

JAPANESE DIRECT INVESTMENT IN ASIAN NEWLY INDUSTRIALIZING COUNTRIES AND INTRA-FIRM DIVISION OF LABOR

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INTRODUCTION

FOR some time the Republic of Korea's rapid economic growth had people talking about the "Han River Miracle." But like a wisp of smoke such talk has vanished. That country's recent coup d'etat has undoubtedly put a cramp in the notion that newly industrializing countries (NICs) pose an economic threat to Japan.

Of course, even as journalists were putting the spotlight on such rapid export-oriented economic growth of Asian NICs (the Republic of Korea, Taiwan, Hong Kong, and Singapore), experts warned that one should not overestimate such a threat. The grounds for that warning were based on a factual analysis of the economies of the countries concerned. Experts pointed to the NICs' limitations in terms of technology and capital accumulation, their imbalanced industrial structures, and the possibility of an increase in international economic frictions.

I share in that opinion and have repeatedly stated that in view of the actual conditions of trade and investment between Asian NICs and Japan, it is one-sided to solely discuss the threat they pose as they catch up with Japan in some areas.¹ My argument has consisted of two main points. First, Asian NICs still do not have self-contained industrial structures. Despite missing components in their domestic economic structures, they have been able to achieve rapid export-oriented economic growth largely because they have been able to rely on imports, especially imports from Japan, their advanced industrialized neighbor. This is the background for the formation of the complementary division of labor between NICs and Japan.

Second, Japanese direct investment in Asian NICs has made the expansion of bilateral trade between those countries and Japan possible. In other words, by dividing labor between themselves and their subsidiaries in Asian NICs, Japanese firms have been utilizing the economic growth capacity of those countries to their own advantages as well as raising the level of sophistication of their own production and softening the impact that NICs would otherwise have on Japan in catching up in certain industries. What I pointed out is that this behavior on the part of Japanese firms that have made direct investments in Asian NICs

The present paper is an abstract of "Direct Japanese Investment Overseas and Trade Relations Between Japan and NICs," a research paper done on behalf of the National Institute for Research Advancement as a further development of the theory expounded in that article.

¹ See my article [3].

has contributed to the expansion of complementary trade and facilitated industrial structural adjustment.

In this paper I intend to present a brief overview of the first of these two main points and then develop the second point in terms of theory. The main emphasis of this paper will be on division of labor through direct investment. My purpose is to show that there is more interdependence between Japan and the Asian NICs than is generally realized and that the popular notion of Asian NICs posing a threat to Japan is not substantiated by the facts. Furthermore, I contend that only if and when economic policy of Asian NICs is successful in overcoming their present crisis by raising the level of sophistication of their industrial structures, will such a threat likely be valid. And I will point out that adjustment of domestic industry from a long-range perspective will become increasingly important.

I. THE POTENTIAL FOR COMPLEMENTARY DIVISION OF LABOR

The rapid economic growth of the Asian NICs can be characterized best as "export-oriented." Although, strictly speaking, there is a recognized slight difference in nuance with respect to such export orientation between Hong Kong and Singapore, on the one hand, which as city states or commercial states have had to gear their national economies mainly to exports, i.e., processing trade of particular kinds of goods and transit trade, and the Republic of Korea and Taiwan, on the other hand, which are using exports as a means of ultimately establishing a self-contained economic structure. Nevertheless, the fact remains that exports presently play the leading role in the economic growth of all four. It is this export-oriented growth that has given rise to talk in the advanced industrial nations about the threat posed to them by the NICs in view of the fact that the advanced industrial countries are feeling the impact of imports from them as well as of the competition posed by them in third-country markets.

However, analysis of the domestic industrial structures and imports of Asian NICs shows that this concept is not based on an accurate overall evaluation of their economies. Generally speaking, at the stage in which a national economy is taking off from a lengthy period of stagnation and beginning steady growth, there is a considerable demand for (1) machinery and equipment for industrialization, (2) various raw materials and fuels and intermediate goods, and (3) various types of consumer goods as income levels rise. In fact, this demand often increases explosively. Domestic production capacity has a strong tendency to lag behind such large increases in demand, resulting in an inevitable sharp rise in imports. Asian NICs are no exception in this respect. As demand for goods has geometrically increased in the course of their economic growth, Asian NICs have had to meet a considerable portion of their needs with imports because of their weak domestic industrial structures. In some cases, even main export industries are highly dependent on imports for materials and machinery necessary for production. Whence the fact, some observers go so far as to contend that imports, more than anything else, make possible the export-oriented growth that Asian NICs have experienced. Let us take a closer look at the situation in terms of

the Republic of Korea, recognized by all as the nation having the strongest economic capability among the Asian NICs.

The shipbuilding industry is a typical assembly-type industry making use of some two hundred products—steel plates, pipe, main and auxiliary machinery and tool, valve, solvent, paint, and so on—manufactured by about forty different industries. Each of these industries must be developed in time with the shipbuilding industry itself. In the case of the Republic of Korea, however, only 40–50 per cent of the shipbuilding industry's demand for materials and equipment is met by Korea's domestic industries because of the failure to adequately develop related industries. Required demand is met mostly by imports from Japan, the Republic of Korea's advanced shipbuilding neighbor.

In the case of the motor vehicle industry, in spite of 80–90 per cent domestic manufacture of the types designated in government plans for promotion of domestic production, the vehicles in question are able to hold their own only because of government protection and promotion since they are not really competitive in terms of price, quality, delivery schedules, and other considerations owing to the fact that related parts industries on which the motor vehicle industry depends have not been promoted as they should have been. Furthermore, all of the three largest motor vehicle manufacturers (Hyundai Motor, Sae Han Motor, and Gia Industry) are engaged not only in production of such domestic motor vehicles but in assembly of foreign makes based on technical cooperation and contractual arrangements with foreign manufacturers.

Not just in the case of these new leaders but even in the case of the textiles and home electric appliance industries, Korea's traditional export leaders, completely integrated production systems have not yet been established. The textile industry, for example, is particular dependent on imports of DMT (dimethyl-terephthalate) and other chemical textile materials, product-differentiated, high-quality yarn, cloth, and other products. Similarly, the home electric appliance industry is still dependent on imports for key electronic parts such as integrated circuits (IC) and LSI.

