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5 Japanese Foreign Investment and the Creation of a Pacific Asian Region

Richard F. Doner

5.1 Introduction

This paper explores the sources, patterns, and consequences of Japanese foreign investment (FI) in the Pacific Asian region. My principal question is whether and how this investment promotes regional linkages among Japan and the two major groups of developing capitalist countries in East Asia: the newly industrialized countries (NICs), which include South Korea, Taiwan, Hong Kong, and Singapore; and four members of the Association of Southeast Asian Nations (ASEAN), which include Indonesia, the Philippines, Malaysia, and Thailand.[1] I define Japanese FI broadly to include not simply foreign direct investment (FDI) in the form of equity participation in overseas ventures, but also the intermediate forms of FI, such as technology agreements, licensing, and machinery sales that yield knowledge-based assets (Markusen 1992, 31; see also Lipsey 1992, 277).

East Asian regionalism has at least three dimensions: a dynamic division of labor brought about in large part by foreign trade and investment, a set of countries exhibiting increasingly common institutional characteristics, and a regional organization. This paper emphasizes regionalism in the first two senses. My principal argument is that East Asia is becoming a product-based region, one in which Japanese-style institutions show signs of extensive diffusion. Development of a regional division of labor and common production-related institutions has outpaced the growth of ASEAN or other regional organizations. This progress varies, however, across the region.

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1. ASEAN also includes Singapore and Brunei.

The argument proceeds in five major steps. Section 5.2 examines and largely confirms the argument that Japanese investment has promoted a "dynamic multitier catch-up process" in which the eight countries have become increasingly part of a regional division of labor (e.g., Lo, Song, and Furukawa 1989). I first examine the broad outlines of Japanese (as well as U.S. and NIC) FDI in the region, and then describe structural changes in the national economies and the evolving trade and production interdependencies. Considering the weak evidence for a regional trading bloc in this volume's other papers, the argument here suggests the emergence of a region that is outward-oriented in terms of trade and increasingly integrated in terms of production.

Section 5.3 addresses the supply side of Japanese investment flows to the Pacific Asian region. It explores the position of East Asia within Japan's global investment targets and argues that, despite a relative cut in Japanese funds to the region and a global move away from investments in manufacturing, Japanese FI will continue to promote upgrading in the region's economies and a shifting division of labor. This process has been encouraged by the political economy of structural changes in the Japanese economy itself, and by institutional mechanisms through which Japanese FI flows.

In section 5.4 I take this institutional focus one step further and explore the impact of Japanese investment on domestic institutions of recipient countries. Most observers acknowledge that Japan owes much of its industrial success to production innovations such as "lean production" systems (Womack et al. 1990; see also Yamashita 1991b). Such innovations involve a whole range of cooperative arrangements ranging from "trust-based" subcontracting to business associations, trading companies, and corporatist-like public-private-sector bodies. These can be considered part of the knowledge-based assets Japanese multinationals bring to the region. Section 5.4 explores whether and to what extent such Japanese practices have indeed spilled over into Asian host countries, thus linking the region institutionally.

Section 5.5 proceeds on the assumption that the countries of East Asia are far from passive recipients of FI. They have developed institutions, private as well as public, to resolve the collective action problems involved in screening and absorbing the managerial and technological components of FI. This section thus examines this host country side of the equation—the varying national and regional approaches to and capacities for FI management. This focus helps to explain the different national positions within the regional development hierarchy. It also illustrates the weakness of *regional* responses to FI and suggests that, where such responses emerge, they are consistent with the development of an investment-driven regional division of labor.

The preceeding issues are of course important for the United States in both security and economic terms. Section 5.6 reviews the implications of Japanese investment for U.S. interests.

5.2 Japanese FDI and the Regional Division of Labor[2]

5.2.1 Cumulative Flows

Japanese direct investment in East Asia trailed that of the United States until 1977, when cumulative totals of both countries were roughly $6 billion. This rough parity disappeared in subsequent years as a flood of Japanese investments exceeded even the threefold growth of U.S. funds.[3] On a cumulative basis, Japan is now the most important source of FDI in the region. Japan is the primary investor in Thailand, Indonesia, and South Korea, and the second most important source of FI in Malaysia, the Philippines, Hong Kong, Taiwan, and Singapore (tables 5.1–5.6).

It is true that the share of Japan's investment going to the Asian developing countries actually dropped during the latter 1980s. Up to 1980 the NICs and ASEAN-Four had accounted for 25 percent of Japanese FI. That portion dropped to roughly 12 percent of reported flows between 1986 and 1988, and the region's share of cumulative Japanese flows fell to roughly 17 percent (table 5.7). However, the absolute volume of Japanese capital going to developing Asia has increased significantly, in part as a function of the broader general growth of Japanese overseas investments.[4] Cumulative Japanese flows to the region (including the People's Republic of China) increased from $5.5 billion in 1976 to $19.5 billion in 1985 and $32.3 billion in 1988, an almost sixfold increase in a twelve-year period. The NICs and ASEAN-Four accounted for over 90 percent of these totals. Japanese flows contributed to a steady expansion in overall FI to the eight countries from $2 billion in 1976–80, to $4 billion in 1981–85, and then to $6 billion in 1986, $8 billion in 1987, $12 billion in 1988, and $15 billion in 1988. This expansion of funds to developing Asia stands in marked contrast to lower and in some cases stagnating FI in Africa, Latin America, and the Middle East (Ramstetter 1991a, table 1).

This expansion was also fueled by a significant new source of investment flows—and an important indicator of both changing comparative advantage and regional interdependence—investment funds from the NICs. Both Malaysia and the Philippines saw the relative share of their FDI from the NICs, espe-

2. Any attempt to evaluate the relative importance of diverse FI sources in East Asia must first recognize the severe comparability and validity problems involved. This paper does not pretend to resolve these two problems. As to the first, I hope simply to capture basic patterns of FDI, leaving more nuanced treatments to careful economists (e.g., Ramstetter 1992). I address the validity issue by exploring the technological and institutional benefits of FI captured by host countries. For an extended discussion of these problems see Ramstetter (1991a, 10).

3. Encarnation (1992, 176). Note that these data include investments in China and India. Given Japan's minimal investments in India, these inclusions do suggest patterns at variance with those limited to the NICs and ASEAN-Four. Further discussion of the evolution of Japanese FDI is found in section 5.3.

4. For example, after remaining relatively constant in 1977–80 and rising slightly in 1980–86, the number of Japanese affiliates worldwide roughly *doubled* from 1986 to 1988 (Ramstetter 1991b, 30).

Table 5.1 **Cumulative FDI in Developing Asia by Country of Origin (percentage)**

	Japan	Hong Kong	United States	Netherlands	Germany	India	Singapore
Indonesia ending Dec. 1986	34.2	12.3	7.9	4.5	3.3	2.9	2.0
Malaysia up to 1985	18.6	6.3	7.0	3.6	N.A.	N.A.	30.3
Philippines							
Up to 1983	16.5	5.9	51.5	4.2	N.A.	N.A.	N.A.
Up to 1986	15.7	6.2	54.0	4.1	N.A.	N.A.	N.A.
Thailand							
Up to 1983	23.1	N.A.	8.9	6.2	N.A.	5.4	N.A.
Up to 1986	20.5	N.A.	19.1	4.4	N.A.	4.2	N.A.
Taiwan 1981–86	20.0	N.A.	34.0	N.A.	N.A.	N.A.	N.A.
South Korea ending June 1987	51.6	4.3	28.6	1.5	1.6	N.A.	N.A.
Hong Kong ending Dec. 1986	20.5	N.A.	41.2	3.7	N.A.	N.A.	1.4
Singapore 1984	23.6	N.A.	30.0	12.8	2.2	N.A.	N.A.

Sources: Figures for Indonesia, Philippines, Thailand, South Korea, Hong Kong, and Singapore are from Japan External Trade Organization, "Foreign Direct Investment of Japan and the Rest of the World" (Tokyo), as cited in Healey (1992). Figures for Malaysia are from Steven 1990, table 6.9; for Taiwan from Lim and Fong 1988, table 10.

Table 5.2 **Cumulative FDI in Developing Asia by Country of Origin (percentage)**

	Indonesia	Australia	South Korea	U.K.	France	Taiwan	Malaysia
Indonesia ending Dec. 1986	N.A.	1.9	1.4	1.4	1.1	N.A.	N.A.
Malaysia up to 1985	N.A.	N.A.	0.08	17.3	N.A.	0.6	N.A.
Philippines							
Up to 1983	N.A.	2.0	N.A.	3.3	1.8	N.A.	N.A.
Up to 1986	N.A.	1.7	N.A.	3.4	1.5	N.A.	N.A.
Thailand							
Up to 1983	N.A.	1.3	N.A.	8.7	N.A.	6.2	N.A.
Up to 1986	N.A.	6.4	N.A.	5.3	N.A.	6.2	N.A.
Taiwan 1981–86	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
South Korea ending June 1987	N.A.	N.A.	N.A.	2.7	1.2	N.A.	N.A.
Hong Kong ending Dec. 1986	N.A.	N.A.	N.A.	5.5	N.A.	N.A.	N.A.
Singapore 1984	N.A.	N.A.	N.A.	13.1	N.A.	N.A.	N.A.

Sources: Figures for Indonesia, Philippines, Thailand, South Korea, Hong Kong, and Singapore are from Japan External Trade organization, "Foreign Direct Investment of Japan and the Rest of the World" (Tokyo), as cited in Healey (1992). Figures for Malaysia from Steven 1990, table 6.9; for Taiwan from Lim and Fong 1988, table 10.

Table 5.3 **Cumulative FDI in Developing Asia by Country of Origin (percentage)**

	Philippines	Thailand	Switzerland	Canada	Panama
Indonesia ending Dec. 1986	N.A.	N.A.	N.A.	N.A.	N.A.
Malaysia up to 1985	N.A.	N.A.	N.A.	N.A.	N.A.
Philippines					
Up to 1983	N.A.	N.A.	2.7	2.0	N.A.
Up to 1986	N.A.	N.A.	2.5	1.6	N.A.
Thailand					
Up to 1983	N.A.	N.A.	N.A.	N.A.	5.4
Up to 1986	N.A.	N.A.	N.A.	N.A.	3.9
Taiwan 1981–86	N.A.	N.A.	N.A.	N.A.	N.A.
South Korea ending June 1987	N.A.	N.A.	N.A.	N.A.	N.A.
Hong Kong ending Dec. 1986	1.8	N.A.	1.7	N.A.	N.A.
Singapore 1984	N.A.	N.A.	2.7	N.A.	N.A.

Sources: Figures for Indonesia, Philippines, Thailand, South Korea, Hong Kong, and Singapore are from Japan External Trade Organization, "Foreign Direct Investment of Japan and the rest of the World" (Tokyo), as cited in Healey (1992). Figures from Malaysia from Steven 1990, table 6.9; for Taiwan from Lim and Fong 1988, table 10.

cially Taiwan, grow over threefold in the 1986–90 period.[5] Thailand and Indonesia experienced similar, albeit smaller, increases in the NICs' share of investment flows (table 5.8). In fact, 1988 NIC investment in the ASEAN-Four

5. At least some of the funds from Taiwan are reportedly recycled domestic capital from Malaysian Chinese restricted from investments in Malaysia. This further illustrates, however, the ways in which the region's economies may be gradually integrated despite legal impediments.

Table 5.4 **Cumulative FDI in Indonesia by Country of Origin (percentage)**

	Gross Investment Approvals, 1985–88	Realized Investment, 1967–88 (foreign equity)
Total (in millions of U.S. $)	7,563	6,687
Japan	16.4	30.0
Asian NICs	27.1	11.2
Hong Kong	6.0	8.8
Korea	4.0	1.4
Singapore	4.7	0.6
Taiwan	12.4	0.5
Other ASEAN	0.5	0.5
Malaysia	0.3	0.3
Philippines	0.1	0.1
Thailand	0.05	0.2
United States	14.0	4.3
Australia	1.3	1.5
Other	40.7	52.5

Source: Adapted from Pangestu 1992, table 3.4

Note: Gross investment approvals are new investments and expansion.

Table 5.5 **Cumulative FDI in Taiwan by Country of Origin, 1952–86, Share of Total (percentage)**

	1952–60	1961–70	1971–80	1981–86	1952–86
Total (in millions of U.S. dollars)	35.2	523.1	2,158.7	3,211.6	5,930.2
Overseas Chinese	29	29	37	8	21
Foreign nationals	71	71	63	92	79
United States	67	42	25	34	31
Japan	4	17	17	20	23
Europe	0	7	10	14	12
Others	0	5	11	15	12

Source: Reproduced from Lim and Fong (1988, table 10).

Note: Totals may not add up to 100 percent because of rounding.

exceeded that of Japan and was expanding more rapidly: these four countries contributed 31 percent of new ASEAN projects compared to Japan's 30 percent and increased their commitments by 334 percent compared to Japan's 125 percent (Holloway 1989, 71). Thus, as the ASEAN-Four have gained a comparative advantage in labor-intensive industries due to rising wages and currency appreciation in the NICs, investment from the latter has moved south (Kohama and Urata 1988, 333). In the case of the two largest NIC investors, Hong Kong and Taiwan, these flows have been facilitated by overseas Chinese networks.[6]

6. South Korea's low level of FDI relative to the other three NICs reflects at least two factors: its lack of a "Chinese connection" and the ability of the dominant *chaebol* to sustain higher costs

Table 5.6 **Cumulative FDI in Thailand by Country of Origin, 1974–89 (percentage)**

	1974	1981	1986	1989
Total (in millions of U.S. dollars)	$416	$1,282	$2,662	$5,871
Japan	28.0	27.4	29.5	37.2
United States	38.5	34.0	31.0	21.0
Other OECD	11.8	14.0	15.7	13.2
Europe	11.3	13.2	14.8	12.6
United Kingdom	5.5	5.7	5.3	3.3
West Germany	0.7	3.2	2.7	2.5
France	1.7	1.0	1.1	1.2
Netherlands	2.9	1.6	4.0	3.1
Switzerland	0.5	1.6	1.8	2.5
Australia	0.5	0.8	0.9	0.5
NICS	16.6	18.8	16.0	23.0
Hong Kong	11.1	10.5	10.3	11.1
Singapore	5.3	8.1	5.0	5.4
Taiwan	0.5	0.2	0.6	6.2
Other ASEAN-Four	1.7	1.2	0.9	0.5
Malaysia	1.2	1.0	0.8	0.4
Philippines	0.5	0.2	0.04	0.02
Other	3.6	4.8	7.2	4.1

Source: Adapted from Tambunlertchai and Ramstetter (1992, table 4.3).
Note: The figure for total FDI is year-end stock.

Finally, note that while U.S. investment flows did increase in the early 1980s, they largely stagnated in the last half of the decade (table 5.9). This pattern results in part from the fact that developing Asia is less important for U.S. multinationals than it is for Japanese multinationals. For example, U.S. affiliates in Asia accounted for 0.5–0.7 percent of U.S. employment and 7–8 percent of U.S. affiliate employment worldwide, whereas the ratios for Japan were 0.8 percent of employment and 50–54 percent of affiliate employment worldwide (Plummer and Ramstetter 1992, table 9.1).

