Maintaining Public Transport in Japan's Countryside - Burden Sharing and Subsidies

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Bankrupt Local Bus Company

In March 1968, Kochi Prefectural Transport Co. Ltd., a local bus company, went bankrupt. The company had been capitalized at ¥240 million and its debts totalled ¥2,123 million, nearly nine times its capital. This made news because the director in charge of accounting disappeared and the company was found to owe a large amount of money to a 'loan shark.' More importantly, it cast dark shadows over the future of local bus companies. The company was relatively large, serving the people of Kochi Prefecture in Shikoku, one of the four main Japanese islands. Most of the local bus companies in Japan were established as small, private enterprises in the 1920s and 1930s. Under the wartime controls in the 1940s, they were unified on a prefectural basis resulting in one to several companies of relatively large scale in each prefecture.

There were two bus operators in Kochi Prefecture, and the Company was the larger of the two. The entire prefecture was well served by many routes including those from the Prefectural capital, Kochi City (population 300,000) to Cape Ashizuri. From the end of WWII to the early 1960s, the Company's buses were known as the 'red buses' among the local people who rode them regularly. The Company thrived from the profitable express bus services between cities and expanded to the less-profitable rural areas. Then, full-scale motorization began as part of the rapid postwar economic growth. At the same time, many people moved from rural to urban areas. Local bus companies, including Kochi Prefectural Transport Co., soon found themselves suffering from these social changes.

The bankruptcy meant sudden abolition of bus services for local people, for high-school students riding the bus everyday and for elderly people who had to go to hospital regularly. The community suddenly faced the need to secure a means of transportation for the 'transportation poor'. The Prefectural government prepared a temporary grant to maintain the bus services after the company was wound up. The grant helped save the bus services for a time, but the Company's main bank stopped all loans until it could submit realistic rehabilitation plans. The Company carried out the first plan in May 1968. The plan called for reducing the capital by 70% and converting loans into ¥200 million of equity. The plan also called for selling the Company's head office in the centre of Kochi City, which also served as its bus terminal, as well as the sale of a toll road that the Company owned.

The Company's shareholders changed completely after the equity swap. Half the management team was also replaced. The president, who was a member of the local plutocracy, was replaced by a government officer from Kochi Prefectural government. The first plan was implemented smoothly and a second plan was finalized in January 1969. It called for 40% reduction in the number of employees by voluntary resignation and dismissal. It also called for abolishment of some bus lines representing 48% in route-km or 17% in vehicle-km. The personnel cut was to be achieved by lowering the retirement age and by introducing "one man" bus operation. But the plan was opposed by the labour union and was abandoned. The partial bus route abolition plan aroused strong opposition among the communities along the routes. But they also began serious discussion about securing public transportation assuming that the Company's routes were to be ended.

After the second plan failed, a third reconstruction plan was proposed in October 1970. It was no more than a re-introduction of the second plan but with the percentage of personnel cuts reduced to 33% and temporary postponement of abolition of ten of the bus routes. The new plan was carried through after an agreement was reached with the labour union that no one was to be fired against his or her will. But the plan created victims and many people left the company reluctantly. The number of employees fell from over

Local Bus on Mountain Road *(Transportation News)*

Diesel Railcars on JNR Shibetsu Line in Hokkaido (now closed) *(T. Iizuka)*

1800 in 1966 to only 900 in 1973. The abolition plan affected 62 routes (760 km) primarily in the mountain areas. Some routes (14%, 105 km) were abolished completely with no substitute transport. They were the least busy routes with a passenger density of 3 or less. The local authorities financed substitute services for the remaining 655 km.

Grants and Burden Sharing

The local governments were forced to accept responsibility for maintaining some means of public transport after the bus routes were abolished. The routes were salvaged by three methods, which later became a precedent for keeping public transport in other depopulated areas. The first method was breaking up the Company into smaller new companies to run the least-profitable bus routes. The new companies had the lowest possible wages for employees and highest possible bus fares for passengers. The employees that left Kochi Prefectural Transport Co., established four companies using this method.

The second method was to allow a local taxi company holding a license to operate charter buses, to operate scheduled buses. Charter-bus operators are prohibited from operating scheduled buses under Article 24 of the Road Transport Act, although the law also permits such operation when services by the scheduled bus license holder are not feasible. Again, the second method was implemented at low wages and costs.

