GROWTH OF JAPANESE EXPORTS

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INTRODUCTION

THE STRUCTURE OF the Japanese balance of payments in the decade from Shōwa 30 to 39 (1955–64) was quite different from that in the subsequent years. It is a change which occurred in the balance of trade and long-term capital account, that is, shifts in the balance of trade toward big surpluses, and in the capital account, toward deficits. In the 1955–64 period, the prevailing pattern was one in which "deficits in the current account were covered by surpluses in the capital account." But in the subsequent period, it has changed into a pattern in which "surpluses in the current account due to the big surpluses in the balance of trade make up for the deficits in the capital account."

The factor which has made this favorable change possible is the constantly high growth rate of Japanese exports. While the rate of growth of export in Japan has been higher than the rate of growth of import, which was also high during the period, Japanese exports began to catch up rapidly with imports, becoming almost equal around 1965. Thereafter, exports have been exceeding imports, thus continuously enlarging the amount of surpluses in the current account.

It should be noted that such an improvement in the current account was not due to decrease in the real growth rate, but to a rise in the real growth rate. This is a rise in the so-called "growth-competitive power," which has enabled Japan to adopt new economic policies. Various liberalization measures (that is, trade liberalization, capital liberalization including Japanese investment overseas, decontrol of foreign exchange, lowering of tariffs, etc.) have become important policy problems, and the revaluation of the yen has been urged. These topics will be discussed in the following sections.

Section I examines the improvement in the Japanese balance of trade after 1955. The emphasis in the discussion is placed on the reasons for the high growth rate of Japanese exports. Regarding the growth of imports, the relations between changes in the import-saving structure of industry and changes in the demand structure will be discussed.

Section II deals with the problem of the strengthening of growth-competitive power. Since this new concept of growth-competitive power seems to be very useful for comprehensive analysis of international competitive power, this section will treat the discussions based on this concept. Next, the results of analyses based on other related concepts will be presented.

Section III discusses Japan's choices in international economic policies which

Japan has had to tackle anew as the result of her rising growth-competitive power.

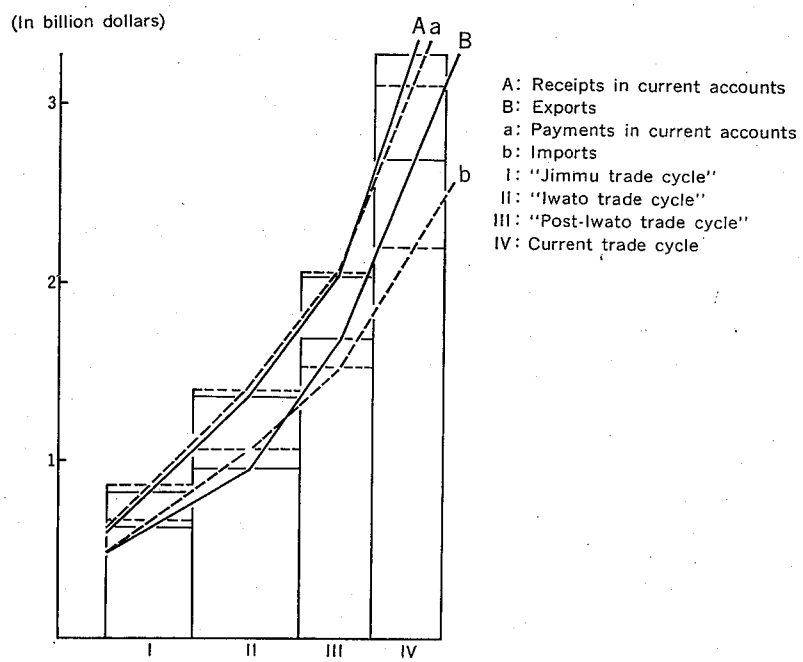
I. SECRETS OF THE HIGH GROWTH RATE OF EXPORTS

A. *Analysis of Balance of Trade*

Figure 1 illustrates the changes in the pattern of Japanese balance of payments in relation to the business cycles after 1955. Examining successively the "Jimmu trade cycle" (1st quarter, 1955 to 2nd quarter, 1958), "Iwato trade cycle" (3rd quarter, 1958 to 4th quarter, 1962), "Post-Iwato trade cycle" (1st quarter, 1963 to 4th quarter, 1965), and the current trade cycle (since the 1st quarter, 1966), we will find that receipts exceeded payments in the current account midway between the "Post-Iwato" and the current trade cycle, or around 1965. When viewed from the standpoint of the balance of trade, the point at which receipts and payments became equal is seen to have occurred slightly earlier.

Table I shows the results of calculation of the growth rates of world trade and Japanese exports for each trade cycle. Table II presents the results of

Fig. 1. Changes in the Pattern of Balance of Payments



Notes: 1. Figures in the detailed table of overseas accounts in *Kokumin shotoku tōkei nempō* [Yearbook of national income statistics] by the Economic Planning Agency have been converted into dollars.
2. Figures in the chart show the average for each quarter.

calculation of export growth rates on a customs clearance basis for the boom period, the slump period, and the entire period of each trade cycle. In this table, the export growth rate i is calculated with the following equation.

$$\sum_{t=1}^{n} A_t = A_0 \sum_{t=1}^{n} (1+i)^t$$

where A_0 stands for the average for the three quarters, i.e., the beginning quarter of the period concerned and the quarters immediately before and after it; n for the number of quarters during the period; A_t for the value of performance at the t quarter. This method is designed to provide a practical way of solving such

TABLE I
ANNUAL GROWTH RATES OF WORLD IMPORTS AND JAPANESE EXPORTS
(BY TRADE CYCLES)

(%)

Items \ Period	"Jimmu Cycle" (1955–58)	"Iwato Cycle" (1958–62)	"Post-Iwato Cycle" (1963–65)	Current Cycle (1966–69)
World imports	9.1	2.8	9.6	9.8
World imports as a function of Japanese market composition	8.7	1.9	8.0	9.9
Japanese exports	18.4	10.6	16.8	17.2
(Including Communist bloc)	18.9	10.6	17.6	17.2

Notes: 1. Calculations are based on the method stated in the text. Since annual data are used in this table, no amendments are made for the base year.
2. "World" does not include the Communist bloc.
Sources: IMF-IFS statistics and Customs Clearance Statistics in Japan.

