should be implemented to avert any undue crisis. These should include:

1. Close monitoring of the sources of inflow and foreign investment behavior.

2. Diversification of the sources of inflow and the nature of the investment funds.

3. Single ownership of large funds, which makes then vulnerable to block selling at time of panic, should be discouraged.

4. More of the close-ended type of funds, rather than open-ended funds, should be established.

5. FOREIGN LOANS

5.1 Structure of Foreign Loans in Recent Years

In the early 1980s net foreign loan inflows accounted for almost 90 percent of foreign capital movement in Thailand, while direct investment's share was about 10 percent and portfolio investment contributed only marginally. The pattern has, however, changed significantly over this decade. After a slump in 1985, when the Thai economy grew by only 3.5 percent per annum, direct investment and portfolio investment picked up noticeably in 1986 and the importance of foreign loans declined. By dividing the years into three subperiods of three years each we can see that the average share of direct investment and portfolio investment has grown over the years (Table 5-1).

Shares in Total Capital Movements*

(percentage)

	80-82	83-85	86-88
Direct Investment	10.1	15.4	41.0
Portfolio Investment	1.2	2.8	24.7
Foreign Loans	88.7	81.8	34.3

Note: * detailed data are shown in Table 5.1.

During the early 1980s, the public sector borrowed much more heavily than the private sector, accounting for more than 60 percent of total foreign borrowings. With the increasing debt burden, the public sector has become more cautious. The private sector, on the other hand, has played a bigger role in attracting foreign loans. Over the past three years, the private sector brought in an average of about three-quarters of the net foreign loans inflows.

Table 5.1 : Growth and Structural changes of Capital Flow

(Million baht)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989p a/
Total net capital flow	50,798.8	55,181.4	38,338.0	34,713.7	58,378.4	51,455.9	11,381.5	25,443.7	70,907.1	66844
-% of total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1. Direct investment	3,878.2	6,414.4	4,331.4	8,224.8	9,638.0	4,402.2	6,908.1	9,043.7	28,243.8	17135
-% of total	7.6	11.6	11.3	23.7	16.5	8.6	60.7	35.5	39.8	25.6
2. Portfolio investment	1,033.3	18.9	609.8	339.9	(86.6)	3,858.5	2,516.8	12,861.7	11,191.2	13598
-% of total	2.0	0.0	1.6	1.0	(0.1)	7.5	22.1	50.5	15.8	20.3
3. Loans	45,887.1	48,748.1	33,396.8	26,149.0	48,827.0	43,195.3	1,956.6	3,538.3	31,472.1	36111
-% of total	90.3	88.3	87.1	75.3	83.6	83.9	17.2	13.9	44.4	54.1
3.1 Private	20,674.4	14,678.2	12,322.3	9,734.4	32,614.4	11,385.3	3,149.1	(1,063.3)	31,870.7	35096
% of 3	45.1	30.1	36.9	37.2	66.8	26.4	160.9	(30.1)	101.3	97.2
-Long-term	n.a.	8,269.4	3,897.9	6,949.2	15,618.6	611.3	(6,236.8)	(6,786.6)	1,984.2	10067
% of 3.1	-	56.3	31.6	71.4	47.9	5.4	(198.1)	638.3	6.2	28.7
-Short-term	n.a.	6,408.8	8,424.4	2,785.6	16,995.8	10,774.0	9,385.8	5,723.3	29,886.5	25029
% of 3.1	-	43.7	68.4	28.6	52.1	94.6	298.0	(538.3)	93.8	71.3
3.2 Public	25,212.7	34,069.5	21,074.5	16,414.6	16,213.0	31,810.0	(1,192.5)	4,601.6	(398.5)	1015
% of 3	54.9	69.9	63.1	62.8	33.2	73.6	(60.9)	130.1	(1.3)	2.8

Note: a/ Data refer to January-June.
p Preliminary

Source: Balance of Payments Section, Bank of Thailand.