5.2.2 Industry Concentration

The manufacturing emphasis of Japanese FI seems to have contributed to, as well as reflected, the region's dynamic division of labor. By 1988 Japanese manufacturing investments had become twice the size of comparable U.S. investments and constituted a larger share of total Japanese FDI in the region. This emphasis on manufacturing was not static, however; Japanese investment has become increasingly diversified across industries and countries, indeed

without moving overseas due to their high levels of R&D and financial strengths. Indeed, Lall argues that Korean FDI reflects "growing industrial strength rather than, as in Hong Kong or Singapore, domestic deindustrialization" (1991, 23).

Table 5.7 **Japanese FDI Abroad: Net Flows and Reported Flows**

	Net Flows[a]			Reported Flows[b]					
Year	Total Amount	OECD Share	Total Non-OECD Share	Total Amount	OECD share	Total Non-OECD Share	Developing Asia Share	Latin America Share	Africa and Middle East Share
1972	723	62.7	37.3	2,338	58.7	41.3	17.2	12.1	11.5
1973	1,904	60.8	39.2	3,494	40.4	59.6	28.6	23.5	6.2
1974	2,012	56.7	43.3	2,395	34.6	65.4	30.5	29.2	5.0
1975	1,763	48.7	51.3	3,280	38.8	61.2	33.6	11.3	11.8
1976	1,991	49.5	50.5	3,462	35.3	64.7	36.0	12.1	15.9
1977	1,645	49.2	50.8	2,806	39.4	60.6	30.8	16.3	13.0
1978	2,371	48.4	51.6	4,598	41.2	58.8	29.1	13.4	15.6
1979	2,898	48.5	51.5	4,995	48.5	51.5	19.5	24.2	6.0
1980	2,385	59.0	41.0	4,693	55.6	44.4	25.3	12.5	6.3
1981	4,894	66.1	33.9	8,932	41.7	58.3	37.4	13.2	7.5
1982	4,540	61.8	38.2	7,703	54.3	45.7	18.0	19.5	8.0
1983	3,612	61.3	38.7	8,145	47.5	52.5	22.7	23.1	6.6

1984	5,965	68.1	31.9	10,155	55.1	44.9	16.0	22.6	5.9
1985	6,452	69.9	30.1	12,217	64.7	35.3	11.7	21.4	1.8
1986	14,480	78.5	21.5	22,320	66.6	33.4	10.4	21.2	1.6
1987	19,519	76.4	23.6	33,364	69.5	30.5	14.6	14.4	1.0
1988	34,210	81.2	18.8	47,022	72.0	28.0	11.8	13.7	1.9
Average annual flows									
1965–71	207	56.3	43.7	521	54.1	45.9	22.9	13.4	8.0
1972–80	1,966	52.9	47.1	3,562	44.1	55.9	27.6	17.0	10.0
1981–85	5,093	66.1	33.9	9,430	53.6	46.4	20.4	20.1	5.6
1986–88	22,736	79.3	20.7	34,235	70.0	30.0	12.4	15.6	1.6
Cumulative flows									
1965–71	1,447	56.3	43.7	3,645	54.1	45.9	22.9	13.4	8.0
1965–80	19,139	53.2	46.8	35,706	45.1	54.9	27.1	16.7	9.8
1965–85	44,602	60.5	39.5	82,858	49.9	50.1	23.3	18.6	7.4
1965–88	112,811	71.9	28.1	185,564	61.1	38.9	17.3	16.9	4.2

Source: Bank of Japan and Japan Ministry of Finance, cited in Ramstetter (1991b, table 1).

Note: Amounts in millions of U.S. dollars; shares in percentage.

[a]Data refer to calendar years.

[b]Data refer to fiscal years ending March 31 of following calendar year.

Table 5.8 **Shares of FDI in ASEAN-Four, 1986–90 (percentage)**

	Total	Japan	NICs	Korea	Taiwan	Hong Kong	Singapore	U.K.	U.S.	China
Indonesia										
1986	100.0	39.8	27.6	1.5	2.2	11.6	12.3	N.A.	18.6	N.A.
1987	100.0	36.5	11.8	1.6	0.5	9.3	0.4	N.A.	5.0	N.A.
1988	100.0	5.6	36.0	4.5	20.6	5.4	5.4	N.A.	15.2	N.A.
1989	100.0	16.3	25.4	9.9	3.3	8.6	3.5	N.A.	7.4	N.A.
1990	100.0	13.3	34.7	6.4	8.5	15.8	4.0	N.A.	0.3	N.A.
Malaysia										
1986	100.0	6.9	15.1	0.3	0.6	3.4	10.9	2.9	3.2	N.A.
1987	100.0	34.7	28.9	0.2	11.7	4.3	12.6	3.8	7.9	N.A.
1988	100.0	25.1	32.6	0.9	17.0	6.1	8.6	4.0	11.0	N.A.
1989	100.0	31.1	41.8	2.2	25.0	4.1	10.6	8.8	3.7	N.A.
1990	100.0	12.0	54.9	0.7	48.4	3.0	2.6	4.2	1.4	N.A.
Philippines										
1986	100.0	28.2	9.6	0.0	0.4	9.0	N.A.	N.A.	28.2	2.6
1987	100.0	17.4	23.4	0.6	5.4	16.8	N.A.	N.A.	21.6	4.8
1988	100.0	20.3	30.0	0.4	23.3	5.7	N.A.	N.A.	32.3	5.5
1989	100.0	19.7	40.2	2.1	18.5	16.5	N.A.	N.A.	16.3	4.2
1990	100.0	37.1	31.3	1.7	23.4	5.6	N.A.	N.A.	6.0	2.3
Thailand										
1986	100.0	58.2	40.7	27.3	0.1	7.2	6.1	13.9	17.2	N.A.
1987	100.0	36.6	35.6	19.0	0.5	11.4	4.7	2.4	6.5	N.A.
1988	100.0	48.7	51.0	26.9	1.7	13.6	8.7	4.4	10.8	N.A.
1989	100.0	44.1	45.2	25.2	2.1	10.9	7.0	5.1	6.9	N.A.
1990	100.0	34.6	60.2	34.7	4.4	7.3	13.9	9.2	15.3	N.A.

Source: International Centre for the Study of East Asian Development Symposium, cited in Tan, Heng, and Low (1991, table 9)

Table 5.9 **U.S. Outward FI to East Asia, 1986–89 (millions of U.S. dollars)**

	Average 1976–80	Average 1981–85	1986	1987	1988	1989
Asian NICs	428	560	1,088	1,175	1,153	1,033
Hong Kong	211	289	720	321	707	370
Korea	8	20	68	190	237	222
Singapore	155	192	217	226	5	162
Taiwan	54	59	83	367	204	279
ASEAN-Four	161	772	54	−180	−143	996
Indonesia	−17	609	44	−310	−251	757
Malaysia	33	87	−55	−67	167	−32
Philippines	114	−33	66	9	90	155
Thailand	30	109	0	188	−149	116
China	N.A.	70	−116	102	96	54

Source: U.S. Department of Commerce, cited in Ramstetter (1991a, table 6).

Table 5.10 Japanese FI Distribution across Sectors

	Manufacturing	Mining	Trade	Other
Global				
1976	31.3	25.0	13.5	30.2
1985	29.2	14.1	15.2	78.7
1988	24.7	7.5	10.7	55.0
Asian NICs				
1976	60.8	0.24	8.3	30.6
1985	43.4	0.17	10.2	46.2
1988	36.9	0.09	10.1	52.9
ASEAN-Four				
1976	31.5	56.5	0.8	11.1
1985	35.8	54.3	2.4	7.5
1988	42.5	46.0	2.4	9.06

Source: Adapted from Ramstetter (1991b, table 3).

more so than U.S. investments (Encarnation 1992, 177–78). Together the industry and geographical distributions of Japanese FDI seem to mirror the region's evolving comparative advantage.

Manufacturing traditionally constituted a major portion of Japanese FDI in the NICs, 61 percent in 1976 (table 5.10). But this portion declined to 37 percent in 1988, while other industries (presumably non-trade-related services such as finance) became a more important focus of Japanese investment, expanding from 31 percent to 53 percent. Mining was never an important component of Japanese investment in the NICs. This shift away from manufacturing investments in the NICs does vary somewhat by country.[7] Hong Kong, South Korea, and Singapore all saw the percentage of Japanese FI in manufacturing reduced by at least 25 percent, and in none of these three does manufacturing investment account for more than 52 percent of cumulative Japanese FDI (table 5.11). In Taiwan, however, the concentration of manufacturing investment fell only 12 percent, with manufacturing investment accounting for 82 percent of all Japanese investment as of 1988.

Unlike in the NICs, the manufacturing component of Japanese FDI in the ASEAN-Four has tended to expand, from 32 percent to 43 percent (table 5.11). Again, however, there is cross-national variation (based on Ramstetter 1991b, table 3). Manufacturing investment in Indonesia has increased, from 25 percent to 30 percent, but remains the lowest of the ASEAN-Four because of the continued large volume of funds flowing to the Indonesian petroleum sector (mining accounts for some 63 percent of Japanese FI). Between 1976 and 1988, manufacturing has risen from 57 percent to 74 percent of Japanese flows in Malaysia and 26 percent to 45 percent in the Philippines. The portion of

7. This paragraph draws on data from Ramstetter (1991b, table 3).

Table 5.11 **Cumulative Reported Flows of Japanese FDI**

	Manufacturing, Percentage of All Industries		
	1976	1985	1988
Asian NICs	61.0	43.0	37.0
Hong Kong	6.2	8.4	7.97
Korea	70.0	56.0	49.0
Singapore	72.0	64.0	52.0
Taiwan	93.0	89.6	82.0
ASEAN-Four	31.5	35.8	43.0
Indonesia	25.2	27.7	30.0
Malaysia	57.6	70.3	73.6
Philippines	26.0	39.7	45.5
Thailand	75.0	70.0	73.0

Source: Adapted from Ramstetter (1991b, table 3).

manufacturing dropped slightly in Thailand but continues to account for the majority of Japanese FDI, shifting from 75 percent in 1976 to 73 percent in 1988.

Another indication of the role of Japanese investment in the region's changing structure of comparative advantage is the emphasis on what may be termed early, middle, and late industries. Applying Ramstetter's data (1991b, table 3) to the classification developed by Lo, Song, and Furukawa (1989), trends seem to be the following:[8] For the Asian NICs, cumulative Japanese FI shifted away from early industries toward middle and late industries between 1975 and 1988. Much of the reduction in early-industry concentration was due to a drop in emphasis on textiles. The increase in the middle industry reflects growth in investment in the chemical industries of Korea and Singapore. Growth in late-industry investments is due to increased concentration of Japanese FI in machinery, electrical machinery, and transport machinery in Hong Kong and South Korea and in transport machinery in Taiwan. Singapore, on the other hand, saw a reduced share of investment in basic metals, machinery, electrical machinery, and transport machinery. Thus for the NICs, Japanese FI seems to have shifted further along the product cycle by first moving out of manufacturing into the service industries and by increasingly concentrating on late industries within manufacturing.

The most dramatic shift for the ASEAN-Four is between early and late industries. In 1975 early industries accounted for almost 46 percent of cumula-

8. As presented in Lo, Song, and Furukawa (1989, 115), early industries include food, certain textiles, and leather. Middle industries include certain wood products, chemicals, petroleum, and nonmetallic products. Late industries include apparel, paper and printing, metal products, industrial and electrical machinery, and transport equipment.

tive Japanese manufacturing FI, but by 1988 this had dropped to 19.3 percent, while the proportion of late industries rose from almost 38 percent to 66 percent in the same period. These shifts reflected a reduction in Japanese emphasis on textiles (as in the NICs), and country-specific growth in different manufacturing industries. Indonesia saw Japanese investment in basic metals rise from 16.9 percent of total manufacturing investment to 47.7 percent but remained essentially stable across other categories. Malaysia saw the largest increase in electrical and transport machinery, with the former doubling its relative share and the latter growing from under 2 percent to over 13 percent of the total. The Philippines experienced a similar increase in transport-machinery investment, up from 4.2 percent in 1976 to 26.7 percent in 1988. Thailand saw increases in basic metals, machinery, and electrical machinery. Thus for ASEAN, Japanese investment evolved both away from mining toward manufacturing, and within manufacturing toward a concentration in the late industries.

Finally, shifts in the industry distribution of Japanese FDI are reflected in the production of Japanese affiliates in developing Asia.[9] In 1977 Asia accounted for 42.6 percent of Japanese manufacturing sales worldwide, with roughly 27 percent of these sales in textiles and apparel, 25 percent in electrical machinery, and only around 11 percent in transport machinery. By 1988 Asia's contribution to Japanese worldwide manufacturing sales had dropped to roughly one-third, but textiles accounted for only 8.4 percent of these sales, while the shares of electrical machinery and transport machinery had risen to 34.4 percent and 22.8 percent, respectively. In the Asian NICs, electrical machinery accounted for 40.4 percent of gross sales in 1988, followed by transport machinery with 18.2 percent and textiles and apparel with only 7.5 percent. In the ASEAN countries, transport machinery accounted for 25 percent of gross sales in 1988, followed closely by electrical machinery, accounting for 23.3 percent, with textile and apparel accounting for 12.1 percent.

As implied in the preceding paragraphs, the industry diversification of Japanese FDI has been accompanied by geographical diversity. In 1988 Singapore moved up to second place as a target of Japanese manufacturing investment. Yet it accounted for only one-sixth of such investment, compared to one-third for the United States. As a result Singapore "represents less of a regional manufacturing center for the Japanese than for the Americans."[10] Consistent with the shift of Japanese manufacturing investments south to the ASEAN-Four has been the expanding role of Thailand: in 1988 Thailand's manufacturing sector attracted more new Japanese investment than did the combined manufacturing sectors of the four NICs.

5.2.3 Trade Orientations of Japanese Overseas Investments

Broadly speaking, Japanese affiliates in East Asia have gradually become more export-oriented, with a trend toward greater exports back to Japan, an

9. This paragraph draws on data presented in Ramstetter (1991b, table 14).
10. Encarnation (1992, 178), from which the rest of this paragraph is drawn.

emphasis on labor-intensive exports, and a tendency toward greater linkages with local sources of inputs.

Compared to U.S. firms, Japanese investors have emphasized sales to host country markets rather than back to Japan or to third countries. In 1977 and 1988 some 60 percent of Japanese subsidiary sales in East Asia went to host country markets, whereas the role of host country markets for U.S. subsidiaries dropped from roughly 40 percent in 1977 to around 23 percent in 1988. Host country markets accounted for roughly 40 percent of sales of manufactured goods by U.S. subsidiaries in the region in both 1977 and 1988, compared to levels of some 65 percent and 60 percent for Japanese subsidiaries (Encarnation 1992, 155, 175). However, these relative figures do not reflect the significant absolute growth of exports by Japanese subsidiaries, especially since the Plaza Accord's yen appreciation in 1985. Since then, Japanese FDI in developing Asia has been increasingly oriented toward the exploitation of comparative advantage rather than simple maintenance of host country market. Exports by Japanese affiliates in Asia expanded over sixfold, compared to threefold growth for all Japanese affiliates.[11] The growth of manufactured exports for all affiliates was somewhat greater (over sevenfold) than that for Asian affiliates (over fivefold).

