rent as part of the programme to modernize motive power was planned to start in 1953. In 1957, the National Railways succeeded in using 50 hertz (60 hertz west of Fujikawa and Himekawa) commercial frequency, 20,000 V single-phase alternating current, a valuable contribution to reducing the number of substations and improving the operating efficiency for both trunk and local lines. The later technological success of the Shinkansen was due to the achievements made with the Shonan electric trains, the new performance electric trains, and the use of alternating current.

Roads

Hirofumi Yamamoto

Postwar Reform and Road Transport

The end of the Pacific War changed road transport conditions completely by destroying the basis of the system of small transporters and moving system reform forward rapidly, particularly through the abolition of the two laws on small transport.

Reform in the small transport system provided one of the major features of the first part of the postwar era; the reform aimed at increasing the number of small transporters at each station and reorganizing Nippon Tsuun. The move to increase the number of small transporters, carried out with the backing of several laws to democratize the economy – including the April 1947 Anti-Trust Law and the December 1947 Law to Remove Excess Concentrations of Power in the Economy – could not be resisted even by Nippon Tsuun, singled out as a company possessing an excessive concentration of power in the economy. In November 1948, the Transportation Ministry issued a general plan for a system of more than one small transporter at each station and set up a Small Transport Council to investigate licensing standards and other important matters. Their deliberations resulted in the announcement in March 1949 of new licensing standards and the installation of more than one transporter at 33 stations, this number increasing subsequently. The Railroad Freight Handling Operations Law of February 1950 abolished the framework for specifying multiple-operator stations and uniformly licensed all operators meeting with the licensing standards.

Designation as an excess concentration of economic power under the law and abolition in December 1949 of the (1937) Nippon Tsuun Kabushiki Kaisha Law forced the part-government, part-private small-transport overseer to thoroughly reorganize. Concerning the ordered reorganization in relation to excess concentration of economic power in order to ensure that such critical commodities as wheat and rice would get transported, the rather mechanical break-up plan initially proposed was replaced by planned restructuring centred on the transfer of railway station facilities for small transport, ships, and shares in other companies. This part was completed in June 1951. Abolishing its status as a company of "national importance" and

Table 2. Changes in the number of road transporters (1946–1954)

Fiscal year ending	Lorry operators				Bus/hired vehicle/taxi operators				
	Routes	Zones	Other[a]	Total	Buses	Hired coaches	Hired vehicles/taxis	Other	Total
1946	77	736	—	813	222	120	801	—	1,143
1948	145	829	151	1,125	255	120	846	—	1,221
1950	282	1,108	273	1,663	303	312	1,438	161	2,214
1952	363	1,741	1,696	3,800	326	373	2,251	27	2,977
1954	483	3,473	4,021	7,977	341	616	3,288	25	4,270

Source: Ministry of Transportation, *Rikuun tōkei yōran* (Statistics on land transport).
[a]Figures include small lorries.

reorganizing it as a private company was effected through the obliteration of the Nippon Tsuun Kabushiki Kaisha Law and revising the company's articles of incorporation. Paralleling these measures was the February 1950 abolition of the Small Transporters Law. In its place, the Railroad Freight Handling Operations Law, enacted in December 1949, went into force in February 1950 to preserve free competition but keep the market from being flooded with small producers.

The Law on Motor Vehicle Transport Operations, the major support for wartime control of the motor-vehicle transport industry, was abolished in December 1947. In its place, the Road Transport Law was enacted (December 1947) and went into effect in January 1948; its purpose was to democratize operations and administrative control and to create order in road transport, including private vehicles. At the same time, new licences were being issued in a constant stream for operators of hired cars, taxis, buses, and lorries. This resulted in a rapid increase in operators from 1950 on (see table 2) and the achievement of new levels of progress based on free competition and the general licensing system.

Motorization

The most important feature of road transport after the postwar reforms was motorization. Freight and passenger transport by motor vehicle had begun to flourish in Japan around 1910, and by 1930 it was starting to cut into the railroad business. But the lack of fuel and parts during the war prevented any subsequent progress, and the flowering of motorization was yet to be witnessed.

