Chap. 5 : consolidating the transportation system (1922-1937) : coastal and river transport

著者	増田 広実
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At the same time, almost all companies handling freight at the stations, including the agents of the powerful companies mentioned above, were consolidated in 1927 and 1928. This led to the appearance at every station of a series of consolidated companies handling the pick-up and delivery of freight under the new system. After October 1927, however, they were all designated as subcontractors for the pick-up and delivery of special small freight. Under the direction of Kokusai Tsuun, which was now a general contractor, these companies loaded and unloaded, picked up and delivered and handled the arrival and departure of freight at all stations.[3]

Notes

1. Yanagida Ryozo, *Jidōsha sanjū-nen shi* (Thirty-year history of motor vehicles) (Sansui Sha, 1944).
2. Japan National Railways, *Nihon Kokuyū Tetsudō hyaku-nen shi* (Hundred-year history of the Japan National Railways), vol. 8.
3. Railway Ministry, Bureau of Transport, *Kokuyū Tetsudō no kounsō mondai* (Problems in small-scale transport on the National Railways) (Railway Ministry, Bureau of Transport, 1935), and Nippon Tsuun Kabushiki Kaisha, *Shashi* (Company history) (Nippon Tsuun, 1962), chap. 4.

Coastal and River Transport

Hiromi Masuda

Coastal Shipping and the Great Depression

The Great Kanto Earthquake of 1923 created demand that temporarily reactivated an ocean-shipping industry hit hard by the recession of the post–World War I period. But the industry fell back into recession and was undergoing reorganization when the October 1929 New York stock-market crash pushed the world off the brink into the Great Depression. Values of stocks in ocean-shipping companies dropped and the industry fell upon bad times. In January 1931, 320,000 tons of ships were out of commission, and charter fees hit their lowest levels. But the Manchurian Incident broke out in September of that year, and by year's end the re-export of gold had been banned, creating conditions favourable to industrial recovery.

In May 1932, the government set up a Maritime Affairs Council for devising a policy to restore a good economic climate for ocean shipping. The result of the council's deliberations was that in October, a three-year plan was begun to institutionalize the provision of assistance for shipping improvements. The plan called for eliminating excess ship tonnage and introducing the most recent technological advances to the nation's shipping. To do this, all ships more than 1,000 tons and 25 years old were scrapped and subsidies of 45 to 54 yen per ton provided to build new freighters of at

least 4,000 tons and speeds of at least 13 knots, the amount of subsidy being determined by the level of speed and tonnage.

When the first of the three-year-plan periods ended, a second was started, and then a third. Under the plan, 98 old ships (420,000 tons) were scrapped and 48 new ships (300,000 tons) were built. In 1933, a Communications Ministry ordinance was put into effect to regulate the import of used ships and bring about improvements in shipping. Aid for these improvements was budgeted in 1937 as a part of the national policy on ocean shipping; the aid accruing during these three periods resulted in the establishment of superior facilities for ship construction. During the next four years, 300,000 tons of ships were built, each weighing at least 6,000 tons and able to attain speeds of 19 knots or more. In 1939, a legal framework was provided for ship loan assistance and loss indemnification, which led to the building of 105 ships totalling 295,000 tons.

Supported by powerful government aid policies, the shipping industry began in 1934 to extricate itself from the depression and become more active. Beginning in 1935, the excess in ships was gradually trimmed, resulting in an eventual shortage. To ease the shortage, the Communications Ministry announced that it would permit, for the time being, foreign ships and ships registered in Guangdong Province to participate in coastal trade. This special permission reimplemented the Meiji practice of allowing foreign ships to operate in coastal trade, which had been banned by the revised Customs Law of 1900. This extraordinary opening to foreign ships in 1937 is significant in showing that coastal shipping had developed enough subsequent to 1900 that the government could allow foreign ships in again. The 1933 regulations on ship imports allowed a sort of flag-of-convenience arrangement in which ships could be registered in Guangdong Province. Under the special permission, the trade from ships under Guangdong Province registry alone was enough to fuel recovery.

