TRADE AND INDUSTRIAL ADJUSTMENT IN PACIFIC ASIAN COUNTRIES

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I. CHANGING TRADE PATTERNS AND INDUSTRIAL ADJUSTMENT

A. *Changes in Pacific Asian Trade*

THIS paper focuses on economic relations among nine "Pacific Asian countries": Japan, Asian NICs (Korea, Taiwan, and Hong Kong), and ASEAN countries (Thailand, Malaysia, Singapore, Philippines, and Indonesia).[1] Besides being geographically close to each other, they have some important economic similarities. One is their market economy systems, and another is their rapid growth in both industrial production and trade in the 1960s and 1970s.

The countries in the region, in spite of many basic similarities, are far from being homogeneous. Table I shows a big difference both in terms of population and of GDP. Moreover, the gap in per capita income level between Japan and Indonesia is in the range of twenty-five times difference. Stages of industrialization, industrial structure, and factor endowment conditions also show wide variation among these countries [3].

The purpose of this paper is to consider the pattern of trade and division of labor among these countries, prospects for future development, and adjustments in their industrial and trade policies necessary for future development. "Industrial adjustment" in this paper does not merely mean the passive response of importing countries to import increase. Tentatively, we shall define it as "medium- and long-term industrial transformation in the direction of promoting international economic welfare." The notion, therefore, is similar to the idea behind "positive adjustment," but is even wider, including direct investment, and so on.

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[1] Singapore has a special position in this group of countries, being a NIC and a member of the ASEAN at the same time. In this paper, with an emphasis of her close trade relationship with other member countries, Singapore is grouped with ASEAN countries. NICs in this paper, therefore, refer to Korea, Taiwan, and Hong Kong, unless otherwise specified.

TABLE I

SIZE OF PACIFIC ASIAN ECONOMIES, 1980

	GDP (U.S. $ Million)	Population (Million)	Per Capita GDP (U.S. $)	Export (U.S. $ Million)	Import (U.S. $ Million)
Japan	1,155,150	116.8	9,890	129,812	140,523
Korea	58,300	38.2	1,520	17,505	22,292
Taiwan	37,980	17.6	2,150	19,811	19,733
Hong Kong	21,400	5.1	4,240	19,714	22,413
Singapore	10,650	2.4	4,430	19,773	24,003
Malaysia	22,300	13.9	1,620	14,345	12,139
Thailand	31,140	47.0	670	6,505	9,214
Philippines	34,190	49.0	690	5,788	7,727
Indonesia	61,470	146.6	430	21,909	10,834

Sources: [1], [6].

Such a dynamic approach is necessary because a very particular situation exists in this region, i.e., a coexistence of three groups of countries which are seemingly following a similar path of industrialization at intervals.

We can observe a sequential or wave-like spreading of industrialization from the more-developed to the less-developed countries, i.e., from Japan to East Asian and then to ASEAN countries [17]. Changes in comparative advantage structures of individual countries correspond to this shift.

Let us give a brief overview. In prewar days, Japan was the only industrialized country in the region. And the trade pattern was a simple complementary manufactures/primary commodities exchange between Japan and other countries. Meanwhile, East Asian countries completed import substitution of light manufactures in the 1950s, and started exporting them to the United States and West Europe in the 1960s. Then there emerged a competitive aspect in the trade relations between East Asia and Japan. A complementary relationship between East Asia and ASEAN also started. Following this new development, the 1970s saw ASEAN light industrialization and the start of competitive relationship between ASEAN and East Asia. East Asian countries, in their turn, proceeded with heavy industrialization, and in some commodities competition with Japan began as a further development.

It should not be ignored that at the present stage Japan still supplies heavy industry goods such as capital and intermediate goods on a large scale to these countries, and around 80 per cent of ASEAN export consists of primary commodities. There is a growing tendency in Japan, however, of importing from ASEAN countries low-price light manufactures which substitute domestic goods. And this is expected to continue. The present trade relationship among Japan, East Asia, and ASEAN, therefore, can be summarized in that there exists a complex structure consisting of both competitive and complementary elements. This of course reflects the economic differences among the three groups of countries such as level of industrialization and size of domestic market.

The trade structure of NICs and ASEAN countries seems to be facing another change. Rapid growth in the region in the 1970s, as already mentioned, has been of the outward-looking nature not only for individual countries but also

for the region as a whole. The ultimate destination of exports from the region, in spite of the notable development of intermediate commodities trade within the region which will be discussed later, has been predominantly outside the region, mainly the United States and West Europe.

After the second oil shock, however, the world market situation deteriorated considerably in 1981 and 1982 to the simultaneous world-wide recession. Recovery is expected to be slow. Under such conditions, export growth of East Asia and ASEAN countries was heavily disrupted. As a consequence a foreign exchange shortage in these countries became serious, resulting in a slowdown of their development plans. This of course is a setback for these countries, but may mark a start of further diversification of their trade partners.

One of the most important avenues for such a diversification will be the expansion of intra–Pacific Asian trade. Although the importance of their present major export markets, the United States and West Europe, will be likely to continue, a need to develop trade relations with faster growing markets will arise. Japan, NICs, and ASEAN countries would be the likeliest markets to provide such an opportunity.

Diversification is also required by the rising trend of protectionism in the United States and West Europe. Asian export expansion to these markets reflects the complementary industrial structures between them. But expansion has caused trade frictions in these markets, and, together with slow growth there, has triggered off restrictive movement to trade.

B. *Trade Matrix and ASEAN I-O Table*

In this paper, hereafter, export expansion of NICs and ASEAN countries will be empirically studied. For the observation of their recent trade expansion, trade matrices will be used as a basic tool. By combining trade data of individual countries into a matrix form, their trade relations can be seen in a global context. Our trade matrices in Appendix show nine Pacific Asian countries which are of our direct concern and eight other regions and countries. The commodity items selected are at three aggregate levels: total trade, industrial goods (SITC Sections 5 to 8), and textiles (SITC 65 and 84). As for the reference period, for us to see the structural change among countries and regions, 1969 and 1979 were chosen.[2]

In order to look into the relationship between trade and production, the international input-output table is used as our second basic tool. Changes in export/import structure of individual countries are closely related to those in their production structure. Trade matrices combined with national income statistics will make it possible to observe the mutual influences a given country's economic growth would have on others through trade flows. Division of labor among countries, however, is not confined to the final product level. A recent trend shows very brisk trade movement on the intermediate goods level. For in-depth understanding, therefore, it is necessary to produce trade matrices at

[2] To highlight the expanding trend of world export, 1969 and 1979 were chosen. Since 1979 was a peak year before the adverse effects of the second oil shock emerged, the 1969–79 period can capture the fastest growth of world export, at least nominally.

disaggregated commodity levels and link them to the input-output tables with corresponding classification on the production side. Fortunately such a table, the international linked input-output table (hereafter referred to as the ASEAN I-O Table), which covers five ASEAN countries, Japan, Korea, and the United States, was recently compiled by the Institute of Developing Economies [4].

Major observations based on these two tools will be presented in the remaining part of this paper. In the next section, changes in the overall trade structure of the Pacific Asian region in the global setting will be identified. The following three sections deal with trade relations inside the region: first, those between Japan and developing countries, then, those between NICs and ASEAN countries, and, lastly, those among ASEAN countries. In our interpretation of these observations, due attention will be paid to the behavior of economic agents, governments, and both local and foreign enterprises.[3] The last section contains summary and policy implications.

II. MAIN FEATURES OF PACIFIC ASIAN TRADE IN A GLOBAL CONTEXT

The overall structure of Pacific Asian trade will be considered in this section. The pace of trade expansion attracts our attention first. That exports of these countries have been expanding very quickly is well known. It might be noteworthy that imports have also been rising. Secondly, destinations of their exports and sources of imports will be checked. Trade matrices seem to suggest that predominant export destinations are extraregional developed countries, but expansion of exports to Japan has been significant. Thirdly, trade balances of individual Pacific Asian countries will be touched upon.

A. *Rapid Trade Expansion*

Changes of commodity flow structure, especially that of industrial goods, is to be examined using the trade matrices. In the other commodity levels, all commodities and textiles, the overall trend was almost the same. The latter shows a much more intensified trend than industrial goods as a whole.

Between 1969 and 1979, world export of industrial goods increased at current prices 5.56 times (annual average growth rate of 18.7 per cent). Checking the growth rate of individual cells, those with better than the world average records were identified, which are shown in trade matrix tables in Appendix with asterisks.

NICs and ASEAN countries as a group showed the most significant expansion of trade flows, both export and import. Both groups recorded faster than average growth. Japan closely followed them. It is notable that developed countries show poor growth record, either lower than average or only slightly better, while NICs' and ASEAN countries' performances were very brisk; their export increased tenfold during the period.

[3] For ASEAN industrialization policies, brief accounts and assessment on recent trend are given in [2] [11]. For the prospects on foreign direct investment, see, for example, [12].

