

# JAPAN'S TRADE WITH DEVELOPING COUNTRIES

— A Note Based on *Foreign Trade of Japan 1961\** —

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## I. INTRODUCTION

The upward trend of the Japanese economy for the past three consecutive years hit a wall of unfavourable international balance of payments in mid-1961. The main cause of this development was a high increase in the rate of production induced by brisk equipment investment which resulted in an unusual increase in Japan's import demands. An unexpected decrease in export trade was also a factor in promoting the unfavourable balance. Although there are discernible signs of some improvement lately, export prospects do not look very bright now, and an increase in export trade may take a long time.

It is being felt increasingly in both government and business quarters that Japan's foreign trade, especially export trade, has come to a turning point.

Japan's export trade made a very rapid development since the end of World War II, annually increasing by as much as 16 per cent on the average during the 1950's. This high rate of growth is mostly due to the remarkable recovery of Japan's economy and foreign trade from the debilitating effects of war. Even though the Japanese economy is still growing, the recovery boom has levelled off and the fifties export growth rate cannot be expected to continue at such a high level in the 1960's. Moreover, there is the new, challenging factor of trade liberalization in this decade, which certainly is expected to have far-reaching effects on Japan's economy.

Any attempt to adjust business trends and improve the nation's balance of payments position under these circumstances requires a serious re-examination of Japan's present trade structure. With this objective in view, the referenced White Paper sets forth in detail an article of Japan's foreign trade structure. It points out that the structure of trade among industrial nations has been developing into a "horizontal division of labour" based upon heavy and chemical industry products. In non-industrial countries, the ratio of their imports of such products to their total imports is rising rapidly as economic development increases. The paper also analyzes how Japan's export and industrial structures adapt to such changes. It examines how the change in the exports' structure affects the market structure and problems involved in the export of machinery which is the mainstay of heavy and chemical industry products. A conclusion of the analysis is that if Japan is to maintain a high rate of economic growth, the ratio of heavy and chemical industry products in both industrial and exports' structures should be raised. This is because trade with developing nations will very likely centre on Japan's exports of heavy and chemical industry products.

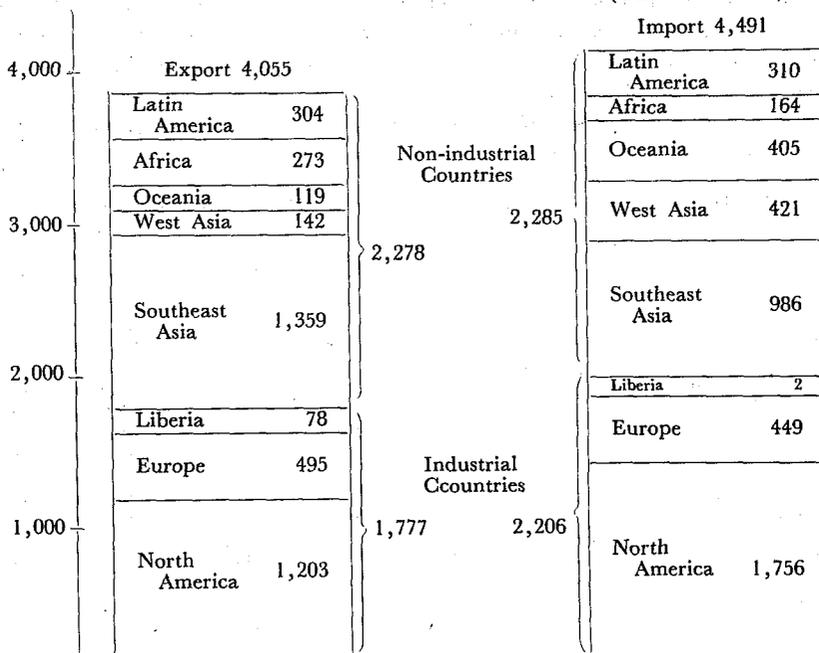
\* Edited by the Ministry of International Trade and Industry, and published by the Japan External Trade Organization (JETRO). It is also known as *Trade White Paper, 1961*.

II. POSITION OF DEVELOPING COUNTRIES IN JAPAN'S FOREIGN TRADE

The following chart will show the direction of Japan's foreign trade.

Chart 1. JAPAN'S REGION-WISE TRADE IN 1960

(Unit: \$ Million)



Source: Finance Ministry's customs statistics

Note: 1 Although the main theme of this review is Japan's trade with developing countries, the regional classification here is given for "industrial" and "non-industrial" countries simply for the sake of convenience in handling statistics. Liberia is included among industrial countries because Japan's recent exports to Liberia consist mostly of vessels, which, although registered as Liberian, are destined for their owners in Greece, an industrial country. In imports, too, Liberia is included among industrial countries for the purpose of making the area classification identical both in export and import.

