

Structure of Japan's Export Trade and its Problems

SHIGERU FUJII*

SECTION I: INTRODUCTION—CHARACTERISTICS OF JAPAN'S ECONOMY

The fact that Japan started capitalization and industrialization much later than advanced countries has imparted considerable peculiarities to her economy.

Japan has had to establish her manufacturing industries amidst competition from advanced countries. This was the case when she first succeeded in establishing her light industries as export industries; so it has been in recent times with the exportation of chemicals and machinery, and will be in the future with the exportation of manufactured goods newly developed.

On the other hand, there are many young rising nations which are speeding up their industrialization. Some of them have already succeeded in establishing their light industries as export industries, replacing the imports from Japan in their domestic markets and competing with Japanese goods in world markets.

Situated midway between the advanced and the young rising countries, Japan is sometimes called a "halfway advanced" country, and this characteristic is reflected in the structure of her production and export trade, as will be examined in this paper.

Moreover, owing to the shortness of the time of Japan's economic development, there are many sectors that remain yet to be sufficiently modernized. There still lingers precapitalist agriculture at the back of highly capitalized manufacturing industries. And even in the manufacturing industries, there remains some part not yet modernized in technique, management, organization and so on. Most of the so-called small- and medium-scale manufacturing industries have made remarkable improvements in technique and productivity, keeping pace with the development of Japan's economy as a whole. Nevertheless, there are conspicuous differences or gaps in productivity between the advanced sector and the less advanced.

Table 1 illustrates this by showing the differences between agricultural and non-agricultural productivities.

*The author is Professor in the Department of Economics, Kobe University, Kobe, Japan.

TABLE 1

NET PRODUCTION PER EMPLOYED PERSON IN AGRICULTURE AND
IN NON-AGRICULTURE, 1952

Country	Agriculture U.S.\$ (A)	Non-Agriculture U.S.\$ (B)	Ratio % (A/B)	Net production per 1,000 acres of cultivated land (U.S.\$)
United Kingdom	2,045	1,665	122.8	318
Italy	412	733	56.2	222
United States	2,766	5,112	54.1	105
Germany (West)	550	1,216	45.2	323
Philippines	31	79	39.2	25
India	176	458	38.4	84
Japan	164	467	35.1	582
Thailand	152	641	23.7	245

Source: N. Kayo, *Fundamental Statistics of Japan's Agriculture* (in Japanese), (Tokyo: Norin Suisangyo Seisansei Kojyo Kaigi, 1958), p. 6.

The difference in productivity between the two sectors is very wide in Japan—much wider than in European and American countries and wider than in some Asian countries. This might be mainly because of the shortage of land compared with the population engaged in agriculture. Despite highly intensive cultivation and very large net production per acre of land, per capita productivity of agriculture is far smaller than that of the non-agricultural sector. This is why there is continuous pressure brought by agriculture to bear upon the non-agricultural sector to keep its wages down.

Table 2 shows the differences in wages and productivity of manufacturing industries by scale of enterprise.

TABLE 2

DIFFERENCES IN WAGES AND PRODUCTIVITY OF MANUFACTURING INDUSTRIES BY SCALE OF ENTERPRISE

Scale of enterprise (No. of employees)	Wages			Value added per employed person		
	Japan ^b (1955)	U.K. ^a (1949)	U.S. ^a (1947)	Japan ^b (1955)	U.K. ^a (1949)	U.S. ^a (1947)
1-3 persons (1-4)	—	—	65*	—	—	108*
4-9 (5-9)	40	—	73*	28	—	90*
10-19 (11-24)	43	84*	79	33	90*	89
20-49 (25-49)	47	83*	84	40	92*	93
50-99	53	84	86	52	94	91
100-199 (100-249)	59	85	86*	63	96	102*
200-499 (250-499)	69	86	88*	81	97	104*
500-999	79	89	90	95	98	105
Over 1,000	100	100	100	100	100	100

Source: Economic Planning Agency, *White Paper on Economy 1958*, (in Japanese), (Tokyo: Printing Bureau, Ministry of Finance, 1958), p. 146.

- Notes: *Figures correspond to the scale of enterprise shown in the brackets.
a. Calculated from the figures of censuses on manufacturing industries of the respective countries.
b. From the data of the Japan Productivity Center.

In the case of Japan, differences by scale of enterprise are very large both in wages and productivity, especially in the latter. There are indeed some differences in wages in such advanced countries as the United Kingdom and the United States, but they are much smaller than in Japan, and there are hardly any differences in productivity in the United Kingdom and the United States.

The main reason why such large differences are seen in Japan's manufacturing industries is that the smaller the scale of operation, the less well-equipped is the firm with capital, and therefore, the more primitive the technique.