TABLE II

EXPORT COMPOSITION BY DESTINATION

(%)

Exports from \ Exports to	Japan	NICs	ASEAN	North America	West Europe	Australia/ New Zealand	Middle East
A: All commodities:							
Japan		12.4	10.0	34.4	12.8	3.6	1.3
		13.8	9.3	27.5	16.0	3.1	9.3
NICs	11.2	5.3	8.6	41.4	18.6	2.4	0.8
	14.5	5.2	6.2	35.3	21.4	2.5	6.3
ASEAN	20.9	4.9	17.1	18.2	16.0	3.1	0.7
	26.5	6.9	22.0	18.4	15.7	2.7	2.0
B: Industrial goods:							
Japan		11.4	10.1	35.2	12.3	3.7	1.3
		13.4	9.3	27.9	16.0	3.1	9.4
NICs	5.7	4.6	8.7	46.7	19.2	2.7	0.9
	10.9	5.1	5.9	37.9	22.6	2.7	6.2
ASEAN	9.3	2.5	22.4	28.3	12.3	1.2	0.4
	8.3	7.1	21.8	25.0	20.4	2.6	4.8
C: Textiles and clothing:							
Japan		17.8	11.2	30.3	7.0	5.6	2.7
		23.1	9.8	13.7	7.6	5.0	9.9
NICs	4.1	4.2	7.1	40.5	27.1	3.6	0.8
	14.4	5.9	4.7	31.0	28.0	3.0	3.5
ASEAN	2.7	2.7	13.5	21.6	9.0	0.9	1.8
	6.2	5.7	11.9	18.8	34.4	9.4	5.9

Sources: Appendix tables.

Notes: 1. The percentage figures are calculated using total exports of individual groups as denominators.

2. The upper figure indicates the share in 1969 and the lower figure the share in 1979.

Industrial trade among developed countries lagged behind. An exception to this trend was Japan whose export grew much faster than the world average. This created many cases of trade conflicts between Japan and other developed countries, especially the United States and West European countries.

Industrial trade among Asian developing countries shows a very high growth rate. The main reason for this, however, is that it started from a very low level, almost negligible in 1969. Even in 1979 intra–developing country trade still stands at a relatively low level.

B. *Extraregional Trade*

Let us turn to the trade relations of Pacific Asian countries with other regions, before going into the intraregional trade in the following sections. Table II gives a summary view of the Pacific Asian exports by destination, with panels A, B, and C covering all commodities, industrial goods, and textiles respectively.

From the table, it is clear that developed markets in North America, West Europe, and Australia/New Zealand are the predominant markets for Pacific

TABLE III

COMPETITION IN MAJOR MARKETS

(%)

Imports from \ Imports of	Japan	NICs	ASEAN	North America	West Europe	Australia/ New Zealand	Middle East
A: All commodities:							
Japan		37.6	27.3	11.5	1.7	12.9	2.9
		29.8	20.8	11.3	2.2	15.5	12.4
NICs	3.5	3.9	5.7	3.3	0.6	2.1	0.5
	6.4	4.6	5.7	6.0	1.2	5.1	3.5
ASEAN	9.3	5.2	16.2	2.5	0.7	3.8	0.6
	14.0	7.3	24.2	3.7	1.1	6.7	1.4
B: Industrial goods:							
Japan		46.9	36.5	15.8	2.4	15.4	3.9
		43.3	32.7	18.9	3.5	20.1	16.4
NICs	4.7	4.0	6.8	4.5	0.8	2.4	0.6
	17.3	6.4	8.1	9.9	1.9	6.6	4.2
ASEAN	2.7	0.7	6.1	1.0	0.2	0.4	0.1
	4.6	3.1	10.3	2.2	0.6	2.2	1.1
C: Textiles and clothing:							
Japan		59.1	44.1	24.1	1.9	28.6	22.3
		30.6	25.8	6.5	0.7	13.6	10.4
NICs	28.8	9.1	18.3	21.1	4.6	12.1	4.3
	51.8	23.7	37.4	44.5	7.8	24.4	11.3
ASEAN	1.5	0.5	2.8	0.9	0.1	0.5	0.8
	3.4	3.4	14.1	4.0	1.4	5.0	2.8

Sources: Appendix tables.

Notes: 1. The percentage figures are calculated using total exports of individual groups, approximations of their imports, as denominators.
2. The upper figure indicates the share in 1969 and the lower figure the share in 1979.

Asian industrial exports. North America is the largest, while West European imports are two-thirds as large as North America. Australia/New Zealand equals only one-tenth of American market. As already mentioned, high concentration of export in the two markets, whose growth prospects are not likely to be very bright, makes the diversification of markets necessary.

The market shares of Pacific Asian countries in those regions presented in Table III also attract our attention. The most notable is a large gap between the share of Pacific Asian countries in North America and that in West Europe. In 1979, the former stood at around 30 per cent, while the latter was only 6 per cent.[4] In both cases, however, the shares increased from 1969 to approximately 50 per cent larger than ten years before.

A high level of Pacific Asian countries' share in Australia/New Zealand, as high as that in North America, is worth mentioning. The closeness between

[4] The small market share of Pacific Asian exports in West Europe can be explained by a high level of intra-European trade.

Asian and the two countries makes transaction important for both groups. Here, too, the share of Pacific Asian countries shows a substantial rise between 1969 and 1979.

Textiles present a good illustration of such a development. The present market share of Pacific Asian countries in the market of these regions in textiles is high, indicating a keen competition for local producers. As a consequence, demand for protection is most visible in textiles, and some measures for that purpose such as the Multi-fiber Arrangement (MFA) have already been brought about.

Among the developing country markets outside the region, the Middle East recorded a rapid import growth. Exports from all the Pacific Asian groups, i.e., Japan, NICs, and ASEAN, unanimously showed the highest growth rates to this region. China's import also increased very rapidly, but did not apparently show the existence of a viable division of labor relationship with our countries, except Japan, Hong Kong, and Singapore. South Asia, with roughly the same size of import market with China's import market, is a traditional neighboring trading partner for ASEAN countries, but with a very similar factor endowment situation with ASEAN, South Asia does not seem to have developed a sizable division of labor relationship with Pacific Asian countries. Trade with the rest of the world, including socialist countries, has not been fully developed.

C. *Balance of Trade of Pacific Asian Countries*

Trade matrix can show the regional structure of balance of trade. Comparison of figures in cells at symmetrical positions using the diagonal line as an axis enables us to obtain each country/region's balance of trade with others. Table IV provides balance of trade for Pacific Asian countries obtained in such a way.

For these countries, the total balance and extraregional balance conforms to each other fairly well. Japan, Indonesia, and Malaysia show surpluses in both respects. Other countries have deficits, but extraregional deficits tend to be much smaller than the total balance in each of these countries. For the deficit countries, the major source of unfavorable balance of trade is in intra–Pacific Asian trade. It may follow, therefore, that with certain mechanisms to clear the intraregional balance (for example, a revolving fund proposal for Pacific Asian countries), we can considerably ease the foreign exchanges constraints for the deficit countries [8] [9].

Such a pattern, however, is not the product of very brisk intraregional trade activities. On the contrary, as is observed in the trade matrix, regional trade has a heavy concentration in certain countries, and large deficits reflect such a concentration. Thus all countries except Indonesia and Malaysia show large deficits against Japan. Japan, in her turn, has large deficits against Indonesia and Malaysia. Other figures in Table IV are small (because of small trade transactions) except Hong Kong's deficit against Taiwan and Singapore's deficit to Indonesia and Malaysia.

TABLE IV

REGIONAL STRUCTURE OF BALANCE OF TRADE, 1969 AND 1979

(U.S.$ million)

		Trade Balance with					
		World (1)	Japan (2)	East Asian NICs (3)	ASEAN (4)	Pacific Asia (5)	Outside Pacific Asia (6)
Japan	1969	3,500		1,556	441	1,997	1,503
	1979	6,714		8,143	−3,831	4,312	2,102
Taiwan	1969	−165	−448	67	28	−353	188
	1979	2,773	−2,105	957	500	−648	3,421
Korea	1969	−1,019	−634	−3	−56	−693	−326
	1979	−3,224	−2,893	479	−320	−2,734	−490
Hong Kong	1969	−247	−474	−64	85	−453	206
	1979	−5,239	−3,145	−1,436	−1,064	−5,645	406
East Asian	1969	−1,431	−1,556		57	−1,499	68
NICs total	1979	−5,690	−8,143		−884	−9,027	3,337
Singapore	1969	−180	−203	−60	−370	−633	453
	1979	−3,110	−1,300	402	−1,024	−1,922	−1,188
Malaysia	1969	772	167	18	213	398	374
	1979	2,961	1,084	288	45	1,417	1,544
Thailand	1969	−361	−281	29	48	−204	−157
	1979	−1,608	−602	2	41	−559	−1,049
Philippines	1969	−488	−139	16	−48	−171	−317
	1979	−2,033	−419	−65	−343	−827	−1,206
Indonesia	1969	−73	15	−60	157	112	−185
	1979	8,193	5,068	257	1,281	6,606	1,587
ASEAN total	1969	−330	−441	−57		−498	168
	1979	4,403	3,831	884		4,715	−312

Source: Appendix Table I.
Note: (5)=(2)+(3)+(4), (6)=(1)−(5).

III. JAPAN'S TRADE RELATIONS WITH NICs AND ASEAN COUNTRIES

As seen in Tables II and III, intraregional trade represents only slightly more than one-fifth of Japan's trade for both exports and imports.