Exports of manufactured goods by Japanese affiliates have generally emphasized third-country markets over sales to the Japanese home market. But exports to Japan did expand slightly, from roughly 7 percent in 1977 to around 13 percent in 1988 (Encarnation 1992, 175, 181). More significant growth in exports to the home market has occurred in electrical machinery and other manufacturers, although even in electronics Japanese subsidiaries are less reliant on their home market than are U.S. affiliates. The growth of Japanese affiliate exports has been most pronounced in labor-intensive industries and in the NICs, not in the ASEAN countries (Ramstetter 1991b, 71). This consistency between exports and relative factor supplies and technology levels is also seen in U.S. affiliates but seems to be more pronounced for the Japanese (Lipsey 1992, 281–86). Although electronics occupies an important position in the exports of both Japanese and U.S. affiliates, the Japanese export emphasis is reportedly closer to that of local firms than is that of U.S. affiliates. The Japanese concentration in machinery exports is not as strong as that of the United States. And, as noted earlier, the Japanese tend to be more concentrated in other manufacturing, which includes textiles and apparel.

As to affiliate imports and the ratio of imports to local purchases, Japanese *trade* affiliates account for a declining but still sizable percentage of imports from Japan, down from 85 percent to 72 percent worldwide and 54 percent to 49 percent in Asia (Ramstetter 1991b, 80). There is a general trend toward lower import/purchase ratios in Asian affiliates, whereas these ratios stayed

11. Unless otherwise noted, information on exports and imports is drawn from Ramstetter (1991a, 1991b, especially table 20).

constant in affiliates worldwide. Import/purchase ratios vary somewhat by industry, being naturally higher for machinery than for food. The ratio also varies by region and country. Ratios for manufacturing affiliates in the NICs were "relatively low" but "relatively high" for affiliates in the ASEAN countries (here including Singapore). By 1988 NIC affiliates import ratios were low in electrical machinery and transport machinery relative to affiliates worldwide and in ASEAN, thus suggesting that NIC affiliates "have developed more extensive ties with local suppliers than elsewhere" (Ramstetter 1991b, 81). However, Japanese manufacturing affiliates in the NICs obtained a much larger portion of their imports from Japan than did affiliates in the ASEAN countries.[12] Finally, imports from Japan as a percentage of all Japanese manufacturing affiliate imports in Asia were high and growing, from 72 percent in 1980 to 78 percent in 1986 and 1988. In sum, although Japan remains a major source of inputs for Asian affiliates, the latter have gradually increased their links to host country economies, albeit with significant cross-national and cross-industry variation.

5.2.4 National Structural Change and Regional Division of Labor

There is no clear proof of a consistent relationship between Japanese investment in Asia on the one hand and the pattern of comparative advantage in developing Asia or Japan on the other (Ramstetter 1991b, 98). That said, it is presumably possible at least to identify general patterns of association between investment flows and indicators of change in the regional division of labor. I proceed first by examining structural changes in the region's national economies and indicators of shifting regional comparative advantage. I then examine some possible causal linkages between investment, trade, labor migration, and shifting comparative advantage.

The impressive changes occurring within the NICs and ASEAN-Four need little elaboration. Measured most crudely, the share of manufacturing in GDP has risen by at least 42 percent for six of the eight countries, the exceptions being Hong Kong and the Philippines, both of which were at fairly high levels by the mid-1960s (table 5.12).

These structural changes have translated into shifts in comparative advantage consistent with the flying geese analogy. That model involves each country capturing "increasingly sophisticated products from more advanced economies, which in turn are shifting their attention to still more advanced products" (Petri 1992a, 54). Several kinds of evidence seem to support the flying geese dynamic. One is Petri's calculation of the sophistication exhibited by the export bundle of different economies in developing Asia. Shifts in market shares between 1970 and 1986 suggest considerable dynamism consistent with dynamic comparative advantage (Petri 1992a, 56). Petri's general argument is reinforced

12. Since Ramstetter's data do not include country-specific figures, it's unclear whether excluding Singapore from ASEAN would make a difference (see 1991b, table 23).

Table 5.12 **Share of Manufacturing in GDP, 1965–89**

	1965	1989	Change (%)
United States	29	20	−31.03
United Kingdom	30	22	−26.67
France	29	25	−13.79
Germany	40	31	−22.50
Australia	28	17	−39.29
Japan	32	30	−6.25
NICs			
Korea	19	28	47.37
Hong Kong	24	24	00.00
Taiwan	20	36	79.97
Singapore	15	24	60.00
ASEAN-Four			
Malaysia	9	19	111.11
Indonesia	8	14	75.00
Thailand	14	20	42.86
Philippines	20	25	25.00

Source: World Bank, *World Development Report, 1987,* cited in Lo, Song, and Furukawa (1989, 86, table 1).

by evidence showing the NICs moving away from and the ASEAN countries moving toward unskilled labor-intensive products (table 5.13; see Alburo, Bautista, and Gochoco 1992).

The result has been an increasingly horizontal and intrafirm division of labor. Rather than the U.S.-European intraindustry trade driven by demand for differentiated products, FDI in Asia has promoted a more vertical type of horizontal trade involving the exchange of goods within similar industries at different stages of assembly or processing. This is reflected in (1) the expansion of NIC exports to Southeast Asia (Fransman 1986a, 170–71), (2) the expanded share of manufactures in Japan's imports from the NICs and especially ASEAN (tables 5.14 and 5.15), and (3) the increasing dependence of the NICs and ASEAN-Four on Japan for industrial goods.[13] The emergence of a horizontal division of labor has been especially sharp in the steel and textile industries. According to recent MITI figures, South Korea and Taiwan account for nearly half of Japan's steel imports, whereas Japan exports almost half of its higher-value steel and iron products to Taiwan and South Korea as well as to Singapore and the rest of ASEAN (do Rosario 1992, 38). In many cases, this regional division of labor occurs within firms as production departments move abroad and R&D and planning departments are strengthened at home (Nakakita 1988, 318). Indeed, Encarnation argues that intracompany trade is more characteristic of Japanese than of U.S. multinationals (1991, 9).

13. According to a recent MITI report, manufactured exports from the ASEAN-Four have been more successful in penetrating the Japanese market than those of the NICs (do Rosario 1992, 38).

Table 5.13 **Revealed Comparative Advantage Indexes**

	Year	Indonesia	Malaysia	Philippines	Thailand	Japan	Hong Kong	Korea	Singapore	Taiwan
Unskilled labor-intensive	1970	N.A.	0.15	0.08	0.21	2.61	7.10	5.43	0.94	N.A.
	1976	0.01	0.29	0.84	1.29	1.38	6.91	6.06	0.94	N.A.
	1980	0.07	0.44	1.29	1.63	1.17	6.48	5.63	0.93	6.14
	1985	0.45	0.56	0.67	1.89	0.89	5.74	4.18	0.72	5.58
Human capital-intensive	1970	0.02	0.12	N.A.	0.03	1.62	0.45	0.20	0.39	N.A.
	1976	0.001	0.10	0.02	0.05	2.25	0.70	0.76	0.61	N.A.
	1980	N.A.	0.12	0.05	0.13	2.42	1.23	1.19	0.51	0.81
	1985	N.A.	0.04	0.02	0.14	2.10	0.87	1.84	0.43	0.78
Technology-intensive	1970	N.A.	0.04	0.003	N.A.	2.46	1.59	0.62	0.63	N.A.
	1976	N.A.	0.64	0.041	0.17	2.10	2.06	1.39	1.75	N.A.
	1980	0.04	0.98	0.14	0.52	2.13	1.59	1.46	1.80	1.81
	1985	0.05	1.39	0.78	0.54	2.08	1.45	1.16	1.19	1.44
Physical capital–intensive	1970	0.05	0.93	0.06	0.53	1.37	0.13	1.16	0.26	N.A.
	1976	0.05	0.68	0.20	0.31	1.68	0.18	0.39	0.45	N.A.
	1980	0.12	0.58	0.25	0.65	1.80	0.23	0.74	0.56	0.43
	1985	0.24	0.40	0.42	0.23	1.50	0.44	0.53	0.59	0.48

Source: Chen (1989).

Table 5.14 Changes in Export and Import Structure of Japan

	1970	1975	1980	1985	1988
Export structure					
Textiles	12.5	6.7	4.9	3.6	2.6
Chemical	6.4	7.0	5.2	4.4	5.2
Metal	19.7	22.4	16.4	10.5	8.2
Machinery	46.3	53.8	62.8	71.8	74.3
Office machines	1.7	1.4	1.8	4.4	6.9
Semiconductors	0.4	0.8	1.8	2.7	4.7
Videotape recorders	—	—	1.5	3.8	2.3
Cars	6.9	11.1	17.9	19.6	18.4
Import structure					
Foodstuff	13.6	15.2	10.5	12.0	15.5
Raw material	35.4	20.1	16.9	13.9	15.0
Mineral fuels	20.7	44.3	49.8	43.1	20.5
Chemical	5.3	3.6	4.4	6.2	7.9
Machinery	12.2	7.4	7.0	9.6	14.2
Official machine	1.7	0.9	0.7	1.2	1.8
Other manufactures	12.8	7.4	11.4	15.2	26.9
Iron and steel	1.5	0.3	0.6	1.1	2.5
Textile	1.7	2.3	2.3	3.0	5.8
Manufactures subtotal	30.3	18.4	22.8	31.0	49.0

Source: Japan Tariff Association, cited in Yamazawa (1990, table 2).

Notes: Percentage of total export and import values. Manufactures subtotal is the sum of chemical, machinery, and other manufactures.

Table 5.15 Share of Manufactures in Japan's Imports

	1970	1975	1980	1985	1986
Asian NICs	38.1	52.2	57.3	57.3	61.7
Taiwan	34.4	44.7	55.2	57.0	54.8
Korea	42.3	61.2	73.0	64.0	68.9
Hong Kong	67.4	79.8	78.7	84.1	85.1
Singapore	6.2	21.6	20.7	27.6	40.2
ASEAN-Four	2.1	2.6	3.2	4.8	7.7
Malaysia	2.7	4.0	4.4	5.8	7.4
Thailand	6.5	10.6	14.7	21.7	22.3
Philippines	1.7	2.4	10.6	13.7	14.1
Indonesia	0.7	0.4	0.7	1.6	4.0
China	24.9	20.4	22.4	25.8	34.2
LDC total	7.1	7.5	8.3	13.6	21.5
World total	25.3	18.1	19.3	26.7	35.3

Source: Institute for Developing Economies Trade Data Search System, cited in Hirata and Nohara (1989).

Note: Manufactures include SITC less 68.

Finally, this Japanese-driven division of labor has entailed a wave of labor migration throughout the region. Some two million workers from East and Southeast Asia have left home to take work, not just as domestic helpers or unskilled labor, but as accountants and machine tool operators and cooks. As the Japanese work force has aged and moved into higher-technology areas, severe labor shortages have plagued the country's construction and basic industries. The Japanese work force reportedly now includes some 38,000 "trainees" from the region, over 150,000 ethnic Japanese foreigners, and an unknown number of illegal entrants. A similar pattern has occurred in Taiwan and South Korea. In Malaysia some 50 percent of construction and plantation workers are foreigners (mostly Indonesians), and manufacturers have begun to bring in foreign workers. Indonesia, itself an important source of labor flows to other countries, has been forced to employ Filipinos and other foreigners in white-collar and professional positions. Although these flows have the potential to generate numerous social tensions, they will also encourage further shifts up the product-cycle ladder. Labor shortages will encourage countries to improve productivity through technical innovation, while workers returning to Southeast Asia from Japan, Taiwan, and South Korea will constitute a source of new skills ("Asian Labor Shortages" 1992).

The preceding discussion presents only the general outlines of the ways in which Japanese FI influences the region's division of labor. In fact, the impact will vary by industry, as well as country. The following two cases provide some sense of this variation.

Textile and Apparel Industries

The evolution of the region's textile and apparel complex is probably the most advanced of all industries. Between 1968 and 1977 Japan's total textile and apparel trade with East Asia increased by over twofold, but its trade surplus with them declined by roughly one-half (Arpan, Barry, and Tho 1984). By 1972 textile and apparel exports of South Korea, Taiwan, and Hong Kong exceeded those of Japan for the first time, and widened considerably by 1977. By the end of this period, Japan maintained a comparative advantage in upstream and midstream activities (e.g., yarns, fibers, and fabrics) but rapidly lost competitiveness in apparel. The NICs, on the other hand, expanded surpluses in apparel and began to catch up with Japan in synthetic fiber products, whereas the ASEAN countries gained competitiveness in apparel.

By 1987 Japan maintained an overall surplus in textiles but experienced increased competition from the NICs. NIC textile and apparel products increased their penetration of Japanese markets, prompting both intensified diversification by the stronger Japanese firms and demands for protection by others.[14]

14. Import penetration ratios for textile products between 1984 and 1987 went from 25.1 percent to 34.5 percent: for yarn from 11.6 percent to 13.7 percent, for cloth outergarments from 23.2 percent to 34.1 percent, and for knit outergarments from 26.7 percent to 46.7 percent (JICA 1989, A-III-1). On diversification see Johnstone (1988). On charges of dumping and demands for protection, see "When Japan Is Threatened by Imports" (1988).

The ASEAN countries, meanwhile, rapidly expanded apparel exports while some moved into midstream and upstream operations. Thailand, for example, was 100 percent self-sufficient in cloth made from synthetic fiber and 85 percent self-sufficient in synthetic yarn by the early 1970s (JICA 1989, II-1).

From the Japanese perspective, the textile and apparel complex is perhaps the quintessential example of the product cycle. This relatively rapid shift in comparative advantage was due to at least three factors, one of which involved the relatively low entry barriers for Asian firms in certain sectors of the industry. A second factor was Japan's effective restructuring of its own textile capacity and its low levels of protection, leading to a general reduction in textiles position within Japanese manufacturing (JICA 1989). And finally, these regional shifts reflected Japan's focus on East Asia as its primary focus of textile and apparel FI. Some 64 percent of the cases of Japanese FI in textiles between 1955 and 1985 were in the NICs and the ASEAN-Four (UNCTC 1987, 136). As host country firms have expanded their own capacity, however, the Japanese presence seems to have declined.[15] Simultaneously, textile investment from the NICs, especially Hong Kong and Taiwan, has expanded, in some cases bringing technology as well as capital (Tho 1988, 397). In some cases this has occurred via linkages with larger Japanese firms.[16]

Automobile Industry

The auto industry lies at the other end of the spectrum from textiles and apparel. As the share of textiles in Japanese manufacturing and exports declined, the role of autos and auto parts grew.[17] Auto exports (parts and components) by the NIC and ASEAN countries expanded as well, albeit much more slowly and from a smaller base. The East Asian countries, especially South Korea and Taiwan, accounted for between 5 percent and 9 percent of Japanese auto part imports in 1987. However, given the very low overall level of Japanese part imports, this is not a very large volume. Also, until recently the Japanese have not had much of an overseas manufacturing (as opposed to assembly) presence. Preferring to service overseas markets through exports, not offshore production, Toyota and Nissan had a combined average of only 1 per-

15. According to Plummer and Ramstetter (1992, 250), affiliate export shares declined in Taiwan and Thailand. Also, affiliate employment levels and shares of host country employment fell for South Korea, Taiwan, and Thailand.

16. The prime example of this pattern is Toray's tie-up with TAL in the 1970s. The latter, a Hong Kong-based textile converter, already had subsidiaries in Taiwan and Thailand. The two firms established several more subsidiaries in Thailand, Hong Kong, and Malaysia and by the mid-1970s had created a vertically integrated complex in the region (Arpan, Barry, and Tho, 1984, 139).