TABLE II
ANNUAL GROWTH RATE OF EXPORTS (ON CUSTOMS CLEARANCE BASIS)
(BY TRADE CYCLES)

(%)

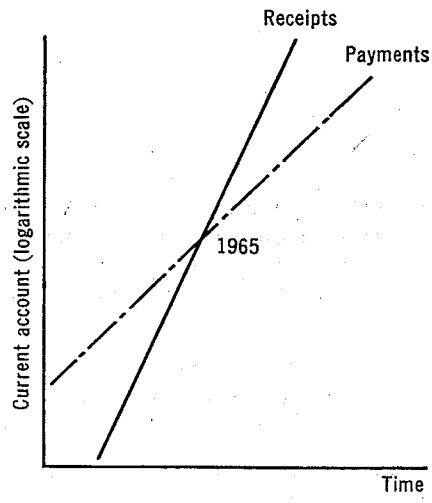
Trade Cycle	"Jimmu Cycle"	"Iwato Cycle"	"Post-Iwato Cycle"	Current Cycle
Boom period	I Quarter 1955– II Quarter 1957	III Quarter 1958– IV Quarter 1961	I Quarter 1963– III Quarter 1964	I Quarter 1966– IV Quarter 1969
	22.0	15.0	14.4	17.0
Depression period	III Quarter 1957– II Quarter 1958	I Quarter 1955– IV Quarter 1962	IV Quarter 1964– IV Quarter 1965	
	3.2	19.3	30.2	
Whole period	I Quarter 1955– II Quarter 1958	III Quarter 1958– IV Quarter 1962	I Quarter 1963– IV Quarter 1965	
	19.5	14.5	19.4	

Source: "Seasonally-adjusted Value of Exports" (EPA Method).

difficult problems as the calculation of growth rates in the process of a business cycle. Such calculations should deal with the magnitude of the growth rate not only at the starting and ending points of a cycle, but also in the whole process. Thus the method adopted here may be a satisfactory solution.

Table II shows that the growth rate of Japanese exports after 1955 was almost constant. A decline in the rate of growth of import is witnessed in the "Iwato trade cycle." But, as is clear from Table I, the growth rate of world imports in the period corresponding to the "Iwato trade cycle" was extremely low, so that the growth rate of Japanese exports during this period necessarily remained low. On the other hand, the elasticity of Japanese export to world imports became larger during this period. Therefore, from the viewpoint of the growth rate of Japanese export, it may be said that the growth rate after 1955 was almost constant. The same result can be obtained in relation to imports by applying the above-mentioned calculation method. The change in the current account shown in Figure 1 can therefore be translated into Figure 2 in more simplified figure. Figure 2 shows the change in the Japanese current account after 1955.

Fig. 2.



The next problem to be discussed is the factors which have been responsible for Japan's consistently high rate of growth of export.

B. *Strengthening of Competitive Power of Export*

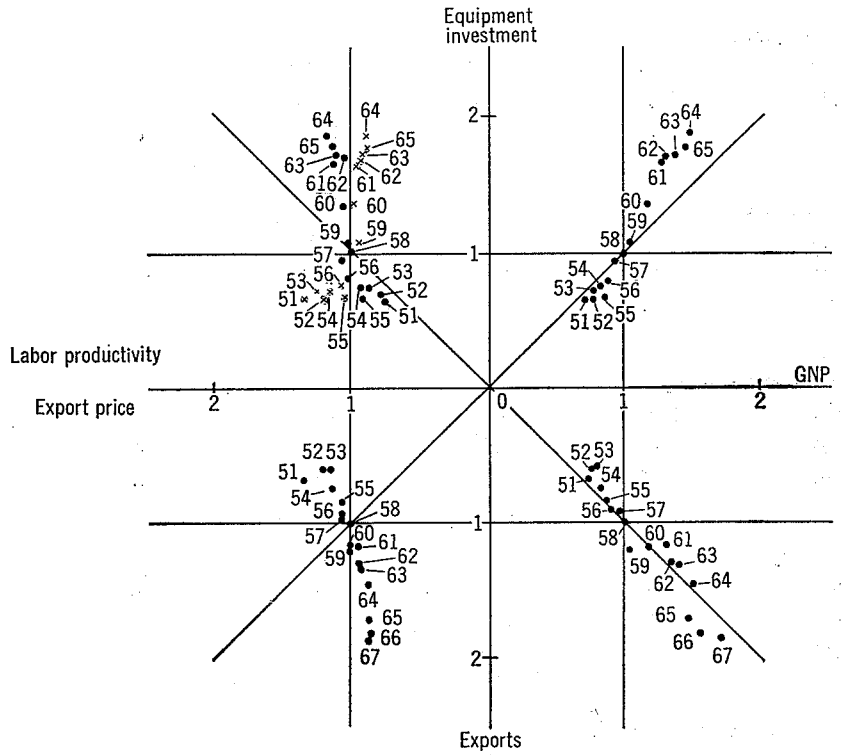
For the purpose of analyses focusing on rate of growth of export, that is, on international competitive power in a narrower sense, comparisons will be made between Japan and her major competitors—the United States, England, West Germany, France, and Italy.

The items to be compared are real equipment investment, GNP in real terms, labor productivity, export price, and amount of exports. The ratios of Japan to other countries are calculated for each item and time-series data of these ratios

are organized into indices with 1958 as the base year. In the calculation of the ratios, Japan is always taken as the denominator. In addition, the general indices are calculated for each item for the five countries in order to compare them with Japan, and attempts are made to compare the general indices between Japan and the five countries. The results of the calculations are presented in Table III.

Table III shows that Japan has maintained a greater performance than any country in every field of equipment investment, labor productivity, export price, amount of exports, and growth of GNP; and that the ratio of improvement of Japan in relation to England and the United States is remarkable. Compared to

Fig. 3. Changes in Relative Competitive Power



Notes: 1. Indices were calculated with 1958 as 100 for USA, England, West Germany, and Italy, employing United Nations statistics and statistics of various countries. These indices were then weighted to obtain the average for the five countries.

2. The Japanese indices were calculated with 1958 as 100 and then divided by the average for the five countries.

3. In the second quadrant, ● indicates the relation between equipment investment and labor productivity, and × the relation between equipment investment and export price.

TABLE

CHANGES IN THE DEGREE OF STRENGTHENING

(a) Changes in the Relative Competitive Power

Countries and Years	Equipment Investment	Labor Productivity	Export Prices	Exports	GNP
With USA					
1951	0.80	0.81	1.35	0.56	0.53
1958	1.00	1.00	1.00	1.00	1.00
1967	2.34	1.50	0.17	2.06	1.69
With England					
1951	0.65	0.69	1.41	0.58	0.53
1958	1.00	1.00	1.00	1.00	1.00
1967	1.99	1.46	0.84	2.41	1.90
With France					
1951	0.87	0.70	1.54	0.59	0.60
1958	1.00	1.00	1.00	1.00	1.00
1967	1.79	1.35	0.80	1.63	1.63
With West Germany					
1951	1.00	0.93	1.35	1.21	0.79
1958	1.00	1.00	1.00	1.00	1.00
1967	1.95	1.12	1.05	1.47	1.68
With Italy					
1951	0.80	0.94	1.03	0.74	0.65
1958	1.00	1.00	1.00	1.00	1.00
1967	2.14	1.08	1.05	1.08	1.56
With the above five countries					
1951	0.66	0.75	1.35	0.65	0.55
1958	1.00	1.00	1.00	1.00	1.00
1967	2.17	1.35	0.87	2.02	1.69

Notes: 1. The factors determining the competitive power are calculated as follows, e.g., in the case of equipment investment:

$\frac{I_{Jt}}{I_{J58}}$ / $\frac{I_{Ft}}{I_{F58}}$ where I_{Jt} stands for Japanese equipment investment in the year compared; I_{J58} for Japanese equipment investment in 1958; I_{Ft} for the average equipment investment of the five countries in the year compared; and I_{F58} for the average equipment investment of the five countries in 1958.