The third method was for municipalities to operate scheduled buses themselves. Since none of the municipalities had licenses to operate either taxis or chartered buses, they needed to rely on non-commercial vehicles to provide services. The Road Transport Act (Article 101) prohibits provision of such commercial services by non-commercial vehicles except as a last resort. The substitute buses run by the municipalities were nicknamed 'Article 101 buses' referring to the exceptional provision of the Act.

The only grant for local bus companies in Japan at that time was the Bus Purchasing Grant for remote islands. The grant availability was expanded after 1967 to depopulated areas on the four main islands as well. In 1969, a new grant was introduced to compensate for the loss of bus service operators in remote islands and areas. In the new system, central government and local governments (prefectures and municipalities) shared the cost of compensating for bus operators' deficits. Still another grant was introduced in 1970 to help municipalities purchase substitute buses. A special grant for local bus companies was added in 1972 after a series of financial crises and scandals similar to the case of Kochi Prefectural Transport Co. The grant was primarily for bus routes with a passenger density of 5 to 15. It included a grant for purchasing buses from the central government and the prefecture at a ratio of 50% or 33% each. There was also compensation for deficits from the central government and the prefecture at a ratio of 50% each, or from the central government, prefecture and municipality at a ratio of 17% each. Such a grant was not considered appropriate for bus routes with a passenger density of less than 5. However, a special grant was made available in justifiable cases to be borne by the central government and prefecture at a ratio of 25% each.

Grants were not deemed necessary for routes with passenger densities over 15 because their operation should be profitable. The operators of profitable bus routes are expected to solve their financial problems themselves by cross-subsidies between profitable and unprofitable routes. An operator with a higher degree of monopoly has a better chance of receiving government grants. This reveals the Ministry of Transport's intent to increase the business scale of each operator in order to restrict competition. However, I wonder if such a measure is really effective for bus operations which have no scale merits. The Ministry of Transport is proud of the grants for local bus companies in that it was able to maintain bus services in all parts of the country at a relatively small annual cost amounting to ¥10 billion. However, an unavoidable cut in grants is foreseen due to budget problems. This will present a new problem for local bus companies because their profit level has dropped so low that they cannot survive without the grants. A major cut will certainly mean serious problems.

The cost of substitute bus operations after the closure of Kochi Prefectural Transport Co. was borne by the central government, the prefecture and the municipalities at a ratio of 1:2:3. This is a large burden for a local government in the countryside without a substantial financial base. Despite the plans, the Company soon faced a new crisis in March 1971 and filed an application under the Company Rehabilitation Law. The court appointed a receiver to begin the necessary procedures, but the plan presented by the receiver was opposed by the large shareholders who were also large creditors, and the plan was abandoned. The management was replaced and a voluntary reconstruction plan was introduced. It mainly consisted of another equity swap, debt writeoff by the Bank of Shikoku and an increase in working hours for employees. The Company survived by burden sharing of the shareholders, creditors and the employees, although the financial crisis has never been resolved completely.

JNR Measures for Provincial Lines

Buses are the last resort for public transportation in depopulated areas in Japan because there are no substitutes such as shared taxis. Obviously, the bus is better than the railway in terms of cost in a low-density transport market. Accordingly, during the 1960s, private railway companies in local areas in Japan adopted a policy of abolishing railways and running buses instead. A total of 1500 km of lines were closed during the 10-year period around 1970. This represented nearly 40% of the route-km of local, private railways in the 1960s. Naturally, JNR's provincial lines were as unprofitable as the private lines. JNR began its rationalization efforts in the 1950s. In 1968, it announced a plan to abolish 2600 km along 83 lines, representing nearly 40% of provincial lines, and replace them with buses. But it managed to close only 120 km, or a mere 5% of the plan, because local communities showed vehement opposition to the plan, unlike the opposition to similar plans of private railways.

