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A Brief History of the Japanese Merchant Marine Fleet

Tadaaki SHINDO

Introduction

Japan is a small island country with a land area of approximately 378,000 km², 85 per cent of which is mountainous. Japan is also a country with a very large population and very few natural resources. Japan is therefore very dependent on overseas countries for its survival. It is imperative to import large amounts of raw materials, such as petroleum, iron ore, bauxite, staple foods, etc., and export machinery, equipment and various kinds of processed goods (see Table 1). To expedite the transportation of these goods in and out of Japan safely, speedily and economically, the development of the merchant marine has been one of the most important national tasks for Japan.

The Birth of the Modern Japanese Merchant Marine (1884-1914)

(Era of "Shasen" Liner Service)

In 1868, after the Meiji Restoration, the Japanese shipping industry was released from its national isolationism policy and began to divert from conventional coastal navigation to ocean-going shipping. At this stage the Japanese economy was just starting to industrialize, much later than the great world powers. Because of lagging so far behind, machinery and equipment, as well as the raw materials necessary for industrialization had to be imported. At the same time, the export of Japanese merchandise was imperative in order to obtain necessary foreign exchange. Thus, from the very beginning, Japan was very dependent on foreign trade.

It must be realized, however, that Japan had no experience in foreign trade nor in the organization of ocean-going shipping industries. Moreover, at that time, European

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TABLE 1 Natural Resources—Overseas Dependency by Selected Country (1979)

	Degree of Overseas Dependency ^{a)} (%)				
	Japan	U. S. A.	Germany, F. R.	France	U. K.
Energy ^{b)}	87.0	20.6 ^{c)}	57.7 ^{c)}	80.3 ^{c)}	9.3 ^{c)}
Coal	79.2	-9.6 ^{c)}	-8.7 ^{c)}	57.0 ^{c)}	1.6 ^{c)}
Oil	99.8	42.3 ^{c)}	95.8 ^{c)}	99.0 ^{c)}	18.9 ^{c)}
Natural Gas	88.7	5.8 ^{c)}	65.8 ^{c)}	68.8 ^{c)}	19.5 ^{c)}
Iron Ore	98.6	29.7	96.9	44.4	80.7
Copper	95.6	33.5	99.9	99.9	100.0
Lead	82.4	59.9	90.9	86.0	99.3
Zinc	68.7	70.6	71.9	87.2	100
Tin	97.7	100.0	100.0	100.0	81.8
Aluminum	100.0	62.6	100.0	-230.5	100.0
Nickel	100.0	93.0	100.0	100.0	.00 0
Wood and Lumber	69.2 ^{c)}	3.8 ^{c)}	20.7 ^{c)}	16.0 ^{c)}	72.9 ^{c)}

a) Rate of foreign dependence is calculated as follows:

$$\frac{\text{Import Volume} - \text{Export Volume}}{\text{Domestic Production Volume} + \text{Import-Export Volume}} \times 100$$

However, aluminum, nickel, tin and lead are calculated as follows:

$$\left(1 - \frac{\text{Domestic Mineral Output}}{\text{Consumption of Metal}}\right) \times 100$$

b) The total of coal, oil, natural gas, and electricity (hydro and nuclear generated)

c) 1978

Source: MITI, "White Paper on International Trade, 1981"

and American shipping companies, such as the Peninsula and Orient (P. & O.) and the Pacific Mail Steamship had already started operating in seas near Japan. Under these circumstances, there was nothing more important and urgent for the Japanese government than to foster its own foreign trade and shipping industries and nurture them so that they would be strong enough to compete internationally. For this purpose, the Meiji government began to give tremendous amounts of monopolistic favors and subsidies to the Mitsubishi Company in the early 1870's.

The following are merely a few examples of how Mitsubishi was treated by the Meiji government in the field of subsidies. In 1871, a semi-governmental company named Nipponkoku Yubin Jokisen Kaisha was established, but soon its business failed and the government purchased its ships and other property for 350,000 yen. The ships and other property were disposed of to Mitsubishi free of charge. In 1874, at the time of the Saga rebellion and Formosa expedition, the government purchased thirteen used foreign steamships totaling 1,570,000 dollars and consigned their operation to Mitsui. After the settlement, these ships were disposed of to Mitsubishi

free of charge. In 1877, when the Seinan rebellion occurred, in order to cover the shortage of ships, the government accommodated Mitsubishi with 700,000 dollars for purchase of ten used steamships and paid subsidies of 250,000 yen annually to Mitsubishi for ten years commencing in 1875. In 1875, when the government ordered Mitsubishi to inaugurate the first ocean liner service between Yokohama and Shanghai once a week, the government accommodated Mitsubishi with a total of 810,000 dollars for the purchase of ships and land facilities owned by the competitor, Pacific Mail Line. Thus, the Meiji government rendered such discriminative favor and advantage to Mitsubishi, by which they were able to consolidate a strong business foundation.

On the other hand, another semi-government company named Kyodo Unyu was established in 1882 after many mergers. Kyodo Unyu became a strong competitor. They purchased four steamships from England and started liner service between Yokohama and Kobe. Cutthroat competition continued for a period of time and finally, in 1885, Mitsubishi and Kyodo Unyu merged and established Nippon Yusen Kaisha (N. Y. K.) with a capital of 1.1 million yen and 58 vessels, totaling 68,000 gross tons. N. Y. K. was treated as a special company with government guarantee of 8 per cent dividends. Later this amount became a fixed annual subsidy of 880,000 yen.