17. Transport equipment expanded as a percentage of total Japanese manufacturing from 5.3 percent in 1950 to 14 percent in 1987 (Tahara-Domoto and Kohama 1989, 3). Japanese exports of auto parts grew even more sharply, from a total of $3.8 billion to $15.5 billion from 1980 to 1987, compared with an increase of U.S. exports from $10.5 billion to $14.3 billion (auto parts = SITC 732.8 [bodies, chassis, and parts] and 7111.5 [internal combusion engines]; UNCTAD 1990, table 3).

cent of their production abroad in 1980, compared to 35 percent for the U.S. Big Three. And unlike U.S. firms, Japanese assemblers preferred not to export from their overseas plants or those of their East Asian partners (Doner 1991, 64). Quite clearly, regional shifts in comparative advantage in the auto industry have been much slower than in textiles (or in electrical equipment).

The regional production and trade of auto products is, however, far from stagnant. For one thing, Japanese assemblers and parts firms have helped to develop a modest automotive industrial base in the region through a fairly long history of operation in most of the countries. Toyota was involved in an early joint venture in South Korea, and Mitsubishi has established a close relationship with Hyundai. Until the proliferation of Japanese transplants in the West beginning around 1985, the ASEAN-Four accounted for 39 percent and 35 percent of the overseas production bases of Japanese assemblers and parts firms, respectively (Doner 1991, 72–73). The ASEAN facilities were largely devoted to assembly. However, host country localization policies and the growth of spare-parts markets both at home and overseas gradually gave rise to local automotive industries of varying strengths. This growth was of course most striking in the South Korean assembly industry. Elsewhere in the region the emphasis was on parts production. Exports of parts and components began to grow in the early to mid-1980s. Some of this growth was due to initiatives by local firms confronted with saturated domestic markets, especially in Thailand and Indonesia. But some was a function of initiatives by Japanese firms who dominate the region's markets and account for one-fourth of its auto exports.[18]

Several interrelated factors accelerated the investment and export activities of Japanese firms in the region. One was the assemblers' growing realization of the enormous growth potential of the Asian markets, especially when contrasted with relatively stagnant demand in Japan and in the developed countries more generally (e.g., LTCB 1987). Second, South Korea's emergence as an auto exporter has encouraged Japanese (as well as U.S.) auto makers to view the region as a potential source of vehicles and components for small car and developing country market niches.[19] The yen appreciation helped to crystallize these other factors. By increasing the import price of Japanese-made components used to produce vehicles in the NICs and ASEAN, this shift encouraged further use of locally made parts. It has also resulted in a further extension of competition in the Japanese market to the East Asian markets: individual Japanese assemblers have formed linkages with potential East Asian competitors to preempt any linkage between these firms and one of their competitors in Japan (LTCB 1987, 2). Finally, the most recent auto (as well as electronics)

18. According to Plummer and Ramstetter (1992, 272), Japanese affiliates accounted for $1.7 billion out of the total $5.9 billion in transportation equipment exported from Asia in 1986.

19. Hyundai has recently shown signs of establishing assembly operations in the Philippines and Thailand (MACPMA News [Kuala Lumpur], December 1991, 9).

investments in Southeast Asia reflect still another factor—the shortage of labor in Japan (author interviews).

These factors have prompted the Japanese to deepen and rationalize their auto manufacturing operations in the region. Deepening has involved increased investments and pressure on local firms to modernize production management. If overseas facilities are to be used for exports as well as domestic markets, quality must be raised by replicating Japanese practices. There thus seems to be a marked increase in efforts to implement quality circles, to organize suppliers' cooperative associations, to improve stamping lines, and so forth in overseas operations (discussed below).

Note that this process has occurred even in certain of the ASEAN-Four that are categorized above as the locus of simple assembly operations. In Thailand the FI inflow has resulted in labor scarcities and encouraged many firms to increase both capital equipment and required skill levels. The importance of both local and regional markets has also prompted several Japanese firms, including Kawasaki, to establish design and R&D centers in Thailand and elsewhere in the region.[20]

To rationalize their operations, the assemblers have begun to engage in limited cooperation among themselves (e.g., in engine manufacturing in Indonesia and Thailand). They have also begun to develop intrafirm production and trade arrangements within the region. Toyota, traditionally the most Japan-bound producer, has begun to ship engines from Indonesia to Malaysia, Taiwan, and Japan, and from Thailand to Portugal. The firm has also begun to use Southeast Asia as a source of press dies for its regional operations. Toyota's Thailand complex is slated to play a leading role in the firm's "planned Southeast Asian parts-production network" (*Japanese Motor Business*, July 1989 and various issues). Nissan has announced a regional complementarity program that would involve Taiwan selling Nissan auto bodies to Thailand and Thai-made Nissan engines going to Taiwan. Nissan's role would be to coordinate production and distribution among the Asian countries, to "administer the traffic" (*Asiaweek*,

20. The Kawasaki case highlights the importance of regional market niches and the potential for intraregional exports. Thai Kawasaki originally produced for the domestic market. After Kawasaki's plants in the Philippines and Indonesia ran into problems. the firm decided to focus its assembly activities in Thailand, where Kawasaki's facilities had initiated design changes to meet the specific requirements of Thai consumers. These were approved by the home office in Japan, proved quite popular in the Philippines and Indonesia, and have resulted in exports as well as a design center in Bangkok (author interviews). Note the following other cases: Isuzu has organized a special automotive engineering program with Thailand's King Mongkut Institute of Technology. Toyota plans to invest several hundred million baht to develop technology-transfer programs in Thailand; these will include establishing an automotive engineering department at one of Thailand's universities, setting up auto mechanics courses with local technical schools, opening a Toyota automotive vocational center to produce qualified mechanics, and granting scholarships to university students. Thailand's Federation of Thai Industries plans to join with Japan's Keidanren to establish an institute to train technicians and engineers. The Japan International Cooperation Agency provided financial and technical support for two materials testing centers in Thailand. Sony will establish a major research and manufacturing operation in Taiwan (*Bangkok Post*. various issues).

October 26, 1986). Mitsubishi has perhaps been the most active by initiating intraregional exchanges among its plants and promoting an ASEAN complementarity scheme. Honda has recently begun participating in this plan as well. Several of these projects involve overseas production and export of old models or older technologies (e.g., Mitsubishi is reportedly manufacturing an engine in Indonesia that has been phased out of production in Japan). But some also involve products used in Japan but cheaper to make in East Asia due to labor costs. Such products are not necessarily low-skilled goods. Nippondenso Tool and Die is exporting dies from Thailand to Japan due to a shortage of tool-and-die experts.

Many of these plans are still on the drawing board. Some will not come to fruition, and those that do will take some time to work out. The precise mix of "self-contained" investments versus "regional division of labor" also remains to be seen. It will, however, reflect efforts to reconcile (1) host country factors, such as localization policies and particular market characteristics; (2) pressure to increase efficiency through regional scale economies; and (3) tensions between regional and global strategies of particular firms. Japanese strategies will also have to take account of competition from South Korean firms, especially Hyundai, whose shrinking North American export markets have prompted new efforts to penetrate ASEAN as well as Japanese markets ("Update on South Korea" 1990; author interviews).

These two cases suggest that the impact of Japanese FI varies with factor endowments, entry barriers, and the degree of industry-specific restructuring within Japan itself. And they suggest that the emerging hierarchy will not be a neat alignment in which the ASEAN-Four are confined to simple assembly activities. The fact that much of this new Japanese investment builds on existing facilities and interests suggests greater potential for both local value added and continued tension between individual host country concerns and efficiency on a regional level.

More broadly, it appears that the impact of FI on the comparative advantage and exports of a particular host country is indirect, mediated by host country conditions, the shifting comparative advantage of neighbors, and the ways in which host countries screen and manage FI. Before addressing that management process in section 5.5, I turn to the supply side of Japanese investment in the Pacific Asian region.

5.3 Supply of Japanese Investment

To assess the impact of Japanese FI on East Asia from the supply side, I first examine the broad evolution of Japanese investment and the region's position as an investment target within that evolution. I then explore the domestic sources of Japan's ability to promote structural changes at home along with those it helps to engender abroad. I conclude with an analysis of the important institutional components of Japan's investment presence in the region.

5.3.1 Patterns of Japanese FI

Japanese FI in East Asia has passed through three general phases. Until the late 1960s, Japanese capital flows to the region were "quiescent and narrowly circumscribed" due to Japanese capital controls and pervasive anti-Japanese attitudes by host countries (Encarnation 1992, 167–68). Capital controls were probably the dominant factor here, since the low levels of investments in East Asia mirrored the modest global levels of Japanese investments, at least relative to those of the United States (tables 5.16 and 5.17). During this period, the largest share of Japanese investments in the region was devoted to natural resources.

Manufacturing investments jumped in the early 1970s as a result of several factors, including domestic capital liberalization, the 1971 yen appreciation, increased protectionist pressure from the United States, and host country performance requirements. Although the import and development of natural resources continued to play an important role, the expansion of Japanese textiles and electronics investments was especially striking (table 5.18). As host countries shifted from import substitution to a greater emphasis on exports, the portion of export-oriented investments in labor-intensive intermediate and final products expanded.

Japanese investments increased in overall volume during the 1980s, especially following the yen appreciation. Indeed, after remaining relatively constant in 1977–80 and rising slightly in 1980–86, the number of Japanese affiliates worldwide roughly doubled from 1986 to 1988 (Ramstetter 1991b, 30). This period also witnessed a more pronounced shift of emphasis from natural

Table 5.16 **Japanese FDI**

	1965	1970	1975	1980	1985	1988
Percentage of GNP	0.5	0.7	1.7	1.8	3.4	4.0
Amount (billions of U.S. dollars)	0.4	1.5	8.2	19.5	45.0	113.1

Source: Balance of payments figures cited in Yoon (1990, table 1).

Table 5.17 **Components of Japanese FI (percentage)**

Area	Contents	1951–71	1972–80	1981–84	1988
Developed	Resources	10.3	7.0	2.5	2.9
	Manufactures	9.2	11.4	15.0	16.4
	Other	31.3	26.9	32.6	42.2
Developing	Resources	14.3	14.4	9.9	5.5
	Manufactures	18.2	24.0	12.2	10.4
	Other	16.5	16.2	27.9	22.6
Amount (billions of U.S. dollars)		4.4	32.1	34.9	186.4

Source: Approved investments cited in Yoon (1990, table 2).

Table 5.18 Distribution of Japanese FI in Manufacturing

	Region	1975	1980	1985
Processing and assembling	North America	8.5	12.7	37.6
	Machinery	3.1	1.8	10.3
	Electrical machinery	4.7	9.8	17.1
	Transportation equipment	0.7	1.1	10.2
	Asia	9.3	7.7	11.9
	Other	14.0	14.1	13.9
Basic	North America	22.3	9.9	10.9
	Asia	24.3	30.7	5.2
	Other	12.2	19.8	11.6
Other	All regions	9.4	5.2	8.8

Source: Yoon (1990, 11).

Note: Basic industries include food, textiles, wood and wooden products, pulp and paper products, chemicals, iron and steel, and nonferrous metals.

resources and cheap labor in the developing countries to technology-based, market-oriented activities in the developed countries (table 5.17). The global percentage of Japanese FI going to the NICs and ASEAN-Four also declined, from roughly 26 percent of the 1953–83 cumulative total to 10 percent of the 1987 figure (table 5.19), as did the percentage going to developing countries overall. Nonmanufacturing investments, especially in U.S. finance and insurance sectors, expanded sharply after 1985.

This picture of a geographical shift away from East Asia and a sectoral shift away from manufacturing requires qualification. First, the statistics cited in table 5.19 do not cover direct investments by subsidiaries using money obtained abroad. Second and more important, the absolute volume of Japanese FDI to the NICs and ASEAN countries has expanded rapidly, averaging a $2 billion/year increase for all eight countries during the 1984–87 period in contrast to a roughly $485 million/year annual growth for the 1951–83 period (Nakakita 1988, table 3, 308, 310). This reflects not only complementarity in industry structures (wages, technological developments, and structural changes in Japan). It is also a function of "country bias" factors such as physical proximity and strategic interests (Pangestu 1987). Further, in the coming years Japan may shift the emphasis of its investment from North America and Europe to developing Asia. This may occur for several reasons: Asian investments yield relatively high profits; Japan's "trade friction–avoiding" investments are largely in place; Japanese firms are worried about economic uncertainty in the industrialized countries; and American and European trade blocs could push Japan to focus on its own backyard.[21]

21. According to a recent Export-Import Bank of Japan survey, 115 major Japanese firms said they would direct 26.1 percent of their foreign investment to the European Community between 1992 and March 1994. But ASEAN was slated to receive 25.1 percent and the NICs 12 percent (Rowley 1992a; see also Rowley 1992b; *Asian Wall Street Journal Weekly,* April 15, 1991, cited in Lim 1991, 93).

Table 5.19 **Distribution of Japanese FI (percentage)**

	1951–83	1984	1985	1986	1987
NICs	10.0	8.0	5.8	7.0	7.7
Korea	2.4	1.1	1.1	2.0	1.9
Taiwan	0.9	0.6	0.9	1.3	1.1
Hong Kong	3.9	4.1	1.1	2.3	3.2
Singapore	2.8	2.2	2.8	1.4	1.5
ASEAN-Four	16.3	6.8	4.8	2.5	3.0
Indonesia	12.5	3.7	3.3	1.1	1.6
Malaysia	1.5	1.4	0.6	0.7	0.5
Philippines	1.3	0.5	0.5	0.1	0.2
Thailand	1.0	1.2	0.4	0.6	0.7
China	0.1	1.1	0.8	1.0	3.7
Oceania	5.3	1.2	4.0	4.4	4.0
United States	27.0	33.1	44.2	45.5	44.1
Europe	11.6	19.1	15.8	15.5	19.7
World (in millions of U.S. dollars)	61,278	10,155	12,217	22,320	33,364

Source: Japan Ministry of Finance, cited in Nakakita (1988, table 3).

Third, these figures also exclude overseas activities that do not involve capital transfers but do offer host countries the opportunities to capture knowledge-based assets. One involves expertise provided to host country importers of production machinery by the machinery makers' sales engineers.[22] There are also, as noted earlier, several "intermediate" forms of overseas activity by firms who might otherwise engage in more direct FI. These include business tie-ups (cooperative links between Japanese and foreign firms involving the acquisition and provision of sales rights or brand names), technological tie-ups (the provision of new technologies between Japanese and foreign firms for joint efforts on R&D), and production cooperation (cooperative links involving commissioned and local production). The number of these intermediate forms has risen, with the greatest gain in technological tie-ups and production cooperation agreements in the NICs (Nakakita 1988, table 4). Indeed, there is evidence that in South Korea, at least, knowledge-based assets obtained from licensing, technical services contracts, turnkey plants, and machinery imports were more important than FDI (Westphal, Rhee, and Pursell 1984). The relative weight of intermediate forms versus FDI may also vary with industry and, as discussed below, with the level of development of local firms.[23]

22. This is the "major mechanism for technology acquisition" by Thailand's largest locally owned producer of consumer electronics (Shiowattana 1991, 182–83).

23. In South Korea, for example, technical licensing is the major source of foreign technology in the general machinery subsector. According to one study, this reflects the subsector's multitude of differentiated products, most of which involve several distinct processes, each of which can be licensed. Since no two products may be alike, no two processes or technologies may be alike (Amsden and Kim 1986, 100).