The amount of freight carried by inland shipping began to increase slowly in 1921, was reduced by the 1930 Showa Depression, started to recover in 1934, and continued to increase until 1940 as a reflection of domestic economic conditions. Table 10 in chapter 4 gives statistics for 19 major ports, handling 70 per cent of the nation's marine freight, that show us the freight make-up at the time. First place, in 1935, goes to fuel at 34 per cent (coal 31.3 per cent and oil 2.6 per cent); second place, to construction materials at 13.3 per cent (lumber 5 per cent, cement 3.3 per cent, and sand and gravel 5 per cent); third place, to metals at 10.2 per cent (steel and steel products, 9.8 per cent, copper 0.3 per cent); fourth place, to foodstuffs at 6.9 per cent (rice 3.1 per cent, sugar 1.7 per cent, salt 1.6 per cent, and sake 0.4 per cent), and fifth place, to fertilizer at 3.5 per cent. A comparison of the 1925 and 1915 figures from the previous chapter shows that fuel, food, and textiles were decreasing every year but that construction materials, metals, and ores were increasing. The increases in cement, steel products, and ores stand out, as do the decrease in coal and increase in oil in the

Table 9. Volume and increase or decrease of internal freight shipping (1922–1937)

Year	Tons (1,000)	Index of increase or decrease
1922	34,729	114.7
1923	36,770	121.5
1924	37,877	125.1
1925	38,308	126.6
1926	45,192	149.3
1927	45,842	151.5
1928	53,962	178.3
1929	56,976	188.2
1930	53,421	176.5
1931	52,960	175.0
1932	58,257	192.5
1933	69,753	230.4
1934	77,009	254.5
	81,438	269.1
1935	89,060	294.2
1936	98,653	325.9
1937	106,099	350.5

Source: Nihon yusō shi.
Note: The index of increase or decrease uses 1913 as the base year (see table 8, chap. 4).

fuel category, figures indicating further domestic development of heavy industry.

The Development of Shipbuilding Technology and the Formation of Coastal Industrial Zones

As throughout the First World War, Japan was laying the foundations for modern shipbuilding. This was a time in which further technical improvements were being made to upgrade ship quality and the increase and decrease in number of ships shows what the situation was like.

The nation had 6,312 steamships (3,296,000 tons) in 1922, 7,779 (3,662,000 tons) in 1926, and continued the increase, with 8,511 ships (3,969,000 tons) in 1930. Ship numbers increased slightly in 1932, but gradually decreased to 7,657 in 1938, slightly less than the figure for 1926. However, tonnage continued to increase from 1931, going up to 5,140,000 tons in 1938. A similar situation is seen with sailing-ships: in 1922, there were 35,629 (1,260,000 tons), increasing to 42,161 and 1,270,000 tons in 1926 and then to 50,339 (1,350,000 tons) in 1930. A decline then set in from 1931 to 1934, but a recovery in 1935 brought the total to 51,291 ships (1,380,000 tons). This increase continued until, in 1938, the figures were 56,091 ships and 1,520,000 tons. These trends in shipping can be explained

Table 10. Number of inland steam- and sailing-ships (1922–1938)

	Steamships		Sailing-ships	
End of year	Number	Tons (1,000)	Number	Tons (1,000)
1922	6,312	3,296	35,629	1,259
1923	6,169	3,361	38,725	1,270
1924	6,716	3,565	39,866	1,263
1925	7,323	3,547	40,679	1,270
1926	7,779	3,662	42,161	1,267
1927	8,091	3,729	43,243	1,273
1928	8,149	3,812	45,102	1,303
1929	8,341	3,862	46,512	1,228
1930	8,511	3,969	50,339	1,355
1931	8,077	3,974	48,997	1,335
1932	8,709	3,938	48,306	1,310
1933	7,696	3,832	48,671	1,307
1934	7,712	3,863	49,737	1,334
1935	7,892	3,915	51,291	1,375
1936	8,385	4,091	52,738	1,419
1937	7,785	4,469	54,352	1,478
1938	7,657	5,140	56,091	1,524