Such special favors and subsidies paid to Mitsubishi only were too much to connive at and made for the creation of opposition powers. It was at about this time that many small shipowners in the Osaka area who had been engaged primarily in navigation in Setouchi and Kyushu, increased their numbers and because of their activity the shipping market became very competitive resulting in much confusion. In order to solve this problem, in 1884, the 55 Osaka shipowners merged and, under governmental protection, Osaka Shosen Kaisha (O. S. K.) was established with 1.2 million yen capital and 93 vessels, totaling 15,375 gross tons. At the time of its establishment, O. S. K. was given six newly built vessels and various subsidies including funds for renovation of their fleet amounting to 50,000 yen yearly and 20,000 yen a year for mail transportation.

Thus, it can be said that the modern shipping industry in Japan was born in 1884. It developed with N. Y. K. and O. S. K. as the core. They received almost exclusive government protection and subsidization throughout their history. These two com-

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panies became known as "shasen", with Toyo Kisen and Nisshin Kisen joining this group later. All other companies were called "shagaisen". The "shasen" specialized in liner service while the "shagaisen" concentrated in tramp service.

Besides N. Y. K. and O. S. K., many other shipping companies such as Mitsui Bussan Sempakubu and Asano Kaisoten were established at approximately the same time, but government subsidies were not extended to these "shagaisen" companies and their fleets were not able to grow rapidly like those of N. Y. K. and O. S. K. Japan's steamship tonnage increased from 25,000 gross tons in 1870 to 170,000 gross tons in 1893.

The Sino-Japanese War broke out in 1894 and it was at this time that the Japanese shipping industry made great strides for the first time. A large amount of ship tonnage was drafted for military transportation but yet this was not adequate. The government purchased 14 vessels making up 41,834 gross tons and consigned their operation to N. Y. K. The chartering of foreign flag vessels also thrived during the war. When the Sino-Japanese War ended in 1895, the Japanese merchant fleet had increased by some 330,000 tons.

This war caused the Japanese government to keenly recognize the necessity of marine subsidies and protection. Immediately after the war, subsidies concerned with navigation, shipbuilding, and steamship service were implemented. Theoretically, this meant that now the marine subsidies would be available not only to specific companies, but to all the companies in general. In actuality, however, this was not the case. The "shasen" were the major recipients of the subsidies while the "shagaisen" received almost none. These subsidies amounted to a total of 130 million yen by 1914 and were a major factor in the development of the "shasen's" fleet.

In 1904, the Russo-Japanese War broke out and again the Japanese shipping industries were given an opportunity to progress rapidly. During the war a large number of vessels to carry troops and cargo for military use were needed. Between February, 1904, and October, 1905, 177 foreign vessels totaling 316,000 gross tons were purchased and 485 foreign vessels were chartered totaling 1.48 million gross tons. When the Russo-Japanese War ended in 1905, the Japanese merchant marine fleet had increased by 302 ships (275,000 gross tons), and reached a total of 1,390 vessels (1,932,470 gross tons). As a result, Japan ranked sixth in the world as a

maritime nation whereas it had been in ninth place before the war.

After the Sino-Japanese War, most of the large-size vessels for use in liner service were purchased from foreign countries, but after the Russo-Japanese War, this was no longer the case. N. Y. K. placed orders for six vessels of 8,600 gross tons each for liner service between Japan and Europe; Toyo Kisen placed orders for three vessels of 13,500 gross tons each for liner service between Japan and San Francisco; and O. S. K. ordered three vessels of 6,000 gross tons each for liner service between Japan and Tacoma. All these orders were placed with Mitsubishi Shipbuilding and Kawasaki Shipyard.

During this period of time, while the development of liner service was being successfully implemented by primarily N. Y. K. and O. S. K. with favorable governmental subsidies, the expansion of "shagaisen" was also noteworthy. They imported a great many large-sized ocean-going vessels, with the result that the total tonnage owned by "shasen" and "shagaisen" was not substantially different. One of the results of the Russo-Japanese War was that Japan obtained the privilege of using the Liaotung Peninsula as a bridgehead and so could secure soybeans and pressed bean curd from Manchuria, Bujun coal, Kaihei coal, salt from North China, sugar from Taiwan, etc. The "shagaisen" owners thus grew rapidly and started operating liner service in various areas.

Development of Fleet from World War I to World War II (1914-1941)

(Era of "Shagaisen" Tramp Service)

One of the most flourishing times for the Japanese merchant marine throughout its history was a period of a few years during World War I. As stated before, since the birth of the merchant fleet, its growth and development were made possible by favorable government subsidies and the influence of wars. World War I provided the most significant opportunity for growth. With the breakout of World War I, the global shortage of ships brought about an extreme increase of freight in the shipping market and in the cost of shipbuilding. The freight rate suddenly rose more than ten times that of prewar time, charterage increased more than twenty times, and the cost of vessels went up more than five times. Profits earned by the

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shipping companies were remarkable and two "shasen" companies, N. Y. K. and O. S. K., earned 500 million yen in profits at that time. During this period, not only the "shasen", but also the "shagaisen" and other companies could enjoy many benefits and were able to expand their business.