2 Apart from the major classifications of industrial and non-industrial countries, regional divisions are, as a matter of principle, made in accordance with geographical areas. West Asia means the area west of Iran and east of Israel and includes Turkey. Thus, it is approximately equal to the area known as the Middle East in United Nations statistics and other documents minus the countries belonging to the African Continent such as Egypt and Libya. Southeast Asia applies to the area of the Asian Continent minus West Asia and embraces the area from Afghanistan and Pakistan in the west to Korea in the east, including Communist China. North America includes Canada and the United States and some other minor area such as Greenland. Mexico, Cuba and other Central American states are included in Latin America together with South American states. Europe includes East European countries and the Soviet Union.

3 Africa does not include Liberia. Also certain areas are not mentioned in the above chart. Therefore, the aggregates of the figures for the regions given above are not exactly equal to the total.

A glance at the above chart will show that Japan's import and export trade is about equally divided between industrial and non-industrial countries, centreing around North America and Southeast Asia, respectively. Imports and exports were balanced in 1960 in trade non-industrial countries, with an excess of exports to Southeast Asia offset by an excess of imports from West Asia (petroleum products) and Oceania (raw wool). In trade with industrial countries, there was a considerable amount of import excess, with the export surplus to Europe and Liberia failing to cover up the large excess of import from North America.

Let us now study the change which has taken place in Japan's foreign trade market composition, as shown in Table 1.

**Table 1.** JAPAN'S FOREIGN TRADE MARKET COMPOSITION

	(Unit: %)				
	1938	1948	1958	1959	1960
Export (Total)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Industrial Countries	26.8	38.3	46.1	50.0	43.8
North America	16.9	26.2	26.3	33.1	29.7
Europe	9.9	12.1	11.6	10.8	12.2
Liberia	—	—	8.2	6.1	1.9
Non-industrial Countries	73.2	61.7	53.9	50.0	56.2
Southeast Asia	59.7	48.5	32.8	29.4	33.5
Africa (excluding Liberia)	5.0	7.7	6.2	5.8	6.7
Others	8.5	5.5	14.9	14.8	15.9
Import (Total)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Industrial Countries	52.1	69.1	47.6	45.4	49.1
North America	38.0	65.9	38.8	35.2	39.1
Europe	14.1	3.2	8.9	10.1	10.0
Liberia	—	—	—	0.1	—
Non-industrial Countries	47.9	30.9	52.4	54.6	50.9
Southeast Asia	38.0	14.3	22.1	22.5	22.0
Africa (excluding Liberia)	2.0	2.8	2.8	3.5	3.6
Others	7.9	13.8	27.5	28.5	25.3

Source: For 1938 and 1948, U.N., *Direction of International Trade*; for years after 1958, Finance Ministry's customs statistics.

Note: Dash (—) means nil or negligible (This applies to all tables).

Postwar exports of Japan to non-industrial countries have declined considerably from those of prewar years. This is because the East Asian market declined due to the world political changes after the war, while the North American market grew.

There is no great difference between prewar and postwar imports in industrial and non-industrial classifications. However, the relative importance of Southeast Asia as a source of imports has declined markedly. On the other hand, the imports from West Asia and Oceania rose in importance.

Export surplus to Southeast Asia used to be balanced by excess of imports

from North America in prewar days, resulting in an overall balance. But in the postwar years, a new factor—large excess of imports from West Asia and Oceania—has been added. The prewar pattern of export excess to Southeast Asia and import excess from North America has remained unchanged, however. As a result, the overall balance of trade has turned unfavourable.

In 1961, import demand remained static in North America and in South-east Asia. In Japan, however, demand for foreign goods was brisk. Therefore, the excess of imports over exports in Japan's trade with North America increased further while the excess of exports over imports in her trade with South-east Asia shrank sharply. This resulted in an adverse balance of as much as \$1,630 million in terms of customs clearance.

**Table 2. JAPAN'S REGION-WISE BALANCE OF TRADE**  
(Unit: \$ Million)

	1938	1948	1958	1959	1960
Total	7.5	-424.0	-156.6	-143.0	-436.6
Industrial Countries	-190.1	-372.7	-118.2	94.3	-429.6
North America	-158.5	-382.0	-419.5	-123.3	-552.6
Europe	-31.6	9.3	64.6	10.4	46.5
Liberia	—	—	236.7	207.2	76.5
Non-industrial Countries	197.6	-51.3	-38.4	-237.3	-7.0
Southeast Asia	169.4	27.9	273.3	203.8	373.2
Africa (excluding Liberia)	22.9	1.0	95.1	74.4	111.4
Others	5.3	-80.2	-406.8	-515.5	-491.6

Source: Same as Table 1.

