

A railroad ferry service began between Wakkanai and Otomari (now Korsakov) as part of the railroad network connecting Hokkaido and Sakhalin (formerly Karafuto), but the different automatic coupler heights prevented freight-car ferrying. Standard passenger-cargo ferries were used, all of them with ice-breaking capability.

Note

1. A rail in which one metre of length weighs 37 kilograms. Measured in yards and pounds, this is a 75-pound rail (75 pounds per foot).

Roads

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Increase in Motor-Vehicle Imports and the Development of Domestic Production

The years from the Great Kanto Earthquake of 1923 to the outbreak of the Sino-Japanese War in 1937 mark a period in which policies of economic rationalization were sought to deal with the Great Depression and the economy moved rapidly into a wartime stance. The import of vehicles and parts during the period stimulated further progress in motorization and thus further progress in road transportation. Road-transport businesses were also quickly organized and integrated so that transport costs could be reduced and the building of the transport system completed. Motor vehicle transportation in Japan really began to thrive in the 1910s, particularly through the use of imported passenger cars, with hired cars, taxis, and even motorized buses appearing everywhere in the country around 1920. Not many lorries were in operation until the post-earthquake recovery period, but they showed their usefulness in emergency transport at that time. Ford- and General Motors-produced motor vehicles were now quickly beginning to supplant the European models previously imported. In 1925, Japan Ford set up a plant in Yokohama, and, in 1927, Japan General Motors built its plant in Osaka, all funds for which the companies provided themselves. The import of completed motor cars and the assembly of imported parts by these two giants overwhelmed the nascent native motor car makers and gave the foreign giants rule over the Japanese market until the mid-1930s (see tables 3 and 4). Damage from the 1923 earthquake and the incursion of foreign motor cars into the domestic market presented a series of crises for Japanese motor car manufacturers. Around 1930, to improve the balance-of-payments picture, the government adopted a policy designed to promote the domestic manufacture of motor vehicles through grants-in-aid for the production of lorries and buses designated as standard by the government. This provided the impetus for three powerful companies – Ishikawajima

Table 3. Motor vehicle and parts imports (1922–1933)

Year	Complete units			Total (¥1,000)
	Number	Cost (¥1,000)	Parts (¥1,000)	
1922	752	2,216	5,093	7,309
1923	1,938	4,955	8,527	13,482
1924	4,063	8,772	12,413	21,185
1925	1,762	4,630	7,062	11,692
1926	2,381	5,324	10,397	15,721
1927	3,895	8,063	10,218	18,281
1928	7,873	13,770	18,474	32,244
1929	5,018	9,545	24,062	33,607
1930	2,591	4,896	15,876	20,772
1931	1,887	3,378	12,951	16,329
1932	997	2,894	11,927	14,821
1933	491	1,864	12,806	14,670

Source: Toyo Keizai Shinposha, *Nihon bōeki seiran* (Figures on Japanese trade).

Note: Figures are rounded off to the lowest ¥1,000-unit.

Table 4. Number of foreign motor cars assembled in Japan (1929–1936)

Year	Number	Year	Number
1929	29,338	1933	15,082
1930	19,678	1934	33,458
1931	20,109	1935	30,787
1932	14,087	1936	30,997

Note: Survey by Ministry of Industry, quoted in Ozaki Masahisa, *Nihon jidōsha shi* (History of motor vehicles in Japan) (Jikensha, 1942).

Motor Vehicle Manufacturing, Datto Motor Vehicle Manufacturing, and Tokyo Gas and Electric Manufacturing – to work together on five standard test-production motor vehicles (two lorries and three buses), which they completed in March 1932. Government policies also led to the creation in June 1934 of Nissan Motor Company and, in August 1937, of Toyota Motor Manufacturing, the first steps in firming up the domestic production system. However, these companies were unable to produce full-sized motor vehicles; most of those produced before 1937 were small vehicles with maximum engine displacements of 750 cc (table 5).¹

The Development of Motor Vehicle Transportation

Road transportation in the 1920s and 1930s was marked by the decline of the old modes – the horse-drawn carriage, the rickshaw, and the hand cart –

Table 5. Number of motor vehicles produced in Japan (1930-1937)