Public and Private Foreign Loans

(percentage)

	80-82	83-85	86-88
Net Foreign Loans	100.0	100.0	100.0
- Public	62.6	56.5	22.6
- Private	37.4	43.5	77.4

Foreign capital has played an important role in financing the investment needs of Thailand. When domestic savings have been insufficient to finance investment activities, foreign capital inflows have filled this gap. Even though the proportion has declined steadily, net foreign capital inflows have accounted for an average of 26 percent of net capital formation during the 1980's. Throughout this decade, foreign loans have contributed the largest share, supporting an average of 19.7 percent of total investment. Its share during the past three years, however, was only 4.8 percent. This is because there has been a significant shift towards direct and portfolio investment (Table 5.2).

Contribution to Investment

(percentage)

	80-82	83-85	86-88
Net Foreign Capital Inflows	34.9	28.8	14.3
Net Foreign Loans Inflows	30.9	23.5	4.8
- Public	19.3	12.9	0.4
- Private	11.6	10.6	4.4

When taken over a longer perspective, the pattern of development of foreign capital inflows into Thailand appears similar to the pattern seen in many developing countries. During the original stage of development, capital inflows tend to consist of official sources, particularly grants and concessionary loans. More loans also come from multilateral sources. Later, as a country develops, these loans become available on a more commercial basis. Once a country has established its credit worthiness and gains recognition in the international community, more loans from private sources will generally be forthcoming, not only to the public sector but also to the private sector.

Table 5.2: Foreign Financing of Investment

(Billions of baht)

	1980	1981	1982	1983	1984	1985	1986	1987	1988
1. Net Foreign Capital Flows	50.7	55.1	38.3	34.7	58.4	51.4	11.4	21.1	70.3
(percent of 3)	(29.1)	(27.6)	(20.2)	(14.7)	(24.1)	(21.1)	(4.7)	(6.6)	(17.7)
2.Net foreign Loans	45.9	48.8	33.4	26.1	48.8	43.2	1.9	3.5	31.5
(percent of 3)	(26.4)	(24.4)	(17.6)	(11.1)	20.1	(17.7)	(0.8)	(1.1)	(7.9)
- Public	25.2	34.1	21.1	16.4	16.2	31.8	(1.2)	4.6	(0.4)
(percent of 3)	(14.5)	(17.1)	(11.1)	(6.9)	(6.7)	(13.0)	(0.5)	(1.4)	(0.1)
- Private	20.7	14.7	12.3	9.7	32.6	11.4	3.1	(1.1)	(319)
(percent of 3)	(11.9)	(7.4)	(6.5)	(4.1)	(13.4)	(4.7)	(1.3)	(0.3)	(8.0)
3.Net Capital Formation	130.6	149.7	132.6	171.4	169.5	162.5	147.9	215.6	275.6
(percent of 4)	(19.8)	(19.7)	(16.2)	(18.8)	(17.4)	(16.0)	(13.5)	(17.5)	(19.0)
4.Gross Domestic Products	658.5	760.2	820.0	910.1	973.4	1014.4	1094.7	1234.0	1448.7

Source : Bank of Thailand

Public Borrowings by Sources

(millions of US$)

	73-77	78-83	84-88
Official Sources	68.5	53.2	58.5
- Multilateral	42.2	28.1	28.9
- Bilateral	26.3	25.1	29.6
Private Sources	31.5	46.8	41.5
- Private Creditors	31.3	46.8	37.8
- Suppliers' Credits	0.2	3.3	3.7

It may appear that this trend has been reversed during the period from 1984 to 1988, since funding from multilateral sources has again increased. This is due to the large amounts drawn on Structural Adjustment Loans from the World Bank in 1984 and 1985. Table 3 shows that the share of public borrowing from official sources has been declining since 1986 because of the decline of multilateral funds, while that from bilateral sources has increased. Loans from private creditors also show a noticeable upward trend (Table 5.3).

As a developing country moves up the scale and becomes more financially secure, bond issues can be placed in the international bond market, mainly to prove the country's creditworthiness to foreign commercial banks. Earlier this year the Thai government successfully launched bond issues worth 200 US$ million in the Yankee bond market, which is considered to be the best place to seek inexpensive, long-term funds, but also the least accessible market for developing countries (Table 5.4).

5.2 Factors Affecting Net Foreign Loan Inflows

Factors influencing net foreign loans are:

(a) The country's need for financing various economic activities which cannot be met by domestic sources of funds. Economic activities may include investment in physical capital, modern technology or human capital, as well as developing consumer markets and other business opportunities. To promote optimum growth, these foreign capital inflows should be directed towards productive and efficient activities.