Now let us turn to the question of how Japan can attain a high growth rate in her exports, a prerequisite to her steady economic growth. We propose to study this question in the light of the change to be made in the commodity composition of her exports.

### III. NEED FOR INCREASING SHARE OF HEAVY AND CHEMICAL INDUSTRY PRODUCTS IN JAPAN'S TOTAL EXPORTS

It goes without saying that the increasing of exports is an essential prerequisite to achieving a high rate of economic growth for a country like Japan, which is deficient in natural resources. In order to increase exports, therefore, Japan must adapt the structure of trade and industry to world-wide trends of supply and demand.

As shown in Tables 3 and 4, world trade is shifting its weight from primary products to manufactured goods and from less processed or lower-quality products to more processed or higher-grade goods. In other words, heavy and chemical industry products have come to claim more importance in world trade. One of the reasons for this phenomenon is the notable increase in the volume of trade among industrial countries in such products. Another reason may be found in the fact that, with the industrialization efforts in non-industrial countries, the commodity composition of their imports is

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changing in favour of heavy and chemical industry products. But import demands in these countries for certain light industry products such as textiles tend to slacken as the countries become more self-sufficient.

**Table 3.** TRENDS OF WORLD TRADE

(Unit: \$ 100 Million)

	1948		1953		1959	
	Amount	Ratio (%)	Amount	Ratio (%)	Amount	Ratio (%)
World total	573.0	100	816.8	100	1145.6	100
Total Export of Industrial Countries	322.6	56.3	477.7	58.5	708.9	61.9
For Industrial Countries	171.4	29.9	255.0	31.1	451.5	39.4
For Non-Industrial Countries	151.2	26.4	222.7	27.4	257.4	22.5
Total Export of Non-industrial Countries	250.4	43.7	339.1	41.5	436.7	38.1
For Industrial Countries	148.6	25.9	192.4	23.5	233.0	20.3
For Non-industrial Countries	101.8	17.8	146.7	18.0	203.7	17.8

Source: U.N., Monthly Bulletin of Statistics.

Note: Industrial countries mean the U.S., Canada, West European countries, and Japan.  
Non-industrial countries mean the other countries of the world.

**Table 4.** EXPORT TRADE OF INDUSTRIAL COUNTRIES

(Unit: \$ 100 Million)

	1953			1959		
	Total	For Industrial Countries	For Non-industrial Countries	Total	For Industrial Countries	For Non-industrial Countries
Total Exports	477.7	255.0	222.7	708.9	451.5	257.4
Primary Products	140.8	108.6	32.2	212.6	163.1	49.4
Industrial Products	336.9	146.6	190.5	496.4	288.4	208.0
(Heavy and Chemical Industry Goods)	214.1	100.7	113.5	339.2	185.3	153.9
Machinery	124.3	52.6	71.7	198.0	101.6	96.4
Metal Products	61.4	33.3	28.2	87.6	54.1	33.5
Chemical Products	28.4	14.9	13.6	53.6	29.6	24.0
(Light Industry Goods)	122.7	45.7	77.0	157.2	103.1	54.1
Textiles	37.4	16.5	20.9	47.1	26.3	20.8
Others	85.4	29.1	56.3	110.1	76.8	33.3

Source: Ministry of International Trade and Industry, *Foreign Trade of Japan, 1961*.

How has Japan's export structure adapted itself to such changes in the world's trade structure?

In analyzing this process, the *White Paper* goes back to 1900, comparing Japan's export structure with that of major industrial nations. It points out that Japan, having launched its industrialization later than the other principal industrialized nations, tended to specialize in the export of light industry goods up to the 1930's. Other major industrial countries had already begun to export heavy and chemical industry products. This fact seems to explain why Japan has lagged behind Western countries in adapting her export struc-

ture towards exporting more heavy and chemical industry products while, though, her industrial structure is considerably high.

In 1959, Japan exported more heavy and chemical industry products than light industry products to non-industrial countries. But in her exports to industrial nations, heavy and chemical industry goods amounted to only about 60 per cent of light industry goods. In other words, Japan exported capital-intensive goods more than labour-intensive products to non-industrial markets, while the opposite was the case with industrial markets. This fact is a "vertical dualism" in Japan's export structure and is a special characteristic of her export trade.