Year	Standard vehicles				Small vehicles				Total
	Lorries and buses	Passenger cars	Total	Four-wheel	Three-wheel	Two-wheel	Total	Electric cars	
1930	458	—	458	—	300	1,350	1,650	—	2,108
1931	434	—	434	2	552	1,200	1,754	—	2,188
1932	696	—	696	184	1,511	1,365	3,060	—	3,756
1933	1,055	—	1,055	626	2,372	1,400	4,398	—	5,453
1934	1,077	—	1,077	1,710	3,438	1,500	6,648	—	7,725
1935	1,181	—	1,181	3,908	10,358	1,672	15,938	25	17,144
1936	5,004	847	5,851	6,335	12,840	1,446	20,621	29	26,501
1937	7,643	1,819	9,462	8,593	15,230	2,492	26,315	68	35,845

Source: Un'yu Keizai Kenkyu Senta, Kindai Nihon Yuso Shi Kenkyu Kai, eds., *Kindai Nihon yusō shi* (History of transport in modern Japan), pp. 454-455.

and the rapid increase of the new – motor vehicles and bicycles. Rickshaws and horse-drawn coaches declined dramatically as they were forced into competition with the bus and bicycle, so that by 1937 there were one-sixth as many horse-drawn coaches as there were in 1920 and one-seventh as many rickshaws. But horse, ox, and hand carts had the power to resist this trend, the ox carts even increasing throughout the period (see table 6). The persistence of these older modes of transportation occurred despite the increase in the number of lorries – 60 times as many in 1937 as in 1920 – and is attributable to the limited range of motor vehicles due to the lack of roads outside the major urban areas adequate for motor-vehicle use. The situation for freight was different from that for passengers, because freight had to be collected at the shop front and a regional road network for transporting the freight had to be built. Road conditions were a major factor in the declining use of horse-drawn coaches and rickshaws for passenger traffic and yet, simultaneously, in the persistence exhibited by horse, ox, and hand carts used in transporting freight.

In the early 1930s, the foreign-funded companies mentioned earlier were supplying motor vehicles at such a high rate that the number owned (table 7) was rapidly increasing and proving to be a threat to the railroad's short-distance shipping of freight and passengers. A 1930 Railway Ministry survey showed that privately operated motor vehicles had taken over 41 per cent of the freight and 12 per cent of the passenger traffic carried over distances of 50 km or less. This is one of the reasons that the Railway Ministry in December 1930 began operating its own buses. By the end of 1936, it was running buses on 58 routes extending over 1,980 km.²

The increase in the use of motor vehicles in urban transit was also dramatic. This is clearly shown in table 8, which was taken from the Tokyo Electric Bureau's *Tōkyō-shi toshi kōtsū tōkei shiryō* (Statistical resources on urban transit in the city of Tokyo) for fiscal 1935. We see that buses and taxis carried one out of every three persons riding public transit in fiscal 1935. The figures for bus companies operating in the city in that year were 1 city-operated, 11 operating in conjunction with private railroads, and 35 others. The number of vehicles owned was 2,578, with 3,327 drivers and 3,460 conductors. A total of 14,674 taxi companies owned 23,160 vehicles, and 10,604 of those companies were one-vehicle operators. However, the number of people being transported was increasing every year, and by 1935 it was close to the number of people being carried on the private railroads. Enforcement of the October 1933 Motor Vehicle Transportation Law made the railway minister the licenser of the motor vehicle transport industry, replacing the prefectural governors, and provided a uniform system of licensing standards that eliminated many problems created by a market flooded with too many small operators.

Unification of Railroad Freight Handlers

The good economic conditions during the First World War not only worsened the glut of small railroad freight handlers on the Japanese market

Table 6. Numbers for all vehicles, 1928-1937

Fiscal year	Horse-drawn				Motor vehicle				
	Passenger	Freight	Ox cart	Cart	Rickshaw	Motor cycle	Passenger	Freight	Bicycle
1928	2,232	315,933	85,278	2,116,281	43,463	19,028	40,281	20,252	5,025,124
1931	1,545	296,560	94,960	1,752,962	36,618	24,560	62,419	34,837	6,000,450
1934	1,320	299,702	101,041	1,565,936	23,247	42,057	70,481	42,059	6,895,256
1937	1,096	306,793	111,146	1,519,334	15,376	?	75,740	52,995	7,878,463

Source: *Nihon Teikoku tōkei nenkan* (Statistical yearbook of the Empire of Japan).