The dual structure of Japan's manufacturing industries lies not only in the magnitude of the differences between the two sectors, but also in the great number and importance in production as well as in export trade of the small- and medium-scale manufactures.

The vast number as well as the importance of the small- and medium-scale firms in Japan's economy originates from the fundamental imbalance between population and natural resources. In order to get out of this imbalance and to elevate the standard of living, Japan was forced to industrialize her economy and extend her foreign trade. Nevertheless, even at the present time when Japan has succeeded to a considerable extent in industrialization and in extending her foreign trade, the pressure of overpopulation is still at work, thereby making the labour-intensive way of production advantageous. This is but another expression of the relative scarcity of accumulated capital, and explains why the small- and medium-scale manufacturers are playing so important a role in production and export trade.

Table 3 shows how much Japan's production and exportation of manufactured goods depend on the small- and medium-scale firms.

TABLE 3

PRODUCTION AND EXPORT CONTRIBUTIONS OF SMALL- AND
MEDIUM-SCALE MANUFACTURES* (1957)

	Production (percentage share)	Export (percentage share)
Total (manufactured goods)	51.8	55.4
Foodstuffs	79.3	63.8
Fabrics and clothings	57.7	79.3
Wood manufactures	95.5	72.2
Pulp, paper and printing	52.6	42.9
Chemicals	34.4	35.5
Rubber and leather manufactures	43.1	33.3
Ceramics	54.0	46.6
Metals	38.6	34.1
Machinery	37.6	26.3
Others	87.9	92.9

Source: K. S. Kai (ed.), *Doubling National Income Plan* (in Japanese), (Tokyo: Printing Bureau, Ministry of Finance, 1960), p. 202.

*Less than 300 employees

It is quite natural that the percentage contributions of the small- and medium-scale firms should be larger in the light industries than in the heavy industries, since the former can be more labour-intensive than the latter. At the same time, we must pay attention to the fact that the percentage shares contributed by the small- and medium-scale firms are not trifling even in the heavy industries which are, as a rule, capital-intensive and require a high level of technique.

The reverse side of the importance of the small- and medium-scale firms is the weakness of the large-scale ones in production and export trade. This is especially true of the heavy industries, which require more capital and higher technique and are subject to economies of large scale. It is in this sector that Japan cannot yet compare with advanced countries, and it is this sector that Japan is now eagerly endeavouring to establish as export industries.

In the present paper, we shall explore how these peculiarities are reflected in the structures of Japan's production and export trade, with the view to discovering problems involved.

SECTION II: DEVELOPMENT OF INDUSTRIES AND EXPORTS OF JAPAN

Foreign trade has had much to do with the economic development of Japan. Until the Second World War, foreign trade and production increased in a close relationship with each other, the development of trade playing a leading role in increasing production. In the earlier stage of industrialization, such natural products as raw silk, tea and others took the largest share in the export trade. Meanwhile, light industries (*e.g.*, the cotton textile industry) with imported raw materials and modernized technique were growing up with an increasing share in the export trade. Following behind the rising exports of light industries came heavy and chemical industries which had also been expanding until, by the Second World War, some of their products had won considerable shares in production and trade (18.2 per cent of exports and 52.7 per cent of production of manufactured goods in 1935).

Immediately after the Second War, Japan's economy was thrown into confusion and beset with severe difficulties, but by and by it got out of the chaos and won its way to recovery. Manufacturing industries were able to recover the pre-War level of production in 1951, and the level of consumption exceeded the pre-War level in 1953. Foreign trade, especially export trade, however, lagged far behind in recovering the pre-War level—imports by 1956, but exports not until 1959.

Exports were so slow in recovery that it is worth discussing how it was possible for Japan's production to recover rapidly with such low levels of

imports and exports. The reasons might be as follows: *First*, until 1952 there were imports supported by United States funds which helped to fill up the adverse balance of trade. Special procurement by the United States army from 1950 had the same effect on Japan's international payments as normal exports. *Secondly*, the composition of the industries changed after the War. Such industries as cotton and wool spinning and weaving, which depended entirely on imports of raw materials, decreased their shares, and heavy and chemical industries, which depended less on imports, increased their shares in production. Levelling-up of quality and manufacturing process also counted for much. A production increase was possible without a corresponding increase in imports. *Thirdly*, there was an erosion of stocks and wealth. Domestic natural resources as well as capital equipment were exploited to the full without sufficient depreciation. Post-War inflation accelerated this process of deterioration. Actually, until 1950, the accumulated capital was, for the most part, devoted to the replenishment of past losses and damage; and, it was not until 1953 that Japan could afford to invest positively for the modernization of equipment.¹

The scene changed in 1956 when the investment boom burst upon Japan. This boom was induced by export expansion in 1955. Japan's export trade began to increase at the end of 1954, when the American economy recovered from a recession. The investment for modernization in the preceding years had much to do with the expansion of exports, as modernization and rationalization increased the competitive power of Japanese manufactured goods. The sudden expansion of exports in 1955 induced an explosive investment in 1956. New investment in equipment in the private sector increased from 880 billion yen in 1955 to 1,280 billion yen in 1956 and has kept on increasing ever since.