Thus, Korea's industrialization has made possible the import substitution and export of the products of the industries that have been introduced and promoted, but has not yet reached the stage of being able to adequately meet the material and equipment demand, generated by the forward and backward linkage effects. Particularly strongly affected in the course of industrialization is the demand for industrial machinery and equipment. However, it is hard to shift this field to domestic production overnight because of the wide range of products that it encompasses. Accordingly, the degree of development achieved in the sector is considered a good indication of the degree of a country's industrialization. Most mature industrialized countries boast of a sound industrial machinery industry. Table I shows the degrees of self-sufficiency of Korea's industrial machinery industries, or rather their degrees of dependence on imports. As one can see, only a very few of these industries, such as the agricultural machinery industry and the transformer industry, have achieved a very high degree of self-

TABLE I
THE RATE OF DEPENDENCE ON IMPORT OF INDUSTRIAL MACHINERY
OF THE REPUBLIC OF KOREA, 1975

Industry	The Rate of Dependence on Import
Motors	0.436
Agricultural machinery	0.103
Metal cutting machinery	0.797
Metal processing machinery	0.842
Woodworking machinery	0.645
Construction and mining machinery	0.803
Textile machinery	0.858
Food processing machinery	0.485
Other special industrial machinery	0.639
Office and service equipment	0.324
Sewing machines	0.409
Other general machinery and devices	0.725
General machine parts	0.525
Electric generators and electric motors	0.419
Transformers	0.242
Power transmission and distribution machinery	0.577
Other industrial electric equipment	0.754

Sources: Bank of Korea, *1975 Input-Output Tables* (Seoul, 1978); [4].

sufficiency.² But industrial machinery industries are not alone. Intermediate goods industries, utilizing metallurgical, grinding and polishing, planting, painting, and other skilled techniques for production of various parts and semi-finished goods, also conspicuously lag behind in their development. Thus, even the Republic of Korea, the most industrialized of the Asian NICs, has a very imbalanced and fragile industrial structure with many missed products and production processes. Since this is even truer of the other three Asian NICs, it is obvious that all four are far from having self-contained industrial structures.

The fact that the missing elements in the industrial structures of the Asian NICs have been covered by imports from their advanced industrial neighbor Japan needs little explanation. There is plenty of room for establishment of a complementary division of labor between Japan, which tends even to be criticized for having an excessively self-contained industrial structure and the Asian NICs, which still suffer on account of their limited industrial structures. In the textile industry, for instance, such complementary division of labor between Japan and the Asian NICs takes the form of an intra-industry division of labor between different textile production processes and different types of textiles.³ If one also takes into account chemical product, machinery, and other industries closely related to the textile industry, the degree of complementation is even greater. As for this intra-industry division of labor and inter-industrial interdependence,

² This point is emphasized in the article by Toshio Watanabe [4].

³ The state of division of labor between Japan and the Republic of Korea in the textile industry is diagrammed in my previously mentioned paper [3].

including peripheral industries, I will only mention the fact that the results obtained by T. Nagasaka and his fellow researchers at JETRO in the joint research project employing consolidated input-output tables for Japan and the Republic of Korea put them in very clear focus.⁴

In any case, a sound industrial structure cannot be built in a day. In many fields of industry in the Asian NICs which do not yet have a very long history of industrialization, Japanese products are practically built into the manufacturing processes on account of their quality, the dependability of their delivery schedules, and many other advantages. The rapid economic growth of the Asian NICs has strengthened this tendency. The calculation results given below indicate simply the fact that the economic growth of the Asian NICs has given rise to increased demand for import of Japanese products from a macroeconomic point of view. As a macroeconomic expression of the above microeconomic facts, the elasticity of Japanese exports to these countries in the 1960s and 1970s, during which years they were experiencing rapid economic growth, was greater than unity in all cases:

Republic of Korea:

$$\log REX_K = -3.0524 + 1.2057 \log RGNP_K,$$

$$(-6.333) \quad (19.6)$$

$$R^2 = 0.9675, \quad DW = 0.605,$$

Taiwan:

$$\log REX_T = -11.0097 + 1.4096 \log RGDP_T,$$

$$(-17.55) \quad (27.7)$$

$$R^2 = 0.9834, \quad DW = 1.02,$$

Hong Kong:

$$\log REX_H = -5.4663 + 1.2509 \log RGDP_H,$$

$$(-0.9759) \quad (21.3)$$

$$R^2 = 0.9743, \quad DW = 1.25,$$

Singapore:

$$\log REX_S = -4.6276 + 1.2199 \log RGNP_S,$$

$$(-8.536) \quad (20.2)$$

$$R^2 = 0.9714, \quad DW = 0.959,$$

where

- REX_K : real Japanese exports to the Republic of Korea,
- REX_T : real Japanese exports to Taiwan,
- REX_H : real Japanese exports to Hong Kong,
- REX_S : real Japanese exports to Singapore,
- $RGNP_K$: real GNP of the Republic of Korea,
- $RGDP_T$: real GDP of Taiwan,
- $RGDP_H$: real GDP of Hong Kong,
- $RGNP_S$: real GNP of Singapore.

⁴ See, T. Nagasaka, H. Ambara, and H. Masuno, "Ajia chūshinkoku no kōgyōka to Nihon no sangyō kōzō" [Industrialization of Asian NICs and the Japanese industrial structure], *Kaigai shijō* Vol. 29, No. 332 (June 1979).

Period of estimation is for Republic of Korea and Taiwan, 1963–77, and for Hong Kong and Singapore, 1963–76. REX_K , REX_T , REX_H , and REX_S are aggregates of the value of main items of Japanese exports to these countries as deflated by export price indices and weighted according to the 1975 export shares of those items to each of them.