III
OF RELATIVE COMPETITIVE POWER

(b) Rates of Change of the Relative Competitive Power

Years	Equipment Investment (A)	Labor Productivity (B)	Export Prices (C)	Exports (D)	GNP (E)
1951–54	1.7	4.4	− 5.8	6.2	14.7
1954–62	14.5	2.1	− 2.2	9.7	6.6
1962–65	2.5	3.8	− 2.1	10.8	3.2
1965–67	15.9	10.1	− 1.1	3.5	7.6
1951–54	4.0	10.2	− 6.8	5.8	14.2
1954–62	10.6	3.8	− 2.3	9.7	7.2
1962–65	0.2	2.1	− 3.3	12.6	4.2
1965–67	9.8	10.8	− 1.1	8.8	10.4
1951–54	0	3.7	− 5.5	5.6	13.7
1954–62	7.8	4.2	− 5.0	6.9	4.8
1962–65	− 0.4	3.0	− 3.2	8.0	3.3
1965–67	5.8	7.0	1.3	4.5	7.6
1951–54	− 1.4	2.5	− 6.9	− 7.7	8.9
1954–62	4.6	− 0.5	− 1.7	2.2	2.6
1962–65	0.5	0.3	− 1.8	8.4	3.1
1965–67	18.0	7.5	1.7	0.9	10.7
1951–54	1.7	2.4	− 1.6	6.5	11.3
1954–62	6.7	− 0.3	0.7	0.7	3.9
1962–65	10.0	− 1.0	1.7	3.7	4.2
1965–67	6.4	6.1	2.5	1.1	6.4
1951–54	3.4	5.9	− 5.7	4.0	14.2
1954–62	11.1	2.4	− 2.3	7.4	6.1
1962–65	1.4	1.5	− 2.2	9.4	3.2
1965–67	11.0	9.3	− 0.6	3.8	8.0

2. The rates of variation of factors determining the competitive power are annual rates.

Sources: *United Nations Statistics; Kokumin shotoku tōkei* [Yearbook of national income statistics]; *Bōeki nempō* [Trade yearbook]; and *ILO Labor Statistical Yearbook.*

West Germany and Italy, Japan's export price seems to have risen. But this is only due to rapid changes in the composition of Japanese export items. Thus the effective price of Japan's exports can be considered not to have risen compared to these two countries.

Although it seems to be important to compare Japan with the five other countries for each item, the following discussions will be limited to a comparison of Japan with the average indices of other five countries due to limitation of space. Figure 3 shows the comparison between Japan and the average indices of five countries. This figure is very instructive and suggestive. In discussing the figure, it may be divided into the right and the left sides. The right side shows the supply side of Japan's exports and the left, the overseas demand for Japan's exports.

First, let us examine the right side. The first quadrant of the figure shows that the growth rate of Japanese equipment investment is considerably higher than that of other countries and that, as a result, the growth rate of the Japanese GNP is extremely high. An examination of the relationship between equipment investment and GNP in relative terms shows that the efficiency of increase in equipment investment to GNP increase has recently been declining. This point should be further examined.

Next, the fourth quadrant shows that the relatively higher GNP growth rate has resulted in a relatively higher export growth rate. In other words, it shows the supply side of exports.

The second quadrant on the left side shows the relatively higher growth rate of Japan's equipment investment; the steady improvement in Japan's labor productivity as compared to that of other countries; and advances in the lowering of Japan's export prices relative to other countries as the result of improvements in labor productivity. The time-series change in relative labor productivity proceeds from the right bottom to the left top and the time-series change in relative export price from the left bottom to the right top, both intersecting halfway to form a symmetrical shape. The graph shows a much clearer relation than expected.

The third quadrant is interpreted as revealing that the lowering of Japanese relative export price caused an increase in world imports from Japan. As mentioned above, the left side of Figure 3 is said to show the world demand for Japanese exports. Together with the right side, representing supply, it reveals that the growth rate of Japan's exports has been maintained at an extremely high level.

The above are the results of an examination of the high growth rate of Japanese exports on the basis of macroscopic comparisons between Japan and the five other industrial countries. Next, let us discuss the regional and commodity structures of Japanese exports from a more microscopic viewpoint.

C. *The Regional and Commodity Structures of Japanese Export*

The regional structure of Japanese exports can be clarified by drawing and analyzing a world trade matrix. Since the trade matrix cannot be included here

due to considerations of space, only the results of the analyses will be presented.[1]

Table IV shows the degree of regional connection in world trade. The degree of connection in this case is the value obtained by dividing the share of exports to the importing region (or country) in question in the total exports from a exporting region (or country) by the share of imports of the importing region (or country) in question in total world trade. Accordingly, if the value is larger than 1, the weight of the exports to that region (or country) in question in relation to the total exports of the exporting region (or country) should be considered larger than the appropriate value for the importing region (or country), judging from the weight of the region in world trade. Therefore, the larger the value the closer the connection.

From Table IV, the regions with which Japan has a high degree of export connection are Southeast Asia (3.84), North America (2.01), Oceania (1.89), etc. In North America, the degree of connection with the United States is very high at 2.54. Lower regions are West Europe (0.30), the Communist bloc (0.56), etc. In West Europe, EEC (0.24), EFTA (0.36), and other European countries (0.35) are all low. On the other hand, it should be noted regarding the Communist bloc that Mainland China is considerably high at 2.96, while East Europe (0.10) and the USSR (0.58) are low. LDC Africa (1.50), South Africa (1.18), West Asia (1.36), and Latin America (0.94) show an almost average degree of connection. From the above results it may be concluded that the regions with which Japan has a high degree of export connection are the United States, Oceania, Southeast Asia, and Mainland China, or in other words, the area facing the Pacific Ocean and its periphery; the low areas are West and East Europe and the Soviet Union. (East Europe and the Soviet Union have a low degree of export connection with regions other than the Communist bloc, so it may be unnecessary to refer to these countries.) Other regions show an average degree of connection.

The import growth rates of these areas are shown in Table V. The regions which are highly connected with Japan do not necessarily show especially high import growth rates compared to the growth rate of world imports: rather, they show lower rates on the whole. Therefore, the regional structure of Japanese exports cannot be said to have contributed to her export growth; but Japan has succeeded in enlarging her share in export markets by strengthening her competitive power.