(b) The interest rate differential. The demand for loans, in general, is inversely related to the loan rate. Since loans can be obtained from either domestic or foreign sources, their relative costs directly affect the willingness to borrow.

Table 5.3: Public Borrowing by Sources

(Millions of US$)

	1980	1981	1982	1983	1984	1985	1986	1987	1988
1.Multilateral Sources	975	1336	1790	2280	2650	2979	3174	3193	2889
(percent of c)	(24.7)	(26.3)	(29.7)	(33.2)	(35.7)	(31.7)	(29.0)	(24.8)	(23.4)
2.Bilateral Sources	1134	1358	1528	1844	196.2	2595	3233	4090	4054
(percent of c)	(28.6)	(26.8)	(25.4)	(26.9)	(26.4)	(27.6)	(29.5)	(31.9)	(82.8)
a.Total Official (1+2)	2109	2694	3318	4124	4612	5574	6407	7283	6943
(percent of c)	(53.3)	(53.1)	(55.1)	(60.1)	(62.1)	(59.3)	(58.5)	(56.5)	(56.2)
3.Private Credit	1813	2302	2530	2516	2597	3470	4109	5087	4934
(percent of c)	(45.9)	(45.3)	(42.0)	(36.6)	(35.0)	(36.9)	(37.5)	(39.5)	(40.0)
4.Suppliers Credit	31	81	173	225	216	362	438	521	467
(percent of c)	(0.8)	(1.6)	(2.9)	(3.3)	(2.9)	(3.8)	(4.0)	(4.0)	(3.8)
b.Total Private (3+4)	1844	2883	2703	2741	2813	3832	4547	5608	5401
(percent of c)	(46.7)	(46.9)	(44.9)	(39.9)	(37.9)	(40.7)	(41.5)	(43.5)	(43.8)
c.Total Public (a+b) Borrowings	3953	5077	6021	6865	7425	9406	10954	12891	12343

Source : Bank of Thailand

Table 5.4: Bond Insurance in the International Market

(Millions of US$)

	1983	1984	1985	1986	1987	1988	1989
Government	-	126.5	400.1	-	-	240.5	500.0
Public Enterprise	77.1	68.7	365.1	-	-	-	-
Total	77.1	195.2	765.2	-	-	240.5	500.0

Source : Bank of Thailand

(c) Exchange rate risk. There is a time lag between the time foreign-currency loans are brought into the country and converted into the domestic currency and the time when interest payments are due or loans repaid in the original foreign currency. The possibility of change in the value of the domestic currency relative to the foreign currency should therefore enter into considerations of whether to borrow or not. If there is a threat of depreciation, then the amount of domestic currency needed to repay the loans will increase.

(d) Domestic liquidity situation. If domestic capital market is restricted then more loans from abroad will be sought.

(e) Rules and regulations. The government can influence the flow of foreign loans by introducing a number of policy measures. The measure which has often been used to directly regulate the inflow of foreign loans is an exemption on withholding tax on interest payments, the details of which are described in Appendix 5. Other measures which may be carried out include the setting of interest rate ceilings, the Bank rate, and the exchange rates in the repurchase market. These domestic interest rates set will cause the differential rates to change which in turn, will influence the demand for foreign loans.

Taking into account the above postulates regarding the factors influencing net foreign loan inflows, separate regression analyses were performed for net long-term and net short-term loans. Monthly data from January 1986 to December 1988 were applied in the Ordinary Least Squares regression analysis. Since, during this period, there were no exemptions made on the levying of withholding tax on interest on foreign loans, no dummy variable has been defined for this. If we had lengthened the period to include 1983, for example, we could have defined a dummy variable to take a value of "1" during the months in which the exemptions applied and "0" otherwise.

For the net private long-term loans, the following result was obtained:

$$\text{LOANLT} = 361.4 - \underset{(-3.063)}{0.090\ \text{CAD}} + \underset{(4.824)}{132.9\ \text{FORW}}$$

$$R2 = 0.725 \qquad \text{S.E.} = 179.6$$

where,

LOANLT = Net private long-term loans (12-month moving average), defined to include net long-term trade and suppliers'credit and net other loans and capital inflows in millions of baht.