From the above it is easy to see that complementary relations of division of labor are being formed between Japan and the Asian NICs and that if one stresses solely the supposed threat posed by them to Japan, one may be accused of imbalanced analysis. Furthermore, examination of the process whereby such complementary relations of division of labor have been formed reveals considerable influence on that process on the part of direct investment by Japanese firms in the Asian NICs. Now let us analyze these bilateral relations of division of labor from the viewpoint of direct investment and take a look at how Japanese firms have dealt with the threat posed by the Asian NICs.

II. DIRECT INVESTMENT CONDUCIVE TO TRADE

As of March 31, 1980, direct investment by Japanese firms in the Asian NICs amounted to U.S.\$1,102 million in the case of the Republic of Korea, U.S.\$323 million in the case of Taiwan, U.S.\$939 million in the case of Hong Kong, and U.S.\$800 million in the case of Singapore in terms of authorization-based statistics.

It is a well-known fact that direct investment abroad by Japanese manufacturing firms differs from that of Western multinational corporations, or the U.S. type of direct overseas investment. One characteristic of the Japanese type of direct overseas investment is that in many cases it involves the establishment of small subsidiaries along the lines of small factories in labor-intensive fields in Southeast Asian and other developing countries as joint-venture partnerships with local interests, and another very important one is that it is very conducive to trade.⁵ In undertaking direct overseas investment, Japanese firms have not necessarily been primarily interested in earnings from interest and dividends. Rather, there has been a strong tendency for them to set their sights on profit from trade either with the foreign subsidiary itself or through it. Moreover, this is evidenced by the strong orientation of such subsidiaries toward development of new markets, the high frequency of partial processing on their part rather than completely integrated operations, and other such characteristics.

Direct investment in the Asian NICs has been no exception in terms of considerably contributing to the expansion of trade between them and Japan. Another fact worthy of attention and which will be further discussed later is that Japanese firms engaging in direct overseas investment in Asian NICs have managed to establish systems of division of labor between themselves and their subsidiaries

⁵ Professor Kiyoshi Kojima has written a number of books on the subject of the Japanese type of direct overseas investment. See, for instance, *Sekai bōeki to takokuseki kigyō* [World trade and multinational corporations] (Tokyo: Sōbunsha, 1973); [1]; and *Japan and a New World Economic Order* (London: Croom Helm, 1977).

in those countries in a very efficient manner. In so doing they have been able to increase their exports to those countries while, at the same time as softening the impact of increased imports from them, using them as a catalyst for converting their domestic production systems in such a way as to make use of the growth potential of the Asian NICs in their own operations. As already mentioned, there is plenty of room for further formation of such complementary relations of division of labor between Japan and the Asian NICs, but one should not overlook the fact that such systems of division of labor between Japanese firms and their overseas subsidiaries have been and are continuing to be formed through direct overseas investment against this background.

First of all, let us analyze how trade between Japan and the Asian NICs has expanded along with direct overseas investment on the part of Japanese firms. Table II compares the value of imports and exports between Japanese firms (including firms other than the parent firms of overseas subsidiaries) and Japanese subsidiaries in the Asian NICs with the total value of imports and exports between Japan and those countries. The figures for 1972 are those obtained in a questionnaire survey of the sales to and purchases from Japan of Japanese subsidiaries in those countries conducted by the Ministry of International Trade and Industry [2, 1974]. As for the figures for 1975, they have been estimated on the basis of the 1972 figures by means of additional related data. It should be noted that there is a strong possibility that these figures understate the amount of trade between Japan and Japanese subsidiaries in the Asian NICs, particularly in view of the incomplete coverage of the questionnaire. Nevertheless, they should be adequate for our analytical purposes in that they at least do not overestimate the actual amounts.

For reference, the figures for all industries have also been given, but they include a considerable amount of general imports and exports via overseas subsidiaries of Japanese trading companies. That is to say, a substantial portion does not represent either plant and equipment transactions involved in the initial establishment of Japanese manufacturing subsidiaries abroad or trade of products in division of labor arrangements between Japanese firms and their overseas subsidiaries. Thus, it has been necessary to estimate the share of imports and exports of industrial products between Japan and the Asian NICs represented by Japanese manufacturing subsidiaries in those countries. Strictly speaking, one should also take into account the fact that some of the import and export transactions of Japanese manufacturing subsidiaries in those countries are undertaken on their behalf by local subsidiaries of Japanese trading companies and the fact that there is no guarantee that all of the imports and exports of the Japanese manufacturing subsidiaries involve industrial products, but such considerations have been disregarded here.

Let us now take a look at the figures. Between 1972 and 1975, the exports of Japanese manufacturing industries to their subsidiaries in the Asian NICs increased from U.S.\$315,980,000 to U.S.\$995,580,000. The share of these exports in the total Japanese industrial product exports to those countries rose from 7.9 per cent to 13.4 per cent. As for the imports of Japanese manufacturers from

TABLE II
THE SHARE OF JAPANESE TRADE WITH ASIAN NICs REPRESENTED BY JAPANESE SUBSIDIARIES

	1972		1975	
	Total Amounts (U.S.\$ Million)	Percentage of Total Imports or Exports	Total Amounts (U.S.\$ Million)	Percentage of Total Imports or Exports
All industries:				
Imports from Japanese subsidiaries	101.66	7.9	679.71	22.3
Exports to Japanese subsidiaries	418.33	10.5	1,483.33	20.2
Manufacturing industries:				
Imports from Japanese subsidiaries	78.22	10.7	547.31	27.1
Exports to Japanese subsidiaries	315.98	7.9	995.58	13.5

Sources: [2]; Ministry of Finance, *Gaikoku bōeki gaikyō* [Outline of foreign trade] (Tokyo).

Note: The figures for 1975 has been calculated on the basis of the 1973 figures for the imports and exports of Japanese subsidiaries in the Asian NICs, the 1974 and 1975 figures for the rate of increase in sales in Asia as a whole, and the rate of place of destination to place of purchase.

their subsidiaries in those countries, they soared to U.S.\$547,310,000 in 1975 from a mere U.S.\$78,220,000 in 1972. The share of such imports in the total amount of Japanese industrial product imports from the Asian NICs increased to a full 27.1 per cent from 10.7 per cent. In other words, both the import and export transactions between Japanese manufacturing firms and their Asian NIC subsidiaries increased more substantially between 1972 and 1975 than all imports and exports of industrial products between those countries and Japan, and the increase in imports from such subsidiaries was particularly conspicuous.