Students Form Majority of Provincial Train Passengers *(T. Iizuka)*

Construction of government provincial lines began in the 1920s. The Railway Construction Act was passed in 1922, and railway lines were built in many parts of the country. Construction continued for more than 50 years until the 1970s. The Act was legislated by the Hara Cabinet, Japan's first cabinet after universal suffrage. Local communities, anxious to have railways in their towns and cities, formed 'railway construction forums' while their local parliamentarians lobbied the central government demanding that construction start in their areas immediately. These forums became powerful pressure groups during elections. While the local parliament members were eager for construction of provincial lines, the railway bureaucrats insisted that it was more important to increase the capacities of the trunk lines such as the Tokaido and Sanyo lines. However, political pressure won and led to the Railway Construction Act.

But, within 10 years of the Act, private companies were introducing bus services in rural areas as well. During the 1930s, some private railways lost the competition and abandoned their lines. But the construction of government provincial lines continued. Severe fuel shortages during WWII seriously damaged bus companies and railways regained their position as the major means of transport. After the defeat in 1945, rural transport relied heavily on provincial railway lines. The war delayed the transition from private railways to buses in rural areas for two decades. The delay lasted for another three decades as far as JNR's provincial lines were concerned.

JNR went into deficit in 1964 and suffered a serious financial crisis every year after. The situation grew critical about 10 years later when the deficit had spiralled to nearly ¥1 trillion. JNR's cost calculation indicated that nearly 33% of the deficit arose from provincial lines, which represented 40% of total route-km but only 5%

of passenger- and tonne-km. Their cost/revenue ratio was over 500%. The government legislated the JNR Rehabilitation Act in 1980 to reduce JNR's deficits by either replacing the least profitable provincial railway lines with buses or demanding that local communities maintain these lines at their cost. In short, the sole object of the Act was to relieve JNR of the unprofitable provincial lines. New provincial lines under construction were to be terminated or to be taken over by local communities. The Railway Rehabilitation Act was passed towards the end of JNR's history, just 7 years before privatization. Naturally, no one imagined privatizing JNR at that time.

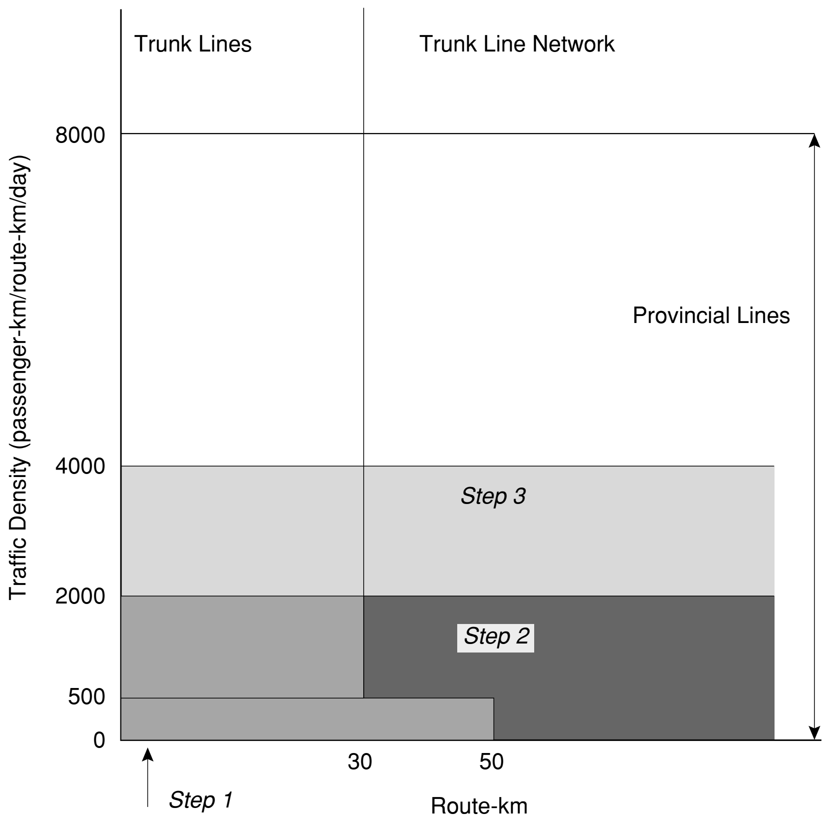
As shown in Fig. 1, the Railway Rehabilitation Act classified railway lines on the basis of traffic density and route-km. As a rule, those lines with a traffic density of 4,000 or less were to be closed in three steps as shown. Public transportation was to be provided by privately-run buses, in which case any deficit from the bus operation during the first 5 years was to be compensated entirely by government subsidy. If a local government wanted to keep lines open, they were to be maintained only as a private railway. The law provided a government subsidy for half of any deficit during the first 5 years of private operation. This meant that local governments had two options: abandon the railway and switch to cheaper bus operation, or stick with the railway at extra cost. Nearly half of affected communities chose the bus, while the other half preferred the railway. In addition to the deficit compensation subsidy, the government also offered temporary subsidies to buy railcars or buses, build new garages, or to be saved for future deficits.