Table 7. Number of motor vehicles owned (1930-1937)

Calendar year	Standard vehicles				Small, four-wheeled vehicles				Total	Special-use vehicles	Total	
	Lorries	Buses	Passenger cars		Lorries	Passenger cars		Total				
			Lorries	Buses		Lorries	Passenger cars					
1930	30,881	17,522	40,305	88,708	—	—	—	514	2,513	14,284	587	106,606
1931	34,837	21,226	41,193	97,256	—	—	—	572	5,260	14,638	515	118,241
1932	35,939	22,825	41,457	100,221	—	—	—	630	9,074	15,048	163	125,136
1933	38,199	24,822	41,911	104,932	302	590	892	892	11,753	11,229	6,006	134,812
1934	42,060	26,328	44,153	112,541	607	1,223	1,830	1,830	24,388	13,330	4,493	156,582
1935	46,918	28,428	45,580	120,926	1,021	3,968	4,989	4,989	30,842	14,807	4,688	176,252
1936	51,338	28,745	46,165	126,248	4,272	6,194	10,466	10,466	39,891	14,220	4,411	195,236
1937	52,995	24,344	51,396	128,735	8,137	8,658	16,795	16,795	47,859	16,131	4,616	214,136

Source: *Kindai Nihon yusō shi* (History of transport in modern Japan), pp. 466-467.

Table 8. Percentages for transport modes in Tokyo (1926-1935)

Fiscal year	Total number of persons transported	Percentages of total					
		Municipal electric railway	National (Railway Ministry) electric railway	Underground	Private railway	Bus	Taxi
1926	881,613,452	50.1	27.6	0.0	14.3	5.9	2.1
1927	974,590,162	45.1	28.5	0.0	15.1	7.8	3.5
1928	1,099,088,513	40.5	29.0	0.7	16.4	8.4	5.0
1929	1,153,535,430	36.5	28.8	0.7	17.0	9.2	7.8
1930	1,106,740,822	33.4	29.1	0.9	17.2	10.8	8.6
1931	1,076,450,698	31.2	28.9	1.0	16.7	12.9	9.3
1932	1,102,482,423	27.3	28.4	1.3	16.4	14.7	11.9
1933	1,177,444,847	25.1	28.2	1.5	16.0	16.4	12.8
1934	1,275,687,499	22.5	27.9	2.0	15.6	18.0	14.0
1935	1,373,891,385	21.4	27.9	2.1	15.6	17.8	15.2

Source: Tokyo-shi Denki Kyoku, ed., *Tokyo-shi toshi kōtsū tōkei shiryō* (Statistical resources on urban transit in the city of Tokyo), 1936, p. 36.

and provided obstacles to improved transport efficiency at both the pick-up and delivery ends, it also made apparent many defects, including even the lack of a system to calculate liquidations of debits and credits between operators and financially capable and trustworthy agents. The characteristics of the business itself kept it out of direct postwar competition with foreign capital and made even more immediate reforms to eliminate the bad effect it was having on the nation's economy.

The system to officially recognize railroad freight handlers that went into operation in June 1919 was designed to improve the quality of the industry and weed out the chaff by selecting those railroad freight handlers with a comparatively high degree of financial ability and trust and making their names publicly available. But the Railway Ministry failed to take any concrete measures that would be beneficial to weeding out the bad operators; all that was done was to use a system of official recognition that it was hoped would bring about voluntary reform from within the handlers themselves. However, the work was such that basically it had to be done in vastly disparate locations and at very different times and did not lend itself easily to taking advantage of economies of scale. These factors and the increase in the unemployed and decline in wages during the postwar recession made it very difficult to eliminate the inefficient operators through internal reform and the natural attrition of competition. Thus, although there were great expectations of what the system of official recognition would do, it ran into innumerable obstacles.

Having failed with the recognition system to get the expected reforms in the freight handlers' industry, railway officials had to intervene further in the industry in order to achieve their objectives. This intervention came in the form of a Railway Ministry declaration (June 1926) that sought the consolidation of railroad freight handlers. Based on this and subsequent ministry pronouncements, the pivotal point of new freight policy was that the railways would be responsible for both delivery and pick-up of small consignments, and delivery (later pick-up also) would be entrusted to groups that followed the ministry's guidelines. Some operators strongly protested these guidelines as a violation of tradition and a threat to freedom of operation. But those who relied on the railroads for most of their business went along.

Under these circumstances, the industry began to consolidate – in capital and in other areas – from the autumn of 1926 to the spring of 1928. In October 1926, Godo Unso (Consolidated Transporters) was formed in Tokyo through the funding of three major companies in the area: Naikoku Tsuun, Kokusai Unso, and Meiji Unso. During the next year, it proceeded to bring a series of important companies from all over the country into its net. In October 1927, it was designated as a general contractor, charged with acting as master contractor for special small freight and other items for pick-up and delivery. The amalgamation of Godo Unso and the other three major companies in March 1927 created Kokusai Tsuun, the transport contractor monopoly in the Tokyo area.

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