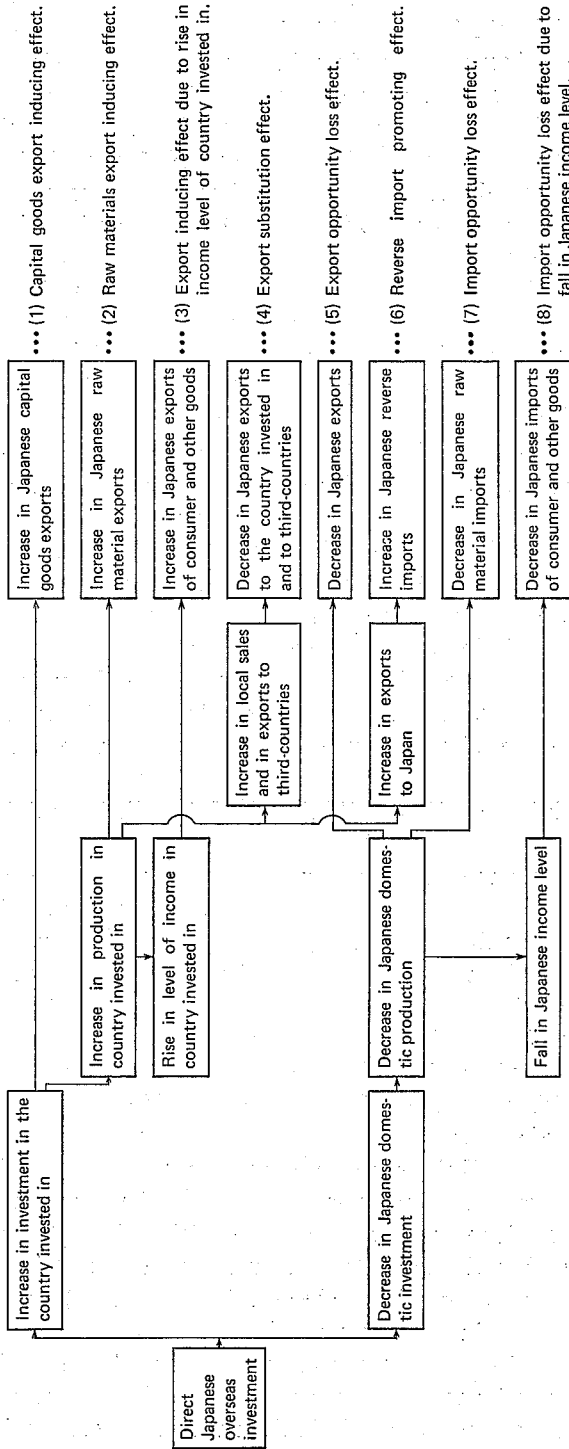
In 1972-73, there was an overseas expansion rush by Japanese firms which got a lot of publicity as the "direct overseas investment boom." The large increases in imports and exports between Japanese manufacturing firms and their subsidiaries in the Asian NICs can be attributed to this boom. Furthermore, it is easy to see that Japanese direct overseas investment in the Asian NICs was extremely conducive to trade. As already pointed out, it is very likely that the actual figures for imports and exports to and from the Japanese subsidiaries in those countries have been greater than those cited here. Hence, the conclusion that it is necessary to take the imports and exports of Japanese subsidiaries into full account when considering trade between Japan and the Asian NICs. It is particularly important that the trade between Japanese firms and their overseas subsidiaries is a reflection to some extent of the division of labor between Japanese firms and their subsidiaries that has been promoted as one of the international business strategies of Japanese firms. Let us now take a closer look at the imports and exports between Japanese firms and their Asian NIC subsidiaries that have resulted from Japanese direct overseas investment in those countries.

III. TRANSFER OF PARTIAL PRODUCTION PROCESSES

Direct overseas investment has an impact in a number of ways on the trade between the investing country and the country invested in. These effects are shown in Figure 1, the first five being the effects on the exports of the investing country and the last three the effects on its imports. The figures given in Table II relate chiefly to effects (1) and (2) on exports and effect (6) on imports, that is to say, only the direct, primary effects on trade of direct overseas investment.

Although, clearly, effect (3) will increase Japanese exports and effect (4) will decrease them, neither of these effects can be considered great enough to offset the other positive effects in the case of direct Japanese investment in the Asian NICs as it now stands. This is because the marketing policy of Japanese firms engaging in direct overseas investment is characterized not merely by passive maintenance of traditional export commercial rights through production in the countries concerned but also by a strong active nuance of opening up new marketing channels and expanding sales. Effects (5), (7), and (8) are due to decrease in domestic investment in the amount of direct Japanese overseas investment. However, in reality direct overseas investment in the Asian NICs is undertaken because of the attractiveness of the growth potential of their economies, low production costs there, and so on. It is doubtful that there would be investment

Fig. 1. The Effect of Direct Overseas Investment on Imports and Exports



Source: This is a simplified version of the flow chart of the *Tokyo ginkō geppō*, December 1977, p. 62.

opportunities in Japan attractive enough to replace such direct overseas investment. Considering such circumstances of direct overseas investment in the Asian NICs and our analytical purposes, it is very worthwhile to analyze the background behavior of the Japanese firms engaging in such investment, chiefly in terms of its direct, primary effects.