Next, let us examine the composition of Japanese export goods. Table VI shows the growth rates of world and Japanese trades by commodity groups according to the Brussel's Tariff Nomenclature. In world trade, Class 5 (chemicals), Class 7 (machinery) and Classes 6 and 8 (other industrial products) show remarkable growth. In Japanese exports, too, Classes 5 and 7 recorded remarkable growth rates. Although the growth rates of Classes 6 and 8 in Japanese exports are lower than the former two categories, they have increased steadily

[1] For details, see Sōgō-seisaku kenkyū-kai ed., *1980-nen no sekai bōeki* [World trade in 1980] (Toyko: Tōyōkeizai shimpō-sha, 1970).

TABLE
THE DEGREE OF CONNECTION OF

Importers / Exporters	Japan	West Europe	EEC	EFTA	Others	North America	USA	Canada	South Africa	Oceania
Japan	—	0.30	0.24	0.36	0.35	2.01	2.54	0.58	1.18	1.89
West Europe	0.23	1.43	1.48	1.36	1.38	0.61	0.72	0.36	1.36	1.00
EEC	0.20	1.54	1.76	1.25	1.27	0.53	0.64	0.22	0.82	0.42
EFTA	0.28	1.24	1.01	1.47	1.67	0.79	0.85	0.62	2.64	2.26
Others	0.15	1.32	1.12	1.82	0.77	0.57	0.74	0.11	0.36	0.26
North America	1.73	0.66	0.61	0.70	0.73	1.88	1.21	3.67	1.09	1.21
USA	1.95	0.72	0.73	0.65	0.92	1.31	—	3.67	1.18	1.37
Canada	0.95	0.44	0.25	0.86	0.15	3.65	1.21	—	0.64	0.84
South Africa	1.78	1.28	0.73	2.30	0.85	0.78	0.93	0.38	—	0.52
Oceania	4.10	0.89	0.60	1.54	0.35	0.93	1.14	0.38	1.00	3.00
Total of advanced countries	0.75	1.12	1.08	1.13	1.08	1.08	1.00	1.29	1.27	1.21
Southeast Asia	3.43	0.52	0.46	0.67	0.29	1.19	1.51	0.33	0.45	1.42
Latin America	1.15	0.74	0.80	0.64	0.73	2.16	2.76	0.56	0.18	0.05
LDC Africa	0.70	1.49	1.80	1.25	0.67	0.52	0.64	0.22	1.45	0.21
Others	0.73	0.75	0.48	1.32	0.31	2.63	3.03	1.56	0.18	1.16
Subtotal	1.70	0.87	0.94	0.85	0.56	1.46	1.83	0.47	0.64	0.58
West Asia	3.83	1.09	1.14	1.05	0.90	0.42	0.45	0.31	1.27	1.42
LDC total	2.10	0.91	0.97	0.89	0.63	1.27	1.59	0.44	0.73	0.74
Communist bloc	0.63	0.45	0.34	0.45	1.02	0.07	0.07	0.07	—	0.11
East Europe	0.10	0.48	0.38	0.50	0.96	0.08	0.09	0.09	0	0.05
USSR	0.68	0.43	0.28	0.39	1.31	0.04	0.06	0.04	0	—
Mainland China	3.28	0.37	0.40	0.39	0.19	0.06	0.02	0.18	0	0.63

Source: Same as Footnote 1.

at a fairly higher tempo than the growth rates of world trade. To summarize, from the standpoint of commodity groups, the high growth rate of Japanese exports has been supported by the high growth rate of Classes 5 and 7 and the steady growth rates of Classes 6 and 8. The performance of exports by commodity groups and regional groups, and the outlook for 1980, are shown in Table VII.

Since the discussion of exports has been completed in the above, imports will be examined next. The import-saving trend in the Japanese economy will be the major topic in the following discussion.

D. *Import-Saving Trend*

The consolidation of surpluses in the current account in the Japanese economy

IV
WORLD TRADE BY REGIONS (1966)

(%)

Total of Advanced Countries	South-east Asia	Latin Ameri-ca	LDC Afri-ca	Others	Sub-Total	West Asia	LDC Total	Com-mu-nist Bloc	East Europe	USSR	Mainland China
0.75	3.84	0.94	1.50	0.71	2.20	1.36	2.11	0.56	0.10	0.58	2.96
1.15	0.51	0.71	1.28	0.71	0.75	1.08	0.80	0.45	0.51	0.35	0.51
1.18	0.41	0.69	1.35	0.57	0.72	0.96	0.75	0.35	0.42	0.18	0.55
1.13	0.71	0.67	1.20	1.21	0.85	1.36	0.92	0.42	0.49	0.29	0.45
1.02	0.30	0.96	0.75	0.07	0.58	0.76	0.61	1.60	1.46	2.18	0.27
1.04	1.31	2.24	0.60	1.21	1.40	0.96	1.36	0.18	0.10	0.23	0.38
0.96	1.63	2.73	0.78	1.36	1.72	1.20	1.67	0.06	0.08	0.03	—
1.27	0.31	0.71	0.10	0.86	0.41	0.16	0.39	0.53	0.12	0.82	1.64
1.14	0.24	0.10	1.58	0.07	1.06	0.08	0.94	0.01	—	—	—
1.15	1.23	0.16	0.20	3.21	0.83	0.64	0.81	0.41	0.15	0.30	2.05
1.09	0.99	1.12	1.10	0.93	1.04	1.04	1.05	0.38	0.35	0.32	0.68
0.87	3.53	0.22	0.80	0.36	1.69	1.04	1.61	0.70	0.35	1.04	1.38
1.08	0.11	1.96	0.10	4.93	1.05	0.20	0.93	0.69	0.44	0.93	1.33
1.18	0.33	0.12	1.68	0.14	0.56	0.68	0.58	0.63	0.55	0.70	0.88
1.21	0.29	0.76	0.50	5.00	0.85	0.80	0.75	0.01	—	—	—
1.05	1.23	0.88	0.75	2.29	1.10	0.56	1.04	0.64	0.41	0.85	1.14
1.10	0.93	0.29	0.98	0.64	0.73	2.92	1.01	0.20	0.17	0.17	0.37
1.06	1.19	0.76	0.80	2.00	1.03	1.00	0.96	0.56	0.37	0.73	1.00
0.35	0.81	0.69	0.78	—	0.70	0.64	0.70	5.54	6.01	5.59	2.95
0.34	0.31	0.33	0.60	—	0.36	0.60	0.39	6.24	4.64	9.89	2.18
0.33	0.57	1.15	0.88	—	0.76	0.56	0.74	5.42	9.00	—	5.00
0.47	4.43	0.69	1.48	—	2.29	1.12	2.17	2.27	1.75	3.74	—

seems to have been affected by import factors as well as export factors. The factors on the import side seem to be the import-saving trend in the Japanese economy. In order to show this, the Input-Output Tables of 1960 and 1965 can be used to show the changes during these five years in Japanese production and import structures which have been influenced by the former, as is shown in Figure 4. Providing the input structures of 1960 and 1965 with the final demands of 1965, the necessary amounts of production and imports for each sector are computed, thus allowing a comparison to be made.