But it also appears that small and medium-sized Japanese firms (SMEs) prefer such intermediate forms and that most SME technical tie-ups have taken place in the Asian NICs, followed by ASEAN and the People's Republic of China (Phongpaichit 1988, 305–6). In addition, the contribution of SMEs to Japanese FI in Asia has increased since the mid-1980s. By the end of 1986, the yen appreciation raised the cost of Japanese goods overseas by some 40 percent. Supplier firms in Japan were asked to reduce the price of their components—by 30 percent in the case of firms supplying one auto assembler (Phongpaichit 1988, 304). This need for price reduction has translated into a powerful incentive to shift production overseas. Investments by Japanese SMEs may hold further benefits to the extent that these firms bring more standardized (and thus more accessible) technology, as well as marketing and managerial know-how needed by host countries. The growing number of investments by SMEs from NICs, especially Taiwan and South Korea, reportedly yield similar benefits (e.g., Ramstetter 1988).

The relative reduction of Japanese FDI to East Asia thus seems to have been offset by quantitative increases in investment flows as well as new forms of investment and particular knowledge-based assets brought by SMEs from the NICs as well as Japan. Two other factors reinforce this admittedly optimistic picture. One is the incremental nature of the investment process. A good portion of Japan's new investments in East Asia is reportedly going to restructure or expand existing investments ("Asia/Pacific" 1989, 50). This assertion is supported by the fact that the recent expansion of FI does not seem to have been a sudden shift caused solely by exchange rate shifts. For many Japanese SMEs, the yen appreciation simply accelerated a process, begun some seven or eight years before, during which they have collected information, made feasibility studies, and monitored economic and political trends in potential overseas investment sites (Phongpaichit 1988, 304–5). The process of globalization among larger firms was also well under way prior to the yen appreciation (Kohama and Urata 1988, 330).

Another factor offsetting the relative reduction in FDI going to East Asia is a tendency for Japanese investment, since the yen appreciation, to promote both a widening and a deepening of overseas manufacturing facilities. I have addressed this issue in the context of the Thai auto industry. Consider here some changes in the Thai electronics industry (Shiowattana 1991, 186–89). Since the exchange rate shift, several Japanese firms have encouraged their Thai partners to stop relying on Japanese suppliers and to begin obtaining components from South Korea and Taiwan. They also began to localize production tools such as press dies and plastic injection molds. Several have expanded their human resource development programs, and at least one has announced plans to establish an R&D center to put Japan-based research findings into product development. Similar developments have occurred in Malaysia (Sanger 1991).

Much of this additional investment, at least in the ASEAN cases, involves

cooperation with established local firms. Local capitalists often have experience in working with foreign partners as well as the financial and managerial capacity to take advantage of new resources. The expansion of linkages between Japanese investors and major Thai firms such as Siam Cement, Saha Union, and Charoen Pokphand illustrates this point (Phongpaichit 1991, 42–43). But, at least in the Thai and Malaysian cases, the pattern extends to many medium-sized local firms that, through Japanese technology and local content regulations, had already become suppliers of parts and components to Japanese firms.

This pattern of building on existing investments and capacity suggests that the production expansion occurring in the ASEAN-Four as a result of new FDI may involve more than simple assembly and other low value-added operations. Thai firms producing under the country's largely import substitution regime have developed sufficient capacity in processes such as forging, mold making, die casting, and plastic injection to supply many parts needed by foreign appliance, electronics, and auto firms. Thai industries, according to one account, "are already well into the phase of developing central industries with satellite suppliers, of the type in Japan and Taiwan" (Handley 1991, 466). This process is certainly not uniform across or within countries. Cross-nationally it varies in large part as a function of policies and institutions (discussed below). But it may also vary within one industry and one country as a function of differences among Japanese investors. Some Japanese firms, for example, have responded to the yen appreciation with a "self-contained" approach (discussed above). Others have pursued the "division of labor" type of investment, in which each host country facility is part of a global production system and any technology introduced is highly fragmented (Shiowattana 1991, 186–88).

5.3.2 Domestic Sources of Japanese Structural Change

Japan's growing FI and its support for shifting comparative advantage in neighboring countries has required structural change at home—shifting resources out of declining and into advanced industries. Such change has been facilitated by particular political arrangements and high levels of investment leading to constant productivity improvements, especially in process innovation.

Japanese growth has relied on, among other things, a conservative coalition for which small business constitutes an "organized swing constituency," especially in periods of domestic crisis (Calder 1988, 348). This "structural bias toward the small" has entailed government policies promoting sectoral development in industries such as textiles, autos, and machine tools. Also, because the Japanese labor force has lacked strong political influence, it could be "eased out of old industries and retrained for new ones" (Cumings [1984] 1987, 65). Further moderating labor's response to structural change has been the Japanese distribution sector's capacity to function as a sponge for labor made redundant by automation.

There are questions as to the strength of these arrangements. The conservative coalition, especially the linkages among agriculture, small business, and big business, has begun to erode under the pressure of economic liberalization (Pempel 1989). To the extent that this occurs, we may see (1) increased conflicts among and within industries with regard to the adjustment capacity of smaller firms, and (2) a more rationalized distribution sector with reduced capacity to absorb redundant labor.

There are also concerns that the replacements of exports by FDI will lead to an industrial "hollowing-out" in Japan (Yoon 1990, 18–20). Growing FI, it is argued, has already reduced investment in, orders to, and employment in the traditionally most efficient industries such as autos. Although many of the unemployed have been absorbed into services and distribution, these are sectors with low productivity growth. Furthermore, shifts of production of lower-end products abroad will entail a loss of production experience, a phenomenon already apparent in the deterioration of Japan's tool-and-die-making capacity.[24] These shifts may also undermine the intraindustry linkages that have supported the development of higher-level products.

A thorough discussion of these concerns is beyond the scope of this paper. But if Japan's automotive, office machinery, computer, and machine tools industries relocate 30–50 percent of their production overseas within the next five to ten years, as suggested by MITI, the political arrangements surrounding this relocation will become increasingly important ("Japan's Drive into Asia" 1989, 50). In section 5.3.3, I explore some of the institutional channels through which relocation has occurred.

5.3.3 Institutional Sources of Japanese Investment in Pacific Asia

Japanese investment in the Asian region has been facilitated by a relatively proactive and institutional approach to regional development by the Japanese government and private sector. In concluding this section, I wish to explore the degree to which public and private sector actors in Japan attempt to manage shifts in the regional division of labor and the range of institutions through which they do so. I hope to avoid the pitfalls of the usual industrial policy debate between state- versus market-led explanations of Japanese economic success. My argument is not that the Japanese government has determined and directed public and private sector activities concerning shifts in the region's division of labor. Certainly the government has been important, especially since the mid-1980s. But its role has been one of promoting collective action toward goals already embraced by the private sector. In addition, private sector

24. This is reflected in Toyota's obtaining an increasing portion of its dies for Asian operations from Thai firms, as noted earlier. Nevertheless, Japan continues to produce dies. Chrysler recently looked for a die producer to provide the 210 pieces necessary for a model it intended to begin making in Thailand. The U.S. price was $35 million, the Thai price $14 million, and the Japanese price $10 million. Chrysler officials stated, however, the Japanese price was clearly a giveaway designed to maintain market share (author interviews).

institutions have themselves played important roles in promoting Japan's overall investment position.

Ironically, given the region's importance to Tokyo, a coherent Japanese government policy toward the developing countries of Asia has been fairly slow in coming. Early efforts included ASEAN technology support by the Association for Overseas Technical Scholarship (AOTS) followed trade tensions in the mid-1970s, Prime Minister Fukuda's 1977 pledge of major support to ASEAN projects, and Prime Minister Suzuki's effort to refocus Japanese aid on clearly designated priority areas.[25] But more focused attention on the region did not come until the mid-1980s. By that time, Japan was coming under significant pressure from ASEAN countries, then suffering from severe economic slumps, to correct trade balances and redirect FI from the United States and Western Europe to Asia (Unger 1990a, 1993); Awanohara 1986; Smith 1986). The United States was pushing Japan to stimulate domestic demand and expand foreign assistance. Increased protectionism in the United States, while not negating the importance of the American market, did encourage the Japanese to look to Asia as a way of correcting an overreliance on Washington. This extended to an explicit recognition, at least by MITI, of the need to develop a horizontal division of labor between itself and its Asian neighbors. Such an arrangement, it was argued, would encourage the long-range industrial growth of its neighbors, thereby expanding markets for Japanese manufactured goods as well as reducing the destabilizing impact of Japan's economic self-sufficiency.

The yen appreciation, beginning in September 1985, added more immediate economic logic to these arguments. MITI calculated that, given exchange rate shifts, a given amount of industrial investment overseas would yield more jobs and thus create more long-term economic welfare than the same investment in Japan (Smith 1986, 56–57). The result of these concerns was a MITI draft called the "Project for Comprehensive Cooperation and Asian Industrialization" (also known as the New Aid Plan). The plan drew on extensive discussions with private sector organizations such as Keidanren, as well as research by government organizations such as the Japan External Trade Organization (JETRO) and the Institute for Developing Economies. One of its goals was to facilitate Japanese domestic restructuring. The other was to provide assistance for export-oriented industries in developing Asia, including help in targeting particular sectors for development. These may be part of MITI's efforts to extend its industrial planning and coordination activities into foreign economies

25. The creation of the Thai-Japan Technological Promotion Association (TPA) illustrates one type of Japanese response on which subsequent measures have been built. During the outbreak of anti-Japanese demonstrations in 1971 and 1972, MITI investigated ways to alleviate the tensions. Reportedly on the advice of the head of the AOTS, the ministry supported the creation of an institute devoted to technology transfer. The TPA was established in 1973 and operated with financial support from some one hundred Japanese firms. As a student in Japan during the early 1970s, the present director of the TPA had participated in anti-Japanese demonstrations in solidarity with his fellow students in Bangkok (author interview; TPA materials).

in response to the expansion of Japanese FI and the lack of coherent industrial policies in host countries (Wade 1992, 290).

This plan was reportedly never officially adopted, due in part to intrabureaucratic conflicts. The plan was more attractive to MITI than to other agencies because it would expand the former's funds and range of jurisdiction when factors such as private sector strength have weakened its traditional functions and leverage (Unger 1990a). But the plan's central thrust has been carried on by a variety of measures and state agencies. In Japan these include, among others, special Export-Import Bank of Japan loans for Japanese investors going abroad (Yoon 1990, 9; Doner 1991, 82), and industry-specific institutions to help in domestic restructuring.[26] Moreover, efforts at domestic restructuring in response to advances in the NICs have been initiated by business associations in industries such as textiles and machine tools (JICA 1989; Fransman 1986a, 171).

Outside of Japan, institutional support includes industry surveys, training, and development assistance by the Japan International Cooperation Agency (JICA), the Overseas Economic Cooperation Fund (OECF), the Japan Overseas Development Corporation, the AOTS, and JETRO. A recent addition is the Japan-ASEAN Investment Corporation, an organization funded by the OECF and designed to channel Japanese FI to worthy projects in ASEAN.[27] Although state or quasi-state agencies, these activities often involve and/or serve the Japanese private sector. For example, members of the private sector do much of the groundwork for projects to be funded by the Japan-ASEAN Investment Corporation. Similarly, in Malaysia a JETRO-sponsored evaluation of press-die and precision-molding capacity made use of Japanese industry experts, and in Thailand, JICA arranged for a visit by the founder of the Japanese mold-and-die association (Tsuruoka 1992; author interviews). The AOTS, which began as a pre–World War II center for overseas Asian students, works with MITI to manage the training of overseas buyers and technicians invited by Japanese industrialists to familiarize themselves with locally made machinery.[28] Further, many of these activities are industry-specific and result in a very impressive level of information. For example, JETRO and JICA officials are

26. The Export-Import Bank's Asia-related activities have shifted over time as a reflection of the region's changing comparative advantage. During 1957–67 and 1968–73, Asian textiles took a dominant portion of the bank's loans. But in 1974–80, the portion of loans going to textiles declined sharply. This reflected the NIC's movement out of light manufacturing into heavy industry, so that 90 percent of the bank's loans to East Asia went to heavy and chemical industries, compared to 7 percent for textiles and sundries (Ozawa 1986).

27. I am grateful to David Arase for bringing this organization to my attention. This organization probably had its genesis in an earlier (1981) body known as the ASEAN Finance Corporation, established by Japan's Committee for Economic Cooperation (Keizai Doyukai).

28. AOTS had enrolled over 27,000 students by 1984. Its trainees first undergo a five-week course in Japanese economy, society, culture, and language. They then spend four months in private companies, often the ones with which their own company has formed a joint venture. JICA also serves training functions but focuses on preparing employees for work in public enterprises and state agencies rather than in private corporations (Koike and Inoki 1990, 64–65).

probably better informed than most officials in Thailand's Ministry of Industry on the competitiveness of various sectors of Thai industry (Unger 1990a, 27; author interviews).

Finally, a number of private sector organizations have played direct roles in supporting this expansion of Japanese investment in Asia. Trading companies (*sogo shoshas*) were traditionally important sources of information and financing for Japanese firms making initial moves into overseas production. With the extensive experience gained by many Japanese firms, as well as the need for more direct control in pricing and marketing, the role of trading companies (and intercorporate networks in general) has declined (Yoon 1990, 12–13). Yet *sogo shoshas* remain important as sources of technical assistance and marketing channels for host country firms, and of information to smaller Japanese firms beginning overseas operations.[29] They are especially important in certain industries, such as textiles, and in certain countries, such as Taiwan, where they reportedly handle over 50 percent of trade with Japan (Baum and do Rosario 1991). And they continue to play a major role in opening up new geographical markets, such as Vietnam (Lehner 1992a).

The overseas branches of Japanese banks fulfill similar information functions. Also, business groups, or *keiretsu*, have at times facilitated the overseas expansion of firms within the group. This has certainly been the case in the auto industry, where Japanese parts and components suppliers have been asked by their primary assemblers to establish operations overseas, and where Mitsubishi Motors joined Malaysia's "national car" project in part through the activities of other Mitsubishi firms in Malaysia (Doner 1991). Also, large Japanese supermarkets and department stores help Asian producers to improve quality control, place orders, and bypass Japan's complex distribution system (Unger 1990b, 41).

Business associations have also been active. The Japan Chamber of Commerce and Industry provides information to Japanese SMEs at home through individual trade associations while gathering data in host countries (Phongpaichit 1988, 308). The Mitsubishi supplier cooperation association sponsored study trips to Southeast Asia when overseas production facilities were being considered (Smitka 1991, 44). Keidanren, reportedly backed by MITI, has established the Industrial Project Development Corporation, whose function is to identify targets for Japanese FI.[30] A think tank supported by the Japanese auto industry is currently undertaking a comprehensive study of present and future needs of the Southeast Asian auto industries (author interview).

The argument here is not that the Japanese government is orchestrating a private sector shift to Asia. The consensus of Japanese executives in the auto and electronic industries interviewed recently in Tokyo was that MITI has

29. Unger (1991c, 41) notes Marubeni's role in arranging for Japanese technical assistance to Thailand's Siam Cement as part of a joint venture operation.

30. I am grateful to David Arase for providing this information.

pressed Japanese firms to invest in the United States and Western Europe but not in East Asia.[31] This is to a large degree because such pressure has not been necessary. As interviewees noted, economic factors encouraged Japanese firms to build on overseas investments and facilities already in place.[32] The government has supplied collective goods necessary to reduce risks for such investments and encouraged private sector efforts to do likewise.

These efforts are clearly designed to promote trade and production linkages between Japan and its neighbors. Illustrative cases abound: public and private sector officials of the Thai textile industry note that JICA proposals for better machinery translate into calls for the import of Japanese equipment (JICA 1989; author interviews). The Japanese report on the Malaysian die industry recommends the adoption of certain grinding techniques that facilitate assembly into Japanese dies (Tsuruoka 1992, 45). U.S. firms attempting to interest Thais in American machinery found that the latter had already adopted Japanese specifications (author interviews).