Let us first consider such behavior from the standpoint of Japanese exports to the overseas subsidiaries in question. Among the direct, primary effects on exports, the capital goods export inducing effect is deeply rooted in the essential nature of direct overseas investment. Direct overseas investment is defined as the transfer of not only capital but a whole package of managerial resources, including technology, management know-how, sales capacity, and plants. Accordingly, particularly essential is the transfer of technology and its embodiment, machinery, plants, and equipment. Japanese subsidiaries in the Asian NICs do depend for the most part on their parent Japanese companies or other Japanese firms for procurement of such machinery, plants, and equipment not only when they initially establish themselves but also when they expand or renew their facilities. According to a MITI questionnaire survey, approximately one-half of the respondents (Japanese subsidiaries in the Asian NICs) cited their parent companies as their sources of procurement of machinery, plants, and equipment, and most of the rest cited Japanese firms other than their parent companies.⁶ Perhaps this is inevitable considering the nature of direct overseas investment. It would also appear, however, to be a reflection of the strong trade profit orientation of the Japanese firms engaged in such investment and their strong tendency to try to recover their investments quickly. Also, the fact that Japanese trading companies, which are particularly apt to behave in this fashion, play an important role in such direct overseas investment probably has something to do with this.

The raw material export inducing effect and the reverse import effect relate to the promotion of intra-firm division of labor, i.e., division of labor between the Japanese parent company and its overseas subsidiaries, as a Japanese international management strategy. For instance, major Japanese home electric appliance manufacturers have set up a large number of production bases overseas in an effort to establish the most efficient worldwide production footing possible for the company as a whole through optimum location of each of the different production processes of each of their products. Because of such international production networks, we see flows of raw material products, parts, semi-finished goods, etc., from Japanese parent companies to their overseas subsidiaries and reverse flows of semi-finished products and final products from the overseas subsidiaries to their parent companies, forming intricate import-export patterns. Such patterns are most characteristic of the electrical machinery industry, but they are also fairly common for a number of other industries, including precision machinery industries such as clocks and watches and cameras, metal processing industries such as steel piping and wire rods, and the apparel branch of the textile industry. Furthermore, the product flow pattern between the parent

⁶ See the results of the MITI questionnaire survey on the procurement of production equipment and machinery by Japanese overseas subsidiaries in [2, 1975].

TABLE

Industries	HOW JAPANESE OVERSEAS SUBSIDIARIES RELATE TO THE			
	Manufacturing Processes	Processing for Preparation of Input Materials	Intermediate Processing for Parts and Semi-Finished Products	Processing for Near-Final Products
Food products		1	4	1
Textiles		8	21	24
Clothing and other textile products				3
Wood and wood products		6	1	1
Furniture and fixtures				
Pulp, paper, and paper products		1		1
Publishing, printing, and related industries			2	1
Chemicals		4	6	4
Petroleum and coal products				
Rubber products			1	1
Ceramics, earthenware, and stone products		2	1	3
Steel		3		12
Nonferrous metals			3	
Metal products		1	2	2
General machinery			4	9
Electrical machinery		4	14	19
Transportation machinery			3	3
Precision machinery			2	4
Other industries		2	1	4
Total		32	65	92

Source: [2, 1975].

Note: These are the results of a questionnaire survey of Japanese subsidiaries through-

company and its overseas subsidiaries varies according to the circumstances of the particular industry and the management policies of each parent company. This trend toward intra-firm division of labor through direct overseas investment, which is becoming more and more pronounced year by year, can be considered one of the factors behind the trade conduciveness of Japanese direct overseas investment. Moreover, this kind of relationship between Japan and neighboring Southeast Asian countries, particularly the Asian NICs, which have the best locational conditions to offer, is getting to be very common.

This is very clear when considered from the standpoint of the production processes involved in such direct overseas investment and the way in which they relate to the overall systems of production of Japanese firms. Table III, which deals with all of Asia and not just the Asian NICs, shows that only a little over 30 per cent of the instances of direct overseas investment by Japanese firms is for the purpose of establishing integrated production lines abroad. On the other hand, almost 60 per cent represents the transfer of some of the company's production processes overseas from the standpoint of division of labor, either the final processes as in "knock-down" production or the intermediate processes through parts and semi-finished products. In particular, the high instance of transfer of the final processes and the fact that the overseas subsidiaries are given only a limited range of processes work toward enhancement of the raw

III

OVERALL PRODUCTION SYSTEMS OF THEIR PARENT COMPANIES (Number of respondents)

Processing for Final Products	Integrated Processing from Raw Materials to Final Products	Other Processing	Processing Unrelated to the Production Systems of the Parent Company	Total
3	17			26
33	47	3	9	145
24	21	1	5	54
3	4	1		16
1	1			4
7	5		3	18
46	29	1	1	91
12	9			23
9	20		2	37
15	15			45
3	10			16
14	15		1	35
25	14	1	2	55
69	71	6		183
18	8	1	4	37
14	6	1		27
23	28	2	3	63
319	320	17	30	875

out Asia.

material export inducing effect of such direct overseas investment on the part of Japanese firms.

Although the case varies considerably from company to company and product to product, the usual practice is for the parent company to supply the key parts that require a high level of technology and to leave production of peripheral parts and simple assembly processes to its overseas subsidiaries. This intra-firm division of labor of production process induces the export of raw material products, parts, and semi-finished products by the parent company, and there has in fact been a great increase in such exports. This is because basically the transfer of some processes overseas represents the optimum allocation of resources across national borders in the case of manufacture of final products and because in this way international competitiveness can be increased further than in the case of purely domestic production. More practically, in this way it is possible for Japanese firms to expand sales in the countries where their subsidiaries are located and in neighboring third-countries through greater proximity to their markets and to avoid import restrictions on their products. Accordingly, by starting production overseas, Japanese firms have often been able to increase the production of their final products to a greater extent than they would otherwise have been able to with purely domestic production systems, and their exports of raw material products, parts, and semi-finished products have risen sharply.

More recently, along with the development of the economies of the host countries and also because of the marked increase in the value of the yen against other major currencies in 1977-78, there has been a tendency on the part of some Japanese overseas subsidiaries to try to replace some of their imports from their parent companies by local procurement. But for the most part there is still heavy reliance on imports from Japan because of the limitations set by the parent companies' capital participation and product specifications. As a result, with the increase in direct overseas investment in Asian NICs on the part of Japanese firms and increasing production activity on the part of their subsidiaries, there has continued to be an increase in export of Japanese products to those subsidiaries.