A comparison of the two reveals that changes in the industrial structure were extremely great between 1960 and 1965. That is, the amount of production necessary for each sector to meet the same final demand has decreased in all sectors except the service sector. The decrease was small in the machinery and

TABLE V
ANNUAL GROWTH RATE OF TRADE BY REGIONS

(%)

	World	Japan	West Europe	EEC	EFTA	Others	North America	USA	Canada	South Africa	Oceania	Total of Advanced Countries
(A)	8.9	13.5	8.9	9.5	7.3	11.7	11.8	12.0	11.3	10.2	7.3	9.8
(B)	9.2	15.3	9.5	10.3	8.2	8.5	9.9	9.9	10.0	8.5	8.9	10.0

	Southeast Asia	Latin America	LDC Africa	Others	Sub-Total	West Asia	LDC Total	Communist Bloc	East Europe	USSR	Mainland China
(A)	6.9	5.9	4.2	6.1	6.3	10.5	6.8	7.0	7.7	5.9	10.1
(B)	7.3	5.8	7.1	5.4	6.7	8.8	7.0	8.0	7.2	9.0	9.1

Notes: 1. Average annual growth rate calculated with the averages for 1961–63 and 1966–68.
2. Average annual growth rates covering the average for 1966–68 and the forecasted growth rate for 1980.
Source: Same as Footnote 1.

metal products, chemistry, and construction and civil engineering sectors, while it decreased by as much as about 10 per cent in the primary products and foodstuffs, light industrial products, and energy sectors. In particular, a sharp decrease of 30 per cent is observed in the mineral raw materials and metals sector. The above changes reflect the rise in the weight of the service sector in Japanese industrial structure, the progress of heavy industry, and the growing degree of processing in the industrial sector.

These changes in the production structure have been accompanied by fairly great changes in the import structure. By sector, the machinery and metal products sector underwent very little change and the energy and light industrial products sectors saw a slight increase in the necessary amount of imports, while all other sectors showed a decrease.

The slight increase in the necessary amount of imports observed in the energy and light industrial products sectors reflects the fact that the conversion of energy sources into petroleum has been carried out rapidly during this period, so that any greater change than this seems likely to occur in the 1970s. The increase in the necessary amount of imports in the light industrial products sector was caused by increased imports of textiles and miscellaneous goods. This increase is expected to continue to grow due to the increasing labor shortage in Japan and the growth of demand for foreign consumer goods due to the development of internationalization of the economy.

The decrease in imports in all other sectors is mainly due to the decrease in raw materials. From 1960 to 1965, the substitution of chemical fibers for natural ones, of artificial rubber for natural rubber, and of synthetic detergent for soap were observed and rapid progress was recorded in the production of various

TABLE VI

AVERAGE ANNUAL GROWTH RATES OF JAPANESE AND WORLD TRADE BY COMMODITY GROUPS

(%)

Commodity Groups	Japan		World	
	1961–63 to 1966–68 (Average)	1966–80	1961–63 to 1966–68 (Average)	1966–80
0–9	16.8	15.0	8.5	9.2
0, 1	4.7	2.8	6.8	5.5
2, 4	7.8	10.9	3.9	3.9
3	10.8	5.8	7.1	7.6
5	25.1	17.3	11.4	11.5
7	24.1	18.5	11.1	12.4
6, 8	13.8	12.4	9.3	9.6

Source: Same as Footnote 1.

TABLE VII

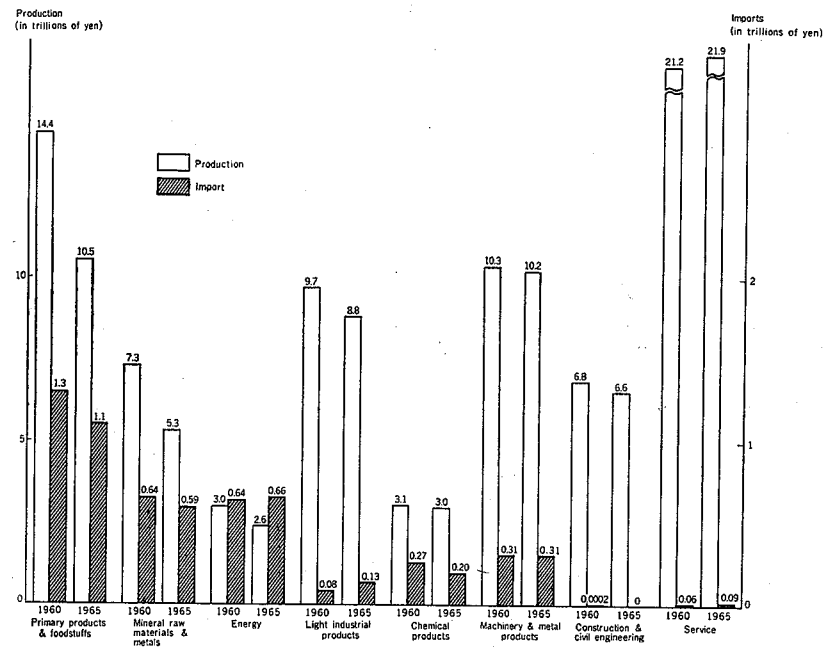
AMOUNTS OF JAPANESE EXPORTS BY REGIONS (OR COUNTRIES) AND COMMODITY GROUPS (1966 AND 1980 [FORECAST])

(Unit: million dollars)

	0, 1	2, 4	3	5	7	6, 8	0–9
World	385	255	32	670	3,310	5,070	9,780
	563	1,085	70	6,275	35,538	25,951	69,482
West Europe	130	55	2	95	470	520	1,300
	196	160	4	687	5,680	3,377	10,104
North America	146	54	3	79	878	2,090	3,265
	212	171	7	627	7,810	11,430	20,257
USA	135	51	3	73	820	1,910	3,010
	195	160	7	565	7,100	10,386	18,413
Canada	11	3	0	6	58	180	255
	17	11	0	62	710	1,044	1,844
South Africa	1	5	1	5	50	66	130
	2	38	2	112	572	374	1,100
Oceania	9	10	0	29	110	200	355
	17	54	0	512	2,095	1,039	3,717
Southeast Asia	71	77	24	275	950	1,230	2,630
	83	380	51	2,018	8,556	4,650	15,738
Latin America	3	8	1	26	190	240	465
	0	43	2	350	2,130	1,039	3,564
LDC Africa	6	5	0	7	375	200	315
	9	27	0	113	3,511	977	4,637
West Asia	6	8	0	6	96	220	335
	11	43	0	225	2,308	987	3,574
Other LDC	15	1	2	3	27	51	97
	22	6	4	62	36	260	390
Communist bloc	1	29	0	148	168	250	600
	11	163	0	1,569	2,840	1,818	6,401
East Europe	0.5	5	0	4	32	17	60
	2	67	0	53	722	302	1,146
USSR	0.5	12	0	24	88	88	215
	6	29	0	553	1,648	1,145	3,381
Mainland China	0	12	0	120	48	145	325
	3	67	0	963	470	371	1,874

Source: Same as Footnote 1.