These statistics, however, underestimate Japan's close competitive/complementary relations with Asian countries. Competition between their products more often has been occurring in the third country markets, rather than in Japan. Besides, even though their final products are in severe competition, behind it exist complementary relations in intermediate and investment goods. Moreover, direct investment and technology transfer from Japan have replaced commodity trade in many cases.

The trade relation between Japan and other Pacific Asian countries, therefore, is not a simple competition, but can more suitably be interpreted as a combination of both competition and complementarity. In this section, both of these

aspects, together with one of the basic factors which resulted in such a co-existence, i.e., Japanese direct investment to these countries, will be considered. Performances and prospects of Japan's manufacturing imports from these countries will also be touched upon.

A. *Competition in Export Markets*

A salient feature of trade relationship between Japan and other Pacific Asian countries is competition, which is revealed in Tables II and III and summerized in the followings.

Table III illustrates competition among our three groups of Pacific Asian countries in their major export markets. For industrial goods, the shares of all three groups increased in both North America and West Europe. The share of NICs and ASEAN countries rose by wider margins than Japan, but Japan still retains the largest share.

In textiles, however, competition is more visible. While Pacific Asian countries increased their combined shares in major markets, those held by individual groups showed a drastic change. Japan lost her share in the North American market from 24.1 per cent in 1969 to 6.5 per cent in 1979. Those of NICs and ASEAN countries went up from 21.1 per cent and 0.9 per cent to 44.5 per cent and 4.0 per cent respectively. It is clear that textiles exports from NICs and ASEAN countries went through a severe competition with Japan's products and succeeded in replacing them at low quality product level.

B. *Complementarity*

The above figures do not show the whole story. Although NICs, and to a lesser degree ASEAN countries, took over Japan in export of consumption goods, they could not yet domestically supply intermediate and investment goods, and had to import a considerable part of these products from Japan. Each aspect of these competition/complementarity relations can be observed from trade matrices, by the change of shares and by the expansion of imports. But the coexistence of both can be established only with the ASEAN I-O Table.

Table V is an excerpt from the inverse matrix computed from it. It gives the induced manufacturing output generated by a unit increase of final demand for the manufacturing output in each country. It includes not only the expansion of manufacturing output both directly and indirectly required for induced export expansion. A detailed examination of the table tells us of the unique role of Japan in providing Korea and ASEAN countries with intermediate input needed for their manufacturing production. The coefficients are in the order of 0.07–0.14 and far exceeds the induced effect for other countries, which are in the order of 0.0002–0.002, except closer ties of 0.009–0.026 of Singapore with Indonesia, Malaysia, and Thailand.

Let us take an example of the Japan-Korea relationship. The competition and replacement of Japanese products by Korean products (a unit increase in Korean export and a corresponding decrease of Japanese export, say, to West Europe) generate a 0.14 unit increase in Japanese output, resulting in a net 0.86 unit decrease in manufacturing output of Japan. The figure 0.14 is the

TABLE V

MANUFACTURING OUTPUT OF INDIVIDUAL COUNTRIES INDUCED BY AN ADDITIONAL UNIT OF A GIVEN COUNTRY'S MANUFACTURING OUTPUT

From / To	Indonesia	Malaysia	Philippines	Singapore	Thailand	Korea	Japan	U.S.
Indonesia	1.1553	0.0010	0.0002	0.0272	0.0002	0.0012	0.0011	0.0002
Malaysia	0.0006	1.2191	0.0004	0.0261	0.0008	0.0054	0.0008	0.0007
Philippines	0.0003	0.0003	1.2575	0.0009	0.0004	0.0011	0.0020	0.0005
Singapore	0.0090	0.0160	0.0004	1.2102	0.0019	0.0005	0.0010	0.0004
Thailand	0.0006	0.0060	0.0003	0.0047	1.2772	0.0013	0.0016	0.0002
Korea	0.0017	0.0015	0.0008	0.0039	0.0023	1.4591	0.0025	0.0012
Japan	0.0972	0.0650	0.0711	0.1228	0.0829	0.1434	1.7820	0.0166
U.S.	0.0171	0.0251	0.0366	0.0679	0.0112	0.0692	0.0220	1.6262
Total induced output abroad	0.1319	0.1149	0.1098	0.2535	0.0997	0.2221	0.0310	0.0198
Total induced output both at home and abroad	1.2872	1.3340	1.3673	1.4637	1.3769	1.6812	1.8130	1.6460

Source: Computed by S. Furukawa, Statistics Department, Institute of Developing Economies.

Note: Inverse matrix of the ASEAN I-O Table [4]. The figures in the table are read as: An additional unit demand for manufacturing output of Indonesia induces the expansion of manufacturing output not only in Indonesia but also in other countries (in the form of imports). It includes both direct inducement of the product demanded and indirect inducement of intermediate input into the production. It amounts to 1.1553 unit expansion of manufacturing output for Indonesia, 0.0006 unit for Malaysia and son on. Induced manufacturing output for the other seven countries combined totals 0.1319 unit and that for the eight countries totals 1.2872 unit.

Even with similar sets of input coefficients for individual countries, different output composition, that is, a different degree of round-about production, results in country difference in coefficients of induced expansion of own output. Japan has the highest coefficient of 1.8130 reflecting a high degree of round-about productions in her industrial structure. On the other hand, coefficients of foreign output expansion reflect import dependence. Singapore has the highest figure of 0.2535.

induced effect for manufacturing as a whole but it is much larger in cases of some individual manufacturing (0.29 for textiles and near 0.40–0.53 for metals and machinery) because intermediate input needed for such heavy manufacturing are not available at home [4, Table 6].

Further heavy industrialization of Korean industry will promote this complementary relationship with Japan. Indeed the import substitution in the heavy industries would reduce complementarity individually, but since Korea is unlikely to promote heavy industrialization in many product lines due to her limited market and capacity size, it is more likely that Korean heavy industrialization will increase overall complementarity together with competition with Japan. Similar competition/complementarity relationships exist between ASEAN countries and Japan to a lesser extent.

It should be added that complementarity between Japan and other Pacific Asian countries is not confined to the intermediate goods trade aspect. Invest-

ment goods constitute the other aspect. Provision of those products from Japan has been one of the major factors of rapid industrialization in NICs and ASEAN countries. This was also one of the reasons for Japan's export growth in the 1970s.

Japan's export growth continued at a reasonable speed in the latter half of the 1970s. Partly, this was because of the steady export expansion of automobiles, electronics, machinery, etc. to the major markets of the United States and West Europe and to the new market of the Middle East. Industrialization in NICs and ASEAN countries, on the other hand, through its inducement effect, promoted Japan's export of intermediate and investment goods to these countries.

The effects of this one-way dependence for Japan are partly offset by her imports of mineral fuels and other primary products. However, it tends to incur a persistent bilateral trade deficit for the NICs and ASEAN countries vis-à-vis Japan, and constitutes one of the cores of trade problems in the region.

C. *Japan's Direct Investment*

The major factor in the creation of the above-analyzed complex competition/complementarity relationship is the rapid industrialization of NICs and ASEAN. But it should be stressed that Japanese enterprises have played an important part through direct investment and technology transfer.

Foreign direct investment by Japanese enterprises became active in the latter half of the 1960s, and was spurred by the speedy liberalization of overseas investment in 1969–72. At the time of March 1972, when overseas investment activities were most active, in manufactures 73 per cent of the number of investments and 37 per cent of the standing amount of investment were made in NICs and ASEAN countries. A survey made by the Ministry of International Trade and Industry at the time [7] pointed out the push factor of domestic labor cost and the pull factor of domestic production promotion by host countries as being the most influential on investment decisions.

The major investment objectives, according to a questionnaire survey, were local sales (76 per cent) and exports to third countries (15 per cent). Exports to Japan (9 per cent) was only a minor objective. It should be added here, that enterprises who have invested in NICs claim that exports to third countries are their major objective. The same tendency has been observed for the ASEAN countries in the late 1970s. Thus Japanese manufacturers' tendency to shift their production sites overseas, from the available evidence, clearly resulted in the manufacturing export expansion of NICs and ASEAN countries. An additional promotional factor may be a similar shift from Japan to these countries on the part of Japanese general trading companies (GTCs) in their procurement of export commodities to U.S. and West European markets.

The relative importance of foreign direct investment in the promotion of manufactured exports is difficult to assess empirically. At present, many Japanese joint ventures in NICs have been localized in management. ASEAN countries also show brisk export activities by local firms [13]. And this tendency is expected to continue. Still it would be misleading to disregard the importance of direct investment for some time to come, and Japan's direct investment will

continue to function as an agent to strengthen the competition/complementarity relationship between Japan and other Pacific Asian countries.

D. *Japan's Manufacturing Imports from NICs and ASEAN Countries*

Let us now turn to the aspect of Japan's import increase. Japanese import of manufactures from NICs and ASEAN countries started in the late 1950s, but reached a substantial level only in the latter half of 1970s. The basic reason for this is the rise of wage costs in Japan, but the following factors also contributed to Japan's import expansion: (i) Substantial tariff cuts in 1967–72 through the Kennedy Round, unilateral tariff reduction, and general preferences to developing country exports, (ii) Several instances of rapid yen appreciation from August 1971 (the yen went up from ¥360 to ¥308 per U.S. dollar in December of the year, and then to ¥265 from February to October 1973. A similarly rapid rise happened in the period of January to November 1978 from ¥290 to ¥176 per U.S. dollar), (iii) A part of the products by Japanese MNCs (boomerang phenomenon) and procurements by GTCs flowed back to Japan, and (iv) NICs' effort to diversify their export markets to the Middle East and Japan in response to the rise of protectionism in the United States and West Europe.