CAD = Monthly value in millions of baht of the current account deficits (12-month moving average). Negative values denote deficits in the current account.

FORW = The one-month premium (+) or discount (-) on the sales of US$ in the forward market offered by commercial banks in Thailand.

All the independent variables are statistically significant in influencing the issuance of net private long-term loans, and the causations show the correct signs (i.e., the higher the current account deficit, the longer the loans required to fill the gap).

When calculating the forward rate, the premium indicates that a depreciation in the baht relative to the US$ is anticipated. However, the value of the baht is set against a basket of currencies, whose major currencies generally move in the opposite direction to that of the US$. For example, following the appreciation of the US$, other major currencies are expected to depreciate. However overall the value of the baht is also expected to appreciate; but to a lesser extent than the appreciation in the value of the US$. With an appreciation of the baht, loan repayments will cost less, so more is demanded. Thus, we have a positive correlation between the forward rate and net foreign loan inflows.

But these identified independent variables are able to explain only 72.5 percent of the movement in net private long-term loans.

Other independent variables such as the loans-to-deposits ratio and the difference between LIBOR and domestic inter-bank rates are also estimated; but they either do not influence net private long-term loans significantly or the causation is in the wrong direction.

The results are just as good when explaining the fluctuations in net private short-term loans, with the two independent variables being able to explain 71.2 percent of the movement as follows:

$$\underset{}{LOANST} = 1125.4 - \underset{(-3.441)}{0.313\ CAD} + \underset{(4.220)}{360.3\ FORW}$$

$$R2 = 0.712 \qquad S.E. = 556.3$$

where,

LOANST = Net private short-term loans (12-month moving average) defined to include net short-term trade credit and other net short-term loans and capital.

Again, only current account deficits and the forward rates significantly influence net private short-term loans.

5.3 Policy Implication

The spectacular growth performance since 1987 it expected to continue. However, high growth rates can threaten stability both internally--in terms of inflation--and externally in terms of trade and current account balances, the balance of payments, and outstanding debts and services. The government needs to find an appropriate balance between growth and stability. Indeed, targets for the remaining three years of the Sixth Plan (1989-1991) have been adjusted: the average growth rate has been set at 7.5 percent per annum and the ratio of current account deficit to GDP at four percent.

Since current account balances have been found to influence the inflow of both short-term and long-term loans in an inverse direction, a current account deficit therefore implies that there is a need for more foreign loan inflows. This is in accordance with the fact that Thailand is still a developing country and needs foreign capital to finance her developmental needs. Foreign capital inflows can contribute significantly to the growth of developing countries if they are used efficiently and not diverted into speculative or non-productive areas.

In carrying out monetary and fiscal policies, foreign loans are generally cribbed to many intermediate targets in order to achieve final goals. For example, during the time when the balance of payments shows a large deficit or domestic liquidity situation, the short-term measure may be to encourage foreign loan inflows.

If a country has a high credit standing, then access to foreign capital is easier and the terms and conditions are less stringent than under other circumstances. To ensure a continuous supply of credit it is of utmost importance that the creditworthiness of the country be maintained. In the long term, it is even more important that a country can get itself into a position where these foreign capital inflows can be refused should the terms and conditions not be appropriate.

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APPENDICES

Appendix 1

List of Businesses Subject to Foreign Ownership Restriction under the Alien Business Law

(National Executive Council Announcement No. 281)

List A

Category 1 - Agricultural Businesses
(1) Rice farming
(2) Salt farming, including salt mining, except rock salt

Category 2 - Commercial Businesses
(1) Domestic trading of native agricultural produce
(2) Real estate

Category 3 - Service Businesses
(1) Accounting
(2) Legal services
(3) Architecture
(4) Advertising
(5) Brokerage of agency
(6) Auctioning
(7) Barbering, hairdressing and beautification

Category 4 - Other Businesses
(1) Building construction

List B

Category 1 - Agriculture Businesses
(1) Farming, except rice farming
(2) Gardening
(3) Animal husbandry, including sericulture
(4) Forestry
(5) Fishery