On the other hand, in such countries as Britain, West Germany, and France, the share of heavy and chemical industry products far exceeds that of light industry goods in their exports to both industrial and non-industrial countries. This is shown in Tables 5 and 6.

**Table 5. MARKET-WISE EXPORT COMPOSITION  
IN INDUSTRIAL COUNTRIES**

		1953	1959
Japan	{ All Areas	0.7	0.9
	{ Industrial Countries	0.5	0.6
	{ Non-industrial Countries	0.8	1.1
Britain	{ All Areas	2.4	3.1
	{ Industrial Countries	2.3	3.1
	{ Non-industrial Countries	2.4	3.1
W. Germany	{ All Areas	4.4	4.9
	{ Industrial Countries	3.8	3.8
	{ Non-industrial Countries	5.6	8.4
France	{ All Areas	1.8	2.3
	{ Industrial Countries	1.8	1.5
	{ Non-industrial Countries	1.8	2.2

Source: Ministry of International Trade and Industry, *op. cit.*

Note: 1 Figures represent the value of heavy and chemical industry exports taking the value of light industry products exports as 1.

2 The above table shows the ratio of the value of export of heavy and chemical industry goods to that of light industry products by markets, in Japan, Britain, West Germany, and France.

Such a difference between Japan and other industrial nations seems to indicate the different stages of economic development in which the former and the latter are found. This is reflected in the existing gap in such factors as comparative costs of heavy and chemical industry products in favour of the latter. At the same time, it should not be overlooked that Japan, being surrounded by non-industrial countries in different stages of industrial development, is prevented from participating in the "horizontal" international division of labour among industrial countries.

In view of the fact that Japan exports less heavy and chemical industry products to industrial countries than she does to non-industrial nations, should

**Table 6.** MARKET-WISE, COMMODITY-WISE COMPOSITION OF EXPORTS IN INDUSTRIAL COUNTRIES

		1953		1959	
		Light Industry Products	Heavy & Chemical Industry Products	Light Industry Products	Heavy & Chemical Industry Products
Japan	{Industrial Countries	14.0 (3)	7.2 (4)	20.9 (3)	12.4 (4)
	{Non-industrial Countries	35.3 (1)	28.6 (2)	26.4 (2)	29.6 (1)
Britain	{Industrial Countries	7.8 (4)	18.1 (3)	8.4 (4)	23.5 (2)
	{Non-industrial Countries	16.3 (2)	39.2 (1)	12.3 (3)	42.6 (1)
W. Germany	{Industrial Countries	11.1 (3)	42.2 (1)	11.7 (3)	45.0 (1)
	{Non-industrial Countries	4.6 (4)	25.7 (2)	3.4 (4)	23.7 (2)
France	{Industrial Countries	8.2 (4)	14.7 (3)	10.1 (4)	24.7 (2)
	{Non-industrial Countries	15.5 (2)	27.2 (1)	12.7 (3)	27.7 (1)

Source: Ministry of International Trade and Industry, *op. cit.*

Note: 1 Figures represent the ratios of market-wise and commodity-wise exports, taking the respective countries' total exports as 100. Non-industrial products are excluded and, therefore, the total of the ratios does not add up to 100. Figures in parentheses (1, 2, 3, 4) show the order of the ratios of each product to the total amounts of exports in each country.

2 The above table shows the rankings of the four countries in respect of the proportional size of heavy and chemical industry products in their industrial goods exports.

she strive to increase these exports to the industrial nations alone? The answer is in the negative, because, even in her exports to non-industrial countries, the ratio of heavy and chemical industry products to those of light industry is not big enough to match the corresponding ratio obtained by other industrial countries. While heavy and chemical industry products accounted for 74 per cent in the total industrial goods exported from industrial countries to non-industrial nations in 1959, the corresponding ratio of Japan's export of industrial products to non-industrial countries was only 53 per cent.

Whether to increase the share of heavy and chemical industry products exported to non-industrial areas is a question of great strategic importance. The non-industrial areas, notably Southeast Asia, are the regions where Japan's heavy and chemical industry products are gaining favour in international competition. The non-industrial markets are a good training ground for Japan's heavy and chemical industries to further strengthen their international competitive position.

Before dwelling further upon Japan's export of heavy and chemical industry goods to non-industrial nations, let us survey some of the characteristics of her export of such products.

In raising the position of heavy and chemical industry products in the structure of both industry and foreign trade of a country, the emphasis should be placed on machinery. This is because machinery is in the greatest demand and, being highly processed, has an effect in developing other industries.