Japan's import of manufactures rose six times from U.S.$4 billion in 1969 to U.S.$24 billion in 1979. Especially notable in this is the rise of NIC's share. Textiles import shows an even more sharp increase, and in value terms increased 18 times in the same period. More than half of them are from NICs. Imports from ASEAN countries show a rising trend in shares, but the absolute share is still small. Japan's import of textiles from NICs and ASEAN became comparable in size to those of the United States and West Europe, although Japan imports much smaller amounts from Singapore and Hong Kong.

It is now necessary to go into the composition of Japan's import of manufactures in some detail. The combined share of NICs and ASEAN in Japan's manufacturing import in 1979 is 22 per cent (Table III), but many individual commodity items exceeded this figure. Table VI lists the twenty groups in which Asian NICs and ASEAN countries held the largest shares of Japan's import market in the order of the size of shares out of 102 SITC three-digit level. In the case of these twenty groups, more than half of Japanese imports were supplied from East Asian NICs and ASEAN countries. Tin (concentrates and metal) may be classified as a primary commodity, but it is notable that not only such light manufactures as wood products, footwear, clothing, textiles, furniture, and leather products but also five products in SITC Division 67 (iron and steel), cement, watches, radio/TV are included. The latter items are new exports which had only very small shares, if any, but grew to be major export commodities of these countries in the 1970s. The right-hand column of the table gives the major exporters with their shares. It is remarkable that in seventeen of them either Korea or Taiwan held the largest share, followed by Hong Kong who had in two items. Apparently, these two countries have been leading the regional countries in manufacturing exports to Japan.

Table VII supplements the list by showing eight commodity groups in which

TABLE VI

JAPAN'S IMPORTS OF MANUFACTURED GOODS FROM ASIAN NICs AND ASEAN IN 1979
—LARGEST TWENTY IMPORT GROUPS—

SITC Code No.	Commodity Name	Japan's Total Imports 1979 (U.S.$ 1,000)	Eight Countries' Combined Share 1979 (%)	Eight Countries' Combined Share 1970 (%)	Individual Countries' Share (1979, %)		
687	Tin	452,413	98.6	98.0	ML (57.9)	IN (20.9)	TH (19.7)
679	Iron and steel castings	1,989	87.1	51.5	KR (57.1)	TW (30.0)	
632	Wood manufactures	141,127	77.4	61.9	TW (55.6)	TH (7.6)	KP (6.8)
					PH (3.5)	ML (1.7)	SP (1.0)
674	Iron and steel plates	224,109	70.8	0.5	KR (41.4)	TW (29.2)	
851	Footwear	288,709	68.1	22.6	KR (42.0)	TW (25.6)	
673	Iron and steel bars	26,329	63.4	19.7	KR (39.4)	TW (23.4)	
841	Clothings	1,650,406	63.3	54.5	KR (39.6)	TW (16.1)	HK (5.7)
					PH (1.1)		
651	Textile yarn and thread	592,608	61.9	40.3	KR (45.7)	TW (10.6)	HK (2.6)
693	Wire products of metal	8,733	61.8	0.2	KR (54.5)	TW (3.6)	HK (2.3)
821	Furniture	231,910	61.2	10.9	TW (40.2)	KR (6.8)	HK (6.4)
					TH (2.6)	PH (2.2)	ML (1.4)
					SP (1.0)		
661	Cement and building materials	94,477	59.5	12.2	KR (47.8)	TW (11.6)	
677	Iron and steel wire	9,911	57.8	0.7	KR (55.8)	TW (2.0)	
521	Mineral tar	67,605	57.4	18.9	KR (56.8)		
899	Other manufactured articles	258,284	56.1	39.7	TW (26.6)	KR (14.5)	HK (8.6)
					PH (2.1)	IN (1.8)	ML (1.4)
842	Fur clothing	150,820	55.5	8.0	HK (49.9)	KR (5.5)	
864	Watches and clocks	209,571	50.5	5.6	HK (20.5)	TW (9.7)	SP (7.2)
					KR (6.2)	PH (5.9)	
654	Tulle, lace, embroidary, etc.	63,790	48.1	9.7	KR (43.6)	TW (3.9)	
672	Ingot of steel	165,584	47.0	18.4	TW (25.4)	KR (21.6)	
612	Manufactures of leather	40,159	45.5	23.7	KR (39.0)	TW (6.2)	
724	Radio and TVs	320,713	45.3	7.6	TW (23.2)	KR (15.6)	HK (2.4)
					SP (3.3)		
	Total (20 items)	4,999,265					

Source: Compiled and computed by H. Kohama using AIDXT of the Institute of Developing Economies.

Notes: 1. All percentage shares in parentheses indicate the shares of Japan's import from individual countries in total imports.
2. KR: Republic of Korea; TW: Taiwan; HK: Hong Kong; SP: Singapore; ML: Malaysia; TH: Thailand; PH: Philippines; IN: Indonesia.

TABLE VII

JAPAN'S OTHER MAJOR IMPORTS FROM ASEAN

	Commodities	Exporters (%)
611	Leather	PH (10.1)
897	Jewelry	TH (9.7)
621	Materials of rubber	ML (7.9)
656	Made-up textile articles	TH (7.6)
655	Special textile fabrics	SP (6.6)
667	Precious stones	TH (6.6)
541	Medical products	SP (6.5)
683	Nickel	PH (5.0)

Source: Compiled and computed by H. Kohama using AIDXT of the Institute of Developing Economies.

Notes: 1. All percentage shares in parentheses indicate the shares of Japan's import from individual countries in total imports.

2. SP: Singapore; ML: Malaysia; TH: Thailand; PH: Philippines.

individual ASEAN countries had a market share of more than 5 per cent. All are either textiles, miscellaneous manufactures, or indigenous products. ASEAN countries in 1979 held a share of 4.6 per cent in Japan's manufactures import, but their share for the all commodities group including primary commodities, was as high as 14 per cent, indicating that ASEAN's export to Japan still consisted mainly of primary commodities.

E. *Factors Affecting Japan's Import of Manufactures*

In spite of this recent increase of Japan's imports of manufactures from the Asian NICs, there is strong criticism from abroad that the absolute amount is still insufficient. Only 11 per cent of NICs manufactured export goes to Japan. A smaller 8 per cent of ASEAN's manufactured export goes to Japan (see Table II). It cannot be denied that Japan does not import manufactures sufficiently even if taken into account that the Japanese market is a smaller size than that of the United States and West Europe. It reflects the one-way complementarity in manufacturing production between Japan and NICs/ASEAN countries in Table V, and the resulting big trade deficits with Japan of these countries except Indonesia and Malaysia in Table IV. Balanced growth of manufactured trade in Pacific Asian countries requires further expansion of Japan's imports of manufactures.

Factors affecting Japan's manufacturing imports are various, but could be grouped into two types. One is the short-term factors which have been in revision for some time, i.e., (i) tariffs and import quotas, (ii) implicit import restriction such as voluntary export restraints and administrative guidance to importers, and (iii) complicated distribution channels. The other type is more deeply rooted in the growth process and behavior of Japanese firms, and would require longer periods to be solved, i.e., (iv) revitalized competitiveness of import-competing producers in Japan, and (v) conventional behavior of Japanese

firms in procuring parts and intermediate inputs mainly in Japan. These will be briefly discussed at some length in the remaining part of this section.

First, Japan's tariffs on manufactures have been lowered below those of West Europe and the United States through a series of trade liberalization: the Kennedy Round tariff reduction (1967–71), unilateral tariff reduction (1972), and Tokyo Round tariff reduction (1980–87). Furthermore, imports under General Schemes of Preference (exempting 50–100 per cent duties on manufactured import from developing countries) have increased steadily since 1971, and NICs and ASEAN countries have been the major beneficiaries. Import quotas on manufactures have been almost totally abolished leaving only raw silk, silk fabrics, and leather goods. Japan has not yet legally resorted to quota restriction of textile imports under bilateral agreement of the MFA, Article 4.

What about the second factor, voluntary export restraints and infamous administrative guidance to importers? Voluntary restraint was requested only at the private business level to exporters of a few commodities: to Korea and Pakistan for cotton yarns, to China on cotton fabrics, and to Korea for certain steel products. All of them took place in the instance of an import surge on the Japanese market. Its import-restricting effect, however, was rather dubious, but the Korean Spinner's Association agreed on voluntary restraint of cotton yarn export when a dumping case was brought up by its Japanese counterpart.

An import surveillance system and administrative guidance were introduced by the government in 1973–74 after the import surge motivated by speculation. The former is no more than an early warning system based on import contract statistics. The record of import contracts was collected from individual importers and fed back to them in order to avoid blind importing. The latter is conducted by MITI officials telephoning to major importers in order to discourage further increase of import contracts in the instance of an import surge. There were a few cases in which these schemes were attempted to discourage an import increase of cotton yarn, but they were not very effective since import was continued by outsider importers. Administrative guidance can prevent speculative import surges but not the import increase caused by market forces [19].