Category 2 - Industrial and Handicraft Businesses
(1) Rice milling
(2) Manufacture of flour from rice and other crops
(3) Manufacture of sugar
(4) Manufacture of beverages, with or without alcohol
(5) Production of ice
(6) Manufacture of medicines
(7) Cold storage
(8) Wood reshaping
(9) Manufacture of goldware, silverware, nielloware or

other stone-polished metalware
(10) Making or casting of Buddha images and bowls carried by Buddhist priest
(11) Manufacture of wood carving product
(12) Manufacture of all kinds of matches
(13) Manufacture of white cement, Portland cement of concrete products
(14) Stone quarrying
(15) Manufacture of plywood, veneer wood, chipboard or hardboard
(16) Manufacture of wearing apparel or footwear, except those manufactured for export
(17) Printing press
(18) Newspaper
(19) Silk spinning and weaving or silk fabric printing
(20) Manufacture of products from silk fabrices, silk filament or silk cocoons

Category 3 - <u>Commercial Businesses</u>
(1) All kinds of retail trading, except those mentioned in List C
(2) Hotel, except hotel management
(3) Entertainment houses or parlors (defined according to the law)
(4) Trading of antiques or works of art

Category 4 - <u>Service Businesses</u>
(1) Touring guide or touring agency
(2) Hotel, except hotel management
(3) Enterainment houses or parlors (defined according to the law)
(4) Photographic studios, including taking photograph, developing films and making phptographic prints
(5) Laundering
(6) Tailoring

Category 5 - <u>Other Businesses</u>
(1) Domestic land, water and air transport

<u>List C</u>

Category 1 - <u>Commercial Businesses</u>
(1) All kinds of demestic wholesale trading, except those mentioned in List A
(2) All kinds of export trading
(3) Retail trading of machinery, engines, equipment and tools
(4) Selling of foods and beverages that promoted tourism

Category 2 - <u>Industrial and Handicraft Businesses</u>
(1) Manufacture of animal feed
(2) Extraction of vegetable oils

(3) Manufacture of weaving and knitting products, including spinnig, dyeing and print
(4) Manulacture of glassware, including electric light bulds
(5) Manufacture of cups, bowls and dishes
(6) Manufacture of writing and printing paper
(7) Rock salt mining
(8) Mining

Category 3 - **<u>Service Businesses</u>**
(1) Services other than those mentioned in List A and B

Category 4 - **<u>Other Businesses</u>**
(1) Construction, except those mentioned in List A

Source: Thailand, Department of Commercial Registration, <u>Collection of Laws of the Department of Commercial Registration</u> (in Thai), Bangkok, 1974, pp. 137-140.

Appendix 2

List of Resource-Based Industries

I-O Code	I-O Sector
042	Slaughtering
043	Canning & Preserving of Meat
044	Milk and Other Dairy Products
045	Frozen, Canning & Preserving of fruits & vegetables
046	Canning & Preserving of Fish & Other Sea Food
047	Coconut & Palm Nut Oil
048	Animal Oil
049	Rice Milling &Rice Husk
050	Flour & Sagu Mild Products
051	Drying And Grianding of Maize
052	Flour & Other Grain Milling
055	Sugar, Glucose & Syrup, Coconut & Palm Nut Sugar
059	Coffee Processing
060	Other Food Products
061	Fish Meal
065	Tobacco Processing
067	Silk Spinning
074	Jute Mill Products
078	Saw Mill, Wooden Construction
079	Wood And Cork Products
080A	Parawood Furniture & Fixture
093	Gasoline, Fuel Oil, Lpg, Keprosene, Diesel Oil and Other Petroleum By Products
095	Rubber Sheet & Block Rubber
097A	Rubber Gloves
099	Ceramic And Earthen Wares
103	Concrete And Cement Products
104	Other Non-Metallic Products
107	Non-Ferrus Metal
136	Gas

Source: Calculated by Industry, trade and Internation Economic Relations Program.