5.4 Institutional Impact of Japan's "Organized Capitalism"

According to some observers, Japanese multinationals differ from their Western counterparts in their preferences for minority equity arrangements, their emphasis on developing countries and standardized industries, and the heavy trade orientation of their investments (e.g., Kojima and Ozawa 1986). Western analysts have cast serious doubt on this view, arguing that such differences are either exaggerated or tend to disappear as multinationals from both countries confront similar economic and political environments (Encarnation 1992; Ramstetter 1991b).

The one area in which differences do seem to exist involves the institutional forms of and supports for Japanese investments discussed in section 5.3.3. Indeed, as many have noted, these arrangements suggest the operation of a more organized form of capitalism in Japan than is common in the United States (e.g., Noble 1989). Here I wish to explore the possibility that Japanese FI, when combined with host country efforts to adopt best practices, can lead to a diffusion of Japanese-style institutions in the region. Rather than a process of mechanical replication, the hypothesis to be explored involves an uneven tendency toward institutional convergence. This section, which is meant to be suggestive, examines the potential for such convergence by focusing on specific institutional arrangements appearing in the region, identifying their

31. Interviews conducted in Tokyo, January–February 1992, by Patcharee Thanamai, Thammasat University, as part of a joint project with the author.

32. During the first half of 1986, "the rapidly improving competitive edge of the East Asian NICs in industries such as steel and electronics, and even in machine tools, has given rise to a stream of plans for shifting production out of Japan to the countries concerned" (Smith 1986, 57).

sources, and exploring possible causes for cross-national variation in their strength.

5.4.1 Looking East to "Japan Inc."

Unger has argued that "most of the capitalist countries of East Asia have already set about learning from Japan and drawing on Japan's successful experience in devising institutions suited to its developmental goals" (1993, 19). At its most general level, this has involved the promotion of public-private sector cooperation. South Korea is clearly the most striking and extensive case of this pattern (e.g., Ting 1985, 77). Also worth note, however, are efforts by Malaysia and Thailand. Malaysia's Prime Minister Mahathir has proclaimed the need for a "Malaysia Inc.," including admonitions to emulate Japan's work ethic. In Thailand, officials of the National Economic and Social Development Board joined with local industrialists to promote private sector peak organizations and joint public-private sector consultative committees during the governments of General Prem Tinsulanond (1980–88; Jomo 1985; author interviews). Both of the efforts have encountered serious political obstacles. In Malaysia, Malay antagonism toward Chinese-dominated business undermines real cooperation between the Malay-dominated state and local capitalists. In Thailand a more fragmented political arrangement under General Prem's successor seems to have stymied the corporatist-like developments of the consultative committees. But the efforts seem to have made a difference. Discussions between Malaysian businessmen and government officials at both industry and national levels are more extensive than before. And in Thailand, industry's peak association has continued to play a major role in aggregating and articulating the views of its members.

5.4.2 Interfirm Cooperation

The efforts to promote peak business association and public-private sector linkages described above came from Malaysian and Thai officials. At the sectoral level, however, at least in Thailand, there has also been pressure from the Japanese.[33] This has involved conditions attached to Japanese industrial support. JICA has been a major supporter of Thailand's Metalworking and Machinery Industries Development Institute (MIDI). MIDI's function is to provide both technical and organizational support for Thailand's SMEs. JICA has emphasized the critical role of business associations in Japan's industrial growth. It has arranged for a visit by the founder of Japan's mold-and-die association. And most critically, JICA has informed MIDI that its financial support is to be

33. This discussion draws on author interviews and on JICA (1989). Note also a case in which Japanese firms demonstrated the utility of cooperation through their own actions overseas: some one hundred Japanese companies in Malaysia reportedly agreed, informally, to restrain their competition for electrical engineers in the country's tight labor market (Tsuruoka 1991, 52).

distributed through such organizations, not through the government. In part under this pressure, MIDI sees itself as a sort of midwife whose function is to encourage the development of independent associations of metalworking firms.

The Japanese have also raised the importance of cooperation among firms through JICA's study of the country's largest industry—textiles and apparel—and, presumably, in other industry studies. In examining Japan's and Thailand's need for textile restructuring, the report stresses the importance of local industry associations and "linkage production units," that is, firms possessing "vertical links with different industries . . . to improve . . . information gathering, product development, and adaptation to wide variety in small lot production" (JICA 1989, A-III-26).

5.4.3 Trading Companies

A number of countries in the region have recognized the benefits of Japan's version of the general trading company (GTC) and have attempted to develop their own. Here I want to focus briefly on the two most extensive efforts, those of Taiwan and South Korea.[34] Both of these cases involved "conscious government attempts to adapt to their respective settings institutional arrangements borrowed from Japan" (Fields 1989, 1075). Yet their achievements were quite different. Korea's GTCs grew impressively, rapidly expanding the country's exports while assembling large, diverse business conglomerates. Taiwan's effort to graft the Japanese institution largely failed. By the mid-1980s, Japanese, not Taiwan, trading companies dominated the island's foreign trade.

Several factors account for these different outcomes. First, Taiwan GTCs encountered significant competition. Rivals included not only local manufacturers, government agencies, and trade associations, but also Japanese trading companies, which had free entry to the island and controlled some 50 percent of Taiwan's trade. In South Korea, on the other hand, Japanese trading companies were excluded until the 1960s. The two cases also differed with regard to support offered by large business groups. Korean GTCs benefited from financial support and a reliable source of export products from Korea's large business groups (*chaebol*). Taiwan's business groups, on the other hand, largely ignored the fledgling GTCs. These groups already had internal trading arms and were largely based in manufacturing, thus having little interest in expanding trading interests. Further, the Taiwan government did little to promote group-GTC ties, due to its own fears of business concentration. This stands in sharp contrast to South Korea's approach of development on the basis of large firms. Indeed, as Fields stresses, the government of Taiwan differed sharply from its Korean counterpart in offering "virtually no incentives" (1989, 1087).

34. On Malaysia, see Jomo (1985). Information on the Taiwan and Korean efforts is drawn from the work of Karl Fields (1989, 1990).

5.4.4 Subcontracting

Japan's success in manufacturing owes much to the strength of subcontracting relationships, whether between primary assemblers and component suppliers in autos (Smitka 1991) or between large fiber producers and downstream processors in textiles and apparel ("A Japanese Approach to Investment" 1991). I know of no study of subcontracting in the region as a whole. But evidence from Thailand, a country with probably average if not above-average levels of subcontracting, suggests that the phenomenon is a fairly recent one, emerging in the early 1970s as a response to local content regulation.[35]

There are also a number of factors impeding the growth of subcontracting in the region. As noted earlier, the positions of SMEs relative to dominant political coalitions helps to account for the weakness of subcontracting in South Korea and the Philippines (under Marcos). The predominance of large firms in Indonesia probably also discourages subcontracting. In Malaysia, ethnic differences also undermine subcontracting linkages. The Malaysian Ministry of International Trade and Industry has designed a subcontractor exchange scheme—a computerized data base designed to link small suppliers with larger primary firms. Yet the Chinese owners of many SMEs are reluctant to participate for fear that the data base will be used to force them to "restructure" their equity in favor of ethnic Malays. A second illustration: ethnic Chinese auto parts firms have refused to accept the Japanese-style supplier purchase agreement designed by Mitsubishi for firms supplying parts to the Malaysian national car. Their fear is that ethnic Malay employees of the national car firm will use price information from the suppliers to establish new parts firms.

There are also economic obstacles, even where the political factors are more propitious (Amsden and Kim 1986, 119). Subcontracting often involves a small group of large prime contractors amid a galaxy of small satellite subcontractors. Yet even in South Korea such large production units are just emerging in several industries. Based on the Japanese experience, subcontracting also seems to require excess demand, pushing prime firms gradually to increase their reliance on suppliers. Yet the problem for many firms in East Asia has been excess capacity. Subcontracting also seems to expand when prime contractors experience labor market rigidities and are not able to shift workers among assignments and extend the workday. Yet in most East Asian firms unions are weak, and there is little ostensible need to rely on subcontractors.

Finally, sociocultural factors may hinder the expansion of subcontracting in the region. As the Japanese experience has shown, trust is critical to subcontracting. Yet trust is not a strong point in several of the region's cultures. Many

35. Dahlman and Brimble (1990, 23). This study found "significant subcontracting activities" in textiles, wood products, metal products, machinery, electronic and electrical products, and transport equipment.

have, for example, stressed the tendency to defect from the group in Chinese business culture on Taiwan (Fields 1990). In Thailand, a country long known for its "loosely structured" social system, Seagate and Sharp abandoned efforts to establish links with domestic subcontractors due to a lack of trust when subcontractors released product designs to competitors (Dahlman and Brimble 1990, 24).

Despite these obstacles, there are indications that subcontracting linkages are becoming stronger in the region. Some pressure is coming from governments impressed with the Japanese model and convinced that subcontracting is necessary to strengthen local firms and the overall competitiveness of their country. The government of Taiwan, for example, has required Toyota to extend active support for the local auto parts and components industry as a condition of its operations (LTCB 1987, 8). The Thai Board of Investments, hardly a proponent of industrial policy, is encouraging local subcontracting through the Board of Investments Unit for Industrial Linkage Development (BUILD; *Business Asia,* May 27, 1991, 74).

Democratic and populist pressures may also encourage this development. In South Korea, popular opposition to economic concentration and the government's strategy of building up national champions prompted the Korean state to strengthen local subcontractors through measures such as tax incentives, the promotion of small-firm cartelization, requirements for frequent payments to vendors by large firms, and a ban on prime contractors' buying out suppliers (Moon 1988). I suspect that this kind of dynamic may emerge in Indonesia, where the Suharto government is constantly concerned with ethnic antagonism against Chinese-owned conglomerates.

There may also be situations in which the economic conditions discussed above encourage local firms to initiate or support subcontracting on their own. This may be the case for Siam Nawaloha, the foundry and casting firm within Thailand's giant Siam Cement group. A number of former employees of this firm have left to establish small machine shops close to the firm (author interviews).

But Japanese firms attempting to expand and improve quality are probably the major force promoting subcontracting. Let me conclude this discussion with a description of an institutional component of automotive subcontracting in Thailand—the cooperation club. This is the Thai analogue of the suppliers' cooperative association, a critical component in Japanese auto production. The associations are groups of auto parts and components suppliers organized by assemblers in Japan for purposes of technical, managerial, and, at times, financial support.[36] The Thai club described here was initiated by Isuzu. I do not know how it compares to those reportedly organized by Nissan, Toyota, and

36. The best discussion of these associations in Japan is Smitka (1991). The following draws on interviews.

Mitsubishi in Thailand. It does, however, conform to the outlines of suppliers' associations in Japan.

The Isuzu cooperation club is controlled by Isuzu's purchasing department. Its members are those suppliers with a fairly high level of original equipment sales to Isuzu. These are the suppliers on whom Isuzu depends heavily and who therefore share with Isuzu all information relevant to production (e.g., cost, price, technology, etc.). If a supplier is invited to join, membership is essentially compulsory if sales are to be maintained. The club's activities are a combination of the social and the professional. The former include various kinds of outings. The latter include the provision of information on issues such as projected model changes and quality problems, the organization of quality circles and QC competitions, and factory visits among the members. The diffusion of information is certainly a major objective of the club. But equally if not more important is the promotion of trust, a feature emphasized by Smitka for the Japanese associations. Trust is, moreover, seen by members as an important and inexpensive method for diffusing information.

Trust is promoted in part by the assembler's willingness to provide important technical and managerial support in exchange for each supplier's openness with regard to its own operations and its commitment to meet price and quality requirements. But the club also promotes trust among suppliers, even those producing the same item, as a way of diffusing best practices. Social outings, at first resented by parts makers as sophomoric, gradually became an opportunity to know and exchange views with other suppliers. QC contests, although intensely competitive, also encouraged trust because teams must openly discuss their problems and their proposed solutions.

Factory visits are also important instruments for diffusion of information and promotion of trust. These visits have reportedly become quite common and are appreciated by most concerned. This is significant, since the Thai auto parts association had previously failed at a similar attempt, due to mutual suspicions. Obviously some of the success of Isuzu's efforts is due to the Japanese firm's leverage as major client. But according to interviews, much credit is also due to the gradual way in which the visiting process evolved. The assembler encouraged firms to accept visitors from other plants, but recognized and attempted to deflate concerns about secrecy. Isuzu sent a list of prospective visitors to the plant to be visited. That plant had the option of striking a visitor, that is, direct competitor, off the list. Gradually, however, such exclusions ceased. This was in part due to assembler pressure. But to draw on game theory, it also reflected changes in the suppliers' payoff structure. Those interviewed talked of being ashamed to refuse to show their plants; they talked of pride in being able to impress visitors with innovations and new machinery; and they talked of the things they in turn would learn from visiting other plants. Finally, they mentioned an added benefit of these visits: the trust that developed helped to alleviate what they termed "domestic brain drain." That is, several firms

stopped raiding other members of the club for skilled labor. This was no small achievement in Thailand's very tight labor market, especially for technicians.

Emphasis on these benefits should not negate the dangers raised by those interviewed—namely, the tendency for Isuzu to get its hands on every aspect of a Thai firm's operation. Several Thai businessmen repeatedly raised the specter of complete Japanese control. On the other hand, the subcontracting relationship had clearly provided local firms with managerial and technological assets that would not otherwise have been available.

There is clearly no teleological process of institutional development occurring in the region. The preceding discussion has indicated a number of factors, such as ethnicity, state fragmentation, loose labor markets, and industrial organization, that can impede institutional diffusion. But we have also suggested other factors, not the least of which is the learning effect of Japanese practices themselves, that can encourage such diffusion. Although inconclusive, the discussion does highlight the importance of research on this question, especially if such research draws on more explicitly theoretical analyses of institutional development in the industrialized countries (e.g., Hirst and Zeitlin 1991).

5.5 The Demand Side: Host Country Management of FI

The preceding sections have painted a relatively smooth and cooperative picture of Japan's contribution to industrial deepening and interdependence in developing Asia. This emphasis may reflect my focus on the post-1985 period, when Japanese firms exhibited willingness to expand overseas manufacture and procurement. Prior to the exchange rate shift, however, Japan was known for its relatively low level of overseas production (see, e.g., Encarnation 1992, 23). There were, of course exceptions, such as the textile case. But in many other industries the Japanese were often reluctant multinationals, reluctant to establish manufacturing facilities and reluctant to share the knowledge-based asset components of these investments.

Further, given the incremental nature of recent FI, it is plausible to expect that the countries benefiting the most from the recent expansion are those that had been relatively successful at inducing and learning from Japanese FI prior to the exchange rate shift. We thus turn to the "demand side" of the equation, the ability of host countries to attract and manage FI. Doing so can help to explain the relative position of different countries within the emerging regional production structures.

The following discussion, it should be noted, does not apply to host country management only of Japanese FI. But it is relevant to the discussion in that Japan is a major investor in each of these countries. Further, the Japanese have shown themselves quite flexible in adapting to the region's range of FI regimes. This flexibility is partly a function of the Japanese ability to operate success-

fully through minority equity, and partly a function of the institutions noted earlier.[37]

The discussion also makes certain basic assumptions, one of which is that host country policies can in fact influence the volume and composition of FI (e.g., Haggard 1990, 204–5). I also assume that each of the host countries considered here is exposed to similar potential "supplies" of FI. Different levels of development largely reflect national capacities to make use of that investment. Finally, I presume that while FI flows are not all that important quantitatively to any of the countries under consideration, with the exception of Singapore (table 5.20), each country considers FI an important factor in its growth. This is in part because the spillover of knowledge-based assets in FI is at least as important for host country economic growth as simple quantities of investment funds. But such spillover is neither automatic nor purely technical. It requires active institutional support from state and, as I argue below, private sector sources.