IV. SOFTENING OF THE IMPACT OF ASIAN NIC EXPORTS TO JAPAN THROUGH INTRA-FIRM DIVISION OF LABOR

The increase in Japanese direct overseas investment in Asian NICs in addition to the increase in Japanese exports is causing production there to increase and some of the products to be exported to Japan with increasing frequency. As a matter of fact, looking at the rate of the sales amounts of Japanese subsidiaries in those countries by the place of destination, one sees that the share represented by exports to Japan is rising sharply, particularly in the case of the Republic of Korea and Taiwan.⁷ Along with the increase in direct overseas investment in the Asian NICs by Japanese firms and the maturing of the Japanese subsidiaries invested in, the latter have been producing and selling more and more goods, the increase in the percentage sold to Japan being particularly pronounced.

The figures estimated in Table II for the imports from Japanese overseas subsidiaries say the same thing. One cannot, however, interpret this rapid increase in imports from Japanese overseas subsidiaries in the context of intra-firm division of labor which aims at the optimum production and efficiency of operation from an international viewpoint as simply representing a threat to Japan, not at least if one is willing to look at the facts. Generally speaking, the fact in itself of inexpensive products being imported from the Asian NICs is by no means a disadvantage to the national economy, as the basic economics theory tells us. Moreover, there is plenty of evidence that even those on the microeconomic level who might be supposed to suffer in the shadow of this macroeconomic merit are minimizing the impact of NIC exports through division of labor between themselves and their subsidiaries in those countries and even turning it to their advantage.

Before pursuing this point further, let us consider how Japanese firms benefit directly from this macroeconomic phenomenon of inexpensive imports. In cases where the parent company assigns its intermediate production processes to its overseas subsidiaries, it is able to reduce the production cost of its final products,

⁷ This can be seen by the figures for the rate of sales amounts of Japanese overseas subsidiaries by place of destination in recent years given in [2].

strengthen its price competitiveness, and expand its sales because it can procure inexpensive parts and semi-finished products from them. In other words, although on the one hand it loses the value added that accrues to the processes that it has transferred to its subsidiaries, on the other hand it benefits by using cheaply imported intermediate goods and by making use of idle production facilities. This advantage would appear to outweigh the disadvantage of such a loss. Even when the subsidiaries are assigned the final processes, Japanese manufacturers can import "final product" as intermediate goods in the form of parts and basic industrial materials at a lower cost than the procurement of comparable goods domestically. At the same time, the parent company might be able to increase its exports of raw material products needed by its overseas subsidiaries. Besides the increase in imports of such final consumer goods as sundry goods, underwear, and shirts from the Asian NICs, there has been a marked increase in Japanese imports from them of various kinds of industrial intermediate raw materials, including condensers, transistors, and other electrical parts, bearings, bicycle parts, yarn and cloth, and steel and chemical products. Furthermore, a large percentage of this increase in imports can be attributed to direct overseas investment by Japanese firms and particularly the development of intra-firm division of labor.

It is not our purpose here, however, to examine this advantage to Japanese firms of being able to procure inexpensive imports, for it is merely the micro-economic manifestation of an advantage that we have already noted from a macroeconomic point of view and is not directly pertinent to our present topic, the behavior of Japanese firms in engaging in direct overseas investment for the purpose of developing division of labor between themselves and overseas subsidiaries. Such direct overseas investment in the Asian NICs follows two main patterns. One involves the transfer abroad of a part of the parent company's production system, and the other is the transfer of some of the parent company's various type products. In reality the two often occur side by side. Let us designate the first as vertical intra-firm division of labor and the latter as horizontal intra-firm division of labor and examine them separately.

As we have already seen, vertical intra-firm division of labor represents the mainstream of Japanese direct overseas investment in the Asian NICs. In this respect, it is often the case that the production processes transferred to the overseas subsidiaries belongs to domestic subsidiaries or subcontractors rather than being directly undertaken by the parent company itself. Even in this case, not to mention the case where the processes transferred are a part of the production system of the parent company itself, efforts are usually made to minimize the detriment to any of the firms associated with the parent company that might be caused by the reverse imports from overseas subsidiaries by, for instance, maintaining the level of production of the domestic facilities involved even after establishment of the overseas production facilities or guaranteeing the conversion of much domestic facilities to production of other parts or to other production processes. Because, however, of the unprecedentedly high value of the yen in recent years against other major currencies there have, of course, been cases where Japanese firms have actively increased their imports, particularly from

their overseas subsidiaries, and the practice of having their products processed for them by overseas facilities, again chiefly of their subsidiaries, with a view to maintaining the international competitiveness of their final products through flexibility in coping with changing economic conditions. Nevertheless, the imports resulting from the transfer overseas of some production processes are usually based on the long-term production plans of the entire group headed by the parent company. They convert the roles of the members of the group with respect to the parts production and processing so that none of them, however small, has to make too great a sacrifice. Furthermore, one can go so far as to say that this kind of direct overseas investment by Japanese firms serves the purpose of raising the level of sophistication of the pyramid-type production systems that so many Japanese products have without having too much of an adverse effect, and in turn this has the effect of facilitating the sophistication of all of the intermediate goods production and processing industries on which the entire Japanese industrial structure is based. At the same time, the parent company at the head of the group is ever striving for higher performance, product differentiation, and development of new machinery with respect to its own production of final products and main parts. It should be noted that it is thereby constantly renovating the production activity of its entire domestic group.

On the other hand, horizontal intra-firm division of labor is typically direct overseas investment aiming at process production. It also includes, however, transfer abroad of just the final production processes, with intermediate goods being procured locally overseas. This kind of direct overseas investment, aims at achieving optimization of the firm's operations from an international point of view through adjustment of production items within the firm, and has recently been increasing conspicuously. In this case as well the firm often follows a long-term plan that takes into consideration the product preference and future prospects of the local overseas market, the level of production technology, the state of development of new products in Japan, and other factors. This is not necessarily a passive form of direct overseas investment based on pressures exerted by the Asian NICs. Let us consider a few examples of such horizontal division of labor. In the toy manufacturing industry, for instance, there is now a strong tendency to manufacture traditional toys in the Asian NICs and to produce high-quality toys employing electronic technology domestically. In the synthetic textiles industry too there has recently been a tendency for the production of general, popular items to be left to overseas subsidiaries and for domestic facilities to specialize in the production of quality and experimental products such as fibers that are highly water-absorbent, those that are non-pilling, and cloth woven in a special way from special fibers to give the sensation of leather, although this does not necessarily represent intra-firm division of labor since such local subsidiaries are being taken over entirely by local capital. In addition, there have also been examples here and there of such horizontal division of labor in the watchmaking and furniture manufacturing industries.