In the light of these data, we might say that Japan's economy passed through a turning point from recovery to new development in or around 1956. Since then, industrialization at the new stage has been speeded up; namely, industrialization in which the chemical and heavy industries dominate. New techniques of production were introduced and new investment for modernization was made in almost all industries and firms. The small- and medium-scale industries were no exception to this rule. The heavy and chemical industries led this innovation investment and the government supported their expansion by a series of economic plans in which much greater importance was laid on these industries than on the light industries.

¹ S. Fujii, *Japan's Trade and Her Level of Living*, (Tokyo: The Science Council of Japan, Division of Economics and Commerce: Economic Series No. 6, 1955). (Originally Data Paper submitted to the 20th Conference of the Institute of Pacific Relations held at Kyoto, Japan in 1954).

TABLE 4
RECOVERY AND DEVELOPMENT OF JAPAN'S ECONOMY
AFTER THE WAR

Period	Production (Mfg.) (1)	Foreign trade quantum (2)		Real family expenditure (3)	Private investment (4) (billion yen)
		Export (1934-36=100)	Import		
1950	71.4	32.1	37.2		
1951	100.8	35.8	55.3		
1952	108.6	38.0	60.9	94.8	
1953	134.5	41.2	82.7	105.7	
1954	147.6	54.9	85.7	111.0	
1955	159.7	71.6	90.1	115.1	880.6
1956	197.3	85.6	114.4	118.4	1,280.9
1957	233.9	95.3	142.6	125.0	1,686.9
1958	234.8	98.7	117.3	130.2	1,794.7
1959	295.8	117.2	148.0	134.3	2,146.6
1960	376.4	133.4	186.4	143.1	3,024.7

Sources: i) For Columns 1, 2, and 3:

Economic Planning Agency, *Japanese Economic Indicators*, (Tokyo: Tokei Kenkyukai, July 1961), p. 5.

ii) For Column 4 :

Economic Planning Agency, *White Paper on Economy, 1961*, (in Japanese), (Tokyo: Printing Bureau, Ministry of Finance, 1961), p. 514.

Thus, the productive capacity as well as the per capita productivity of heavy and chemical industries went up and new commodities were developed. Corresponding to these increases in capacity and productivity, the export of chemicals and heavy industrial goods registered a sharp increase.

Table 5 shows the contributions of chemicals and heavy industrial goods to the increase of exports in recent years.

TABLE 5
RATES OF CONTRIBUTION TO THE INCREASE IN EXPORTS

	1953—56	1956—60
All commodities	100.0	100.0
Chemicals and heavy industrial goods	42.8	53.5
Chemicals	{ 4.5	{ 7.1
Metals	{ 9.5	{ 9.1
Metal manufactures	{ 3.0	{ 5.2
Machinery	{ 25.8	{ 32.2
Textiles	32.7	19.9
Others	24.5	26.6

Source: *White Paper on Economy, 1961, op. cit.*, pp. 522-23.

In this connection, it might be interesting to note that such newly developed commodities as transistor radios and nylon accounted much for the increase of export trade, as is shown in Table 6.

TABLE 6
EXPORT OF NEW MANUFACTURES
(in '000' U.S. \$)

	1953	1956	1960
Durable consumer goods (machines)	201	5,323	174,332
Synthetic fibres	—	4,345	43,299
Synthetic resins	271	2,658	28,130
Motor cars	30	1,491	22,913
Motor cycles	16	205	8,050
Oil chemical manufactures	63	73	2,032
Metals	—	5,076	40,060
Others	8,161	18,013	56,753
TOTAL	8,742	37,184	375,569

Source: *White Paper on Economy, 1961, op. cit.*, p. 313.

The reasons why Japan was able to increase the export of chemicals and heavy industrial goods to such a large extent are as follows:

First, as was mentioned above, productive capacity and productivity have shown a great increase in late years. This was true to some extent of all industries, but there was more room for innovation and economies of large scale in the heavy and chemical industries than in the light industries. There were many more newly developed commodities in the former than in the

latter. The commodities listed as new manufactures in Table 6 are all chemicals or heavy industrial goods.