This situation changes greatly as postwar economic recovery continues. The first supply of motor vehicles came from the purchase of vehicles from Occupation forces and privately from Occupation personnel. The supply began to grow around 1950 as domestic motor-vehicle manufacturers

Table 3. Number of motor vehicles produced (1947–1954)

Fiscal year	Passenger cars	Lorries	Buses	Light vehicles	Total
1947	110	18,538	104	—	18,752
1948	381	36,063	775	—	37,219
1949	1,008	52,349	2,070	—	55,427
1950	1,683	61,915	3,502	—	67,100
1951	5,118	72,107	4,018	—	81,243
1952	5,082	101,037	4,193	126	110,438
1953	11,380	148,194	5,420	1,767	166,761
1954	14,414	133,366	5,566	1,279	154,625

Source: Un'yu Keizai Kenkyu Senta, *Kindai Nihon yusō shi* (History of transport in modern Japan), pp. 568–569.
Note: Two-wheeled vehicles not included.

strengthened in their recovery, which eventually led to a five-fold increase in vehicles, from the 165,000 at the end of fiscal 1946 to 815,000 at the end of fiscal 1954 (see table 4).

This increase in the number of vehicles brought on a rapid increase in the amounts of passengers and freight carried and in the motor vehicle's share in the transport market. Motor vehicles increased both the amount they carried and their portion of the market, transporting 200 million ton-kilometres (7.8 per cent) of freight in fiscal 1946, which rose to 890 million ton-kilometres in fiscal 1954 (13.0 per cent), and transporting 610 million passenger-kilometres (5.3 per cent) in 1949, rising to 2,410 million passenger-kilometres in 1954 (15.5 per cent). In time, the motor vehicle gradually began to eat into the railroads' transport monopoly.

Revision of the Road Law and the Rebuilding of Roads

The brutal way in which roads were used during the war, the difficulties in making repairs, and the damage from bombing and shelling left all national and prefectural highways and municipal roads in horrible condition. The Road Law of April 1919 (effective from April 1920) was the basis for supervising and repairing roads, and under this law, planning and use were centrally controlled, while funding was a matter of local responsibility. This arrangement remained unchanged, but the war left the prefectural governments, responsible for paying the costs of national highway repair and upkeep, with no financial resources.

The first projects after the war were related to the repair of national and prefectural highways as part of the link-up of installations requisitioned by the Allied forces. These projects were a primary aspect of road construction up to 1948 and were paid for by reserve funds, war-end fund allocations, and other high-rate subsidies from the national government. In areas with many facilities such as Kanagawa, Fukuoka, Yamaguchi, Nagasaki, Aomori, and Tokyo, the amount of construction of this type was concomitantly large. But with the construction confined to designated areas, it did little in contributing to an overall improvement in the road situation.

In November 1948, SCAP submitted a memorandum on a five-year plan to maintain and improve the Japanese highway and street network and ordered the government to implement the plan. The memorandum called for the adoption of four types of roads: (1) roads necessary to the development of farm, forest, manufacturing, and mining; (2) city roads for the regular transit of motor vehicles; (3) roads that connect major traffic centres; and (4) roads connecting those indicated in 2 and 3. The government was to reply within 60 days on its plan for fiscal 1949 and within 180 days for its plans on the remaining three years.[1]

Construction from fiscal 1949 to 1952 was based on a government plan that in turn followed the memorandum and consisted mainly of repair work paid for by national treasury subsidies. By the end of fiscal 1952, the improvements were as shown in table 7.

Table 4. Number of motor vehicles owned (1946–1954)

	Registered vehicles					
Fiscal year ending	Passenger cars	Lorries	Buses	Special-use vehicles	Light vehicles	Total
1946	26,473	119,999	11,981	7,263	—	165,716
1948	31,480	183,321	13,373	15,600	—	243,774
1950	48,309	279,677	20,425	12,653	122	361,186
1952	91,956	419,387	25,783	18,965	156	556,247
1954	139,078	611,556	32,644	28,938	2,889	815,105

Source: *Kindai Nihon yusō shi*, pp. 584–587
Note: Two-wheeled vehicles not included.

Table 5. Volume and share of domestic cargo transport classified by transport means (1946–1954) (in million ton-kilometres and percentages)

		Railroads		Motor vehicles		Inland shipping		Airlines	
Fiscal year	Total	Number	Share	Number	Share	Number	Share	Number	Share
1946	25,652	19,352	75.4	2,000	7.8	4,300	16.8	—	0.0
1948	41,067	26,867	65.4	2,800	6.8	11,400	27.8	—	0.0
1950	54,824	33,824	61.7	5,400	9.8	15,600	28.5	—	0.0
1952	63,579	39,879	62.7	6,500	10.2	17,200	27.1	—	0.0
1954	68,473	40,572	59.3	8,900	13.0	19,000	27.7	1	0.0

Source: ***Kindai Nihon yusō shi***, pp. 528–529.