As shown in Table 7, machinery now accounts for nearly a half of the world's trade in industrial goods. In Japan's export trade, also, the share

**Table 7.** RATIO OF MACHINERY TO THE TOTAL EXPORTS OF INDUSTRIAL COUNTRIES

(Unit: %)

	1938	1953	1959
Total for Industrial Countries			
Ratio to Total Exports	20.5	27.9	31.7
Ratio to Industrial Products Exports	31.3	41.4	44.0
Ratio to Heavy and Chemical Products Exports	51.1	58.8	59.6
Japan			
Ratio to Total Exports	9.6	16.2	25.6
Ratio to Industrial Products Exports	14.0	18.9	28.8
Ratio to Heavy and Chemical Products Exports	46.8	45.4	61.0

Source: Ministry of International Trade and Industry, *op. cit.*

Note: Total for industrial countries represents the aggregate total of the U.S., Canada, Britain, West Germany, France, Italy, Belgium, the Netherlands, Sweden, Switzerland, and Japan.

**Table 8.** SHARES OF INDUSTRIAL COUNTRIES IN THEIR MACHINERY EXPORTS

(Unit: %)

	1938	1953	1959
Total for Industrial Countries	100.0	100.0	100.0
U.S.	34.3	34.6	26.5
West Germany	24.8	15.9	22.8
Britain	22.4	23.4	20.4
France	3.1	5.8	7.1
Japan	2.9	1.8	4.4
Switzerland	2.7	5.0	3.9
Italy	2.3	2.5	3.9
Sweden	3.2	2.7	3.4
The Netherlands	—	3.0	3.3
Belgium	2.2	2.2	2.2
Canada	2.1	3.1	2.1

Source: Ministry of International Trade and Industry, *op. cit.*

of machinery has been increasing steadily throughout the 1950's, and in 1959 it reached 29 per cent of Japan's export of manufactured goods. Though the ratio is still lower than in the case of other advanced industrial nations, the increase is quite impressive as compared with prewar years. Japan's share in the world's machinery export market has also been increasing, from 2.9 per cent in the prewar 1938 to 4.4 per cent in 1959. (See Table 8)

However, Japan's exports of machinery are still behind such countries as the U.S., West Germany, and Britain, each of which accounts for around 20 per cent of the world's machinery exports. Japan's machinery exports are also smaller than the ratios occupied by other Japanese commodity groups in their respective world markets. (See Table 9)

Japan's machinery exports are mostly ships and light machinery, while such composition of the industrial countries of the West is more diversified, centring on heavy machinery and automobiles, as shown in Table 10. Such a difference is quite natural, since development of machinery industry

**Table 9.** JAPAN'S SHARE IN WORLD MARKET

(Unit: %)

	1938	1953	1959
Total of Industrial Products	6.4	4.0	6.8
Heavy & Chemical Industry Products	3.1	2.3	4.3
Machinery	2.9	1.8	4.4
Metal Products	3.4	3.6	5.0
Chemical Products	3.4	2.1	3.0
Light Industry Products	11.5	7.8	13.7
Textiles	18.1	12.1	21.7
Sundries	5.6	4.1	8.3

Source: Ministry of International Trade and Industry, *op. cit.*

depends upon its expanding market as well as on the technological improvements. In Japan, which emerged as an industrial nation later than countries of the West, the industrial machinery industry could not depend as much on the development of other relating industries.

#### IV. EXPORT OF HEAVY AND CHEMICAL INDUSTRY PRODUCTS TO NON-INDUSTRIAL COUNTRIES

Generally speaking, Japan's exports of heavy and chemical industry goods comprise mainly ships and light machinery to industrial areas and iron and steel, heavy machinery and chemical fertilizer to non-industrial areas.

We will now single out Southeast Asia, one of Japan's most important markets for such products, to make a closer study of the characteristics and problems of Japan's export structure in relation to non-industrial areas.

As is shown in Table 11, the share of heavy and chemical industry products in Japan's industrial goods exports to Southeast Asia (excluding Communist areas) amounted to 54 per cent in 1959, the ratio being greater than corresponding shares in any other markets for Japan. Thus, in terms of area-wise specialization coefficient<sup>1</sup> of a commodity or a group of commodities exported from Japan, Southeast Asia registered 0.87 for light industry products and 1.14 for heavy and chemical industry goods. These figures indicate that Japan's export trade specializes in heavy and chemical industry goods to this part of the world.

Japan's trade record in Southeast Asia, however, does not compare favourably with that of Western countries. As seen in Table 11, the share of heavy and chemical industry products in the total of industrial goods exported from Western industrial nations to this region reached 76 per cent in 1959 as compared to Japan's 54 per cent.