The third factor of conventional import procedures and complicated distribution channels are often referred to as barriers for foreign exporters to penetrate the Japanese market. The import procedure, however, will be improved considerably by an overall amendment of the import law proposed in December 1982. Direct imports of cheap consumption manufactures have been expanded by department stores and supermarkets. This is much less important for Korean and Taiwanese exporters who have close contact with Japanese market.

The fourth factor, restrengthening of competitiveness of Japanese manufacturers in certain products, is the first of the longer-term aspects. It has been a salient feature in Japan that textiles and other consumption goods have been differentiated and upgraded in response to the increased competition with cheap, lower-quality imports from ASEAN developing countries. Changes in consumption patterns in Japan, or more generally in developed countries (i.e., more sensitive to changes in fashion and design and less elastic to price changes), have strengthened the competitive edge of domestic producers significantly.

Changes in production technology, which is highlighted by the rapid increase in the use of industrial robots, would also alter the basis of international competitiveness of certain products, and a reverse shift of comparative advantage from developing to developed countries might occur.

The fifth factor, procurement of parts and intermediate inputs mainly from affiliated suppliers within Japan, has been keeping Japan's imports of manufactures at a low level, while trade in intermediate products is more prevalent in intraregional trade in West Europe. This firm behavior has been fostered for a long time by import substitution strategy under persistent balance of payments deficits. It is also related to a well-developed system of subcontracting and high technology and skill level of subcontracting firms. Both barriers to further expansion of Japan's import of manufactures cannot be overcome without the improved skills and technology of neighboring Asian producers.

IV. NICs' ECONOMIC RELATIONS WITH ASEAN COUNTRIES

The competitive and complementary relations which have been explained between Japan and NICs/ASEAN are also seen between NICs and ASEAN to a lesser extent both in the variety of industry and in the magnitude of the relationships. In this section these relationships and main factors contributing to them will be discussed.

A. *The Catching-up of the ASEAN to NICs and Emerging Competition*

ASEAN countries emerged as strong competitors for the NICs of labor-intensive manufactures in U.S. and West European markets in the 1970s. The trend has been accelerated in response to the wage cost increases in NICs, and the competition has spread to other Asian countries.

For industrial export as a whole, NICs more than doubled their combined share in North American market from 4.5 per cent in 1969 to 9.9 per cent in 1979 (Table III). ASEAN countries also doubled their share from 1.0 per cent to 2.2 per cent, indicating an increasing trend of competition with NICs. It is noteworthy that in the NICs market, while shares held by NICs themselves rose from 4.0 per cent to 6.4 per cent, ASEAN countries showed a much faster rise from 0.7 per cent to 3.1 per cent.

Such expansion of ASEAN's share is most apparent in labor-intensive light industries, textiles in particular. In the import market of textiles in North America while NICs doubled their shares from 21 per cent in 1969 to 45 per cent in 1979, ASEAN countries, although still at a low level, quadrupled theirs from 1 per cent to 4 per cent. Similarly, in the NICs' market of textiles import, while NICs themselves increased their share from 9 per cent to 24 per cent in the same period, ASEAN countries achieved a sevenfold rise from 0.5 per cent to 3.4 per cent (Table III).

In the 1960s, NICs imports from ASEAN countries mostly consisted of primary commodities. With NICs' exports to them of light manufactures, there was a straightforward complementary relationship. ASEAN countries, however, proceeded with import substitution of labor-intensive light manufactures in the

1960s and early 1970s. As a result, ASEAN countries started to procure those commodities from domestic producers and then emerged as an exporter. As mentioned earlier, some products even found their way to the NICs' market. At present, the major field of ASEAN import substitution is shifting toward materials processing industries and other technology- and capital-intensive industries.

The largest ASEAN exporter to NICs, as can be easily seen from our trade matrices, is Indonesia. Here exports, however, mainly consist of primary commodities. In manufactures, the largest exporter is Singapore, which is often classified as a NIC. Hong Kong is the largest destination, reflecting, perhaps, her tradition of an *entrepôt* trader.

The catching-up of the ASEAN industry has strengthened its competitiveness against NICs' industry. Wage increase in the NICs was one of the major factors. In Korea, for example, wages in manufacturing sector grew 2.3 times higher in real terms from 1973 to 1979. Similarly, in Taiwan wages increased 2.0 times higher in that period. A cause and at the same time a consequence of this trend is the shift of industrialization efforts toward knowledge- and technology-intensive directions.

An interesting phenomenon in this context is the movement of multinational corporations (MNCs) to divert their production sites of labor-intensive commodities to ASEAN countries with lower wage rates. Prospective fields of their investment are expected to be relatively low-level standardized products such as parts and assemblies of machinery, cast iron products, and plastic formings. Since these products have been NICs' major export, in which MNCs from developed countries were very often involved, international subcontracting will be one of the major fields of competition between NICs and ASEAN countries. This situation is intensified by the fact that governments of ASEAN countries expect export expansion of such nontraditional commodities as leather products, ceramics, and parts of relatively simple metalworkings.

B. *Complementarity Aspects between NICs and ASEAN*

Behind the fierce competition, however, there has emerged a new form of complementary trade relationship between NICs and ASEAN countries, comparable to that between Japan and NICs described in Section III.

Turning to NICs' exports to ASEAN countries, we find that the largest exporter changed from Hong Kong in 1969 to Taiwan in 1979. It is difficult to single out the largest importer. In textiles alone, export to Singapore has been increasing. Textiles, however, has been gradually losing its importance as a major export commodity to ASEAN, and more varied products including capital and intermediate goods have found their way to the market. This may be considered as an indication of the emerging complementarity between NICs and ASEAN countries.

Korean trade with ASEAN, for example, involves some complementarity. Coefficients for induced output of Korean manufacturing by individual ASEAN countries are between those for Japanese manufacturing by ASEAN countries and those for ASEAN by ASEAN countries themselves. The induced production

effect of increased final demand in ASEAN manufactures on NICs, according to the ASEAN I-O Table, is not only smaller than that of NICs on Japan but also coming from different sectors of manufacturing industry of ASEAN countries. In the case of the induced effect from ASEAN to Korea, the inducing manufacturing sectors in ASEAN countries are by and large, light manufactures. In comparison, among ASEAN countries themselves, the effect is generally small except on Singapore. The size of the production inducement effect on Korea, the only NIC in the table, stands between those on Singapore and other ASEAN countries. The same situation exists for the effects on NICs' manufacturing industry.

At a more disaggregated level, the final demand increase of the textile industry in ASEAN countries induces rather a large effect on Korean textile industries. For example, one unit increase in the production of the Indonesian textile industry induces 0.0117 unit of production in the Korean textile industry, that of Thailand is 0.0068 unit, and that of the Singaporean textile industry, 0.0066 unit; each of which is much bigger than the corresponding figures for average manufacturing in Table V. Other relatively large coefficients are observed between Singapore and Korea for nonmetallic minerals (0.0171) and wood products (0.0049 on Korean chemicals). ASEAN's dependence on Korean manufacturing are, therefore, characterized by small inducement and bias toward light manufacturing in comparison with ASEAN's dependence in Japan [4].

C. *The Role of NICs' Direct Investment in ASEAN*

The complementary relationship between NICs and ASEAN, in fact, has been raised and supported by NICs' direct investment in ASEAN countries. By investment in ASEAN countries NICs have extracted the natural resources for use in NICs, but, at the same time, the subsidiary firms in ASEAN increase the import of capital or intermediate goods from NICs. This has created the complementary relationship which is mentioned above. There has been a gradual increase of direct investment from NICs to ASEAN countries. The fields of investment are various, but Taiwan and Hong Kong cases show a degree of concentration in manufactures, commerce, and real estate. This may be considered as a sign to show MNC-like behavior of some of the NICs enterprises, although to a very limited degree.[5]

In ASEAN countries, viewed from the standing amount of investment, Japan undoubtedly is the leader. NICs' investment, however, shows a noticeable amount. As seen in Thailand, the typical share of NICs in foreign direct investment could be considered in the range of 15 per cent of the total, as compared to Japan's 30 per cent [14].

The other interesting movement is Korean expansion of plant exports accompanied by the overseas operation of Korean construction firms. Such an operation of course brings exports of equipment and industrial materials, thus contributing to the promotion of complementarity.

[5] Korean direct investment also has a focus on procuring necessary raw materials for domestic manufactures. Especially typical is their investment in the Indonesian lumber industry.

Development of a major construction firm in Korea, the Hyundai Engineering and Construction Company is worth looking at. Having experienced domestic construction, the company started overseas operation in Southeast Asia around 1965. Around 1975, its field of operation was spread into Middle Eastern countries. Their projects include harbors, shipyards, military construction, housing, etc. In association, the company widened its operations into such heavy industries as automobiles, cement, and shipbuilding, and formed the Hyundai Group which produces and exports various heavy manufactures. The Hyundai Corporation, a general trading company, was established in 1976, and, with a support from government, started exporting products of group companies.