Appendix 3

Promoted DFI Classified by I-O Code, 1986-1988

(Million baht)

I-O Code	I-O Sector	1986 No. of Projects	1986 DFI a/	1987 No. of Projects	1987 DFI a/	1988 No. of Projects	1988 DFI a/
017	Other Agricultural Products	1	9.80				
022	Poultry Products			1	4.02		
028	Ocean and Coastal Fishing			2	5.56	17	54.33
029	Inland Water Fishing	3	86.00	1	8.00		
035	Other Non Ferous Metal Ore	1	0.45			3	41.65
038	Salt	2	13.80				
040	Stone Quarrying	2	23.00				
041	Other Mining & Quarrying			1	7.20		
042	Slaughtering			1	70.00	1	124.00
043	Canning & Preserving of Meat			1	16.45	3	27.63
044	Milk and Other Dairy Products	1	44.00	1	500.00	1	4.00
045	Frozen, Canning & Preserving of fruits & vegetables	5	51.24	4	62.75	8	62.85
046	Canning & Preserving of Fish & Other Sea Food	4	16.75	5	19.25	7	78.15
050	Flour & Sagu Mild Products	1	7.35			2	6.00
052	Flour & Other Grain Milling			1	14.70		
053	Bakery Products			2	30.24	3	24.50
054	Noodle & Similar Products			2	28.51	2	18.00
056	Confectionery					1	14.70
058	Monosodium Glutamate			1	3.00	1	187.50
059	Coffee Processing			1	9.00		
060	Other Food Products	1	0.60	6	111.35	8	160.58
061	Fish Meal			1	4.00	17	119.77
062	Distlling & Blending of Spirit					1	10.00
064	Soft Drinks & Carbonated Water					2	8.92
067	Spinning	1	20.00	9	494.71	5	206.70
068	Weaving			8	201.28	7	177.50
069	Textile Bleaching Printing and Finishing	2	51.87	6	83.68	4	44.70
070	Made-Up Textile Goods					3	33.70
071	Knitting			1	5.00	9	72.42
072	Wearing Apparels	1	3.50			1	24.50
073	Carpets and Rugh			2	18.00	2	8.20
075	Tannery And Leather Finishing			1	4.90	1	30.00
076	Leather Products	1	8.00	13	146.89	13	123.60
077	Footwear, Except of Rubber	1	1.00	2	1.60	6	55.61
079	Wood And Cork Products	3	32.00	1	1.20	16	132.15
080A	Parawood Furniture & Fixture	1	0.60	6	62.19	16	164.73
080B	Other Wooden Furniture & Fixture	2	14.40			8	32.94

Appendix 3 (continued)

(Million baht)

I-O Code	I-O Sector	1986 No. of Projects	1986 DFI a/	1987 No. of Projects	1987 DFI a/	1988 No. of Projects	1988 DFI a/
081	Pulp, Paper And Paperboard	1	60.00	1	1.75	9	1,415.25
082	Paper & Paperboard Products	1	57.60	1	5.70	3	35.11
084	Basic Chemical	5	265.88	13	547.76	15	605.59
086	Synthetic Resin	1	110.00	8	678.32	14	3,178.63
087	Paint					2	382.98
088	Drug And Medicine			3	97.25		
090	Cosmetic			2	300.00		
092	Other Chemical Products	1	2.35	4	31.75	4	84.20
093	Gasoline, Fuel Oil, Lpg, Keprosene, Diesel Oil and Other Petroleum By Products					1	24.50
095	Rubber Sheet & Block Rubber	4	36.24	2	20.20	16	150.47
096	Tyres And Tubes	1	54.00	1	45.00	3	56.30
097A	Rubber Gloves			5	37.14	66	859.76
097B	Other Rubber Products	4	33.96	22	365.06	34	561.15
098	Plastic Wares	6	18.80	26	526.34	50	1,357.94
099	Ceramic And Earthen Wares			3	29.00	7	188.91
100	Glass And Glass Products			1	19.60	7	2,018.20
104	Other Non-Metallic Products	1	0.02			2	20.18
105	Iron And Steel			1	4.00		
106	Secondary Steel Products	4	33.94	2	48.50	3	137.11
107	Non-Ferrus Metal			1	250.00	2	9.80
108	Cultery And Hand Tool			1	9.80	2	11.00
109	Metal Furniture & Fixture			1	61.25	2	10.25
110	Structure Metal Products			4	84.26	2	20.31
111	Other Fabricated Metal Products	6	406.36	16	511.56	25	1,712.97
112	Enging And Turbine	7	461.22				
114	Wood & Metal Working Machine	2	2.95	1	15.00	1	4.90
115	Special Industrial Machinery	4	10.50	6	130.55	14	230.38
116	Office & Household Machinery	3	437.94	7	198.10	19	1,711.65
117	Electrical Industrial Machinery			3	76.00	5	314.26
118	Radio, Television Set And Communication Equipments And Parts	3	32.22	21	1,031.35	59	3,461.88
119	Household Electric Appliances			5	149.90	5	482.42
120	Insulated Wire And Cable			3	54.70	1	20.00