If seen from the structure of industrial goods imports of Southeast Asia, which roughly corresponds to the structure of exports from industrial nations of the West and Japan to this region, the ratios of light industry goods and

<sup>1</sup> Ratio of a commodity or a group of commodities to the total value of industrial goods exported to a region as divided by the comparable ratio to the total value of industrial goods exported to all the regions of the world.

Table 10. PRINCIPAL ITEMS OF MACHINERY EXPORTS OF VARIOUS COUNTRIES IN 1959

Total for Industrial Countries	Ratio of 3 Major Items to Machinery Exports	Principal Items of Machinery Exports of respective countries (Figures in parentheses represent the ratio (%) of the respective items to each country's machinery exports)		
		Rank No. 1	Rank No. 2	Rank No. 3
	34	Other Industrial Machinery (15)	Finished automobiles (12)	Other electric machinery (7)
U.S.	41	<i>ditto</i> (18)	Mining, civil engineering, & construction machinery (13)	Other automobiles (10)
West Germany	43	<i>ditto</i> (18)	Finished automobiles (17)	Other electric machinery (8)
Britain	39	Finished automobiles (15)	Other industrial machinery (13)	Motorized machinery (11)
France	54	<i>ditto</i> (33)	<i>ditto</i> (13)	Other electric machinery (8)
Japan	63	Vessels (40)	Wireless apparatuses (15)	Scientific, optical goods (8)
Switzerland	53	Watches (26)	Other industrial machinery (15)	Textile machinery (12)
Italy	49	Finished automobiles (24)	<i>ditto</i> (15)	Other automobiles (10)
Sweden	57	Vessels (26)	<i>ditto</i> (23)	Finished automobiles (8)
The Netherlands	54	<i>ditto</i> (20)	Wireless apparatuses (20)	Other electric machinery (14)
Belgium	41	Finished automobiles (16)	Other industrial machinery (15)	Vessels (10)
Canada	51	Agricultural machinery (27)	Motorized machinery (14)	Other industrial machinery (10)

Source: Ministry of International Trade and Industry, *op. cit.*

Note: "Other industrial machinery" means general industrial machinery excluding mining, civil engineering, and construction machinery, textile machinery and sewing machines. "Other electric machinery" means electric machinery excluding high-voltage electric machinery, portable electric appliances, and wireless machinery.

**Table 11.** INDUSTRIAL COUNTRIES' EXPORT COMPOSITIONS  
WITH RESPECT TO SOUTHEAST ASIA (1959)

(Unit : %)

	North America (A)	West Europe (B)	Total of N. America, and W. Europe. (A+B)	Japan (C)	Total of Industrial Countries (A+B+C)
Heavy & Chemical					
Industry Products (a)	39	67	58	50	57
Light Industry Products (b)	14	19	18	43	22
Others (c)	47	14	24	7	21
Total (a+b+c)	100	100	100	100	100
Rate of Heavy & Chemical Industrialization (a/a+b)	74	78	76	54	72

Source : Ministry of International Trade and Industry, *op. cit.*

those of heavy and chemical industries to the total Southeast Asian imports of manufactured goods were 28 per cent and 72 per cent respectively in 1959. Thus, in terms of specialization ratio<sup>1</sup> of exports from Japan as weighed against the imports structure of its customer nations, Southeast Asian market registered 1.64 for light industry goods and 0.75 for heavy and chemical industry products. In this sense, Japan specializes in light industry goods exports, rather than in those of heavy industry products, also to this part of the world. This would mean that, in the way of comparative costs, Japan has an advantage over non-industrial countries in heavy and chemical industry goods, while it has an advantage over the more advanced industrial nations only in light industry products.

Now, what about the composition of Japan's export of heavy and chemical industry products to Southeast Asia?

Japan's export of such products to this region increased by 124 per cent between 1953 and 1959, and Japan's share in the import of such goods by this region also rose from 12 per cent to 19 per cent during this same period. The above rate of increase (124 per cent) can be divided into three parts: that which was brought about by the general increase in demand in the region for such products—part A; that which was attributable to the relative advantage or disadvantage of the composition of Japan's exports of heavy and chemical industry products to this region in the light of the growth rates of the region's import demands for such products—part B; and the portion which was brought about by the strengthened competitive position of Japan's heavy and chemical industry goods—part C. The percentage distribution between the A, B, and C was 49 per cent, -1 per cent, and 76 per cent respectively. Since "A" represents the rate of increase in import demands in Southeast Asia itself, an advantage which can be commonly shared by all countries concerned, we may put it aside from our discussion, and study "B" and "C", which are called the rate of relative increase. "B", representing an advantage or disadvantage of the composition of export commodities, is