Secondly, there was more room for marketing in the former than in the latter. There were remarkable changes in the pattern of consumption in the domestic market as well as in overseas markets. New types of durable consumers' goods were introduced into daily life. High rates of growth in every country in recent years had much to do with the demand for producers' goods as well as consumers' goods from Japan. In particular, economic development in Asian countries increased the demand for producers' goods.

Thus, both supply conditions and demand conditions favoured the heavy and chemical industries, and these two sets of conditions had an accelerating effect upon each other. But there still remain considerable gaps between production and export of chemicals and heavy industrial goods. Let us now turn to these gaps.

SECTION III: GAPS BETWEEN THE STRUCTURES OF PRODUCTION AND EXPORT

Table 7 shows the structure of both export and production of manufactured goods. As was observed in the preceding section, the heavy and chemical industries had grown to a considerable extent by the time the Second World War broke out. Their percentage share was 52.7 per cent in 1935, even larger than those in 1950 and 1955. We must, however, take into consideration the fact that for several years before the outbreak of the War, the heavy and chemical industries were encouraged at the sacrifice of the light industries in order to prepare for War. Although, they had remarkable shares in production before the War, they were mostly for the domestic market and were not able to compete successfully in export markets. Their percentage share of total exports was only 18.2 per cent in 1935. After the War, their percentage share in exports soared until it reached 47.4 per cent in 1959. The gap between the shares in exports and in production was reduced to a large extent.

But still there remains a considerable gap between the two percentage shares. This gap will look even larger when compared with those in advanced countries like the United States, the United Kingdom and Germany, where the percentage shares in exports are much larger than those in production. In particular, the percentage shares which machinery occupies in exports are enormous in the advanced countries. As a result of its increase in export capacity, Japanese machinery has rapidly increased its percentage share in exports, which, however, is only half as large as those in advanced countries. The same holds true, though in a smaller degree, of chemicals and metals.

TABLE 7
STRUCTURES OF EXPORT AND PRODUCTION
(manufactured goods*)

	Japan				U.S.	U.K.	Germany
	1935	1950	1955	1959	1950	1950	1959
A. Shares in export:							
Manufactured goods	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Chemicals and heavy industrial goods	18.2	32.8	42.1	47.4	81.3	73.6	80.2
Chemicals	4.1	2.1	5.2	5.4	10.7	9.1	12.7
Metals	7.3	20.2	21.5	13.0	14.0	17.6	18.2
Machinery	6.7	10.5	15.4	28.9	56.6	46.9	49.3
Light industrial goods	81.9	67.2	57.8	52.6	18.7	26.4	19.8
B. Shares in production:							
Manufactured Goods	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Chemicals and heavy industrial goods	52.7	50.0	51.6	63.5	58.3	66.2	65.0
Chemicals	20.0	15.1	13.6	12.8	8.4	11.4	11.0
Metals	19.3	18.7	21.0	21.9	18.2	19.8	23.2
Machinery	13.5	16.2	18.0	28.9	31.7	35.0	30.8
Light industrial goods	47.3	50.0	48.4	36.5	41.7	33.8	35.0

*Not including foodstuffs

Source: *White Paper on Economy, 1961, op. cit.*, p. 309

The reasons why Japan's exports of chemicals and heavy industrial goods have smaller shares than her production are manifold. Here, it will suffice to mention that they have not yet, as a whole, established sufficient competitive power in export markets. For example, whereas there are some machines which have sufficient export competitive power, there are others for which Japan depends much on imports as is shown in Table 8.

TABLE 8
EXPORT RATIOS AND IMPORT RATIOS OF VARIOUS MACHINES
(import ratios in brackets)

	1955	1957	1959	1960
Sewing machines	98.4	82.8	72.9	60.3
Radio receivers	2.7	16.2	66.6	71.4
Bicycles	13.5	16.5	8.0	18.6
Optical instruments	57.2	44.2	52.6	65.3
Power-generating machines	8.4(22.1)	6.3(16.5)	4.6(18.4)	6.8 (9.1)
Machine tools	19.4(52.3)	4.7(44.7)	2.0(43.0)	3.6(43.6)
Metal-working machines	2.5(18.8)	3.2(16.7)	1.9(33.3)	2.8(21.1)
Ships	31.0	27.6	17.0	12.8
Railway vehicles	..	18.7	11.4	14.9
Motor cars	2.4 (3.1)	2.9 (1.6)	4.6 (1.0)	8.3 (3.5)
Total machinery*	10.0 (5.4)	11.1 (5.4)	10.0 (4.5)	8.2(3.6)

Source: Ministry of International Trade and Industry, *White Paper on Foreign Trade, 1962*, (Tokyo : Tsushyo Sangyo Chosakai, 1961), pp. 388-89.