Fig. 4. Amount of Production and Imports Necessary to Meet the 1965 Final Demand under the Input Structure of 1960 and 1965



Sources: *Input-Output Tables, 1960 and 1965.*
Note: The service sector does not include passenger fares and insurance.

plastics. Furthermore, the decrease in the consumption of raw materials per unit of production due to the rapid development of mass production was remarkable. All these factors have contributed to lowering the degree of dependence on imported raw materials.

The above discussion is based on calculations only for the five years, with the final demand structure fixed. In the actual economy, the final demand structure itself has been changed.

We have calculated the influence on imports of the change in the final demand structure. The final demand structure of 1965 is import-saving to the extent of about $200 million compared to that of 1960. In this calculation the magnitude of the final demand structure of 1960 is taken to be the absolute magnitude of the final demand, and the content of the 1960 and 1965 final demand structures is taken to be the content of the final demand structure. The input structure of 1960 is used in this calculation. If the 1965 input structure is used, it has already been confirmed that the above import-saving amount is larger.

The import-saving amount during the 1960 to 1965 period consists of the amount caused by the change in the input structure and that caused by the change in the structure of final demand. The total of the two amounts to $600–1,000 million, or an import-saving of 1.0 to 1.8 per cent per annum. For the sake of convenience, it may be said to be 1.5 per cent. The following example

will clarify this. Supposing that the input structure and the final demand structure of a year remains the same as those of the previous year, the gross import amount for a year will account for $10 billion. But, in reality, an import-saving change occurred, so that the gross amount of imports was reduced to $9.85 billion.[2] If this degree of accuracy is acceptable, the Japanese economy can realize an annual growth rate within limits of 1.5 per cent without inviting an increase in imports.

The above-mentioned favorable changes in Japanese exports and imports have enabled her to consolidate the surpluses in the balance of payments with a high economic growth rate, or, in other words, to raise her growth-competitive power.

II. STRENGTHENING OF GROWTH-COMPETITIVE POWER

In order to discuss the strengthening of the growth-competitive power of the Japanese economy, let us first clarify the theoretical standard adopted in this article for judging the performance of each country's economy.

Economic policies in the advanced countries aim at the raising of the growth rate, full employment, equilibrium in the balance of payments, and the stabilization of commodity prices.[3] Among these aims, there is a kind of trade-off relation such that the pursuit of one aim results in sacrifices in other aims. It is therefore necessary to evaluate a country's economic performance from the viewpoint of the extent to which these aims, in the context of trade-off relations, have been simultaneously realized. When a country succeeds in realizing these aims compatibly on a relatively high level, the country is said to be good in economic performance and strong in the competition.

Arranged in a four-quadrant graph, Figure 5 illustrates the aims of economic policies in trade-off relations. The horizontal axis of the first quadrant indicates the economic growth rate and the vertical axis, the ratio of current receipts to current payments. This quadrant may be called the "growth-competitive power quadrant." In the second quadrant, the horizontal axis indicates the rate of unemployment and the vertical axis, the ratio of current receipts to current payments. This quadrant may be termed the "quadrant for the rate of unemployment and the ratio of current receipts to current payments." The horizontal axis of the third quadrant shows the rate of unemployment and the vertical axis the rate of rise of wholesale price. This is the so-called "Philipps curve quadrant." The horizontal axis of the fourth quadrant shows the economic growth rate and

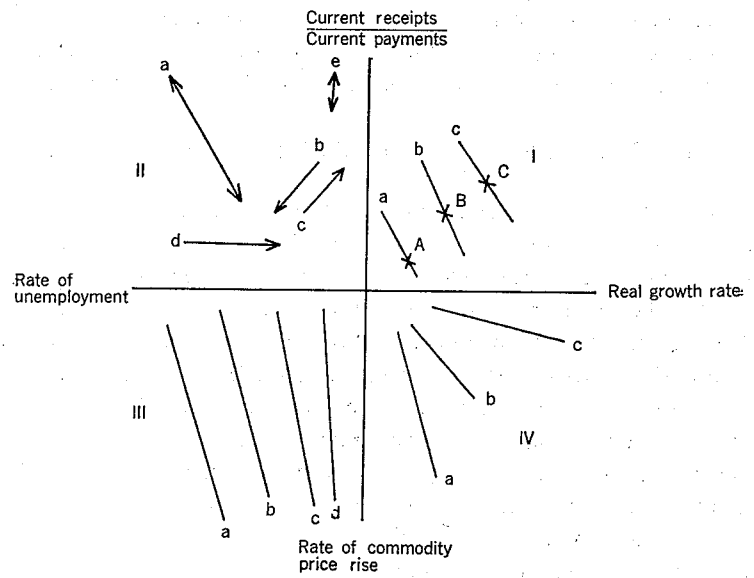
[2] The calculation here based on the Input-Output Tables is not free of the following defects: (1) Since the tables used are based on the evaluation at current prices, they necessarily cannot deal with the effects of price fluctuation; and (2) there are only two tables for 1960 and 1965, so that we cannot discuss fully the effects caused by the differences in the phases of the business cycles. Despite these defects, however, we cannot deny that there has been an import-saving trend.

[3] It is of course important to tackle such serious problems as public nuisances and the increasing social uneasiness caused by antagonism between races and generations, which will become intensified in the 1970s. We can take into consideration these problems in our discussion, i.e., public nuisances as a minus factor in economic growth and social uneasiness as a factor affecting such problems as employment, commodity price rises, etc.

the vertical axis, the rate of price rise. This is the "trade-off quadrant" in income policy.

For Japan, the United States, West Germany, France, and Italy, performance at an appropriate time is plotted in these four quadrants, as in Figure 6. Let us examine Figure 6 in relation to Figure 5.

Fig. 5.