Third-sector Railways

Most of the railway companies that took over JNR's provincial lines were established in the form of joint stock companies, capitalized by the local government (prefecture, municipality) and private companies. Since profits were not feasible from the railway business, much could not be expected of private companies and most investors were local banks and shippers. This type of company capitalized by a local government and private companies is called a third-sector company. With few exceptions, all the railway companies that took over JNR's provincial lines were the third-sector companies. Their book values were not high because the main assets were the infrastructure inherited free-of-charge from JNR and railcars purchased with subsidies. This means large capital was not necessary, but in some cases the big differences between the book value of assets and the actual construction cost could be problematic. For example, Sanriku Railway Company, the first third-sector railway company, was capitalized at only ¥300 million while construction costs were as high as ¥50 billion.

The Sanriku Line faces the Pacific Ocean along the northeastern part of Japan running mainly through undeveloped farming and fishing villages. A railway construction forum had been formed there for many years. After lobbying over three generations, a new line was constructed over a relatively long route of 100 km. The railway provided transport for stu-

Figure 1 Outline of Division of Lines



Passenger Density of JNR Provincial Lines / Third-Sector Lines

Unit: Traffic Density

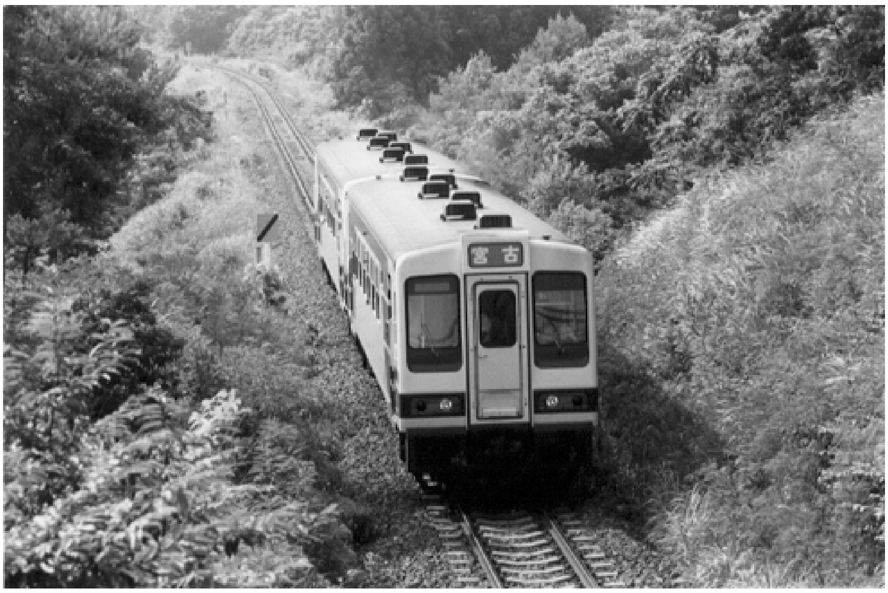
	1965	1975	1977-1979	1983	1984	1985	1986	1987	1988	1989	1990	1994
Chihoku / Hokkaido Chihoku Kogen	1799	1107	**943**	…	…	726	677	…	…	516	476	456
Ohata / Shimokita	2490	1667	**1524**	1081	1090	1162	811	717	…	537	513	423
Kuroishi / Konan	1999	2176	**1904**	1297	1165	711	685	648	…	565	592	487
Aniai / ANJ North line	2562	1587	**1524**	1039	982	927	845	728	693	—	—	—
Kakunodate / ANJ South line	—	372	**284**	182	176	170	193	199	227	—	—	—
Akita Nairiku Jyukan	—	—	—	—	—	—	—	—	—	567	515	494
Yashima / Yuri Kogen	3958	2201	**1876**	1310	1151	1153	982	901	884	886	869	996
Nagai / Yamagata	3935	2395	**2151**	1589	1555	1445	1377	…	1466	1286	1298	1249
Kuji / Sanriku North line	—	530	**762**	684	1224	1123	1009	944	936	957	981	805