Notes: Export ratio=amount of export/amount of production

Import ratio=amount of import/(amount of production+amount of import)

*In luding other machines

Generally speaking, there are two categories of machines. Under the first category come such light machines as sewing machines, radio receivers, bicycles, cameras and other optical instruments. Most of these machines are sold abroad in larger amounts than in the domestic market. The second category contains such heavy machines as power-generating machines, metal-working machines and machine tools. More of these are imported than exported. Such transport equipment as ships and railway stock has competitive power abroad, while motor cars are so far only beginning to enter export markets.

The essential point is that Japan has not yet established a machine-tool industry on firm grounds. It is true that these machines are making advances year after year, and the government is also encouraging further industrialization in favour of the heavy and chemical industries, but it will take a long time before they can be expected to be comparable with those in the more advanced countries. We shall give additional reasons in Section V.

Next we shall turn to the structure of export markets and consider how these characteristics are reflected in the composition of goods exported to various markets.

SECTION IV: STRUCTURE OF EXPORT MARKETS

There is a remarkable contrast in the composition of export goods according to export markets. In general, chemicals and heavy industrial goods are exported to a relatively larger extent to the non-industrial countries, while the manufactures of the light industries, relatively speaking, are sent more to the industrial countries, as is shown in Table 9.

TABLE 9
COMPOSITION OF EXPORTS BY MARKETS AND COMMODITIES, 1960

	Export to industrial countries (%)	Export to non-industrial countries (%)
Total	41.9	58.1
Foodstuffs, raw materials and fuels	6.1	3.4
Manufactured goods	35.8	54.7
Chemicals and heavy industrial goods	14.1	29.2
Metals	{ 4.6	{ 9.3
Chemicals	{ 1.1	{ 3.1
Machinery	{ 8.5	{ 16.8
Light industrial goods	21.7	25.5
Textiles	{ 10.8	{ 19.7
Non-metallic mineral manufactures	{ 1.7	{ 1.8
Others	{ 9.2	{ 4.6

Source: *White Paper on Foreign Trade, 1961, op. cit.*, p. 68.

Note: Industrial countries=U.S., Canada and European countries (including East European countries)

Non-industrial countries=all others.

Raw silk is included in textiles.

Japan exports more to the non-industrial than to the industrial countries (58.1 per cent versus 41.9 per cent), her exports consisting for the most part of manufactured goods (90.5 per cent). With regard to the export of manufactured goods, dependency on the non-industrial countries is much higher. The export of chemicals and heavy industrial goods to the non-industrial countries is twice as large as that to the industrial countries, whereas the export of light industrial goods to the non-industrial countries only slightly larger than that to the industrial countries (21.7 per cent versus 25.5 per cent). Among light industrial goods, sundry goods are exported more to the industrial than to the non-industrial countries.

From these rather general observations, we may say that Japan depends more on the non-industrial countries in her export of chemicals and heavy industrial goods, and that greater relative importance attaches to the industrial countries in the export of light industrial goods. The reason for this is clear enough. Japan, as a country of halfway advancement, has a comparative advantage in the light industries compared with advanced countries and a comparative advantage in the chemical and heavy industries compared with developing countries.

This remark applies to machinery as well. Light machines are exported for the most part to advanced countries (mostly to the United States), and heavy machines are mainly destined for developing countries. This means that Japan has a comparative advantage in light machines even over advanced countries, and a comparative disadvantage in heavy machines as against the same countries.

The comparative advantages and disadvantages are reflected in the absolute differences of costs and prices. Tables 10 and 11 are some examples of these advantages and disadvantages. Table 10 reveals that India and Pakistan have much stronger competitive power than Japan in cotton yarn.

TABLE 10
COST OF PRODUCTION OF COTTON YARN, 1953
(in dollars per 400 lb. bale of 20 count yarn)

	Raw cotton	Processing cost	Total
Japan	170 (100.0)	30 (100.0)	200 (100.0)
India	103 (60.0)	33 (110.0)	136 (68.0)
Pakistan	118 (69.4)	60 (200.0)	178 (93.5)

Source: All-Japan Cotton Spinners' Association, *Monthly Report of Japanese Cotton Spinning Industry*, No. 100, April 1955, p. 17. (Cited in U.N.: *Economic Survey of Asia and the Far East*, 1955, p. 25).

Note: Original figures in local currencies were converted into dollars at official rates.