<sup>1</sup> Ratio of a commodity or a group of commodities to the total value of industrial goods exported from Japan to Southeast Asia as divided by the share of the same commodities in the total value of industrial goods imports of Southeast Asia.

computed from the specialization ratio of each commodity of Japan's heavy and chemical industry goods exported to Southeast Asia in 1953 and from the rates of increase in Southeast Asia's import demands for the corresponding items of such products during the period from 1953 to 1959. Since "B" is a minus figure, the portion of relative increase in Japan's export of such goods can be solely attributed to the strengthened competitive position of Japan with respect to such products.

**Table 12.** JAPAN'S EXPORTS OF HEAVY & CHEMICAL INDUSTRY PRODUCTS TO SOUTHEAST ASIA

	Rate of Growth 1959/'53	Composition Ratio (%)		Market-Wise Specialization Rate		Share (%)	
		1953	1959	1953	1959	1953	1959
Chemical Products	234.7	22.8	23.9	1.18	1.20	14.5	22.3
Metal Products	151.4	43.4	29.3	1.70	1.41	20.9	26.1
Machinery	308.8	33.8	46.7	0.61	0.79	7.6	14.6
General Machinery	257.0	15.4	17.7	0.65	0.66	8.0	12.2
Electric Machinery	418.5	5.8	10.8	0.49	0.89	6.1	16.4
Transport Machinery	395.0	9.0	16.0	0.53	0.88	6.5	16.3
Precision Machinery	137.0	3.6	2.2	1.50	1.10	18.7	20.1
Total	223.7	100.0	100.0	1.00	1.00	12.3	18.5

Source: Ministry of International Trade and Industry, *op. cit.*

Then, what caused the disadvantage of commodity composition (the minus figure in "B")? As is shown in Table 12, the rates of specialization of respective items of Japan's heavy and chemical industry goods exported to Southeast Asia in 1953 were, as seen by major classifications of those goods, 1.70 for metal goods; 1.18 for chemicals; and 0.61 for machinery. On the other hand, the rates of increase in Southeast Asia's import demands for the same classifications of such goods between 1953 and 1959 were 60 per cent for machinery; 53 per cent for chemicals; and 21 per cent for metal goods. Thus, a striking contrast is shown between the former and latter cases in the order of the three groups of products. Further, if seen by minor classifications of such products, Japan's exports registered higher rates of specialization in such goods as chemical fertilizers, iron and steel, bicycles and precision machines than in other goods. Whereas in Southeast Asia, all these items have not recorded the higher rate of increase in import demand than the average increase rate except chemical fertilizers. On the other hand, Southeast Asia registered the higher rates of import increase (than the average increase rate) in such products as power machines, machine tools and automobiles, in all of which Japan recorded notably low rates of export specialization.

All these facts would show characteristically that the rate of specialization of Japan's heavy and chemical industry goods exported to Southeast Asia is high mostly in those goods with lower degree of processing and more or less labour-intensive light machinery, and that they tend to concentrate on rather limited items of products, which have all added up to the disadvantageous commodity composition of Japan's exports to the region.

**Table 13.** SOUTHEAST ASIA'S IMPORT OF HEAVY & CHEMICAL INDUSTRY PRODUCTS

	Rate of Growth 1959/'53	Composition Ratio (%)	
		1953	1959
Chemical Products	153.3	19.3	19.9
Metal Products	121.3	25.5	20.8
Machinery	159.7	55.1	59.2
General machinery	167.4	23.8	26.9
Electric machinery	154.0	11.8	12.2
Transport machinery	157.3	17.1	18.1
Precision machinery	127.3	2.4	2.0
Total	148.7	100.0	100.0

Source: Ministry of International Trade and Industry, *op. cit.*

Note: The total represents the exports to Southeast Asian from 16 industrial countries including the U.S., Canada, EEC and EFTA countries, and Japan.

What, then, about the records of the Western countries in Southeast Asia? Table 14 shows the changing shares of major industrial nations in heavy and chemical industry goods imported by the region between 1953 and 1959. West Germany's advance is in contrast with the others' decline, although Canada was an exception. Since Canada's share was a negligible 2 per cent, West Germany was about the only country, except Japan, whose share increased during the period. West German exports of heavy and chemical industry goods to Southeast Asia increased more than two-fold during the period and its share rose from 11 per cent in 1953 to 16 per cent in 1959. While France and Benelux countries scored a shrinkage in their absolute values of exports as well as a sharp decline in their shares, such declines of Britain and the U.S. were minor, both still holding high ratios of 31 per cent and 19 per cent respectively.