It may be said that in the period between the two world wars the leading role was played by the "shagaisen" companies which had not been particularly protected by the government. The cause of this successful operation was attributed mostly to their characteristic mode of operation. In 1928, the total tonnage of the Japanese tramp service ships was approximately five million dead weight tons (DWT), 3.5 million of which were operated by the "big five" of the "shagaisen", namely, Mitsui Bussan Sempakubu, Yamashita Kisen, Kawasaki Kisen, Kokusai Kisen and Daido Kaiun. This "big five" actually owned only 770,000 DWT, with the difference, about 2.4 million DWT (approximately 75 per cent of the total), being owned by general "shagaisen" operators other than the "big five". From these figures, we can see the importance of the organizing role of the "big five" among the "shagaisen" owners. Business carried on by the "big five" was diversified and covered both liners and tramp services in ocean and coastal waters. They then participated in all the main liner routes covering North and South America, Australia, India, Europe, and Africa. As far as tramp service was concerned, their vessels were placed almost all over the world, but the Japanese market at that time was concentrated mainly in Korea, Taiwan, Manchuria, China, and South East Asia.

One of the important qualifications of the operators was considered to be the ability to combine various types of cargo to meet the type of vessel. For example, in liner service between Japan and the United States, the westbound and eastbound cargoes were quite unbalanced both in quantity and quality. The major westbound cargoes were comprised of large amounts of bulky cargo such as wheat, lumber, and scrap which was ordinarily considered to be trampers' cargo. On the other hand, the most valuable eastbound cargo at that time was mainly silk. Later in the 1930's, many other items were added going both ways—chinaware, textiles, and sundry goods for westbound, and automobiles, machinery, and steel for eastbound. For this route, the skill of the operators in flexibly combining cargo for both liners and trampers was imperative for its success.

As repeatedly stated before, the Japanese merchant marine was developed with two distinct types—one, the “shasen” fleet and the other, the “shagaisen” fleet. While the “shasen” fleet improved because of exclusive government subsidies, the “shagaisen” fleet grew with the close collaboration of trading firms which had established a trade network all over the world with adequate information and data concerning cargo and the chartering market. Significant activities of Mitsui Bussan and Suzuki Shoten in those days were considered equivalent to that of the Baltic Exchange in London.

At the end of World War I, the tonnage of the Japanese “shagaisen” almost doubled compared to that of the “shasen”. This period of time was called the “shagaisen” era. In the “shagaisen” group, however, there was a split and two separate groups were formed. One consisted of the operators who operated mostly chartered vessels owned by other “shagaisen” owners. The other was made up of the owners who specialized in receiving charterage from the operators for their main income. The big “shagaisen” operators who displayed superior qualifications during this period expanded their business to the liner service that had until then been monopolized by the “shasen” group. In return, from the late 1920's, the “shasen” companies chartered many “shagaisen” owners' vessels and performed an active tramp service operation.

(For growth of Japanese merchant marine in Meiji and Taisho eras, see Table 2.)

The readjustment period after World War I, however, was very difficult for both the shipping industries and shipbuilding, and they were still in a serious depression in the latter half of the 1920's. World trade had not yet recovered from the war and all countries were impoverished. The shipping companies particularly suffered from global overtonnage and were forced to abolish or reduce their service routes, lay up vessels, reduce the scale of their organizations and cut down on their personnel. In 1930, the total of laid up vessels in Japan reached 250,000 gross tons.

Under these circumstances, even though world trade was in a slump and cargo was very limited, international shipping competition became intensely keen and utilizing the very best quality ships with high speed was imperative in order to secure even a small share of the world market. To cope with this situation, the government implemented a shipbuilding fund with interest subsidies and also subsidies for replacement of ships, a so-called “scrap-and-build” system. In this way it was possible to build one new ship for every two ships scrapped, utilizing subsidies of 50 yen per

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TABLE 2 Growth of Japanese Merchant Marine in Meiji and Taisho Eras

	Number of Vessels	Gross Tons	Remarks
1870	35	24,997	
1871	71	33,796	
1872	96	37,687	
1877	183	79,202	
1880	210	66,476	
1882	198	64,313	
1884	226	74,916	
1887	252	107,808	
1890	325	142,997	
1893	400	167,490	
1894	461	236,629	Sino-Japanese War
1895	528	331,347	
1897	626	426,624	
1900	859	524,239	
1903	1,088	656,745	
1904	1,224	791,057	Russo-Japanese War
1905	1,390	932,740	
1907	1,574	1,109,444	
1909	1,653	1,189,957	
1911	1,854	1,375,083	
1914	2,133	1,577,025	World War I
1918	2,641	2,310,959	
1922	3,001	3,254,962	
1924	3,143	3,520,748	
1926	3,246	3,607,038	

Source : H. Kuroda, *Sekai Kaiun Shi* (Tokyo: Seizando, 1972), p. 278.

gross ton. With a total budget of 11 million yen, 94 old ships totaling 399,240 gross tons were scrapped and replaced with 31 new superior ships totaling 198,695 gross tons in the first year. During the next two years, 17 new ships totaling 101,725 gross tons were built. Thus, even in such a difficult time, the merchant marine improved in quality with new vessels of more than 4,000 gross tons each and with a speed of more than 14 knots.

The Japanese merchant marine industries were then, because of an ominous foreboding of another war, amalgamated into one body consisting of the "big five" of "shagaisen" (Yamashita, Mitsui, Kawasaki, Kokusai, and Daido), plus the two giants of "shasen" (N. Y. K. and O. S. K.). Thus, through this kind of systematization, everything was accelerated towards wartime control.