Miyako / (Sanriku North)	—	692	**605**	831	—	—	—	—	—	—	—	—
Sakari / Sanriku South line	—	928	**971**	865	1158	1075	991	892	858	846	866	717
Sanriku (Total)	—	—	—	—	1202	1107	1003	926	910	920	942	775
Marumori / Abukuma Kyuko	—	1270	**1082**	906	926	870	1207	1391	1753	1804	2049	2304
Aizu / Aizu	2195	1562	**1333**	1101	1016	960	971	1390	1317	1248	1258	1291
Ashio / Watarase Keikoku	2491	1732	**1315**	858	884	886	581	626	1271	828	892	960
Moka / Moka	3205	1820	**1620**	1427	2024	2066	1943	…	1406	1398	1443	1777
Kihara / Isumi	3286	1680	**1815**	2256	2248	2307	1930	2015	1339	1267	1266	1045
Akechi / Akechi	2124	1525	**1623**	1119	1132	1354	1221	1178	1171	1161	1134	1034
Hutamata / Tenryu Hamanako	3320	1904	**1518**	1077	1022	959	1466	955	1057	1090	1163	1097
Okata / Aichi Kanjyo	—	—	**2757**	…	…	2951	2930	3049	3298	3756	4162	4934
Ise / Ise	—	2007	**1508**	…	…	1354	2634	1268	1332	1480	1876	2905
Etsuminan / Nagaragawa	2948	1620	**1392**	1058	993	976	907	896	798	745	812	823
Tarumi / Tarumi	2049	1192	**951**	652	864	798	869	876	1110	1026	1088	1041
Shigaraki / Shigaraki Kogen	2452	1667	**1574**	2079	2079	2078	1529	1372	1328	1318	1413	1276
Miki / Miki	2268	1496	**1384**	1088	1027	822	631	514	548	545	519	472
Noto / Noto	2139	2542	**2045**	1581	1500	1454	1392	2197	1267	1193	1194	1290
Kamioka / Kamioka	—	477	**445**	255	394	265	239	194	161	138	167	161
Miyazu / Kitakinki Tango	5600	3659	**3120**	…	…	2365	2164	…	…	1060	1467	1442
Hojo / Hojo	3599	1957	**1609**	973	883	667	637	643	616	647	690	647
Wakasa / Wakasa	3268	1781	**1555**	2058	2028	2023	1768	1138	1099	1009	1009	906
Gan-nichi / Nishikigawa	2201	1398	**1420**	1231	1155	981	874	1030	997	971	971	887
Nakamura / Tosa Kuroshio	1801	2583	**2289**	…	…	1689	1629	…	1543	1509	1623	1643
Ita/	7959	3399	**2872**	…	…	1959	1883	…	…	—	—	—
Itoda/	1805	1561	**1489**	…	…	1049	907	…	…	—	—	—
Tagawa /	4621	2594	**2132**	…	…	1362	1230	…	…	—	—	—
Heisei Chikuho	—	—	—	—	—	—	—	—	—	1543	1601	1585
Amagi / Amagi	2002	868	**653**	389	397	397	1238	1498	1892	1917	1993	2293
Matsuura / Matsuura	3383	2235	**1741**	1303	1266	1228	1170	…	1166	1145	1181	1405
Yunomae / Kumagawa	3998	3475	**3292**	…	…	2310	2129	…	…	2190	2196	1984
Takachiho / Takachiho	1958	1593	**1350**	934	1042	939	846	727	…	785	750	820
Takamori / Minami Aso	1687	1280	**1093**	748	692	715	780	694	700	699	682	765