Appendix 3 (continued)

(Million baht)

I-O Code	I-O Sector	1986 No. of Projects	1986 DFI a/	1987 No. of Projects	1987 DFI a/	1988 No. of Projects	1988 DFI a/
121	Electric Accumulator & Battery					5	258.81
122	Other Electrical Apparatuses	2	150.30	14	330.23	21	258.53
123	Ship Building			1	2.49	2	9.68
125	Motor Vehicle			3	33.60	7	117.14
126	Motorcycle, Bicycle & Other Carriages			2	73.00	1	5.00
129	Scientific Equipments	3	16.27			5	413.51
130	Photographic & Optical Goods	1	10.00	5	120.71	5	53.42
131	Watches And Clocks	1	36.00	2	12.37	8	1,119.06
132	Jewelry And Related Articles	3	75.98	18	97.85	18	120.25
133	Recreational And Athletic Equipment	1	4.85	3	220.50	27	311.36
134	Other Manufacturing Goods	5	17.43	29	277.66	40	535.21
138	Residential Building Construction					1	3.50
148	Hotel And Lodging Place	3	52.60	1	16.00		
153	Ocean Transport			2	7.50	1	15.00
157	Other Services			1	4.00	2	8.90
158	Storage And Warehouse	1	15.00	1	27.00	1	17.50
163	Real Estate			1	16.50	4	136.00
169	Hospital					1	3.00
180	Unclassified					1	3.00
	Total	114	2,956.06	330	8,224.05	691	24,504.03

Note : a/ Registered capital of foreign investors from a single country which accounted for at least 10 percent of the firm's total registered capital.

Source : Compile from data from the Office of BOI

Appendix 4

FDI Classified by Countries

Country	1986		1987		1988	
	% of FDI	No. of Project	% of FDI	No. of Project	% of FDI	No. of Project
Japan	57.48	25	40.01	106	51.74	240
Taiwan	11.07	25	19.32	100	12.39	227
Korea, Rep.of	0.17	12	1.17	6	2.05	29
Hong Kong	3.60	11	3.22	24	3.42	61
Singapore	0.36	3	0.45	10	0.69	18
Malasia	3.21	9	0.17	6	0.04	19
United States	3.60	10	6.40	30	5.84	52
United Kingdom	4.53	9	1.27	9	7.32	22
Other	15.98	20	27.99	75	15.51	90
Total	100.00	124	100.00	366	100.00	758

Source: Compiled from data from the Office of the BOI.

Appendix 5

Exemptions on Withholding Tax on Interest Payments On Foreign Loans

The Tax Code requires that private entities established outside the Kingdom of Thailand, having received interest income from Thailand, must pay a withholding tax of 10 percent if they are financial institutions and 25 percent in all other cases.

Exemptions have been established from time to time to lower the cost of borrowing from abroad and stimulate capital inflows. The exemptions have been listed as follows:

- May 1, 1979 to September 30, 1980: exemptions on withholding tax for both short-term and long-term loans.
- October 1, 1980 to September 30, 1981: exemptions on withholding tax only for loans of not less than 12 months.
- August 1, 1981 to December 31, 1982: exemptions on withholding tax for both short-term and long-term loans.
- January 1, 1983 to June 30, 1983: exemptions on withholding tax only for loans of not less than 24 months.
- July 1, 1984 to February 28, 1989: no exemptions.
- March 1, 1989 to August 31, 1989: exemptions on withholding tax only for loans of not less than 3 years and only when the borrowers are private institutions, other than commercial banks. Exemptions are also made on the withholding tax in case of commercial banks, but only if they do not relend the foreign loans so obtained.
- September 1, 1989 to February 28, 1990: an extension was granted to the previous exemptions.