Rebuilding of Fleet After World War II (1945-1963)

Prior to World War II, the Japanese merchant marine fleet could claim 6.3 million gross tons or about 8 per cent of the world's tonnage, ranking third after Great Britain and the United States. During World War II, about 8 million gross tons were lost, including the vessels built during the war. When the war ended, there remained only about 1.3 million gross tons, 70 per cent of which were poor war-standard ships and the balance old and unseaworthy. Thus, in actuality, the Japanese merchant marine was completely debilitated and the shipping companies lost their accumulation of capital and facilities, resulting in the necessity of reconstruction of the fleet from almost nothing.

While the British government, for example, paid 268 million pounds in wartime indemnities, 210 million pounds for new ship building and 200 million pounds for repairment of vessels totaling 678 million pounds to the British shipping companies, the Japanese government suspended such insurance payments to the Japanese shipping companies for losses and damages incurred during the war. The indemnity loss to 82 Japanese shipping companies amounted to 2,500 million yen at that time. Because of this, the Japanese shipping companies suffered significant difficulties for many years.

As a consequence of being defeated in the war, United States occupation forces at first introduced a number of restrictions on the reconstruction of Japan's merchant fleet. For example, the construction of vessels of more than 5,000 gross tons was prohibited; the cruising speed of such ships could not exceed 12 knots; and the total tonnage of the merchant marine fleet could not exceed 1.5 million gross tons. During the occupation period, the shipping industries came under the Shipping Control Authority for Japanese Merchant Marine (SCAJAP) and were strictly supervised.

Due to the cold war between the United States and the Soviet Union, the international political situation placed Japan in such a position that strong economic and industrial power had to be rebuilt so as to be a partner of the United States and other Western allies. The reconstruction of its merchant fleet was then started immediately. In 1949 the occupation authority lifted the restrictions on constructing

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ocean-going ships and on the stipulations of class and speed of ships to be built. By 1950, all merchant vessels were returned to Japanese companies.

In September, 1951, the San Francisco Peace Treaty was signed and took effect from April, 1952. This meant that the Japanese merchant marine could rebuild under its own maritime policy.

In June, 1950, the Korean Conflict occurred and the resultant munitions manufacture triggered the rapid growth of Japan's industrial production. Around 1951, Japan's industrial production rapidly regained the pre-war level. With United States procurement came a shipping boom. The supply of Japanese goods for the war effort and the transportation of such goods gave a golden opportunity for rapid reconstruction of the Japanese merchant marine. The Japanese shipowners, however, were not in a position to participate in this boom because the Japanese merchant fleet was not yet appropriately equipped and only about 400,000 gross tons of vessels were considered seaworthy. They could just look on at the successful operation of foreign flag vessels.

The Korean Conflict presented Japan with a good opportunity to develop industrially. At first, a simple, labor-intensive type industry grew rapidly and this expanded into light-machinery industries in the latter half of the 1950's. After this successful achievement, the Japanese economy again expanded into heavy and chemical industries, the achievement of which was made in the 1970's. Looking back, it can be seen that the reconstruction of the Japanese merchant marine proceeded step by step with that of Japan's economy, as one of its supplements.

The Japan Development Bank was established for building new vessels with the help of long-term subsidized loans. At the same time, the United States occupation forces abolished the restriction that had previously been imposed on the development of Japan's merchant marine. In the 1950's, Japan was able to restore much of its liner service such as that between Japan and the east coast of South America, Okinawa, Bangkok, India, New York, Seattle and Europe. Tramp vessels to various ports of North America, Canada and Africa were also permitted to operate.

Around 1952 the world shipping market deteriorated again and this condition continued until 1954. During this slump that followed the Korean Conflict boom, major advanced maritime countries were implementing necessary measures to increase and

improve their merchant fleets. Indemnities covered losses and damages incurred during the war and various subsidies were available for shipbuilding and operation in those countries. Japan, however, was still far behind other countries because of losses during World War II and subsequent financial weakness. The shipping industry was unable to rebuild its merchant fleet rapidly without heavy government subsidies. This situation forced the Japanese shipping companies to rebuild their merchant fleet at much higher shipbuilding costs with loans at much higher rates of interest than that of the international level at that time. All shipping companies in Japan suffered drastically because of these high interest rates.

In 1955, the world tendency of technological innovation and exploitation of developing areas made international investment active and resulted in the rapid expansion of heavy industries in the United States and Europe. Shortage of grain, increase in demand for U. S. coal in Europe, as well as long-term longshoremen's strikes in England created the demand for tramp ships which resulted in an upward trend in the world shipping market. The shipping market in Japan also became brisk coinciding with the rapid expansion of the Japanese economy. In 1956, the Suez Canal was nationalized and, because of its militaristic dispute, passage through the canal became impossible. This created a shortage in tanker tonnage which resulted in a sudden sharp rise in the world tanker market. Tanker freight jumped to its highest peak in those days—higher than USMC plus 200.

This situation also exerted an important influence on the shipbuilding industry in Japan. Many foreign shipowners rushed to place orders for tankers with Japanese shipyards because of the promise of quick delivery and the competitive cost of shipbuilding. The number of ships built for export in the Japanese shipyards then exceeded that of those being built for domestic use.

It is also noteworthy that the Japanese policy concerning energy changed from coal to oil as the main energy source at that time. The demand for oil expanded quickly and, as the oil business grew into a gigantic industry, the steel business followed. The unit of trade in these businesses became larger and larger in scale in terms of quantity and hauling distances also became longer.