The basic pattern of behavior in establishing such horizontal intra-firm division of labor between different production items through direct investment in the

Asian NICs is first to concentrate on marketing the products in the host and third-countries and then later to commence reverse imports to Japan once the company's domestic production system has been converted. In other words, temporary marketing territory is often established to give the parent company time to convert its domestic production system so as to minimize frictions. Needless to say, this would not be advisable from a macroeconomic point of view if the only purpose were the regressive one of preventing imports from the Asian NICs. Many Japanese firms, however, including some smaller firms, consider their marketing territories in temporary terms and concentrate on production of established quality or technologically advanced items in their domestic production systems, not forgetting as well the development of even more advanced new products. There has been a considerable rise in the percentage of exports to Japan in the total sales of Japanese overseas subsidiaries. This fact is an evidence that such direct overseas investment on the part of Japanese firms is not for the purpose of building a permanent barrier against imports from those countries.

It is a fact that imports from the Asian NICs are increasing, and Japanese firms are undeniably facing growing competition from them. As we have seen, however, Japanese firms are also benefitting from direct investments in those countries in terms of increased exports of machinery, plants, equipment, and raw material products and imports of inexpensive intermediate goods. Nor should it be forgotten that Japanese firms are softening the impact of the growing competition from the Asian NICs by actively establishing systems of intra-firm division of labor that incorporate the growth of the national economies of those countries into the firm's operations. In other words, Japanese firms engaging in direct investment in the Asian NICs are doing so in order to utilize the market growth potential and plentiful and cheap labor of those countries to improve their operational efficiency from an international point of view by promoting the conversion of the production systems of the groups that they head. The "creative destruction" represented by the direct investment on the part of Japanese firms in the Asian NICs for the purpose of intra-firm division of labor is facilitating the task of raising the level of sophistication of the entire Japanese industrial structure and contributing to expansion of trade between Japan and those countries. Considering the fact that the imports and exports relating to this kind of intra-firm division of labor represent a substantial portion of all of the trade between Japan and those countries, talk about the threat posed to Japan by their exports based solely on the appearances of the total figures can only create a false air of crisis. The important thing is to find ways to facilitate the establishment of balanced relations of division of labor between Japan and the Asian NICs considering the positive effect on the Japanese economy as a whole of their economic growth in terms of inducing more Japanese exports over and above the increase in direct exports to Japanese subsidiaries in those countries.

V. RAISING THE LEVEL OF SOPHISTICATION OF DIRECT JAPANESE INVESTMENT IN THE ASIAN NICs

In the above we have considered from a microeconomic viewpoint how direct overseas investment on the part of Japanese firms in the Asian NICs has served as a cushion against the threat of competition from those countries' exports and facilitated conversion of domestic production systems. In conclusion, I should now like to briefly address the question of what change direct Japanese investment in the Asian NICs might undergo in the event that they are able to overcome the economic difficulties they now face and go on to steady development. I would like to suggest that intra-firm division of labor undergoes change in the direction of higher sophistication, and industrial adjustment for the purpose of formation of new relations of division of labor will become necessary more than ever before.

We are now at a major turning point in direct Japanese investment in the Asian NICs, the main reason being that the cheap labor that has been one of the chief investment incentives is not as readily available as it once was. The existing Japanese subsidiaries in those countries have been coping with this circumstance by (1) withdrawing, (2) upgrading their products for higher value added, (3) saving labor through mechanization and automation, or (4) widening their scope of operations through investment in neighboring countries. The media have played up the importance of the first of these choices, depicting a veritable exodus, but it should be realized that the other alternatives are viable for the future of direct Japanese investment in the Asian NICs in the case of a large number of Japanese subsidiaries. In fact, successful application of these other alternatives would indicate the possibility of a higher level of sophistication of direct Japanese investment in the Asian NICs in the future.

Let us now analyze the prospects for direct Japanese investment in the Asian NICs over the medium and long run, for such an analysis will make it clear that such investment is now taking the first painful steps toward a higher degree of sophistication. Direct overseas investment in the Asian NICs varies considerably in form according to the particular firm and the particular industry, but the investment behavior is roughly as follows according to the state of development of the Asian NICs in question. First of all, in cases where the industries concerned in the Asian NICs have a promising future in terms of marketability of products and production costs in spite of their present low degree of development, the Japanese firms usually transfer a part of their production systems with a view to incorporating the growth potential of the NIC into their operations through vertical intra-firm division of labor. The situation with respect to reverse product imports into Japan differs according to whether this vertical division of labor involves the transfer of intermediate production processes or final production processes, as in the case of "knockdown" production. The former kind of vertical division of labor presupposes such reverse imports, but the latter initially aims chiefly at substitution of traditional Japanese exports to

the country in question or third-country markets and expansion of sales, with reverse imports into Japan coming only later on.

However, as the industry in question in the Asian NICs develops, competition between the Japanese subsidiaries and local-capital firms grows, and related peripheral industries also improve, integrated process production of some of the Japanese firm's products in the Asian NICs becomes possible. At this stage, it becomes more efficient for the firm as a whole to have its overseas subsidiaries produce such products in their entirety and to specialize in other products itself. Therefore, its direct overseas investment then takes the form chiefly of horizontal intra-firm division of labor. Even then, however, the production of the overseas subsidiaries is in most cases initially marketed locally and in third-countries, domestic demand still being met with the production of the firm's domestic factories. As we have already noted, however, the marketing territories are maintained in this way largely as a transitional arrangement until completion of the revamping of the firm's domestic production system or as a supplementary measure to allow time for complete transfer of the production know-how in question to the overseas subsidiaries so that it will be possible to market the latter's production in Japan from the standpoint of product quality. In fact, it is not usually too long before reverse imports into Japan of the products in question become possible.