D. *Economic Relations among NICs*

A glance at the mutual trade among NICs is necessary. Its most apparent feature is the prominence of Hong Kong as an importer, not only for the all commodities group but also for industrial products and textiles. This may be partly reexported. As major destination of Hong Kong export, the United States and West Europe are the largest.

The largest exporter of intra-NICs trade is Taiwan with U.S.$1,302 million of export out of U.S.$2,220 million (1979). For industrial products and textiles, Taiwan had a share of around 60 per cent.

The relative shares of individual NICs alone may not be a good indication of intra-NICs trade. It is possible that the ultimate purchaser of some intra-NICs trade goods are in developed countries, or even in ASEAN. More scrutiny would be necessary in this area.

Another important aspect of economic relationship among NICs is the joint industrial project. The joint ethylene plant project between Taiwan and Korea, which attracted attention some time ago, however, has not shown much progress.

V. INTRA-ASEAN DIVISION OF LABOR

In this section, trade relationships in the most recently industrializing area in the region, i.e., ASEAN countries, will be discussed. Here also competition and complementarity seem to be on the rise. Competition in particular has been intensified which is easily seen by the similar range of export commodities in individual countries. The group, however, has been endeavoring to establish stronger economic ties through various measures under the auspices of ASEAN as an economic institution. Their efforts in the future may result in more complementary trade relations among member countries.

The first aspect to be examined will be the importance of ASEAN trade with its member countries. Secondly, measures under discussion and/or implementation, which are expected to increase complementarity, will be discussed. Lastly, prospects of closer ASEAN trade relations will be touched upon.

A. *The Size and Characteristics of Intra-ASEAN Trade*

Intra-ASEAN trade showed a twelvefold expansion, from U.S.$950 million

in 1969 to U.S.$11,200 million in 1979.[6] Therefore, it grew faster than not only world export but faster than their total export trade. The major component of this growth was the expansion of primary products trade. Indonesian export of crude oil and Singapore's petroleum products contributed to this substantially. Intra-ASEAN trade of industrial goods, however, showed growth only slightly better than world average. As a consequence, the proportion of ASEAN manufacturing exports to the ASEAN market itself, calculated from Table II, was stable from 22.4 per cent in 1969 to 21.8 per cent in 1979; although, for all commodities, the proportion rose from 17.2 per cent to 22.1 per cent.

Trade matrices reveal that intra-ASEAN trade is heavily concentrated in Singapore, and among the other four countries it is still small. One ready explanation would be Singapore's long stance of an *entrepôt* trader. But Singapore's earlier start and more successful progress of industrialization, which brought her NIC status, and a consequent practice of her processing type of trade pattern should also be stressed [18]. In the context of intraregional manufacturing division of labor, this may be considered as a sign of emerging complementarity. But induced output expansion is very small among ASEAN countries.

B. *ASEAN Economic Cooperation: Its Recent Development*

Much has been said of intraregional economic cooperation among ASEAN countries. At present, the major forms are agreement on ASEAN Preferential Trading Arrangements (1977), examination and implementation of ASEAN Industrial Projects (1976), and agreement on ASEAN Industrial Complementation Schemes (1981). Others include an agreement on food buffer stock (1979), that on regional petroleum accommodation (1980), and a swap agreement of foreign reserves (1977).

The Preferential Trading Arrangements (PTA) started with only seventy-one commodity items. The coverage gradually increased to 3,200 in March 1978, to 6,581 in June 1981, and to 8,529 in January 1982. PTA's trade creation effect on ASEAN intraregional trade, however, has been mainly considered pessimistically. For the promotion of intraregional trade, the most effective tool is the across-the-board tariff cut. Indonesia, however, the least industrialized of the member countries, found itself unprepared for the regional integration, and preferred the step-by-step, commodity-by-commodity approach. As a result, the tempo of intraregional liberalization was very slow, only expanding in the number of items in the preferential list but fixing the preferential margin at the initial 10 per cent.

Similarity in the industrial and trade structures among member countries is the major limiting factor to PTA. One estimate shows that, even with the 100 per cent tariff reduction, i.e., complete liberalization at SITC 5 digit level on nearly 3,000 items with less than U.S.$500,000 worth of import, its trade creation effect would be as small as only 2 per cent of total import [15]. It should be noted, however, that such static estimations have a downward bias.

[6] For detailed accounts of ASEAN regional cooperation, see [20].

In practice, effect of income rise could be fairly large, especially for those imports with high income elasticities.

ASEAN Industrial Projects (AIP) started in 1976 with feasibility studies to construct urea fertilizer factories in Indonesia and Malaysia, a superphosphate fertilizer factory in the Philippines, a diesel engine factory in Singapore, and a soda ash plant in Thailand. Japan pledged assistance of U.S.$1 billion in the next year. At present, urea fertilizer plants in Indonesia and Malaysia are in the stages of construction and establishing of joint venture agreement, respectively. With imports by other member countries, the prospects seem pretty firm.

The other projects experienced not-so-favorable development. In Thailand, the factory site was not decided until May 1981. The Philippines proposed changing the project to a copper smelter, and acquired consent in January 1982. Singapore abandoned the diesel engine factory, but has not proposed an alternative. For launching these projects, strong support will be still necessary.

ASEAN Industrial Complementation Schemes (AIC), unlike the AIP, was established with initiatives from the private sector. One of the industry clubs under the ASEAN Chamber of Commerce and Industry, that for automobiles, proposed the AIC of automobiles, which acquired the basic agreement from the foreign ministers of five member countries in June 1981. Not much, however, can be expected from the scheme while the ASEAN economy as a whole is in recession. Future prospects are still to be seen.

C. *Prospects of Intra-ASEAN Division of Labor*

ASEAN countries except Singapore have very similar resource and factor endowments. As a consequence, it is difficult to consider an immediate upsurge of intraregional trade based on the comparative advantages. As has been mentioned, Singapore has been almost the only country which substantially contributed to intra-ASEAN trade.

Singapore's path of industrialization, being different from those of other member countries, therefore, is expected to play a major role in intra-ASEAN trade. This is analogous to the emerging complementarity between NICs and ASEAN countries. The proportion of Singapore's domestic exports to total exports has been rising steadily, and it would be justified to conclude that such a complementarity is increasing.

Division of labor among four other ASEAN countries will be slower to take form. But even in this field, there are some signs of rising prospects. One is the management strategy of MNCs. As already mentioned, MNCs' foreign operation has been showing signs of shifting their location to ASEAN countries, mainly because of the rise of wage costs in NICs. A prominent field of such an operation is the production of electronic components and parts, semiconductors in particular. This in itself is an international subcontracting of a part of processing for MNCs. But the movement triggered off production of transistors and ICs export to NICs, manufactures in Hong Kong in particular.[7] These parts producers further expect the export growth to intra-ASEAN producers

[7] Activities of Southeast Asian watchmakers were reported in [10].

who would assemble them for export. Such transactions may have a chance to create a typical pattern of intraregional trade.

Such a possibility to widen the business horizon can be expected not only in MNCs but also in major local firms [5]. In this, overseas Chinese firms may be expected to continue their traditional role of expanding trade among neighboring countries in this region. Governments also should take measures to encourage such export orientations of private firms. On the above-mentioned PTA, a dynamic effect on the creation of favorable circumstances should be assessed as well as the direct but static effect.

VI. SUMMARY AND POLICY IMPLICATIONS

Nine Pacific Asian countries have been showing a unique pattern of interdependence, which can be explained by the economic similarities among them of market economy, export orientation, and high growth performance.

The interdependence, however, has not been based on the mutual exchange of final goods. Intraregional trade has been brisk, but its major part has been in intermediate commodities trade. And the ultimate destination, in most cases, has been North America and West Europe. With their market in developed countries in deep depression, however, their trade strategy may be facing a need to diversify their export destination.

Of course, this does not mean U.S. and West European markets should be abandoned. But, given the present situation of the world market, these countries should diversify their export market. And the most promising market, with the brightest growth potential, is expected to be their own Pacific Asian neighbors. It is only natural, therefore, to search for possibilities for more active intra–Pacific Asian trade.

Statistical findings indicate the growing competition/complementarity relationships among Pacific Asian countries. Competition in third country markets has already shown a sign of spreading into their own, especially Japan's markets. This competition, however, created a very strong complementarity in its wake in intermediate and capital goods. With the selective progress of heavy industrialization in NICs and ASEAN countries, the complementarity is expected to increase even further.

Competition/complementarity relationships are not confined to that between Japan and NICs/ASEAN. We have identified clear signs pointing out the emergence of such relations between NICs and ASEAN countries, although it is still small in comparison to Japan-NICs relationship. With the industrial catching-up of ASEAN countries to NICs, complementarity is also expected to rise. Furthermore, intra-ASEAN trade along the similar line, although on an even more limited scale, may have a possibility.

The past achievement of industrial development and trade expansion of the Asian NICs and ASEAN countries is mainly attributable to the activities of the private sector. Direct investment of U.S. and Japanese firms and technology transfer through their activities played an important role on the spreading process of industrialization to the present NICs and ASEAN countries. Evolution of

leading local enterprises has responded to the growth of demand both at home and abroad. Some of them started as joint ventures with MNCs but gradually shifted the management control to themselves. Merchants of Chinese descent should also be counted as activating division of labor throughout the region.