Table 6. Volume and share of domestic passenger transport classified by transport means (1949–1954) (in million passenger-kilometres and percentages)

Fiscal year	Total	Railroads		Motor vehicles		Passenger ships		Airlines	
		Number	Share	Number	Share	Number	Share	Number	Share
1949	114,640	104,440	91.1	6,100	5.3	4,100	3.6	—	0.0
1950	117,870	105,570	89.6	9,000	7.6	3,300	2.8	—	0.0
1952	138,396	120,127	86.8	15,500	11.2	2,700	2.0	69	0.0
1954	155,832	129,550	83.1	24,100	15.5	2,000	1.3	182	0.1

Source: Kindai Nihon yusō shi, pp. 532–533.

Table 7. Improvements in national and prefectural roads for 1952 (km)

	National	Prefectural
Length	24,052	116,605
Improvements completed	7,246	22,419
Pavement completed	3,190	4,440

Source: Ministry of Transportation, *Dōro gyōsei* (Highway administration), edition for fiscal 1980.

Table 8. Improvements in national, prefectural, and municipal roads for 1954 (km)

	National	Prefectural/municipal
Length	24,092	120,695
Improvements completed	7,652	24,518
Pavement completed	3,781	5,498

Source: Dōro gyōsei, edition for fiscal 1980.

On 10 June 1952 a new Road Law was enacted and went into effect on 5 December of that year. Based on the concept that highways were state property and should be centrally controlled, the old 1919 Road Law gave priority to military and administrative needs in route selection and other essentials. Although the national treasury bore the entire cost of specified military roads and designated national highways and part of the cost to construct or reconstruct ordinary national highways, highway costs were generally borne by local governments.

Not only was this thinking out of tune with the postwar administrative structure based on the Local Autonomy Law, it was regressive with regard to recovery and development of the national economy. Consequently, as a part of post–Korean War economic development, the Road Law was completely revised to make it more congruent with economic aims and the new administrative framework. The revised Road Law divided roads into four categories: class one national highways, class two national highways, prefectural roads, and municipal roads; it designated the prefectural governors as the supervisors of national highways, the prefectural governments as the supervisors of prefectural roads, and the municipal governments as the supervisors of municipal streets and roads. A series of special legislation and government ordinances on road repairs was enacted around this time, and in 1954 the first five-year road-building plan was started (adopted by the cabinet in May 1954; estimated total project cost of ¥260 billion). The road improvement performance up to the end of fiscal 1954 is illustrated in table 8.

Note

1. See Nihon Doro Kyokai, *Nihon dōro shi* (History of Japanese roads) (Nihon Doro Kyokai, 1977), pp. 1365–1368.

Inland Shipping

Hiromi Masuda

Inland Shipping during the Occupation

Japan's defeat in the Pacific War in August 1945 precipitated a new era for inland shipping, with vessels drastically reduced and operations now placed under the control of SCAP rather than the central government.

With 6 million gross tons of registered ships before World War II, Japan could boast of being the world's third-largest shipping nation. But, at the end of the war, the crippled merchant fleet was down to about 1.5 million gross tons, 70 per cent of which was standard wartime ships of inferior performance and the remaining 30 per cent were prewar ships of an average age of 22 years. The result was a greatly reduced transport power. In 1945, Japanese inland shipping carried only 24,756,000 tons of cargo and made a cumulative 997,000 entries into the nation's ports. That is only 24 per cent of the tons transported and 13.6 per cent of the port entries for 1940. This downward trend continued, so that by 1946 cargo tonnage had fallen to 17,551,000 tons and port entries had dropped to 961,000, which, relative to the 1940 figures, gave percentages of 17 and 13, respectively. The figures show how badly the Pacific War had decimated Japan's ships.

The deterioration in inland shipping came not just from ship losses but also from American air attacks on port and harbour facilities – sheds, warehouses, barges, buoys – and from mines laid in ports, harbours, and shipping routes. At the end of the war, the Bureau of Merchant Marine Supervision, which had been temporarily installed in Imperial Headquarters, was abolished, and the responsibility for merchant marine affairs was given to the Transportation Ministry and the Civilian Merchant Marine Committee. Under SCAP Order No. 1 of 2 September 1945, the movement of Japanese ships was prohibited, and the next year, Order No. 2 placed all commercial vessels of 100 gross tons or more under SCAP control and immediately under the direction of the commander of the US Pacific Fleet. In October 1946, SCAP transferred the supervision and control of shipping to SCAJAP.[1] The Civilian Merchant Marine Committee was an organization under SCAJAP and its task was to unify the operation and administration of ships used by the national government, a role that it continued until the peace treaty was signed in 1952.

In view of the military role merchant shipping had played under Japanese government protection, SCAP laid down strict guidelines for its control. It was that military role that gave the occupation one of its reasons for initially