TABLE 11

JAPAN'S PRICES AS AGAINST FOREIGN PRICES

(Foreign Price=100)

	Textiles			Steel		Ammonium Sulphate	
	Cotton yarn (20S) U.S. market price	Rayon yarn (120D) Italy market price	Staple fibre yarn (30S) U.K. market price	Steel bar (19m.m.) Belgium quotation	Thick plate (12m.m.) German quotation	Thin sheet (1.6m.m.) U.K. quotation	German Export price
March 1957	81.3	82.3	54.4	119.9	129.4	157.7	131.6
March 1958	76.3	69.5	43.2	121.7	118.6	133.1	118.9
March 1959	73.5	72.0	64.3	118.8	103.1	100.9	106.9
March 1960	68.3	73.8	63.9	116.0	117.0	106.0	121.4
March 1961	69.5	69.3	59.2	108.0	100.2	102.3	102.8.

Source : Figures are from the Bank of Japan.

Table 11 discloses that Japan has absolute price advantages in textiles and absolute disadvantages in chemicals and heavy industrial goods as compared with advanced countries.

Absolute disadvantages in prices of steel and ammonium sulphate are much smaller in 1961 than in 1957 and 1958, reflecting the effective results of improvements of production in these years. And yet there remain some disadvantages, which are sure to count much in competing with these major supplying countries in world markets.

The reason why Japan has a comparative advantage and, therefore, competitive power in exporting light industrial goods and light machines is that they require relatively more labour in their production and are, therefore, better suited to Japan, where labour is relatively more abundant than capital. And these labour-intensive goods offer more opportunity to the small- and medium-scale firms, which are playing an important role in exporting to advanced countries. Table 12 shows the importance of the small- and medium-scale firms in exporting to the United States.

TABLE 12
EXPORT DEPENDENCY ON U.S. AND THE PERCENTAGE SHARE OF
SMALL- AND MEDIUM-SCALE FIRMS *IN PRODUCTION

Export item	Export dependency on U.S. (1960)	Percentage share of small- and medium-scale firms in produc- tion (1958)
Fabrics	13.7	85.8
Clothings	53.0	85.6
Ceramics	55.8	59.0
Nails	63.1	93.6
Hand tools	56.1	82.3
Table and kitchen knives, forks and spoons ¹	53.6	61.0
Sewing machines	41.0	43.9
Bicycles	21.9	78.4
Optical instruments other than cameras	34.5	88.3
Jewellery worn on person	62.0	88.4
Toys	60.3	91.0
Sports goods	67.6	
Buttons ¹	21.5	83.4

Source : *White Paper on Foreign Trade, 1961, op. cit.*, p. 349.

¹ less than 100 employees (amounting to 100 per cent when "less than 300 employees" is taken into account).

*less than 200 employees.

In short, Japan's export trade is composed of two types of markets with regard to manufactured goods. Hence arise two types of problems about Japan's export trade. One is the problem of excessive competition among Japanese exporters as well as manufacturers of export goods, and the other is the competitive power of Japanese exports against exports from advanced countries. Both problems are common to all markets and to all manufactures exported, but the former is more concerned with exportation to advanced countries, especially to the United States, and the latter more particularly involves chemicals and heavy industrial goods exported to rising countries.

SECTION V: TWO TYPES OF PROBLEMS

Excessive Competition Among Japanese Exporters

There was a persistent tendency towards excessive competition among Japanese exporters before the Second World War. This tendency originates from the structural peculiarity of Japan's economy, that is, the imbalance

between population and natural resources. In order to maintain and raise the standard of living of this relatively excessive population with a limited supply of natural resources, Japan had to increase her productivity by industrialization and supplement the supply of raw materials and the markets for her products by increasing her import and export trade. As was observed in Section II, Japan was fairly successful in developing her economy in these two directions, and at a fairly high rate of growth.²

In this process of development, the pressure of overpopulation, on the one hand, caused the accumulated capital to be dispersed among a large number of entrepreneurs, and, on the other hand, kept the combination of labour and capital labour-intensive. This is the main reason why Japan's economy contains so many small- and medium-scale firms and has a comparative advantage in labour-intensive industries—mostly in the light industries. Of course, there were some monopolistic firms established in the course of development, but a far larger number of small- and medium-scale firms kept the market in a state of competition, which tended to become excessive. Japan's export goods were notorious for being priced too cheaply in the pre-War years.

After the War, the pressure leading to excessive competition seems to have increased. The imbalance between population and natural resources grew larger with the War losses of accumulated capital. Moreover, the difficulties of the economy in several years immediately after the War obstructed a normal depreciation of fixed assets. Post-War inflation accelerated this process of capital erosion. The valuation of the capital in most enterprises lagged behind the general rise in prices, and goods were manufactured at the sacrifice of capital equipment, that is, without adequate provision for depreciation. In 1950, the reassessment or revaluation of fixed assets was introduced and as time went on the erosion of capital gave way to positive accumulation in many sectors of the manufacturing industries. Such sectors, however, as trading firms and the small- and medium-scale manufacturers, with small fixed assets to be reassessed, were extremely slow in strengthening their capital composition. The aftermath of post-War inflation is still evident in these sectors, especially in trading firms. The capital composition of trading firms showed an owned capital of 10.7 per cent in the fiscal year 1958 as against 41.3 per cent in the fiscal year 1939.³

Under the pressure of the shortage of owned funds, trading firms had to depend on borrowing to finance their transactions. And in order to make

² The yearly rate of growth of Japan's economy is estimated at about 3.7 per cent from 1900 to 1937. (K. Ohkawa, "Study on the Rates of Growth of Japan's Economy," *Economic Review*, October 1951 and January 1952, written in Japanese).