Host countries influence FI flows and benefits through three general types of policies: property rights, macroeconomic incentives and general development strategy, and sector- and firm-specific incentives (Haggard 1990, 192). I shall not address the role of property rights. With some exceptions (noted below), the developing countries of East Asia have generally shown much weaker nationalist tendencies toward expropriation or nationalization than seen in Latin America (e.g., Kobrin 1984). Variation in property rights thus seems to account for little if any cross-national ability to manage FI. Further, although Japanese firms are very aware of political shifts in host countries, their willingness to invest seems much less dependent than their U.S. counterparts on major changes in government and policy commonly subsumed under the term "macropolitical risks" (Doner 1991, 93–94).

The section thus begins with a discussion of the macroincentives of the region's various economies and then addresses sector-specific FI management designed to obtain knowledge-based assets. The section concludes with a brief discussion of East Asian regional efforts at FI management.

5.5.1 General FI Regimes

Host country FI regimes vary with regard to a combination of factors that, taken together, suggest a measure of openness to and selectivity about FI. Openness refers to rules on local equity ownership, profit repatriation, tax in-

37. The Japanese tendency to accept minority equity and the U.S. tendency to insist on majority ownership have been attributed to different investment foci: the Japanese on traditional industries for which Japan is no longer a low-cost location, the United States on more modern industries where American firms maintain monopolistic power. I believe that Japanese equity preferences have more to do with the institutional supports discussed above and with the Japanese tendency to maintain control through greater numbers of expatriate managers than used by most U.S. firms. See, for example, Stewart (1985, 12–14). Moreover, Dennis Encarnation has cast doubt on the prevailing assumption that Japanese multinationals tend to operate through minority equity. Like U.S. firms, the Japanese generally avoid minority shareholdings whenever possible.

Table 5.20 Macroeconomic Significance of Direct Investment (percentage)

Host Country	Year	Direct Investment	
		% of Producers' Fixed Capital Formation	% of GDP
NICs	1984	6.9	0.9
	1985	6.9	1.0
	1986	5.6	0.8
	1987	9.6	1.3
Korea	1984	4.2	0.5
	1985	4.8	0.6
	1986	2.6	0.4
	1987	6.3	0.9
Taiwan	1984	7.5	0.9
	1985	8.8	1.1
	1986	6.7	1.1
	1987	12.3	1.4
Singapore	1984	12.2	3.3
	1985	9.5	2.3
	1986	14.3	3.1
	1987	17.4	3.8
Philippines	1984	5.4	0.7
	1985	3.8	0.4
	1986	2.9	0.3
	1987	4.4	0.4
ASEAN-Four	1984	5.9	1.0
	1985	4.7	0.7
	1986	6.0	0.8
	1987	11.3	1.5
Malaysia	1984	1.9	0.3
	1985	2.8	0.4
	1986	7.1	0.7
	1987	9.7	1.0
Thailand	1984	7.0	1.0
	1985	3.4	0.4
	1986	5.2	0.6
	1987	12.0	1.5
Indonesia	1984	7.1	1.3
	1985	5.9	1.0
	1986	6.5	1.1
	1987	12.8	2.2
Total	1984	6.3	1.0
	1985	5.6	0.8
	1986	5.8	0.8
	1987	10.5	1.4

Source: Haseyama, Honobe, and O'uchi (1989, table 3).

Notes: Producers' fixed capital formation is defined as follows: South Korea and Singapore: nonresidential buildings, transport equipment, and other equipment; Taiwan, Malaysia, and Thailand: gross fixed capital formation of private sector; Philippines: private construction and durable equipment; Indonesia: assumed as 70 percent of gross fixed capital formation.

Table 5.21 Characteristics of FI Regimes

Country	Openness	Selectivity
Korea	overall moderate: closed until early 1960s; moderate until late 1980s; increasingly open in 1989	high
Taiwan	high	moderate
Singapore	high	high
Hong Kong	high	low
Indonesia	overall moderate: low until 1965; moderate opening until 1974; opening after 1986	low
Malaysia	moderate; increasingly open after 1986	low/moderate
Philippines	moderate/high	low
Thailand	high	low

centives, foreign exchange controls, and so forth. Selectivity has to do with industry-specific restrictions on foreign operations, and performance requirements on local content, exports, training of local replacements, and technology transfer.

Does any particular combination of these factors seem best suited to derive potential benefits from FI? Table 5.21 provides a rough characterization of the East Asian cases with regard to openness and selectivity. If we assume (1) higher levels of development for the NICs than for the ASEAN-Four, and higher levels for Thailand and Malaysia than for Indonesia and the Philippines, and (2) some linkage between FI and development, then the East Asian cases suggest that no particular combination is optimal on its own. Instead, studies of national FI regimes suggest that the following factors are necessary for effective host country management of FI: a political consensus on the part of public and private sector interests as to the benefits of FI, open information channels between the state and business, clear linkage of investment policy to broader development policy, and the existence of a relatively insulated screening agency.[38] Effective policies designed both to attract and to channel foreign firms into priority areas were evident only in Singapore, South Korea, and, evidently to a lesser degree, Taiwan. Elsewhere, political conditions—ethnic tensions (Indonesia, Malaysia), ideological antipathy (Indonesia), extreme rent seeking (Philippines), and political fragmentation (Thailand)—undermined the kinds of institutions and development policies necessary for such management. To the degree that Taiwan does not seem to have been as selective as the

38. On South Korea see Haggard (1990); Fields (1990); Mardon (1990); *Business Asia* (February 4, 1991, 44). On Taiwan see Fields (1990); Lam (1991); Lim and Fong (1988); Noble (1987). On Singapore see Haggard (1990); Lim and Fong (1988); Phongpaichit (1991); *Business Asia* (January 22, 1990). On Hong Kong see Haggard (1990); Lam (1990). On Indonesia see Phongpaichit (1991); Doner (1991); Hill (1988). On Malaysia see Jomo (1985); Lim and Fong (1988). On the Philippines see Lindsey (1983); Doner (1991); *Business Asia* (various issues). On Thailand see Unger (1990a); Doner (1991); Phongpaichit (1991); Lim and Fong (1988); *Business Asia* (especially May 27, 1991).

other two NICs, we may identify still another factor that can help to account for its success—namely, its promotion of exports. Exports allow host countries low-cost access to a wide range of information provided by buyers of exports as well as machinery suppliers. This factor clearly operated in the other NICs as well (e.g., Westphal, Rhee, and Pursell 1984, 298).

This macroperspective does not capture the entire picture, however. Even if investment flows to areas considered strategic by host countries, there is no guarantee that investment will provide anything but funds and that the spillovers from knowledge-based assets will not be lost. As Fransman notes, factors of production "must not only be purchased on the market at the going rate. They must also be 'brought into the factory gates' so that inputs may be transformed into outputs" (1986a, 209).

Thus even in the NICs, effective public policy at the macrolevel cannot account for the largely beneficial impact of FI and related activities. Also, the macroperspective does not account for relatively impressive economic growth, including the expansion of domestic entrepreneurs, in the less efficient ASEAN-Four (McVey 1992). Although natural resource–based revenues were necessary to the emergence of many of these new capitalists, their growth in manufacturing was closely linked to the technical and managerial resources provided by foreign investors. Given the weaknesses of public policy in the ASEAN-Four, understanding more microlevel processes can help to explain the transmission of these resources.

5.5.2 Host Country Investment Management at the Sector and Industry Level

Host country firms can obtain knowledge-based assets from foreign firms through a variety of channels. These include joint ventures, "competitive imitation," subcontracting (supplier and vendor development), machinery purchases, and intermediate channels such as technology licensing. Regardless of the channel, increased local content requirements, common in most of the countries under consideration, increase the potential for technological spillovers. The pitfalls of localization requirements are well known, however. They often contravene the most basic rules of comparative advantage, resulting in inefficient (protected) local products and very high costs to local consumers. To some degree, the weaknesses of localization can be avoided by localizing simpler parts first and gradually moving to higher value-added items. The Philippines' decision to adopt the opposite strategy—to begin with major functional components beyond the reach of all local firms—was an important flaw in that country's auto localization plans (Doner 1991).

Assuming a realistic localization plan, however, what kinds of measures encourage and enable local firms to become more efficient within local content umbrellas? State policies, such as linking foreign exchange allocations to export performance, are obviously important. Here I want to emphasize other sets of measures—rationalization and technology import policy. In East Asia,

these challenges are met by a wide range of institutions, private as well as public.

Rationalizing

Industries in developing countries are often characterized by a large number of producers in small markets. This market fragmentation can be beneficial: it can force local firms to expand production skills and develop "economies of scope," it can generate capacity to service new markets,[39] it can ensure competitive pressure, and it can help ensure that local suppliers are not the captive of one particular client. But multiproduct firms often encounter real problems in production management, and without some minimum demand, firms cannot hope to reach scale economies large enough to master relevant production processes and technology (Prendergast 1990). Thus rationalization—reduction in the number of firms, brands, and/or models—is an important challenge (Markusen 1992, 29).

As illustrated by the auto industry, the East Asian countries have addressed this problem with varying degrees of success and through different instruments (Doner 1992). South Korea has been the most successful, in part due to state mandates such as limits on the number of vehicle assemblers. But what is striking, given Korea's reputation as a strong-state country, is the degree to which the country's rationalization reflected private sector initiatives and bargaining between the state and private firms. Perhaps most important has been Hyundai's decision to focus on single models (first with the Ford Cortina and subsequently with the firm's own Pony). Malaysia has also achieved some success in reducing brands through a state-led joint venture with Mitsubishi, whose tariff preferences effectively excluded other makes from the most popular market niche. Elsewhere in the region, brand reduction efforts have not succeeded. But large business groups producing components and parts in Indonesia and Thailand have achieved some success in compelling foreign assemblers to accept standardized products. As the localization process continues and costs increase, we can assume that such commonization efforts will intensify.

Importing Technology

I have noted several channels for obtaining foreign technology. The private sector plays a much greater role in these processes than is usually acknowledged in the political science literature. At the same time, successful private efforts usually require political, as well as institutional, support from the state.

The choice of channel through which to obtain knowledge-based assets may, as noted earlier, vary with the industry. Public policy also influences this choice; Korea's efforts to limit Japanese penetration have resulted in greater

39. A Malaysian firm, having produced small volumes of a particular type of glass for several years, subsequently began to sell large quantities of this product to the North African replacement market (author interview).

use of licensing agreements than elsewhere in the region. But the most important influence on the source of foreign technology seems to be the strength of local firms. Joint ventures seem to predominate when host country firms are seeking to induce new technologies. Licensing and technical assistance become more common as local entrepreneurs begin to master technology and the technology becomes more standardized.[40] Note, however, that this pattern is not linear. For example, when Japanese assemblers decided to expand the value of parts obtained in Thailand, a long-standing licensing agreement between the major Thai radiator firm and its Japanese licenser changed to a joint venture. This certainly reflected the Japanese desire to control the transfer of new technology. But this was not a decision imposed on the Thai firm. The latter, although concerned about increased Japanese control, faced major investments in a new stamping line and in-house die production, and believed that a Japanese joint venture partner would provide more solid support than would a licenser (author interviews).

Host country firms have been especially influential with regard to the choice of and benefits derived from licensing and technical assistance contracts. Even in South Korea, where the Foreign Capital Deliberation Committee monitors and approves all technological transfer agreements, there is significant leeway for private sector initiative. Unlike other Korean auto firms, Hyundai has truly shopped around and diversified its technology sources. By 1979 Hyundai licensed over thirty different technologies. In some cases the firm looks to different sources for the same technology, obtaining fundamental concepts from a U.S. firm but then turning to the Japanese for help in practical applications. And although it maintains equity links with Mitsubishi, Hyundai reserves the right "to compete directly in Mitsubishi's own markets and to import technology and parts from Mitsubishi's competitors" (Amsden and Kim 1985).

Private sector decisions as to technology sources seem to have been equally important in the Korean heavy equipment industry as well as in the Taiwan machine tool industry (Amsden and Kim 1986; Fransman 1986a). Larger Thai and Indonesian firms in autos and textiles have also diversified their technology sources, in some cases playing Japanese firms off against each other. Some firms have also added a dimension that reflects the region's interdependence. They have established technology agreements with overseas Chinese firms, often from Hong Kong and Taiwan, who themselves have long operated as suppliers to or partners with Japanese firms. Such NIC sources allow ASEAN firms to obtain technology at significantly better terms than from the Japanese. In a variation of this pattern, Lam notes that Taiwan's small and medium-sized electronics manufacturers initially benefited from "extensive networks of

40. This was the case, for example, for South Korean firms attempting to obtain technology from the leading Japanese fiber producers, Toray and Teijin, during the 1960s (Tho 1988, 395–96). For similar patterns see Kim (1984, 85).

friends and relatives overseas, who helped them market their products and acquire new technology and knowhow" (1990, 33).

Foreign machinery suppliers are a further important source of technology for host country producers. One of several "specialized technological agents," machinery suppliers provide information on issues such as quality control, equipment maintenance, and process organization (Dahlman, Ross-Larson, and Westphal 1987, 772). To the extent that such suppliers are not linked to Japanese principals, they also offer technology that is cheaper, more accessible, and more adaptable by East Asian producers.[41] Thai textile firms, for example, obtained significant amounts of machinery from the People's Republic of China during the 1980s (author interviews, Bangkok, 1992). Quite often such machinery is obsolete secondhand equipment from Europe and Japan. Obsolescent Japanese machinery made possible the initial growth of Hong Kong and Taiwan textile exporters (Lam 1990, 33). Thai auto parts and components producers have developed extensive contacts with secondhand machinery suppliers in Japan. This has, for example, allowed one Thai firm to develop its own boring machines by using Thai-built and used imported components to build the machine around a new boring head purchased from Japan (author interview).

Finally, firms in developing Asia often obtain technology as subcontractors to Japanese producers. Such supply relationships, discussed earlier, potentially involve the provision of a wide range of knowledge-based assets, including blueprints, machinery and plant operation, quality control, training in Japan, and so forth. But such linkages should be seen less as an institution imposed by foreign firms and more as something reflecting host country conditions and influencing the decisions of foreign, especially Japanese, firms (e.g., Dahlman and Brimble 1990, 23). Indeed, what is striking in East Asia is the cross-national range of variation with regard to the development of subcontracting relations (e.g., Amsden and Kim 1986; Fujimori 1986). To a large degree, this variation is the result of differences in economic and political factors noted earlier, such as the structure of industrial organization and the role of small firms within the state's basic coalition.

Education and R&D constitute one final area in which politics interacts with private efforts to influence the technology absorption process. Where the state provides public goods–type incentives, we see not only public research institutes and quality education but also extensive private sector initiatives. This is clearly the case in South Korea, where, for example, all major synthetic fiber producers established their own research institutes by the end of the 1970s (Tho 1988, 397). In Thailand, on the other hand, where textiles and apparel

41. A Thai parts-firm director noted that his Japanese licenser constantly pushes for the most expensive machinery. He admits that such machinery will last for thirty years but searches for other machinery in large part because he does not benefit from the low interest rates on industrial loans common in Japan (author interview).

constitute the largest manufacturing industry and the principal source of manufactured exports, bureaucratic fragmentation, the lack of public-private sector linkages, and the lack of a coherent R&D policy have blocked the establishment of a textile research institute proposed by the private sector several years ago (see, e.g., Dahlman and Brimble 1990).