The Suez Conflict was much shorter than had been expected and the canal was reopened in 1957. The shipping market immediately reacted and there was a sudden

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sharp drop in the freight rate of tankers as well as that of cargo ships. Economical transportation made possible by reduced transport cost became a must. At the same time, there were remarkable technological innovations in the field of shipbuilding. In the late 1950's and 1960's, significant changes were made including an increase in ship size, specialization of ship type, and containerization.

The development of increasingly larger ships reduced the transport cost by sea and promoted a growth in seaborne trade. This encouraged the construction of bigger ships with a reduction of average cost per ton as a consequence. The bigger ships were more capital-intensive and represented more highly developed technology. This trend particularly coincided with the demand of the giant shippers, such as oil refineries, steel works, and other big bulk importers. This phenomenon was especially true in the case of oil tankers. In the early 1950's, oil tankers of 20,000 DWT were the standard type; in 1955, they became 40,000-50,000 DWT; in 1960, 80,000 DWT; in 1965, 200,000-300,000 DWT; and in 1977, 500,000 DWT oil tankers appeared. As for ore carriers, in the early 1950's, 15,000 DWT was standard; then in 1960, 20,000 DWT; and in 1970, 100,000 DWT prevailed.

Requirements of economical transportation of cargo in large quantity created various types of ships suitable for special purposes, for instance, ore carriers, oil tankers, bulk cargo ships, container ships, ships for chemical cargo, ships for liquid natural gas (LNG) or liquid petroleum gas (LPG), car carriers, combination ships for bulk and liquid cargo, etc.

Increase in ship size certainly reduced the cost of transportation, but at the same time, it also made it difficult for shipping companies to secure large amounts of cargo in the market or solicit different types of cargo for these large size tankers and bulk cargo ships. There needed to be a guarantee of safe, stabilized and low-cost transportation over a long period for oil refineries and/or steel mills and, at the same time, shipping companies needed a guarantee for stabilized cargoes whatever the changes in the international market. For this purpose, long-term contracts were introduced between shipping companies and oil and steel companies. These long-term contracts brought stability of management to the shipping companies who were used to being faced with sudden drastic ups and downs in the international market, but it also gave them a constant low-level freight rate over a long period of time. It was

not uncommon for long-term contracts to extend over a period of twenty years or so and sometimes such agreements were signed even before the oil tankers were built. It was also a common practice for ore carriers and other bulk cargo carriers that their cargoes be guaranteed by shippers. In the beginning, it was thought that this way of doing business would be advantageous for both shippers and shipowners, but it actually was the cause of a big discrepancy between them.

Newly-built, large-sized tankers and ore carriers could earn some profit from such low freight levels under a long-term agreement, but conventional vessels of comparatively low efficiency could not profit and suffered only losses. Once the low freight rate appeared on the world shipping market, although it was meant only for new, large, high-efficiency ships, it became prevailing as the market rate. Besides that, in such a period of galloping inflation, whereas the freight rate thus fixed under a long-term agreement remained unchanged (in many cases, the lowest rate over a long period), the operation costs and price of ships greatly increased and therefore no profit could be realized. Further, shipowners could not sell their ships when the price of ships went up because they were bound by their long-term agreement. Thus, the shippers' advantage became greater and greater and the initiative in business negotiations fell completely into the hands of the shippers.

Even though the shipping industries were suffering a depression, the shipbuilding industries were still expanding because of the ships being built for export. In order to create a more favorable balance of trade, the Japanese government extended more protection and subsidies to the shipbuilding industries for building ships for export than for domestic shipowners. For such shipbuilding, government loans were available with an interest of 4 per cent whereas the rate was 6.5 per cent for ships built for the domestic owners under a planned government shipbuilding scheme. Therefore "tie-in" ships (ships ordered from Japanese shipyards in the name of foreign owners for whom Japanese shipowners arranged the building berth reservations intending to charter the ships for long periods upon their completion), became particularly notable and an increasing number of "tie-in" ships were ironically competing with Japanese vessels and caused the Japanese merchant marine to suffer. Such being the case, the share of Japanese flag vessels began to decline in the Japanese trade. Foreign exchange earned by overseas shipping had declined substantially. In 1958, the share of Japanese

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flag vessels showed 60 per cent for export and 57.4 per cent for import; in 1963, however, it had declined to less than 50 per cent for export and 46 per cent for import. Therefore, there was a great need for a new policy and structural reorganization was implemented in 1963.

Reorganization of Shipping Industries (1963-1964) to Present

In order to eliminate undue cutthroat competition in the world shipping market and rationalize the sailings in the liner trade as well as increase the financial capabilities of Japanese shipping companies, a law was passed in 1963 which provided