The present writer calculated the rates of growth of Japan's economy, and got a like result. (S. Fujii, "The Development of Japanese Industries from the Standpoint of the Rate of Growth," *Kobe University Economic Review*, No. 1, 1955).

³ Ministry of International Trade and Industry, *Statistics of Trading Firms, Fiscal year 1938*, (in Japanese), (Tokyo: Tsushyo Sangyo Chosakai, 1960), p. 29.

full use of their own funds, they were compelled to look to a rapid turnover of capital by increasing their volume of trade and by venturing into fields which were outside of their specialities. The rate of turnover of owned capital was 28.4 in the fiscal year 1958 as against 8.0 in the fiscal year 1937. In the annual censuses of trading firms in Kobe, conducted by the present writer, the rates of turnover of owned capital were 43 in 1957 and 34 in 1958 in the case of firms with a paid-up capital ranging between one and five million yens⁴ and accounting for about one-half of the total number of Kobe traders.⁵

This weakness in capital composition, in the long run, has the effect of intensifying competition and decreasing the sales profit rate. This is true of small-scale as well as large-scale traders. The export competition among small-scale traders is intensified by keener competition among large-scale traders and sometimes by the competition among manufacturers.

Such excessive competition among Japanese trading firms is basically attributable to the nation's imbalance between population and resources, and was worsened by inflation and by the weakening of capital composition as an aftermath of inflation. In order, therefore, to solve this problem, the capital accumulation of trading firms must be encouraged. To make it possible, it is essential to prevent competition from becoming excessive and to keep export prices at a proper level. This is the very purpose of the Export Transaction Law put into effect in 1952 and revised into the Export and Import Transaction Law of 1953. Under this Law, there are 34 foreign trade associations at work to prevent excessive competition and unfair trade practices.

It should also be noted that a solution to the problem of excessive competition in Japan's economy lies fundamentally in a further economic development achieved by increasing production and expanding exports and imports, thereby mitigating the pressure of overpopulation.

The speeding-up of Japan's economic development is, therefore, a good remedy for excessive competition, but there are limitations to the high rate of growth of Japan as will be considered later on.

Competitive Power of Japan's Export of Chemicals and Heavy Industrial Goods

The other problem of Japan's export trade flows from the fact that her chemicals and heavy industrial goods are more costly than those of advanced

⁴ *Ibid*, p. 30.

⁵ Foreign Trade Section, Kobe Municipal Office, *Report on Trading Firms in Kobe City*, (Kobe: Kobe Municipal Office) published annually. See also, S. Fujii, "Recovery and Development of Foreign Trade Firms in Kobe After the War," *Kobe University Economic Review*, No. 3, 1957.

countries. They are handicapped in competition with those of advanced countries not only in the markets of advanced countries but also in the markets of newly developing countries, even though Japan retains an absolute advantage as compared with domestic supplies in the latter. The ultimate problem consists, therefore, in the competitive power of these manufactures against those of advanced countries.

The reasons why Japan has a comparative disadvantage in these goods are just the reverse of why she has a comparative advantage in light industrial manufactures. They are more capital-intensive and, therefore, require more capital and higher technique. They are usually subject to the economies of large scale and, therefore, need larger markets. Above all, such industries which require large units of plant must have a stable market. And as the domestic market is, as a rule, more stable than overseas markets, such industries are difficult to establish as export industries unless the domestic market for them is sufficiently large.

This is why textile machines and ships, which are supported by a substantial domestic demand, have long been established as export goods. More over it provides an explanation for a connection between the cultivation of paddy fields in Japan and the backwardness of the machine industry. The application of such heavy machines as tractors and combines is limited technically, and it is only in recent years that various agricultural machines, mostly small-sized, have been generally introduced into rice growing. Until that time, the paddy fields had been, so to speak, green deserts for the machine industry (except for agricultural tools).

The fact that Japan started later than advanced countries meant that she had a continuous handicap in developing her heavy and chemical industry, as there were always imported goods which offered more to the purchaser in price and quality than domestic goods. Under these conditions, such industries would not be developed without protection, but too much protection is costly and the infant industries are apt to remain in infancy for want of growth incentives.