Source: Shōwa kokusei sōran (Survey of Showa Japan), vol. 1, p. 443.

by many years of bifurcation in the construction of steamships and sailing-vessels. Two major types of vessels were being constructed: fast, manoeuvrable small boats for inland shipping and large, high carrying capacity ships for ocean transport, while the sailing-ships that were being built were getting smaller and smaller. The changes in steam- and sailing-ships from 1930 on are attributable to the Showa Depression. Further ship improvements strengthened the trend toward bifurcation and resulted in more and more switch-overs to larger ships. Improvements also worked to sharply decrease the building of sailing-vessels from 1931 to 1934.

Of course, larger ship sizes required the technology for bigger engines and hull structures. Older-type diesel engines were improved and put to use as, for example, auxiliary power for sailing-ships and thus were pivotal in their mechanization and in the economic efficiency in new-ship construction.

In 1923, Mitsubishi Shipbuilding built Japan's first ship powered entirely by diesel engines, the *Ondo Maru*, which went into service on the Seto Inland Sea route. Subsequent research was dramatic, leading to the beginning of licensed production of diesel engines. Osaka Shosen put the freighter *Kinai Maru* into service carrying silk on its route to New York in 1930. Diesel engines powered the ship at a 16-knot cruising speed, at least 50 per cent faster than previous freighters. Spurred on by the success of the *Kinai Maru*, more diesel-powered ships were built, so that by 1936, 21.4 per cent

Table 11. Number of motorized and non-motorized sailing-ships (1922–1936)

	Non-motorized		Motorized	
Year	Number	Tonnage	Number	Tonnage
1922	12,835	858,014	1,162	72,044
1926	11,744	737,333	2,440	136,135
1929	10,825	673,316	4,223	212,672
1931	10,213	597,815	5,077	287,226
1934	8,642	489,795	6,419	385,140
1936	7,805	457,711	7,881	472,611

Source: Suzuki Noboru, *Kogata-sen kaiun kumiai ho to kihansen no genjō* (Small Ship Operators' Association Law and the situation for motorized sailing-ships) (Nihon Kaiji Tosho Shuppan, 1959), p. 85.

of Japanese ships had diesel engines, surpassing the 18.9 per-cent world average.

Meanwhile, surveys on registered sailing-ships of 20 tons or more revealed that more were being equipped with auxiliary engines. The 2,440 ships (136,135 tons) of 1926 rapidly increased to 7,881 ships (472,611 tons) in 1936, motorized sailing-ships thus surpassing the number of ordinary sailing-ships (7,805 [457,711 tons]), a trend that would continue.

Production in the heavy and chemical industries increased dramatically chiefly through armaments manufacture stimulated by the 1931 Manchurian Incident. Inland freight shipping increased its handling of metals, ores, and construction materials in response to increased production; these materials were transported to large factories near the ports and harbours. Inland freight shipping was well suited to transporting heavy materials, and the ports became not just connections between land and sea transport but areas of productive activity. The building of ports as part of large seaside industrial areas was actively promoted at this time. Onahama, Hakata, and Hiroshima were newly added to the list of important ports, while reconstruction projects were in full swing at Shimizu, Yokkaichi, Oita, and Miyako.[1]

Increased Motor-Vehicle Use and the Decline of River Transportation

The only inland rivers where boats still carried cargo were the Tone and Edo rivers in Kanto, the Takahashi, Go, and Ota rivers in Chugoku, and the Shimanto River in Shikoku. But all of these cases represented small-scale operations, fast drawing to a close, except for the larger-scale transport along the Tone and Edo rivers, where, in 1921, 11,932 boats carried 260,051 tons of cargo through the Tone Canal. But 10 years later, in 1931, those figures were halved to 6,043 boats and 121,537 tons, making