However, government policies of both NICs and ASEAN countries have affected the private business activities and are partly responsible for the present structure of extra and intraregional trade summarized above. Their foreign investment and protection policies have so far succeeded in inviting local productions by MNCs, while they have sometimes confined MNCs' activities within small domestic markets of individual countries. The change of their development strategy from inward- to outward-looking accelerated the export expansion of manufactures from these countries. However, it has tended under export promotion measures to increase the extraregional concentration of their export. The expansion of intraregional trade requires the removal of trade barriers among individual countries and the extension of horizon of private businessmen beyond their national borders. Trade liberalization and other economic restructuring programs will help along this line.

Trade and aid policies of the United States, Japan, and other developed country governments should not be neglected either. Setting their macroeconomic policies and the resulting current recession, their industrial and trade policies have significantly affected regional trade. The Multi-fiber Arrangement by the United States and West European countries has affected textile and clothing exports from NICs and ASEAN countries. Rapid liberalization of overseas investment by the Japanese government (1969–79), which was introduced to avoid the appreciation of the yen, stimulated the relocation of industrial production from Japan to ASEAN countries. Japan's pledge of contributing U.S.$1 billion to the ASEAN Industrial Projects originated from her intention to promote intra-ASEAN integration.

It is an objective fact that the Japanese economy with its size and technology level far exceeds other economies in the region, but too much one-way dependence on Japan's industrial production may not be desirable for the harmonious trade relationship in the region as a whole. We argue neither for balancing each bilateral trade nor for eliminating the overall trade surplus of Japan. Incidentally, Japan incurred a current account deficit with the world in 1979, and the overall trade surplus itself, if any, will be offset by capital outflow. We suggest instead that a good case can be made for a more balanced complementarity between Japan and her neighbors in industrial good trade, namely, increased dependence of Japanese manufactures on imported parts and industrial materials.

Insufficient import dependence at the moment, however, results not so much from the alleged "implicit barriers" as the gap in technology and quality control standard between Japan and NICs and ASEAN. Technical cooperation should be promoted both at government and business levels for this purpose.

Policies suggested above may be implemented unilaterally by individual governments but some coordination between them will help strengthen their adjustment efforts. Although the private sector makes main adjustments and the government

affects it only indirectly in our mixed market economies, such a coordination will help individual governments to discuss the need for joint industrial adjustment and to try to concert their efforts among themselves.

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APPENDIX
TRADE MATRIX OF ALL

	1.	2.	3.	4.	5.	6.	7.
1. Japan		606*	767*	615	313*	138*	434
		4,365	6,245	3,675	2,665	1,506	1,714
2. Taiwan	158*		22*	93*	26*	9*	27*
	2,260		171	1,131	422	130	185
3. Korea	133*	13*		24*	12*	2*	6*
	3,352	160		531	197	86	110
4. Hong Kong	141	35	18		90	26	26
	530	185	41		282	86	64
5. Singapore	110*	10*	11*	47*		85*	58*
	1,365	112	230	961		2,037	607
6. Malaysia	305*	—*	37	18*	352		11*
	2,590	193	209	188	1,931		149
7. Thailand	153*	31	1*	56	57*	55	
	1,112	64	50	247	427	228	
8. Philippines	337	15	26	8*	5*	1*	4
	1,201	61	141	158	66	57	19
9. Indonesia	252*	6*	4*	7*	141*	50	7
	7,192	407	387	99	1,964	66	38
10. South Asia	331*	2*	8*	55	45	6*	10
	3,426	209	237	276	168	71	53
11. Australia/New Zealand	1,160	36*	16*	64	84	73*	31
	5,849	409	570	377	486	442	158
12. N. America	4,040	333*	506*	375	154*	71*	155
	20,695	3,239	4,153	2,106	2,333	981	914
13. W. Europe	1,340*	99*	198*	553	278*	231	282
	8,328	1,313	2,073	3,163	2,218	1,349	1,217
14. Middle East	1,730*	a*	24*	44	4*	46*	10*
	27,563	1,900	2,863	95	3,399	606	899
15. China	245*	—	—*	401*	123	72	—
	2,968	—	5	2,719	370	199	218
16. Rest of the world	2,055	29*	3*	66*	48*	12*	8*
	7,887	688	901	673	416	263	470
17. World total	12,490*	1,215*	1,642*	2,425*	1,729*	878*	1,068*
	96,318	13,305	18,276	16,399	17,343	8,107	6,815

Notes: 1. The upper figure indicates the trade value in 1969 and the lower figure the value in 1979.

TABLE I
COMMODITIES, 1969 AND 1979

(U.S.$ million)

8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
476	237*	184*	579	5,498	2,052*	207*	391*	3,495	15,990*
1,620	2,124	2,189	3,191	28,336	16,524	9,610	4,115	15,154	103,032
15*	13*	1*	16*	440*	104*	7*	—	118*	1,050*
201	399	61	448	6,092	2,306	902	—	1,370	16,078
1*	2*	1*	6*	327*	55*	2*	—	37*	623*
109	195	248	181	4,777	2,841	1,366	—	900	15,052
17*	62	11	72	827	557*	23*	6*	266	2,178
115	42	56	417	4,079	3,915	434	120	793	11,160
6*	36*	24*	50*	186*	250*	15*	57	605	1,549*
237	483	709	718	2,088	2,209	482	170	1,825	14,233
25	16*	11*	50	274*	293*	13*	45	200	1,650*
118	235	328	264	1,988	2,133	199	182	361	11,068
3	13*	31	4*	104	139*	12*	—*	50*	707*
11	188	86	59	613	1,372	261	77	412	5,207
	1*	1*	5*	324	77*	a*	—*	19*	823
	46	8	97	1,434	1,001	50	52	211	4,601
25*		a*	62	120*	123*	a*	a	3*	800*
165		64	241	3,199	1,230	62	—	475	15,590
4	9*	1,097	80	576	841	274*	82*	142*	3,562
13	182	2,025	264	1,890	4,317	2,194	581	2,461	18,366
67	27*	69	250	860	1,700	59*	125*	491	5,110
251	331	357	1,445	3,353	4,284	974	914	2,814	23,014
394	201	1,500	1,140	18,760	14,320	1,289*	115*	7,856	51,210
1,607	1,021	3,126	4,677	68,736	56,161	9,985	2,243	46,785	228,762
252	192*	1,296	1,800	11,900	78,310*	3,220*	520*	18,250	118,720
974	1,304	5,886	5,954	47,240	478,278	33,910	3,941	104,098	701,246
13*	1*	507*	215*	481	4,530*	660*	19*	1,095*	9,380*
863	328	5,639	1,760	18,637	59,178	8,395	202	18,108	150,435
—	39	126*	36	27*	405	85*		692	2,250*
109	119	958	216	707	2,149	749		3,772	15,258
13*	25*	1,471	135	7,034*	19,753	1,225*	1,190	26,892	56,960
241	400	1,195	614	57,578	100,576	7,753	4,965	120,579	305,200
1,311	873*	6,329	4,500	47,740	123,510	7,090*	2,550*	57,210	272,560
6,634	7,397	22,935	20,546	250,747	738,474	77,326	17,561	320,119	1,638,302

2. *=the growth rate higher than the world average.
a=the trade value less than U.S.$1 million.
—=no record in the basic data.

APPENDIX
TRADE MATRIX OF ALL

	1.	2.	3.	4.	5.	6.	7.
1. Japan		561*	584*	569*	294*	132*	422
		4,056	5,787	3,450	2,576	1,453	1,652
2. Taiwan	31*		2*	76*	19*	7*	25*
	1,379		94	1,052	387	122	156
3. Korea	57*	8*		20*	11*	1*	5*
	2,360	122		484	182	83	104
4. Hong Kong	96	25*	16		73	18	22
	421	173	35		241	72	46
5. Singapore	3*	1*	1*	15*		30*	11*
	248	52	43	328		1,325	280
6. Malaysia	87	—*	1*	4*	35*		5
	377	28	52	137	352		25
7. Thailand	8*	a*	a*	3*	4*	1*	
	215	6	13	98	163	37	
8. Philippines	3*	1*	a*	2*	1*	1*	3
	155	19	10	115	22	16	18
9. Indonesia	4*	—*	a	a*	108	1*	a*
	114	3	a	43	275	28	15
10. South Asia	58*	a*	5	37	26	2*	9
	592	34	18	193	57	49	32
11. Australia/New Zealand	93	10*	a*	34*	27*	29	18
	520	123	62	230	281	123	105
12. N. America	1,657	200*	198*	292	132*	53*	110*
	7,519	1,844	1,872	1,574	2,146	873	679
13. W. Europe	1,148	88*	193*	494	239*	193*	256
	6,713	1,174	1,942	2,921	2,006	1,227	1,081
14. Middle East	30*	a*	2*	34	3	8	1*
	425	48	28	19	3	6	13
15. China	51*	—	—*	169*	73	30	—*
	700	—	3	1,470	216	71	61
16. Rest of the world	595	1*	1*	9*	2*	1*	1*
	2,359	73	448	427	164	55	14
17. World total	3,920*	895*	1,005*	1,757*	1,045*	507*	888
	24,098	7,756	10,406	12,544	9,072	5,539	4,281

Notes: 1. The upper figure indicates the trade value in 1969 and the lower figure the value in 1979.