Such has been the case with some industrial machines in Japan until recently. Import restrictions through the exchange control system were often more effective than import duties. It is true that there were many new manufactures that sprang into being under the shelter of protection as shown in Table 6. But more capital, better techniques and technicians and wider markets are required for such heavy equipment as power-generating machines, machine tools and metal-working machinery (*see*, Table 8), to expand so that they can replace imports and develop into export goods. Techniques could be introduced from advanced countries, but the large number of engineers and technical labourers are difficult to train in a short time.

The amount of investment and savings in Japan is considerably higher in these years than in advanced countries, but the firms depend on borrowing for most of the funds necessary for investment. The source of capital becomes increasingly dependent on borrowings as the high rate of investment goes on as shown in Table 13. The manufacturing industries are the predominant factor in the change.

TABLE 13

CAPITAL COMPOSITION : ALL INDUSTRIES

Capital	1934—37 (average)	1st half 1956	1st half 1958	1st half 1959	1st half 1960
Borrowed capital	39.30	63.38	67.13	69.25	70.69
Owned capital	60.70	36.62	32.87	30.75	29.31

Source: White Paper on Economy, 1961, op. cit., p. 137.

The limitations put by the domestic market may be most decisive in some kinds of chemicals and machines. Japan has neither such a large domestic market as the United States nor such stable integrated markets as European countries. Moreover, there are many small- and medium-scale firms in the machine industry, which are not modernized in technique, management and organization. Some of them have their own lines of production independent of large-scale firms, but many are contributing to production in cooperation with large-scale firms, either as subcontractors or as suppliers of parts. The levelling-up and modernization of these small- and medium-scale firms are, therefore, essential if Japan's capacity to export machinery is to be increased. Although there are active movements among small- and medium-scale firms towards modernization, it will take a longer time for them to achieve these ends than for the large-scale ones.

Now that the liberalization of import trade is to be extended to all these weaker sectors of the machine industry in the quite near future, the test of competition from manufactures of advanced countries will grow all the more severe. How to improve these weaker sectors under liberalized trade is one of the most important tasks facing Japan's economy. The plan for doubling the national income in ten years from 1961 to 1970 (a yearly rate of growth of 7.2 per cent) is said to have as one of its aims to level up these weaker sectors.

It is hoped that the investment for improvement and rationalization will increase productivity, and that the high rate of growth of one sector will increase the demand for another's products, but this will not be so in all industries and all enterprises. The plan lays much greater emphasis on the heavy and chemical industries than on the light industries. The higher rate of growth in one industry will surely have repercussions on another industry growing at a lower rate. This may already be seen in the labour market. The rapid increase of demand for labourers in growing industries pushes up wages, and the industries which cannot afford to offer the same level of wages are experiencing a shortage of labourers. Similarly, large-scale firms are in a more advantageous position in the labour market and also in the money market than the small- and medium-scale ones.

This process might be quite natural with a developing economy, and to squeeze less advantageous sectors for the development of more prosperous sectors might be the way to extinguish differences in productivities and wage levels among various industries and firms. But we must take into account the fact that there might survive industries and firms working with sub-standard labourers and capital equipment; a considerable portion of the small- and medium-scale firms is in danger of falling into this extreme. In Japan, where the economy is half-developed, it is doubtful whether a high rate of growth could achieve this end without a great deal of conflict.

SECTION VI: CONCLUSION

Japan has been fairly successful in developing her economy since she first started capitalization and industrialization about 90 years ago. By the Second World War, she had established as export goods some of her chemicals and heavy industrial goods as well as her light industrial goods.

In the post-War years, the recovery and development of Japan's economy was much more rapid than had been expected, and of late Japan has been seeking to further her industrialization with special emphasis upon the heavy and chemical industries. Both in production and in export trade the percentage shares of chemicals and heavy industrial goods are expected to increase to a large extent.

However, the fact that Japan started her industrialization much later than advanced countries is so large a handicap that Japan remains still half-advanced. This handicap, coupled with the fundamental imbalance between population and natural resources, has shaped particularly the structure of her production and export. Her relatively large population and the consequent abundant supply of labour have favoured her labour-intensive goods like light industrial goods and light machines in competing with those from advanced countries. The situation, however, is somewhat different

with regard to such manufactures as chemicals and heavy machines, which are capital-intensive and as such require advanced techniques and large stable markets. More capital must be accumulated and larger numbers of technicians and technical labourers are needed. Above all, larger and more stable markets are necessary.

The advanced countries in Western Europe integrated themselves into the Common Market in order to build up larger and more stable markets for their manufactures. There seems to be a limit to the exports of Japan, which has neither a large domestic market nor stable markets overseas.