Private sector initiatives themselves, however, are important in several ways. First, some firms make use of public sector incentives more than others. Hyundai Motor Company, in part by drawing on expertise from other firms in the Hyundai group, established a Department of Planning in 1973 and an R&D center in 1979 to obtain and adapt foreign technologies at the lowest price. The other major firm, Daewoo, has not followed this path (Amsden and Kim 1985; Back 1990). Second, there is evidence that R&D initiatives by large firms, such as Siam Cement (Thailand) and Astra (Indonesia), have jumped ahead of relatively passive government policies. And finally, as noted earlier, there is evidence of Japanese support for an expansion of both public and private sector research capacities in Southeast Asia.

5.5.3 Regional Management of FI

My emphasis has been on management of FI at the national level largely because intraregional investments have largely been a function of market forces and private sector preferences operating independently of any organizational efforts (Lim 1992). The one partial exception to this pattern illustrates both the obstacles to regional investment management and the ways in which, however slowly, Japanese and local capital have interacted to create some regional patterns. These programs, I argue, will encourage the development of a regional division of labor.

The case discussed here involves efforts by ASEAN to establish an auto complementarity program in order to overcome the inefficiencies of production for fragmented, small markets. The initial impulse for this project came from Ford's interest in building an "Asian car" during the early 1970s. Ford's effort was defeated in part by Southeast Asian suspicions that such a vehicle would simply facilitate the expansion of Ford's economic empire. Equally important, however, were the objections of Japanese firms then in the process of establishing themselves in the ASEAN markets.[42]

The complementarity concept was revived in 1976 when a summit meeting of the ASEAN heads of state revitalized both private and public sector activities in ASEAN. The meeting led to the establishment of regional industry clubs, the most active of which was the ASEAN Automotive Federation (AAF). Subsequent efforts led to the establishment of a program in which particular countries would specialize in the production of particular auto parts/components. These products would enjoy tariff exemptions and local content

42. The emphasis on local suspicions is found in Young (1986). The emphasis on Japanese influence is drawn from author interviews. This discussion draws on these two sources.

accreditation in the other ASEAN member states, thus encouraging their production for the regional market.

This effort also failed. The member states were not able to agree on levels of foreign involvement. They also differed with regard to potential trade imbalances resulting from the production of higher value-added goods in Singapore, say, compared to Malaysia. Indeed, in the late 1970s, the project prompted competing engine manufacturing projects in Thailand, Indonesia, and the Philippines. These were designed to ensure the position of each country in higher value-added products. Also hindering the project were overlapping production facilities in the countries. Thai firms were not willing to abandon or diversify out of their investments so that Philippine firms could dominate the manufacture of a particular product. Equally important, however, was Japanese opposition. By the late 1970s the Japanese dominated the Southeast Asian markets and auto production facilities. They participated in the regional discussions but refused to move forward, citing high transportation costs, intra-ASEAN disputes, and the impossibility of one assembler using components made under the umbrella of another.

By the mid-1980s, it had become clear that only a plan based on the strategic interests of each assembler, rather than each ASEAN country, would be feasible. The AAF thus developed a "brand-to-brand" (BTB) proposal. The initial Japanese response was largely indifferent, and the plan, along with the AAF, lay dormant for several years.

There has, however, been progress on two fronts. First, as described earlier, the deepening and expansion of Japanese auto production has prompted the assemblers to submit firm-specific plans for regional production within a modified BTB framework. This is an uneven process, with Mitsubishi taking the lead and Indonesia holding back, its government clinging to the objective of a completely integrated national auto industry. But it is a first step, and further progress will probably occur under the pressure of Japanese attempts to expand scale economies.

The second area of progress—the ASEAN Industrial Joint Venture program (AIJV)—has the potential to create networks somewhat more independent of Japanese production structures. With the failure of regionwide efforts, local entrepreneurs in 1980 began to design a lower-level model of cooperation in the form of a joint venture agreement between interests from at least two different ASEAN members with majority equity from local interests. The products of such ventures would enjoy tariff reductions and local content accreditation in the countries participating.

Although just getting started, the program's smaller scale has provided opportunities for local initiative and participation by non-Japanese firms. The first AIJV, for example, involves electrical motorcycle parts and is jointly held by Thai and Malaysian interests. Yamaha's Thai partner initiated the project with support from Thailand's major peak association, the Federation of Thai Industries. Yamaha itself reportedly still opposes the project. Other AIJVs involve

the engineering firm of Siam Cement, Thailand's largest industrial group, as well as several European firms.[43]

Several features of these efforts merit note. Most importantly, regional programs in the auto industry will continue to follow rather than lead regional investment decisions by Japanese firms. However, prior regional and national efforts will accelerate and mold those investment decisions. On the regional level, it is likely that the BTB plan hastened Mitsubishi's efforts by establishing a rough set of institutional guidelines. On the national level, the Japanese are attempting to reconcile their regional plans with each country's existing strengths in parts production. It is also possible that the pressure to achieve greater economies of scale will lead to more cooperation among Japanese firms in the production of major components. The sharing of dieing and casting facilities for the manufacture of engines in Thailand is one such case (Doner 1991).

Finally, as ASEAN businessmen emphasize, the very process of attempting to design a complementarity scheme encouraged organizational development—the growth of assembler and auto parts associations in each country—and cross-national contacts among firms. The latter have reportedly led to the establishment of some of the AIJVs.

5.6 U.S. Interests: Implications

The Pacific Asian region described in this paper is characterized first and foremost by production linkages and shifting comparative advantage. The region also exhibits a less developed but potentially important feature, the gradual diffusion of Japanese-style institutions. But as other papers in this volume argue, the region is not a closed trading bloc. With most of the countries in the region strongly dependent on Western, especially U.S., markets, Japan and the other countries of the region are part of a triangular trading system. In broad terms Japan sells capital goods to the rest of East Asia, the rest of East Asia sells finished goods to the United States, and the United States sells raw materials to Japan. Japan is a critical contributor to each of these developments. Yet, as captured in Unger's phrase "Big Little Japan," Tokyo's political vision does not yet match its impressive economic strength (1993; see also Tamamoto 1990).

These features—strong production ties, growing institutional commonalities, outward trade orientation, and weak political vision by the strongest economic actor—challenge U.S. corporate interests in the region as well as Washington's broader concerns with economic stability and security.

5.6.1 U.S. Firms in East Asia

As developing Asia's dynamic growth becomes more evident, so does the declining position of U.S. firms in many (but certainly not all) industries in the

43. On an extensive auto-related AIJV undertaken by the truck firm DAF, see *Business Asia*, December 17, 1990, 433–34.

region. Preceding sections of this paper suggest several possible reasons for this state of affairs, including (1) host country adoption of Japanese industrial standards at odds with U.S. equipment; (2) the establishment of Japanese networks that are difficult to penetrate by outsiders; (3) the lack of institutional supports providing U.S. firms information about local economic and political conditions; (4) "country bias" factors such as general lack of information and interest about the region on the part of U.S. firms (one Malaysian supplier noted that some officials from U.S. auto firms viewed Southeast Asian markets as similar to Australia due to physical proximity); (5) short U.S. time horizons encouraged by the need for immediate returns on investment; (6) lack of fit between U.S. firms' mass production emphasis and the need for more flexible production in the region's smaller, fragmented markets; and (7) domestic protectionism discouraging U.S. FDI (as in many textile sectors).[44]

Although Japanese investment will most likely dominate capital from other sources in the region, there are several reasons to believe that this domination need not be so absolute. Anecdotal evidence suggests a strong desire on the part of many in the region to moderate the weight of Japanese capital with U.S. investment. As local firms expand their own bargaining leverage, they will presumably improve their capacity to draw on diverse sources of finance, technology, and managerial skills.

U.S. firms can also adopt several measures to improve their position in the region. At one level this involves making better use of corporate tie-ups. U.S. firms can pursue what one auto parts official termed a "shirttail strategy" involving joint ventures with Taiwanese firms to break into Japanese supplier networks in the region. In a related approach, U.S. firms can follow the example of Dana, an auto components firm with extensive experience in the region, by using sales to Japanese transplants in the United States to begin similar sales in East Asia (Lehner 1992b). Tie-ups with Japanese trading companies coordinating infrastructural investment offer still another channel (e.g., Lehner 1992a).

Linkages with politically and managerially strong host country firms are especially important. Dana itself quit Indonesia several years ago, in part due to a lack of a good local partner (Doner 1991, 146–48), whereas Guardian Industries, a major U.S. glass producer, succeeded in establishing a Thai production site in part through links to Siam Cement. Such tie-ups require better firm-level information, which in turn often hinges on extending the time period of expatriate managers. Perhaps more important, stronger linkages require shifts in U.S. managerial approaches. The simple fact is that many established local entrepreneurs, given the expansion of their operations and investments, are becoming more choosy about foreign partners. Local capitalists are some-

44. Recent articles decrying and analyzing the sources of U.S. weakness in Asia include Lim (1991); Lehner (1992b); Sanger (1991); and Darlin and White (1992).

times hesitant to engage in joint activities with U.S. firms because of the latters' narrow focus on price and delivery.

According to interviews, several U.S. electronic and auto firms operating in Southeast Asia have begun to address these concerns. They have essentially attempted to emulate Japanese-style supply networks by developing longer-term, trust-based relations with suppliers and clients. Whether such attempts succeed depends in large part on support from the home office. But they do signify East Asia's potential as a test site for U.S. firms attempting to improve production management, as well as a base for breaking into Japanese production networks and, potentially, the Japanese market. This is somewhat ironic, since Southeast Asia functioned in the 1960s and early 1970s as a test site for Japanese auto firms hoping to break into the U.S. market.

5.6.2 U.S. Economic and Security Interests

In a worst-case scenario, an economically more integrated and Japan-dominated East Asia might prompt a broader U.S. disengagement from the region. The demise of an ideological mission for the United States in the region, isolationist pressures in the United States, the outbreak of instability in other regions, and the weakness of U.S. corporate involvement in East Asia may all undermine domestic pressure for sustained U.S. involvement. These factors may be compounded by U.S. indignation at the structure of its triangular trade with the region and by tensions stemming from a more assertive Japanese voice with regard to broader economic questions. Japan may well be "bound by a wilful political innocence [and] a society devoid of ideas about what to give to the world, much less how to organize it" (Tamamoto 1990, 494). But that does not preclude a more forceful enunciation of Japanese views on issues, such as economic reform, that are relevant to its own economic interests (e.g., OECF 1991). Finally, tensions may increase if East Asian reactions to the formation of North American and European trading arrangements prompt regional trading arrangements perceived as exclusionary by the United States.

Washington's disengagement would not only reduce U.S. access to and influence over the world's most important source of economic growth. It would also find disfavor with Japan and the rest of the region for at least two reasons. A general U.S. withdrawal would weaken the region's ties with a critical export market. More important, it would deprive the region of a moderating influence on Pacific Asia's suspicions of Japan and thus weaken the broader political basis of the region's growth. Whether countries of the region are able and willing to influence U.S. policy remains to be seen. One hopeful sign is Japan's recognition of its own stake in maintaining the international trading and financing system (Rosecrance and Taw 1990). Where and to what extent Tokyo will extend such an attitude to regional affairs is yet unclear. But it may well be that East Asia's very ability to encourage a sustained U.S. presence depends on a greater leadership role for Tokyo.

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Comment

Robert E. Lipsey

As I read this paper, it occurred to me that economists tend to look for, and to find, the operations of impersonal forces—the invisible hand—and that political scientists tend to look for, and to find, the operations of conscious policy carried out by specific actors.

A basic theme of the paper is that an interdependent East Asian region is developing, and that the development is not simply a consequence of economic forces, such as trends in income and skill levels that change national comparative advantages. According to this view, the interdependent region is being constructed by conscious management of the response to economic developments by governments, by intergovernmental organizations, and by private companies and organizations representing private companies. Of course, even in the economists' world the invisible hand does not work without individuals and enterprises making choices and acting on them. One way of describing this paper is that Richard Doner is looking more at these actors and their behavior than at the underlying economic changes that are forcing them to act or at the outcomes of their actions taken in the aggregate.

It is not surprising to find that Japanese multinationals are organizing interdependent operations across national borders. That is what multinationals do. It would be interesting to know how these Japanese networks differ from those formed by American or European firms or by multinationals from developing countries, if they differ at all.

There is quite some discussion in various places in the paper about comparative advantage. Two kinds of comparative advantage are involved. One is the standard comparative advantage of countries, based on immobile factors of production. But the other determinant of direct investment is the comparative advantages of a country's firms, based on firm-specific advantages that are immobile between firms but mobile within firms across countries. The latter may stem from the former, but firms may retain some advantages, particularly those based on knowledge or technology, long after their countries have moved on to different comparative advantages, perhaps because factor endowments and factor prices have changed. And firms may develop advantages based on their own R&D, technology, or marketing skill quite apart from their countries' present or former comparative advantages.

There is a passing mention in the paper about the replacement of exports by foreign investment. The idea of such replacement by foreign *direct* investment, which, from the context, appears to be what is meant here, is highly questionable. The major empirical studies I am aware of do not find that such replacement is a general phenomenon and, more frequently than not, find that such investment raises exports. The reason is that the direct investment raises the

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investor's market share in the host country and exports of components and of other finished products rise.

The explanation given in this paper of the greater willingness of Japanese firms than of American firms to accept minority equity in developing countries is an example of the rejection, or slighting, of an explanation in economic terms in favor of one based on institutional preferences. I am not sure such a difference between Japanese and American multinationals exists, but if it does, there are at least two economic explanations. One is the relative inexperience of Japanese firms in direct investment, which might make them more willing to accept partners. The other is the relatively low-tech industry composition of Japanese direct foreign investment in developing countries. The prevalence of 100 percent or majority ownership in U.S. foreign direct investment is clearly related to the technological level of the industry. To what extent could the difference between U.S. and Japanese firms be explained by industry composition? Or should the industry composition of investment itself be explained by different attitudes toward the employment of foreigners and the leakage of technological knowledge?

The paper argues that the spillover of knowledge to host country firms or nationals requires support from the state. There is certainly a large collection of regulations aimed at encouraging such spillovers, and I do believe that the spillovers are one of the main advantages of direct investment to the host country. But I do not know of strong evidence that the regulations have much effect, and there must be some level of regulation that would reduce spillovers by discouraging investment. Spillovers may depend more on the capacity of the host country to absorb technology than on regulations requiring technology transfer. Would a country gain more spillovers by raising the educational level of its citizens, by encouraging foreign study by its citizens, or by raising the technical level of local firms than by regulating foreign firms?

The reader's task is made a little harder by defining "foreign investment" in an extremely broad way, to include technology licensing and machinery sales, certainly not part of the economist's usual definition. Both of these can be arm's-length transactions involving no control over the use of the techniques or machinery, and neither one necessarily involves any transfer of capital.

There is a brief mention of political risk and of the apparent indifference of Japanese firms to it in making their investments. There have been suggestions recently that Japanese firms would shun direct investment and joint ventures in the states of the former Soviet Union because of fears of political instability. Perhaps their orientation toward investing in the United States and Southeast Asia, rather than in Latin America or Africa, reflects some concern about political stability.