TABLE II
INDUSTRIAL GOODS, 1969 AND 1979

(U.S.$ million)

8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
432	226*	174*	548	5,273	1,848*	198*	382*	3,328	14,970*
1,532	1,975	1,883	3,113	27,679	15,866	9,345	3,587	15,086	99,041
13*	12*	1*	15*	387*	46*	6*	—	95*	734*
176	266	45	432	5,903	2,105	657	—	1,304	14,077
a*	2*	1*	5*	306*	33*	1*	—	29*	479*
104	176	237	173	4,595	2,673	1,287	—	843	13,428
14*	58	10	66*	815	542*	22*	2*	234	2,015
112	41	47	410	4,001	3,879	432	103	720	10,734
3*	30	9*	7*	38*	22*	4*	a*	192	365*
135	135	267	158	1,532	1,056	464	72	620	6,715
5	11	4*	3*	153*	49*	1*	—*	43	401*
23	16	36	95	991	686	33	2	157	3,009
a*	3	1*	1*	63	29*	a*	—*	5	117*
5	13	35	35	357	599	83	11	13	1,683
	a*	1*	2*	43*	4*	a*	—*	6*	67*
	10	26	48	430	146	24	2	44	1,085
a*		—*	1*	21	34*	a*	a	3*	173
17		27	9	23	231	32	—	16	832
3	8	53*	46	329	314*	50*	2*	472	1,414*
7	24	1,666	208	1,171	3,021	1,063	326	655	9,171
43	17*	13*	192	180	210	2*	5*	213	1,088
124	131	180	970	525	807	72	218	871	5,343
293	99*	273	919	14,257	8,626	422*	a*	7,740	35,271
1,246	643	1,426	3,970	49,631	34,590	7,265	758	31,582	147,618
212	163*	632*	1,672	10,104	57,876*	1,545*	427*	17,825	93,070
868	1,198	5,140	5,395	39,829	357,792	29,303	3,616	85,143	545,349
1	a*	2*	5*	151	251*	6*	a*	127	619*
3	4	228	31	108	1,585	2,406	21	671	5,599
—*	33	28*	30	15*	147*	1*		83*	660*
15	99	212	171	460	1,126	509		2,382	7,495
1*	5*	2,265	37*	1,267*	6,819	2,805	771	9,989*	24,568
59	80	1,176	269	8,643	23,752	3,948	3,248	62,415	107,166
1,020	667*	3,466	3,550	33,400	76,850	5,065*	1,590*	40,284	176,010
4,425	4,813	12,632	15,487	145,878	449,914	56,976	12,000	202,523	978,345

2. *=the growth rate higher than the world average.
a=the trade value less than U.S.$1 million.
—=no record in the basic data.

APPENDIX
TRADE MATRIX OF TEXTILES,

	1.	2.	3.	4.	5.	6.	7.
1. Japan		51	103	220	107	11	47
		140	296	568	173	41	47
2. Taiwan	10*		a*	39*	10*	1*	7
	449		23	473	128	30	18
3. Korea	36*	a*		11*	9*	1*	3
	1,242	41		204	85	14	17
4. Hong Kong	11*	6	1*		26	7	3*
	188	23	15		90	20	18
5. Singapore	a*	a*	a*	2*		2*	1
	20	2	3	14		97	5
6. Malaysia	a*	a	—*	a*	1*		a
	21	a	2	6	11		a
7. Thailand	2*	a*	a*	a*	2*	a*	
	51	2	3	36	37	10	
8. Philippines	a*	a	—*	a*	a*	a*	—*
	20	a	a	27	11	1	a
9. Indonesia	a*	a	—	a*	a*	a*	—
	10	1	—	15	45	1	—
10. South Asia	11*	a*	—*	24	19	2	1
	114	6	2	118	27	1	1
11. Australia/New Zealand	1*	a*	a*	3	1	a	a*
	24	23	3	14	4	2	2
12. N. America	15*	3*	3*	20	3*	1	3
	210	19	26	66	19	5	5
13. W. Europe	84*	a*	1*	62	16	9	7
	780	15	24	219	63	20	9
14. Middle East	a*	a*	a	a	a*	—*	a
	11	15	—	1	1	a	—
15. China	23*	a	—*	79*	38	9	—*
	426	—	2	752	92	13	12
16. Rest of the world	1*	a*	a*	a*	a*	a*	a*
	59	60	3	20	5	2	1
17. World total	198*	62	109	462	235	45	71
	3,627	347	402	2,533	791	258	135

Notes: 1. The upper figure indicates the trade value in 1969 and the lower figure the value in 1979.

TABLE III
1969 AND 1979

(U.S.$ million)

8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
44	27	21*	118	635	147	57*	14*	495	2,097
77	88	174	215	593	328	430	112	1,060	4,343
3*	4*	a*	8*	114*	24*	4*	—	38*	263*
46	54	16	115	1,121	488	134	—	440	3,535
a*	2*	a*	1*	120*	26*	1*	—	15*	226*
11	27	63	71	1,234	1,106	170	—	378	4,664
1*	22	6	40	318	319*	6*	a*	108	874
52	6	29	201	1,681	2,055	162	41	247	4,829
a*	4	2*	1*	15*	7*	2*	a*	49	85*
3	2	79	25	155	195	30	2	102	733
a	a	a*	a*	5*	1*	a*	—*	1*	10*
1	1	3	25	36	129	5	1	22	263
—*	2	—*	a*	1*	2*	a*	—*	a*	11*
2	4	20	17	84	214	61	5	6	551
	a	—*	a*	3*	a*	a*	—	a*	5*
	a	a	10	81	110	6	—	5	273
—*		—*	a*	a*	a*	a*	—	a*	1*
1		a	3	8	18	14	—	3	118
a	5	25*	39	284	141	23*	2*	240	817
a	1	336	107	543	1,488	533	92	236	3,584
1	a*	a*	19*	5	4*	a*	a*	5	41*
3	1	5	118	21	114	6	5	9	251
19	23	3	32*	217	294	10*	a*	288	935
47	4	9	211	818	1,618	132	34	1,333	4,556
4	4	10	126	773	6,643	126*	10	1,306	9,183
13	6	45	303	1,545	34,702	1,327	36	3,697	42,804
—	—	a	2	36	72*	4*	a	31	146*
—	—	—	5	61	760	154	—	40	1,048
—*	18	8	23	12*	54*	a*	—	46*	311*
a	16	31	122	296	477	222	—	1,301	3,763
a	a*	7*	2*	76*	189*	23*	1*	417*	717*
—	a	64	38	784	3,298	737	121	3,414	8,606
73	111	83*	412	2,614	7,923	256*	27*	3,037	15,720
256	211	873	1,586	9,061	46,958	4,123	449	12,310	83,921

2. *=the growth rate higher than the world average.
a=the trade value less than U.S.$1 million.
—=no record in the basic data.

APPENDIX

TRADE MATRICES AND THEIR COMPILATION METHOD

Two separate data sources were used for the compilation of the matrices with supplementary individual country trade statistics. The first main data source is the computerized trade statistics search system (AIDXT), which was developed by the Institute of Developing Economies. The original data basis for the system is the UN and OECD trade statistics with supplementary Taiwan data.

The second main data source is the world export estimates of the United Nations presented in [16]. This was necessary because the AIDXT system does not cover all the world and lacks some important country data, mainly centrally planned economies, but some others as well.

Some cells could not be filled in the above-mentioned way. For example, Singapore does not report her export to Indonesia, and the corresponding cell was blank at first. Export to Taiwan from most countries do not appear in the UN data based. Similarly, China's exports to individual countries are not directly available, and Middle East's exports are not fully covered. In those cases, the cells were estimated from the import side, using a uniform multiplier of 0.9 to adjust to the difference between c.i.f. and f.o.b.

Rows/columns 10 and 16 for "South Asia" and "the rest of the world" in Appendix Tables respectively, need some explanation. Both are basically estimated as residuals, and, therefore, their reliability might be limited. Exports to "South Asia" were sought using the UN "other Asia (non–Middle East, developing Asia)" figures, which themselves were deleted from the matrices to avoid confusion. Exports from "South Asia" to areas 10–15 were estimated in the same way. Those to the Pacific Asian countries, however, were independently calculated from the import side statistics, and the exports from "other Asia" to these countries were the summation of Rows 2–10 of the corresponding columns.

A similar method was taken for "the rest of the world," based on export figures from and to the world. For the compilation of exports from "the rest of the world" to the Pacific Asian countries, centrally planned economies less China, Africa, and Latin America were added up to approximate the area.

Additional procedure was required for compiling the 1979 matrices. Export data for Malaysia and the Philippines were still to be put into the AIDXT system when the data search was made. Therefore, individual country trade statistics were used. In the case of Malaysia, only the exports of Peninsular Malaysia and Sarawak were consulted where provisional data for the whole of Malaysia did not give necessary figures. A part of industrial goods and the whole textiles export figures were produced in this way, and need revisions. In the case of the Philippines, exports of all commodities and textiles were produced from the country data. Industrial goods exports, however, because of her different commodity classification from the SITC, were estimated by interpolation using the UN *Commodity Trade Statistics, Series D,* 1978 and 1980. A revision will be necessary here as well.