TABLE 3 Composition of Reorganized Companies as of December 20, 1963

Nucleus Group	1) Merged Companies 2) Capital 3) Fleet	Affiliated Company	Subordinate Company
Nippon Yusen Group	1) NYK/Mitsubishi 2) 14.6 billion yen 3) 78 vessels, 1,052,084 DWT	Shinwa Kaiun, Kyoei Tanker and others totaling 7 companies with 52 vessels, 1,012,000 DWT	Hachiuma Kisen, Okada Shosen and others totaling 7 companies, with 24 vessels, 223,612 DWT
Osaka Shosen-Mitsui Sempaku Group	1) OSK/Mitsui 2) 13.1 billion yen 3) 83 vessels, 1,237,230 DWT	Sawayama Kisen, Nihonkai Kisen and others totaling 5 companies with 30 vessels, 307,572 DWT	Namura Kisen, Inui Kisen and others totaling 27 companies, with 84 vessels, 775,533 DWT
Kawasaki Kisen Group	1) Kawasaki/Iino 2) 9 billion yen 3) 55 vessels, 933,100 DWT	Iino Kaiun, Fuso Kaiun and others totaling 8 companies, with 22 vessels, 390,266 DWT	Kokuyo Kaiun, Hara Shosen and others totaling 8 companies, with 27 vessels, 220,452 DWT
Japan Line Group	1) Nitto/Daido 2) 11.8 billion yen 3) 52 vessels, 967,408 DWT	Nisshin Kogyo, with 6 vessels 43,167 DWT	Hiroumi Kisen and Kokusai Kisen totaling 7 vessels, 58,453 DWT
Yamashita-Shin Nihon Kisen Group	1) Yamashita/Shin Nihon 2) 5.27 billion yen 3) 45 vessels, 570,031 DWT	Tamai Shosen, Morita Kisen and others totaling 4 companies, with 23 vessels, 415,865 DWT	Sanwa Shosen, Asahi Kaiun and others totaling 9 companies, with 17 vessels, 136,528 DWT
Showa Kaiun Group	1) Nihon Yusosen/Nissan 2) 4.5 billion yen 3) 31 vessels, 609,727 DWT	Terukuni Kaiun, Hinode Kisen and others totaling 3 companies, with 17 vessels, 335,807 DWT	Nagoya Kisen, Toa Kisen and others totaling 4 companies, with 6 vessels, 57,049 DWT

Source: H. Kuroda, *Sekai Kaiun Shi* (Tokyo: Seizando, 1972), p. 264.

for merger and the creation of six nucleus shipping groups, which in turn became constituents of large industrial-financial monopolies. The six shipping groups were a combination of 88 companies, owning 9,360,000 dead weight tons, or about 82 per cent of the entire Japanese merchant fleet headed by the following nucleus companies: Nippon Yusen, Mitsui-OSK, Kawasaki Kisen, Yamashita-Shinnihon, and Showa Kaiun (see Table 3).

These nucleus companies were required to own a minimum of 500,000 DWT or more of ocean-going vessels and to have control of more than 1,000,000 DWT of such vessels including its own and those possessed by their affiliates and subordinate companies. By definition, the affiliate companies were ship-operating or owning companies, at least 30 per cent of their stocks being owned and their activities dominated by a nucleus company. Subordinate companies were those companies of which all their vessels were chartered out or entrusted for operation to the nucleus company or their affiliates with which they were required to have the following relationship: at least 10 per cent of the stocks of each company were to be held by a nucleus company or its affiliates; at least 20 per cent of the debt of such company was to be guaranteed by the nucleus company.

Favorable terms and conditions for subsidizing payments on government loans were introduced for the merged companies. The Japan Development Bank extended credit for 15 years with a three-year deferment of payments, covering 80 per cent of the cost of the vessels at 4 per cent interest. The city banks extended credit for seven years, covering 20 per cent of the cost of the vessels at 6 per cent interest.

TABLE 4 Fleets of Six Nucleus Groups as of April 1, 1979

Company	Vessel		Owner		Bare boat chartered		Time chartered		Total	
	Number of Vessels	DWT	Number of Vessels	DWT	Number of Vessels	DWT	Number of Vessels	DWT	Number of Vessels	DWT
Nippon Yusen	71	3,110,180	1	238,425	120	2,836,576	192	6,181,182		
Shosen Mitsui	57	1,823,336	1	3,248	148	3,360,725	206	5,187,309		
Kawasaki Kisen	32	1,025,319	—	—	95	4,079,418	127	5,104,737		
Japan Line	25	2,908,417	10	2,337,286	115	6,571,724	150	11,817,427		
Yamashita Shin-Nihon	24	1,346,436	—	—	113	3,613,485	137	4,959,921		
Showa Kaiun	16	1,154,273	—	—	68	1,823,534	84	2,977,087		
TOTAL	225	11,367,961	12	2,574,960	659	22,285,462	896	36,228,383		

Source: S. Miyamoto, *Kaiun Sangyo Keizai Ron* (Tokyo: Kaibundo, 1980), p. 160.

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In the ten years following the commencement of reorganization, 1,000,000 million yen in government loans to finance the building of new vessels were effectively utilized.

The reduction of the number of companies from 88 to 6 helped in eliminating wasteful competition. Within three years after the structural reorganization, the six nucleus companies nearly doubled their tonnage and the affiliates increased theirs by about 77 per cent. The non-aligned shipowners who built their ships outside of the government program were also given favorable conditions and their positions also improved substantially (see Tables 4 and 5).