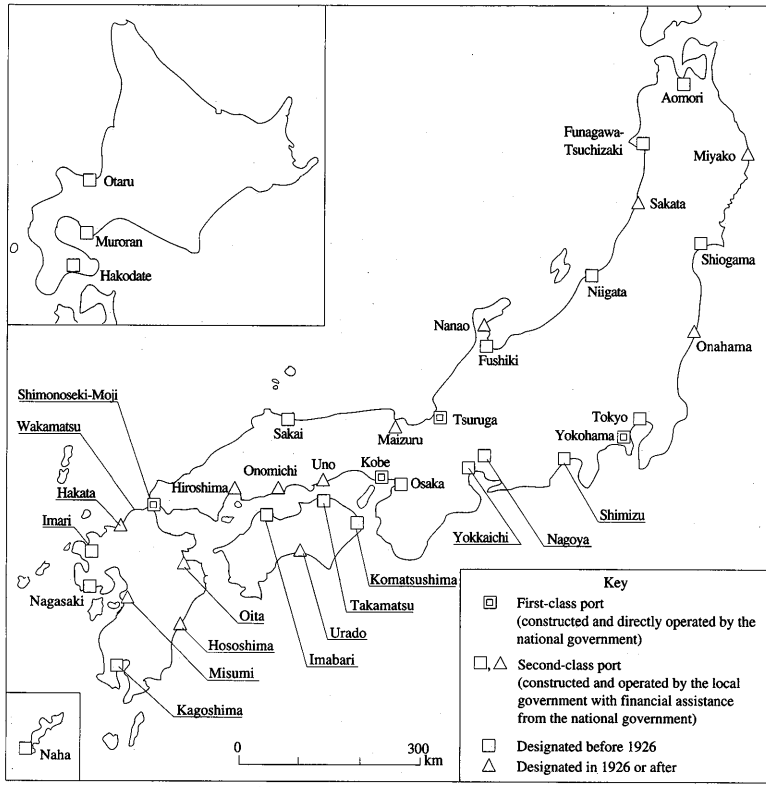

Fig. 4. Distribution of important ports in 1930

apparent a weakening trend. This halving every decade started around 1911, but figures for Tone Canal dropped by half in just six years from 1931 to 1937.[2]

Naikoku Tsuun gave up its steamboat operations along the Tone in 1919 and sold them to Tokyo Tsuun. Operations gradually worsened for this company, too, until, in 1931, it sold its steamboats to Tokyo Kisen. The development of land transport, electric railroads and buses, gradually took passengers away from the boats, the latter unable to compete in speed. Large-cargo owners like the soy sauce brewers of Choshi and Noda temporarily increased the total volume of cargo shipping to Tokyo on small cargo boats, but the overall decline continued, and most small owners got out of business altogether. The 1941 closing of the Tone Canal was the decisive blow.[3] But the major cause of river-boat business decline was bus and lorry transport: in 1930, lorry transport had grown so much it was handling 47 per cent of domestic cargo.[4]

Growth in trucking had a major impact on intra-urban barge transport, too. Another thing working against barge transport was the direct railroad-to-port link between land and ocean transport that increased cargo-hauling efficiency. A further blow to the barge was the more active construction of modern ports, which eliminated the need for small-vessel water transport. Some examples of what happened are given next.