When the industries in question in the Asian NICs develop still further, with greater internal retention of profits, a higher level of technology, acquisition of more management know-how, and the training of more skilled labor, it should be possible for Japanese firms to advance the horizontal division of labor involving the transfer of production of more sophisticated products. In the meantime, however, local-capital firms in those countries can be expected to make considerable progress in their own product development, and unless Japanese firms make considerable efforts with respect to new product development and product differentiation, such direct overseas investment will have less and less the significance of planned transfer of production for the purpose of horizontal division of labor, and the impact of those countries' exports on Japan will become a real threat. Furthermore, as production of a large number of products is transferred to overseas subsidiaries and their management resources are improved, it will be harder for the parent companies in Japan to exercise control over them, and they can be expected to gradually lose their identity as Japanese subsidiaries, with a decline in the rate of participation by Japanese capital as their stock is sold on the open market, a rising percentage of local people in managerial positions, and a decline in technological tie-ups with Japan. From the microeconomic viewpoint of firm management, it would seem at that stage to be advisable for the Japanese firm to pull out its investment, but from the standpoint of contributing to the step-by-step industrialization of the developing countries through such direct overseas investment, it behooves the Japanese firms to wait until the technology and management know-how that have been introduced from Japan are completely transplanted locally before "fading out" on the basis of a mutually

agreed timetable.⁸ In any case, by that time the division of labor aspect of such direct overseas investment will have run its course, and the industries in question will have come to rely heavily on imports from the Asian NICs. In fact, it will no longer be possible to cope adequately with the situation by specializing in the domestic production of higher-quality goods, and it will be necessary to think about conversion of production facilities to other industries. In the above, we have noted that direct overseas investment by Japanese firms in the Asian NICs has for the most part been for the purpose of intra-firm division of labor, and particularly vertical division of labor. Furthermore, we have seen that Japanese firms have been used to raise the level of sophistication of domestic production systems in anticipation of this final stage of direct investment in the Asian NICs, and in this way we have argued against the exaggerated threat of those countries' exports to Japan. This is not, however, a denial of the fact that in a few areas Japanese firms have already been hurt by growing competition from those countries, either because the firms involved have not taken adequate steps to cope with the final stage of such direct overseas investment as described above or because they could only go so far in developing division of labor on account of the shallowness or narrowness of the industry in question. If in such areas the firms involved are not able to cope with their own efforts alone, it goes without saying that the government authorities will have to do something in terms of industrial policy. Furthermore, I want to stress the fact that such action should be based on a correct assessment of the entire perspective, not favoring any particular areas.

Getting back to the fact that the intra-firm division of labor through direct overseas investment is reaching a turning point, the recent change in such investment in the Asian NICs can be interpreted as a sign of a rise in degree of sophistication of such investment as a result of the economic development and changing economic conditions of those countries. Whether the examples of "withdrawal" of Japanese direct overseas investment cited by the media should be considered as being takeovers by local capital at the request of the host countries, as planned "fade-outs" on the basis of prior consultations with local authorities, or as out-and-out pull-outs as a result of business failure, one of the main investment incentives in the first place was the availability of cheap labor. However, this incentive has been disappearing as wages in the Asian NICs have risen in the past several years. This circumstance more than any other has had a direct cause of such "withdrawals" and the slow pace of new direct overseas investment in those countries.

Does this mean that Japanese direct overseas investment in the Asian NICs will inevitably dwindle? I think not, although a lot depends on how those countries run their economies. I say that first of all because of the alternatives to withdrawal, particularly the choice of switching of production of higher-quality products and products representing greater value added and the widening of business operations. In other words, the increase in demand in those countries

⁸ This idea is clearly set forth in the research report by Professor K. Kojima et al., *Nihon kigyō no kaigai shinshutsu no arikata* [Direct overseas investment by Japanese firms] (Tokyo: Sekai-keizai-kenkyū-kyōkai, 1975). See also [1, pp. 281-341].

for new and higher-quality products in the course of their economic growth and the future potential of their economies can also serve as investment incentives in place of cheap labor. It seems to me that more importance will come to be attached to these factors as the Asian NICs overcome their present economic difficulties and their future outlook becomes clear. Furthermore, the Asian NICs themselves are making increasingly clear their intention to be selective in their invitation of foreign capital investment so as to attract more advanced technology and ensure that such investment is compatible with their present conditions of industrialization and their future plans in that respect. It is possible that this tendency will lead to more preferential treatment of the kind of foreign capital that they deem particularly desirable. One can therefore expect the hitherto labor-intensive Japanese direct overseas investment in the Asian NICs to be replaced increasingly by capital- and technology-intensive investment in many fields. If this happens, there should be a shift from transfer of partial production systems, most of which are labor-intensive, to transfer of integrated production systems in the Asian NICs. Also one can expect a shift from vertical division of labor to horizontal division of labor. In the case of products that include labor-intensive processes, it might be possible to go beyond process production in the Asian NICs to development of horizontal division of labor that encompasses as well vertical division of labor between the Asian NICs and other neighboring countries such as Malaysia and China. In any case, once such direct overseas investment gets fully underway, it will mean the transfer of more production and employment opportunities. When marketing territories can only be temporarily maintained as they were, as we have already seen, sufficient measures will have to be taken to cope with the counteraction brought about by such investment, including efforts on the part of the investing firms themselves.

All this seems to point to the fact that Japanese direct overseas investment in the Asian NICs has reached a turning point from which it will head in the direction of establishment of more advanced division of labor. If so, even greater efforts will have to be made to raise the level of sophistication of domestic production systems than in the days when most of such direct overseas investment involved vertical intra-firm division of labor. It will be necessary to plan new relations of division of labor between Japan and the Asian NICs from medium- and long-range points of view and to promote the domestic industrial adjustment that such relations necessitate through both public and private efforts.

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