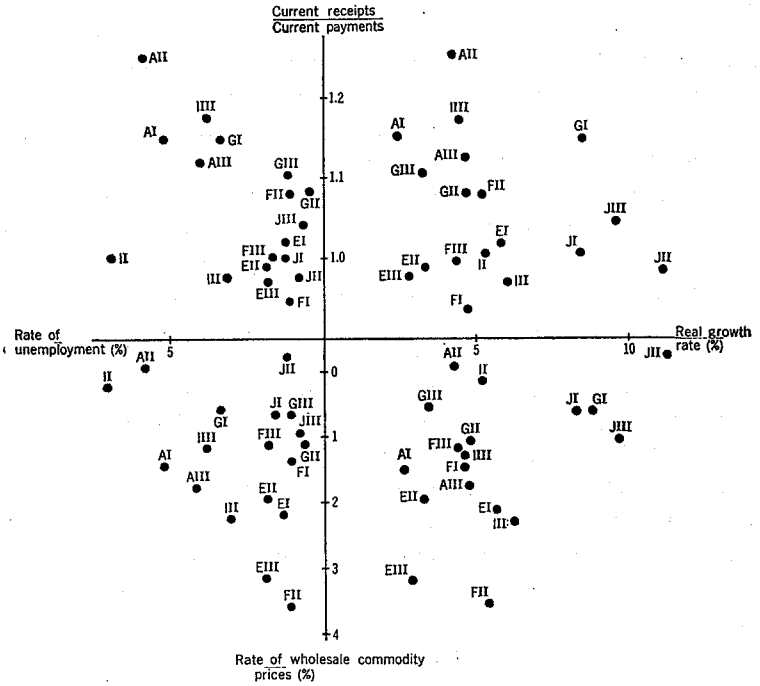


I: "Growth-competitive power quadrant"
II: "Quadrant for the rate of unemployment and the ratio of current receipts to current payments"
III: "Philipps curve quadrant"
IV: "Trade-off quadrant" in income policy

In the first quadrant, let *A* stand for the performance at a specific time in a country. When the country adopts a tight economic policy, the point will shift left-upwards; when the country adopts an expansion policy, the point will move right-downwards. In other words, the curve *a* can be drawn. Since the curve is the locus of points which are dependent on the policy of a country, it is in a sense the locus of points for the same relative competitive power, i.e., the so-called iso-competition curve. For another country, the iso-competition curve *b* may obtain. When we compare curve *a* with curve *b*, the latter shows a more favorable performance than the former and the latter is stronger than the former in international competitive power. Since curve *c* shows a more favorable performance than curve *b*, curve *c* is stronger than curve *b* in international competitive power.

On the basis of the above, let us examine the first quadrant of Figure 6. In this quadrant is plotted the performance of each country during three periods, as indicated in the note to the figure. If the iso-competition curves are drawn

Fig. 6. Trends in Competitive Power of Major Countries



Sources: Balance of Payments Statistics of each country; U.N., *Yearbook of National Account Statistics;* O.E.C.D., *Econamic Outlook* and *Manpower Statistics;* IMF-IFS; Economic Planning Agency, *Kokumin shotoku tōkei nempō.*

Notes: 1. Periods are as follows:

	I	II	III
USA (A), England (E), Germany (G), and Italy (I)	1955–60	1961–64	1965–68
France (F)	1954–58	1959–64	1963–68
Japan (J)	1955–58	1959–62	1963–68

2. Real growth rates are annual rates. The growth rate i is calculated with the following equation:

$$\sum_{t=1}^{n} At = A_0 \sum_{t=1}^{n} (1+i)^t$$

where A_0 stands for the average growth rate during the three years before the period concerned and the three years after it, and n for the number of years in the period concerned.

3. Regarding GNP in 1968, the values for Japan are the preliminary values prepared by the Economic Planning Agency by the QE method and those for the other countries are estimations from *Economic Outlook* by O.E.C.D.
4. Current payments and receipts in the latest years include some estimates.
5. The rates of commodity price rise are average annual rates, and the method of calculation is the same as 2 above.

in this quadrant, the fluctuation of competitive power of each country by period will be clear.

The first period of West Germany was the period immediately before the revaluation of the Mark in 1961, so the growth-competitive power was extremely high. (Therefore, the revaluation of the Mark was in the course of events.) After the revaluation of the Mark, she entered the second period, during which the growth-competitive power visibly decreased.

France witnessed rapid growth in growth-competitive power from the first to the second period. This was due to the devaluations in 1957 and 1958, the start of the de Gaulle administration in June 1958, the settlement of the Algerian problem, the stimulation of entrepreneurship by the establishment of EEC in 1958, etc. The growth-competitive power was again aggravated in the third period.

England saw a continuous decrease in growth-competitive power through the whole period since World War II. The figure suggests that the devaluation of 1967 was not as effective as was desired.

The improvement in the growth-competitive power of Italy in the third period is remarkable compared to the first and second periods.

The United States witnessed an improvement in growth-competitive power in the second period, which was the age of the new economics under the Kennedy administration. But the growth-competitive power decreased in the third period, during which the Vietnam War intensified.

Japanese growth-competitive power was extremely high through the whole period.

Here let us discuss the relations between the strengthening (or weakening) of growth-competitive power and changes in the exchange rate. The strengthening of growth-competitive power is a necessary but not sufficient condition for revaluation. Revaluation requires another condition: the performance of a country must be located fairly high on the iso-competition curve. Revaluation becomes necessary when, due to labor shortage or conservatism in economic policy, the rise in growth-competitive power cannot be used to raise the real economic growth rate but only to improve the ratio of current receipts to current payments. West Germany in the first period is a typical example of this. In the case of Japan, revaluation has not been necessary so far since she has directed the rise in growth-competitive power towards raising the actual economic growth rate. When the growth-competitive power is decreasing and the ratio of current receipts to current payments remains less than 1, devaluation becomes necessary. In this manner, the concept of growth-competitive power is a very useful tool for analyzing competitive power from the viewpoint of the foreign exchange rate adjustment.

Next let us examine the second quadrant. As is shown in Figure 5, the time-series relation shown by curve *a* seems to be normal. Curves *b* and *c*, which are the exact opposite of *a*, show unusual relations. Curve *b* indicates the worst condition, in which unemployment increases and the balance of payments is aggravated: this is similar to the case of England. Curve *c* indicates an excep-

tionally favorable condition, in which unemployment decreases and the ratio of current receipts to current payments improves: this is similar to the case of Japan. There is also the case of curve *d*, as was once the case in Italy, in which the decrease in unemployment appears to be unrelated to the ratio of current receipts to current payments. Finally, as was once the case in Germany, where such a buffer as dependence on foreign labor was utilized, there is the case of curve *e*, which is in contrast to curve *d*.

Observation of the second quadrant will contribute to the examination of the changes in the conditions for competition in each country.

Here it seems hardly necessary to explain in detail the Philipps curve quadrant. However, since the curve has not yet been examined from the viewpoint of international comparison, let us try to briefly examine the curves in Figure 5. Such relations as *a*, *b*, *c*, and *d* are possible in terms of the relation between the rate of unemployment and the rise in commodity price. It is clear that, from the viewpoint of international competitive power, *b* is superior to *a*, *c* to *b*, and *d* to *c*. An examination of Figure 6 with these relations in mind will reveal that Japan occupies a favorable position.

Finally, let us discuss the "trade-off quadrant." It is clear that *b* is more favorable than *a*, and *c* more than *b*. However, the distribution of the performance points in Figure 6 is not necessarily in conformity with the above statement. Nevertheless, if a fan shape covering the range of changes in performance is hypothesized and this fan shape is observed, the above-mentioned relations can be assumed. From the above, it turns out that the Japanese performance has been very favorable in various aspects.