Tokyo's Hinode Pier, built in 1925, the sea wall at Shibaura (1932), Takeshiba Pier (1934), and the port itself (1941) were all facilities connecting large ships to land transport.[5] Prior to this, in 1918, the Etchujima Line was constructed from Kameido along the north-east coast of Tokyo Bay, and the Onagi River freight depot was opened for business in 1929. The Shibaura Line, which starts at Shiodome Station, was constructed in 1927, and Shibaura Station was opened to traffic in 1930. Piers were built at Yokohama's Omote Takashima Station that could dock six 5,000-ton-class ships and two 3,000-ton-class ships at the same time, and at Yamauchi-cho Station piers were constructed that could dock three 5,000-ton-class ships at the same time. All these piers opened for service in 1934. The port of Kawasaki was opened in 1933, but before that, in 1918, a railroad line running from Kawasaki Station to the industrial area of the city was constructed, and Hamakawasaki Station opened in 1918. Nambu Railway began services in 1930 between Shitte and Hamakawasaki. Tsurumi Harbour Railway started operating between Tsurumi and Ogi-machi in the same year. Construction started in 1922 on a line running adjacent to the port of Osaka and a branch from Imamiya on the Kansai Line was completed in 1928. Ajikawaguchi and Sakurajima stations on the Nishinari Line were both remodelled, and the line was opened as far as Osaka-shijo Station in 1931. In addition, train tracks were laid and freight depots opened at the ports of Kobe, Shimonoseki, Moji, Niigata, Toyama, Tsuruga, and Nagasaki in projects undertaken at the same time as port and harbour reclamation.[6]

Although not connected to port railways, there were three stations built as freight depots directly connected to intra-city boat transport. Construction to elevate the tracks at Tokyo's Akihabara Station started in 1923, but the damage due to fire after the Kanto earthquake kept the project from being completed until 1932. The space under the elevated tracks was used to warehouse freight and its proximity to the trains allowed it to function in ways that previous warehouses could not. The freight depot at Osaka Station was separate, built behind it as Umeda Station in the Umeda district. Freight handling at Osaka Station had reached the saturation point, with more than 1,500,000 tons of freight a year coming through Minami Horiwari, a canal that runs along the south side of the station and into the Dojima River, one of the many that traverse Osaka. Umeda Station was completed in 1928, and since 30 per cent of the freight it handled was by boat, Kita Horiwari Canal was cut through Minami Horiwari Canal and electric gantry cranes were installed in 1930. The fan-shaped Kita Horiwari was 53 m wide and 237 m long, and a new 18-m-wide, 160-m-long load-

ing dock was constructed alongside the existing one. The area under the elevated railway was operated as a warehouse from 1936 on.[7] The digging of the Nakagawa Canal in Nagoya took from 1926 to 1931. The Nakagawa is a large canal, with three anchorage sites, and is 8,400 m long, 36 to 91 m wide, and 1.2 to 3 m deep. The canal begins in the heart of the city at Sasajima Station and empties into Nagoya Harbour. The decision to construct Sasajima Station had been made when it was decided to separate the passenger and freight stations at Nagoya, and the link with the Nakagawa Canal was opened in 1937. Here, too, the space under the elevated railway was used as a warehouse, which opened for business in 1937, at the same time as the station.[8]

Notes

1. *Naimushō shi* (History of the Home Ministry), vol. 3 (Taikakai, 1971), pp. 85–86.
2. Kawana Haruo, *Tone Unga shi* (An account of Tone Canal) (Ronshobo, 1971), pp. 87–89.
3. Matsumura An'ichi, "Tonegawa kisen kōtsū no hensen" (Changes in steamboat transport on the Tone River), in *Kotsu Shi Kenkyu* (Historical review of transport and communications), no. 7, p. 15.
4. *Shōwa kokusei sōran* (Survey of Showa Japan), vol. 1 (Toyo Keizai Shinposha, 1980), p. 419, "Kokunai kamotsu yusō no kikan betsu wariai" (Proportion of domestic freight transport according to transport mode); note that in the same year figures for railroads were 35.1 per cent, for ships 18.0 per cent, and for airlines 0 per cent.
5. *Tōkyō-kō shi* (History of the port of Tokyo) (Tokyo, 1962).
6. *Nihon Kokuyū Tetsudō hyaku-nen shi* (Hundred-year history of the Japan National Railways), vol. 9, pp. 252–254.
7. Ibid., pp. 242–244.
8. Ibid., p. 253.