In order to strengthen the newly merged shipping groups and ensure their foreign exchange earnings, the Japanese government continuously endeavored to replenish the merchant fleet through a planned shipbuilding scheme. In construction of con-

**TABLE 5 Growth of Japanese Merchant Fleet Compared to
that of World Fleet (1948—1971)**

	Japan		World	
	Number of Vessels	Gross Tons (thousands)	Number of Vessels	Gross Tons (thousands)
1948	1,204	1,024	29,340	80,292
1949	1,121	1,564	30,248	82,571
1950	1,499	1,871	30,852	84,583
1951	1,529	2,182	31,226	87,245
1952	1,587	2,787	31,461	90,180
1953	1,669	3,250	31,797	93,352
1954	1,727	3,578	32,358	97,422
1955	1,770	3,735	32,492	100,569
1956	1,891	4,076	33,052	105,200
1957	2,032	4,415	33,804	110,246
1958	2,413	5,465	35,202	118,034
1959	2,775	6,277	36,221	124,935
1960	3,124	6,931	36,311	129,770
1961	3,733	7,954	37,792	135,916
1962	4,372	8,870	38,661	139,980
1963	4,819	9,977	39,571	145,863
1964	5,401	10,813	40,859	153,000
1965	5,836	11,971	41,865	160,392
1966	6,105	14,723	43,014	171,130
1967	6,409	16,883	44,375	182,100
1968	6,877	19,587	47,444	194,152
1969	7,665	23,897	50,276	211,661
1970	8,402	27,004	52,444	227,490
1971	8,851	30,509	55,041	247,203

Source: Lloyd's Register of Shipping.

tainer ships, only 5 per cent of the total price was self-financed with 70 per cent of the remainder to be covered by loans extended by the Japan Development Bank and 25 per cent by city bank loans. The Japan Development Bank loans were extended for terms of ten years with a three-year deferment of payments. For other types of ships, 20 per cent of the price was to be self-financed and of the remainder, 60 per cent was to be covered by the Japan Development Bank and 20 per cent by city banks. The Japan Development Bank extended favorable interest rates and the total budget of loans for construction of ocean-going vessels was 250 million dollars for 1976.

With regard to depreciation, the government gave the shipowners the discretion of selecting, ship by ship, one of three depreciation methods—the constant-ratio method, the constant-amount method, and the running-distance method. This depreciation allowance helped the shipping companies to strengthen their financial condition during the depression period. In addition to the aforementioned allowances, various kinds of tax benefits and operation subsidies such as on cargo carried in the cross trade were extended to the shipping companies.

Technological innovations in the shipbuilding industry at first introduced large-size oil tankers in the market and then specialized bulk carriers in the late 1950's and early 1960's. Ever since Sealand Company placed their first full-container ship in the service between the Atlantic coast of the United States and Europe in 1966, a revolutionary change appeared in the liner service sector—containerization. The main objective of liner vessels was to carry general cargo which was very profitable, but which required much handling in comparison with oil and bulk cargoes. Therefore, for liner ships, the time spent in port loading and unloading was comparatively longer and actual navigation time was shorter than that of tramp service vessels. Thus, time spent in port occupied approximately 40 per cent of the entire voyage. The vessels placed in liner service were usually superior ones with high speed. Unless the loading and unloading time in port was minimized, it was of no use to place such expensive vessels. The convenient and economical connections with inland transportation made possible by containerization were also advantageous. Therefore, the liner service between almost all major developed countries became containerized. As of January, 1978, 385 vessels made up the world container fleet totaling 8.85 million

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gross tons carrying 440,351 containers (calculated at 20 ft. size).

It can be said that important contributing factors in the rapid expansion of the Japanese fleet were government subsidies and technological innovation, but the most important was the growth of Japan's economic activity which expanded at an annual rate of 10 per cent until the oil crisis occurred in 1973. The growth of the entire world trade volume exceeded that of the world's total production, increasing from 54.7 billion dollars in 1949 to 372 billion dollars in 1972, an expansion of 6.8 times during a quarter of a century. With regard to the Japanese economy, trade grew 56.1 times, far exceeding the world average, and Japan maintained the third largest trade among free countries. In order to support the growth of trade, a flourishing national economy made necessary a successful shipping industry. In 1975, shipping accounted for 8.3 per cent of the total exchange earnings, which was the highest among all the industries. The average annual gross revenue output of the Japanese shipping industry amounted to 7,700 million dollars.

More recently, the economic depression which began in late 1973 triggered off by the nearly four-times price rise in crude oil drastically changed the world economic situation and the remarkable growth of the Japanese economy also came to an end. During this period, Japanese shipping industries had considerable problems in adjusting themselves to the fluctuating market conditions. The main problem facing them was the reduced competitiveness of the Japanese merchant fleet which was caused by a combination of many factors. Firstly, the inconsistency of the subsidiary policy by the government, in which the shipbuilding industries were favored over the shipping industries in regard to the export ships, weakened the Japanese fleet considerably. Secondly, long-term agreements or cargo guarantees that were concluded for the large-sized oil tankers and specialized bulk carriers benefited the shippers but made the shipping companies financially weaker. The depressed market with a strong reduction in trade and low freight rates meant that shipowners had to make large interest payments to cover their capital loans which had largely supported the expansion of their fleets. Thirdly, in addition to the reduced earnings caused by the above facts, it was remarkable that a substantial rise in operational costs and increased wages to Japanese seamen helped to weaken the competitive ability of Japanese shipowners. Between 1967 and 1974, it is reported that there was an increase

TABLE 6 Development of Japanese Merchant Fleet (1969—1980)