**Table 14.** PRINCIPAL INDUSTRIAL COUNTRIES' SHARES IN SOUTHEAST ASIA'S IMPORTS OF HEAVY & CHEMICAL INDUSTRY PRODUCTS

(Unit: %)

	Year	Britain	U.S.	Japan	W. Ger- many	Benelux countries	France
Total of Heavy & Chemical Industry Products	1953	33.3	22.3	12.3	11.0	7.5	7.5
	1959	31.4	19.2	18.5	16.4	4.3	4.1
Chemical Products	1953	28.6	21.7	14.5	13.5	7.1	7.6
	1959	23.9	23.6	22.3	14.4	5.1	4.4
Metal Products	1953	27.8	12.1	20.9	9.3	11.1	11.1
	1959	26.5	10.8	26.1	11.6	8.4	7.0
Machinery	1953	37.5	27.1	7.6	10.9	6.0	5.8
	1959	35.6	20.7	14.6	18.8	2.6	3.0

Source: Ministry of International Trade and Industry, *op. cit.*

Note: 1. See Note on Table 13 in regard to Southeast Asia's imports.

2. Only major exporting countries are cited. The total does not add up to 100.

Let us now look at the rates of relative increase in heavy and chemical industry exports of these countries to Southeast Asia between 1953 and 1959 in terms of advantage or disadvantage of their commodity composition and the strengthening of their competitive position, as shown in Table 15. Italy, West Germany, the U.S., and Britain registered increases in their commodity composition advantage, but all of them, except West Germany, suffered reductions in their competitive strength, thus bringing about a minus figure in the rates of relative increase in their exports of such goods to the region. The market-wise specialization ratios of West German exports of such products in 1953 were high in chemicals and machinery and low in metal goods in Southeast Asian market. Seen by smaller classifications, such ratios were high in general chemical products, power machines, machine tools, etc., and low in medicines, iron and steel, farming machines, and others. On the whole, West Germany's composition of export commodities was contrary to that of Japan, which favoured the former country in the advantage of commodity composition.

**Table 15.** INTERNATIONAL COMPARISON OF RATES OF RELATIVE INCREASE

	Japan	U.S.	Canada	Britain	West Germany	France	Italy	Benelux countries
Rate of Relative Increase	75.0	-20.4	48.3	-8.8	73.1	-66.8	-2.2	-63.1
Portion Brought about by Commodity Composition Advantage	-1.4	1.5	-8.1	0.8	1.9	-4.0	6.3	-1.4
Portion Attributable to Increased Competitive Strength	76.4	-21.9	56.4	-9.6	71.2	-62.8	-8.5	-61.7

Source: Ministry of International Trade and Industry, *op. cit.*

It must be noted here that, although the commodity composition advantages in the foregoing analysis were computed on the basis of the composition of exports of respective countries in 1953, these countries witnessed changes in their exports composition since then. A comparison of Japan's rates of specialization of heavy and chemical industry products exports to Southeast Asia in 1953 and those in 1959 shows that chemical products remained unchanged, metal goods declined and machinery rose, thus indicating overall improvement. Moreover, the ranking in specialization ratios among Japan's heavy and chemical industry goods exported to Southeast Asia in 1959 changed little since 1953, while in Southeast Asia's imports of such goods, high rates of import of heavy machinery continued and the demand increase in light machinery, pharmaceutical goods, metal products, bicycles, precision machines, etc. was not great. If, therefore, Japan is to increase its exports to Southeast Asia, it must strive to change its exports composition in favour of heavy and chemical industry goods centring around heavy machinery.

In the foregoing discussions, we have studied Japan's trade with non-

industrial nations from the viewpoint of a needed change in Japan's export commodity composition. In doing so, we have explained such need in the light of the changing structure of import demands in these countries, which is shifting its weight from light industry goods to those of heavy and chemical industries. Such a change should not only be looked at as such, but it should be grasped in its broader and long-term perspective. It is that the industrialization efforts in these countries are changing their industrial structures, and that the international division of labour between the developed and less-developed countries is gradually changing from the old pattern—exchange of industrial goods of the former with primary products of the latter—to a new one, that is, exchange of the former's highly processed and capital-intensive industrial goods with the latter's less processed and labour-intensive industrial products as well as primary products. Japan should not let the present strong competitive position of its light industry goods overshadow its future needs which are indicated by this great tide of the times.