JNR lines / Third-sector railways
— No data
… Not available

Sources: Ministry of Transport Surveys and Statistics dents in local areas often referred to as 'lonely islands on land' and the ratio of students going to high school rose as a result. The company bought new diesel railcars to serve the local people and to meet their expectations. But the future was not bright. As in the case of many third-sector railway companies, the single important problem was the persistent decline in the medium-to-long range traffic forecast. The number of private passenger cars in Japan began increasing toward the late 1960s. Many families even owned several cars in the 1980s. As housewives began driving their children to school in small cars, the railway grew less popular with commuters. "We cannot beat the convenience." was the impression about cars felt by those operating local railways. Another problem was the decrease in the number of high-school students due to the falling birth rate. Third-sector railways also faced a crisis after the 50% government subsidy for deficits ended in the sixth year of business.

Some third-sector railway companies increased their traffic volume temporarily by increasing the number of trains during the first years in business. However, for the majority, traffic volume was destined to decline. They resorted to frequent fare increases but faced limitations as fare increases usually result in decreased passengers. Deficits arising after the 5-year government 50% deficit subsidy, or future deficits, must be met by the local government. There are government subsidies for deficits of local private railways but they are small and getting smaller year-by-year. For this reason, third-sector railways stand only a slim chance of receiving subsidies. Government subsidy for deficits arising from substitute bus operation is stopped after 5 years, but the deficits from bus operations are far lower than from railway operations, making it relatively easier for local governments to bear the cost. Strangely, the number of passengers decreases rapidly when railways are replaced by buses. Many passengers seem to switch from railways to cars and motorbikes, not to buses.

Last Train to Run on Akatani Line in Niigata Prefecture *(Shibata Tourist Association)*



New Rolling Stock of Third-Sector Sanriku Railway Co. *(T. Iizuka)*

Although third-sector railways face a severe financial environment, none have ceased operations to date. Since they are basically operated by the local government, it is not easy to close them because the governors and local parliament members tend to respect the will of voters. A thorough cost reduction programme is introduced from the very beginning when a third-sector railway company is established. They often hire JR retirees and personnel costs are minimized by counting pension as part of wages. This means the balance is not likely to be improved by further rationalization. Since third-sector companies are often undercapitalized and cannot depreciate assets, they must rely on local government for subsidies to replace railcars and facilities.

One third-sector railway experienced a

Inaugural Train of Third-Sector Watarase Keikoku Railway Co. *(Railway Pictorial)*

severe accident resulting in death and injury of many passengers. In this case, the local government bore the repair costs.

Future Challenges

With central government facing a worsening financial crisis, there are moves towards reducing government subsidies for local bus operations. This means the burden on local government is likely to increase for bus operations as well as for railways. In other words, the last means of public transport in rural areas maintained by small companies created by breaking up large deficit-ridden businesses may eventually disappear. The JNR Rehabilitation Act of 1980 selected lines for closure on the basis of their commercial performance between 1977 and 1979. However, there are now some provincial lines operating with traffic volumes below the closure criteria meaning that they will have to be maintained by cross-subsidization using the profits from trunk lines.

At the time of JNR privatization, the government created the Management Stability Fund to support the new JRs in Hokkaido, Shikoku and Kyushu where profitable operation is difficult.

The Fund was created to avoid excess cross-subsidization but it actually relies on the profitability of three main-island JRs, although detailed explanation is not within the scope of this article.

Therefore, if the profits of the railways networks as a whole decline, closure of provincial lines both on the main island and three smaller islands may become unavoidable. For example, since the privatization of JNR, small portions of provincial lines in Honshu and Hokkaido have been closed.

Rapid economic growth in postwar Japan stimulated people in rural areas to move to cities creating both regional depopulation and overpopulation. The decline of public transport in local areas was caused by depopulation and motorization beginning in the mid-1960s. Countermeasures mainly consisted of cost reduction, company breakup and establishment of third-sector companies, and provision of subsidies. The same measures were also applied to sea routes in remote islands and local air routes. However, over the last 10 years, the government's budget crisis has worsened, while motorization has progressed to such a degree that most adults own a car and the number of students using public transport has decreased substantially. These demographic changes are likely to make conventional countermeasures obsolete. The new transport environment will place a greater burden on localities and local people in forms such as joint club-type ownership of buses, two-part tariff systems, and sharing of private passenger cars.

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