I. Annual Growth by Flag

	Japanese Flag		Foreign Flag (chartered)		Total	
	Number of Vessels	Gross tons (thousands)	Number of Vessels	Gross tons (thousands)	Number of Vessels	Gross tons (thousands)
1969	1,424	19,259	236	3,667	1,660	22,926
1970	1,508	21,185	462	7,030	1,970	28,215
1971	1,531	24,130	592	10,113	2,123	34,243
1972	1,580	27,933	655	12,575	2,235	40,508
1973	1,476	30,623	820	17,718	2,296	48,341
1974	1,427	32,620	973	21,958	2,400	54,578
1975	1,317	33,485	1,152	26,003	2,469	59,488
1976	1,274	34,649	1,142	28,289	2,416	62,938
1977	1,234	33,722	1,174	29,108	2,408	62,830
1978	1,204	30,030	1,290	32,288	2,494	65,318
1979	1,188	33,344	1,200	29,677	2,388	63,021
1980	1,176	34,240	1,329	30,987	2,505	65,227

II. Annual Growth by Vessel Type

	Dry Cargo Vessel		Oil Tanker		Total	
	Number of Vessels	Gross tons (thousands)	Number of Vessels	Gross tons (thousands)	Number of Vessels	Gross tons (thousands)
1969	1,459	14,472	201	8,454	1,660	22,926
1970	1,756	18,842	214	9,373	1,970	28,215
1971	1,881	22,568	242	11,675	2,123	34,243
1972	1,967	26,222	268	14,286	2,235	40,508
1973	2,000	31,108	296	17,232	2,296	48,341
1974	2,058	33,519	342	21,059	2,400	54,578
1975	2,078	34,415	391	25,074	2,469	59,488
1976	1,989	33,865	427	29,073	2,416	62,938
1977	1,995	34,320	413	28,510	2,408	62,830
1978	2,057	35,349	437	29,968	2,494	65,318
1979	1,969	34,535	419	28,486	2,388	63,021
1980	2,078	36,438	427	28,794	2,505	65,227

Source: The Shipping Bureau, Ministry of Transportation, July 20, 1981.

of 1.78 times in ship repairing costs, 1.63 times in the contract price of new ship-building costs, 2.32 times in operating costs, 4.8 times in bunkering costs, and 2.81 times in Japanese seamen's wages. Despite this high cost of Japanese crew, the employment of a certain minimum ratio of Japanese crew on Japanese flag vessels was strongly requested by the government authorities. In striving to minimize the difficulties of employing the expensive Japanese crews, the shipping companies employed an increasing number of "tie-in" ships and "chartered-back" ships (Japanese

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ships once sold overseas and manned with less costly crews from developing nations, to be chartered again by Japanese shipping companies). These "tie-in" ships and "chartered-back" ships were vessels of "flags of convenience" under Japanese control. These vessels increased and in 1976 accounted for about 44.9 per cent of the total Japanese tonnage.

As shown in Table 6, by 1980 the Japanese flag vessels (of over 2,000 gross tons) aggregated 34.24 million gross tons and the Japanese shipping industries had under their control 30.98 million gross tons of chartered foreign flag vessels. The total Japanese fleet amounted to 65.22 million gross tons which was 15.5 per cent of the total world tonnage. In 1975, the Japanese-controlled fleet claimed 53.7 per cent of all exports of the Japanese trade, which meant a great portion of trade was carried by foreign vessels which were controlled by Japanese companies. Only 23.3 per cent of all exports and 45.6 per cent of all imports were left for Japanese flag vessels. In 1980, the figures further declined to 20.5 per cent of exports and 37.4 per cent of imports for Japanese flag vessels.

North-South and East-West problems concerning the merchant marine which had come into focus, coupled with the increasing cargo reservation policy of developing nations for their merchant fleets, and inroads made by the Soviet Union and other East European merchant fleets which were operated on noncommercial principles were also the cause of considerable problems. The changing international environment was further complicated by international conflicts of fundamental interest between North and South and East and West, and the relationship between these conflicts of interest and the traditional principle of shipping freedom. No effective way of solving these problems is, of course, to be obtained without worldwide, concerted action based on an international agreement.

Conclusion

As has been described in detail, at the beginning of the Meiji era, the development of the Japanese merchant marine started from nothing and achieved remarkable growth in the internationally competitive market, becoming the third largest shipping power in the world. With the advent of World War II, however, almost the

entire fleet which had been built with untiring endeavor together with government support and protection was completely demolished and again the rebuilding of the merchant marine had to commence from nothing. Now, almost forty years have passed and, again, the Japanese merchant fleet has rebuilt and ranks second in the world. Although there are many problems at present that need solving, and although these problems may look different from those experienced in the past, as far as the Japanese merchant marine is concerned, its experience in history has proved that the pattern and cause of problems in the world market before and after World War II are very similar and have very much in common. During the world-wide financial panic and nationalistic attitude prevailing in the 1930's, all countries abused protective measures in foreign exchange and trade, resulting in the formation of economic blocs and, ultimately, in war.

In the light of history, it is clear to us that the Japanese economy and Japanese shipping industries were able to survive and make rapid growth only when the country belonged, as one of the members, to the world of the free trade system enabling goods one wants to buy to be purchased freely and those one wants to sell to be sold freely, and that when this was not the case, Japan went to ruin.

There are many problems facing the Japanese economy and shipping industry at present, but there is little that one country by itself can solve or overcome. There is no other way than for Japan to collaborate with Western allies who adhere to the free trade system in every possible way for solving international problems and achieving the common purpose, that is, the steady liberalization of foreign exchange, trade and transportation.

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(Professor of Economics, Graduate School, Kokushikan University)