III. JAPAN'S CHOICE IN INTERNATIONAL ECONOMIC POLICIES

Along with the strengthening of the growth-competitive power of Japan, there have occurred remarkable changes in Japanese international economic policies. In other words, the time has come in which Japan can and must carry out completely the various liberalization measures which she has been trying to realize since the beginning of the 1960s.

A. *The Future Direction of Liberalization Measures*

The liberalization measures are composed of trade liberalization, capital liberalization, and the decontrol of foreign exchange. Japan has been actively engaged in the liberalization of the former two in the 1960s since the demand for it has been strong from overseas. On the basis of advancement in these fields, Japan is due to deal on a full scale with the decontrol of foreign exchange in the 1970s.

Trade liberalization started on a full scale with the announcement of the "Outline of the Program for Liberalizing Trade and Foreign Exchange" in June 1960, and was energetically carried out until 1964. In June 1960, the percentage of liberalization was 41 per cent, and thereafter remarkable progress was made: 62 per cent in April 1961; 73 per cent in April 1962 (with 466 items on the

negative list);[4] 89 per cent in April 1963 (with 197 items on the negative list); and 93 per cent in April 1964 (with 136 items on the negative list). In April 1964, Japan became an Article 8 country of the IMF. In other words, Japan lagged three years behind the major Western countries (France, West Germany, Italy, Benelux, England, Sweden, etc.) in the completion of liberalization to the extent which these countries had realized.

In 1969, Japan's efforts to liberalize trade became active again. In 1969, the demands for Japanese trade liberalization became strong again because the surpluses in her balance of trade had become clear, while the U.S. balance of payments had worsened. (In October 1968, there were 121 items on the negative list, which were decreased to 118 in October 1969. It is therefore noted that Japan liberalized few lines on the negative list during the period.)

On October 17, 1969, the Japanese Government decided to decrease the number of non-liberalized items to 60 by the end of 1971. Subsequently, the schedule for liberalization has become more clear with the announcement that the non-liberalized items would be reduced to less than 80 in 1970 and to less than 60 in 1971. (Moreover, it has recently been announced that efforts would be made to reduce the number of non-liberalized items to less than 40 by the end of September 1971.)

As of June 1970, the number of items on the negative list plus the number of Japanese export items which are discriminatively restricted in major European countries are as follows: 70 in France; 61 in Italy; 39 in Benelux; and 38 in West Germany. Therefore, if Japan reduces the number to less than 60, she would reach the present level of the West. The sixty Japanese lines whose liberalization period is still not announced are composed of 40 items of agricultural products and 20 items of manufactured goods (BTN 25 and below). The ratio of agricultural products to manufactured goods which have not so far been liberalized is 38 to 32 in France; 12 to 49 in Italy; 8 to 31 in Benelux; and 18 to 20 in West Germany. As far as the number of manufactured goods is concerned, Japan is equal to West Germany with 20 and far ahead of Italy with 49. Agricultural products will therefore hold the key in quantitative terms to Japanese liberalization.

Next let us discuss capital liberalization. It was in 1964, when Japan joined OECD and when it became necessary for Japan to meet the obligations prescribed by the agreement for liberalization of capital movement, that Japan started to struggle with capital liberalization.

In the first round of liberalization of direct foreign investment in Japan enforced in July 1967, 33 businesses in the Class 1 category (50 per cent foreign capital and 50 per cent Japanese capital) and 17 Class 2 businesses (100 per cent foreign investment) were liberalized. The second round of liberalization was enforced on March 1, 1969, for 135 businesses in the Class 1 category and 20 in the Class 2 category. Through the first and second rounds of liberalization, the businesses liberalized amount to 160 in the Class 1 category and 44 in the

[4] The negative list method has been employed since the liberalization of April 1962, and non-liberalized items have been revealed.

Class 2 category, totalling 204. The third round of liberalization is expected to be enforced in September 1970, for about 300 businesses. (On October 1, the government has decided the third round liberalization, and as the result of this decision the number of the business categories in the Class 1 liberalization reached 447 and the number of the business categories in the Class 2 liberalization reached 77.) The series of liberalization programs will be completed with the fourth round liberalization, which is scheduled to be enforced in the fall of 1971. Then, a negative list of unliberalized businesses will be drawn up.

In regard to the liberalization of direct Japanese investment overseas, it has been the case since October 1969, that investemnts of up to $200,000 are automatically approved by the Bank of Japan and investments of up to $300,000 are placed under examination for approval only by the Bank of Japan. Efforts are being made to liberalize investments of up to $1 million in the near future. (Japanese government has liberalized on October 1, 1970 just up to $1 million of her own direct investment abroad.)

The liberalization of capital is of complex meanings. Direct foreign investment in Japan will be necessary for Japan to adapt her economy to the international economy, but it acts as a plus factor in the balance of payments. On the other hand, Japanese investment overseas is a minus factor in the balance of payments, but changes in the Japanese balance of payments structure are making it possible to increase overseas investments. Thus overseas investment should become increasingly important.

The decontrol of foreign exchange will be carried out in three directions. First is the lengthening of the term of settlement of foreign exchange. According to the present standard settlement provision, the standard term for settlement is less than six months in the case of exports and four months in the case of imports. These terms may be lengthened as a liberalization measure. There is the opinion that the terms should be lengthened to five years.

Second is the direction towards decentralization of control. That is, increasing the permissible amount of foreign exchange holdings of business firms and manufacturers is being discussed.

Third is the direction towards yen transactions. It is necessary to increase the amount of yen exchange and to make the yen a means of international settlement. In the future international monetary system the current dollar standard will be replaced by a system in which a number of currencies coexist as key currencies. These currencies may be composed of dollars, European currencies, and yen.

B. *Reduce Tariffs or Form a Free Trade Area?*

Another Kennedy Round may be expected for the actual expansion of world trade. The emergence in 1973 of the enlarged EEC including England (a New European Union) will be a chance for the reduction of tariffs. However, the level of tariffs of major countries after the Kennedy Round remains around 10 per cent. To reduce the level by 50 per cent to 5 per cent does not seem very attractive. A North Atlantic and Pacific Free Trade Area (NAPFTA) should therefore be organized with Japan, the United States, and the New European

Union as nuclei and including Canada, Australia, and New Zealand. Japan is eager to make contributions to the maintenance of world peace and the sound development of the world economy by pursuing such an active economic policy. As is suggested by the EEC analysis, the emergence of such a free trade area will increase world trade by 1.5 per cent per annum.

A NAPFTA should give full tariff preferences and increased aid to developing countries. A NAPFTA will undoubtedly mitigate in the medium and long run the tension between the East and West. On the basis of the strengthening of her growth-competitive power, an increase in the international economic activity of Japan is becoming essential for the sound development of the world economy.