JNR Privatization—JR's First 10 Years and Future Perspectives

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Introduction

Japan's first railway was built in 1872 over the 29-km stretch between Tokyo and Yokohama. It has contributed greatly to Japan's modernization and today, the network is approximately 20,000 km.
The completion of Japan's first shinkansen between Tokyo and Osaka (552 km) in 1964 came as a major shock to other countries especially because railways were generally seen as losing the race with motorization.
Ironically, 1964 also marked the year that Japanese National Railways (JNR) fell into deficit. Although the shinkansen generated huge profits, JNR's total deficits continued to grow year-by-year, leading to its privatization in 1987.
This article reviews a number of unforeseen results and new problems that have come to light in the first 10 years after privatization. It also discusses new proposals enabling the privatized JR companies to change for the better.

Background to JNR Privatization

Japanese railways enjoyed a long monopoly of passenger and freight transport, but by the 1960s, the rapid growth of automobile and air transport was challenging the JNR management to find new means of survival. Against the backdrop of fast economic growth and rising personal income level, JNR was forced to keep pace with its competitors by investing in facilities and equipment, leading to skyrocketing labour and capital costs. The abnormally-high proportion of these costs to income forced JNR into a very tight corner. The resultant year-on-year increases in train fares resulted in fewer customers, as well as labour disputes and increasing distrust by users. It also allowed more political intervention. Privatization and division was seen as the only way to revitalize JNR and brought its business to an end. However, how did Japan's largest national enterprise reach such a demise, leaving behind a huge deficit of ¥25 trillion, and the complete loss of customer confidence.

Seikan Tunnel with track bed prepared for eventual shinkansen service (Japan Railway Construction Public Corporation)

Contributing factors

While JNR contributed much to the country's postwar recovery and economic growth, its management had inherited an inflexible bureaucracy from the war era. On the other hand, the labor union had an entrenched ideological viewpoint. These two factors played a major role in JNR loss of competitiveness and poor productivity.
Since JNR was state owned, the management was unconcerned about the debt and forgot the 'customer first' principle, believing that the government would always foot the bill.
Transport infrastucture is extremely costly but the rate of return is low. To fund its huge investment, JNR relied on easy government loans based on postal savings. However, any business with huge loans and low rates of return will inevitably fall victim to the interest burden. JNR was only the first to suffer from this easy funding scheme.
Lastly, JNR was simply too large to respond flexibly to users' needs and failed to satisfy demand.

Outcome of First 10 Years of Privatization

At privatization on 1 April 1987, responsibility for settlement of the old debt was assumed by the Japanese National Railways Settlement Corporation (JNRSC), a new government body established to liquidate JNR assets. JNR itself was split into seven new JR companies (JRs) generally known as: JR Hokkaido, JR East, JR Central, JR West, JR Shikoku, JR Kyushu, and JR Freight.
The number of employees was reduced from more than 400,000 in 1980 to 191,000 in 1994. With privatization, the

Table 1 Ratio of Labour and Capital Costs to Fare Income Before and After Privatization

	Labour Costs (%)	Capital Costs (%)
1985	73.6	53.8
1987 Privatization	31.6	22.2
1994	35.1	33.0

ratio of labour and capital costs to fare income decreased greatly (Table 1).

The falling number of JNR passengers began rising again after privatization, reaching 20% more in 1993 than in 1986, although JRs' share of the entire passenger market has stabilized at 21%.

Similarly, while freight transport on a tonne-kilometer basis was plummeting sharply before privatization, it began rising again and recovered from 4.6% to 4.9% in 1990, thanks also partly to the booming economy. After 1993, the economy started retreating, but the freight volume in tonne-kilometers in 1994 was still a 20% increase over the 1986 level (Table 2).

The rolling stock kilometers increased about 20% after privatization, and the fare income and number of passengers also registered a similar increase despite the unfavourable economy. These results were achieved as the number of employees decreased, causing employee productivity to rise sharply (Table 3).

Introduction of consumption tax by the government in 1989 caused a revision of passenger fares and freight fees by 2.9% and 3.0%, respectively. A further hike in consumption tax from 3% to 5% in April 1997 resulted in another fare revision. However, there was only one true fare increase in 1996 when the three unprofitable island JRs had to raise passenger fares by 6.1% to 7.3%. Prior to privatization, fares had been increased in 1981, 1982, 1984, 1985, and 1986. Stable JR fares for 10 years on the main island of Honshu is in pleasant contrast to the situation before privatization.

From the passengers' viewpoint, the outcome of the first 10 years of privatization has been virtually no fare increase, and better services. From the JR management viewpoint, the outcome has been improved productivity and successful structural reform. We can say these results have been better than expected before the privatization. Customers have generally reacted favorably and the JRs have succeeded in regaining their trust.

A further, but less tangible benefit, of privatization has been freedom from questionable government intervention and clarification of management autonomy. The JR management and employees have been able to shift their attention from parliament to the customer, resulting in better service and productivity. The management improvement has been, to a large extent, due to the elimination of politically-motivated investment in less

Table 2 JNR and JR Transport Statistics

Year	Passenger		Freight	
	Passengers-km (million)	Share (%)	Tonne-km (million)	Share (%)
1975	215,289	30.3	46,577	12.9
1980	193,143	24.7	36,961	8.4
1985	197,463	23.0	21,410	5.0
1986	198,299	22.6	19,974	4.6
1987	204,677	22.0	20,026	4.5
1988	217,589	21.8	23,031	4.8
1989	222,671	20.8	24,675	4.8
1990	237,657	21.4	26,728	4.9
1991	247,030	21.8	26,697	4.8
1992	249,606	20.3	26,241	4.7
1993	250,016	21.7	25,027	4.7
1994	244,378	21.2	24,077	4.4

Table 3 Productivity Trends

Item / Year	Rolling Stock km (million)	No. of Passengers (million)	Income (¥ million)	No. of Employees (thousand)
1965	2,966 (71.9)	6,721 (95.4)	399,101 (31.2)	462 (107.4)
1970	3,713 (90.0)	6,534 (92.7)	824,458 (64.4)	460 (107.0)
1975	4,124 (100.0)	7,048 (100.0)	1,280,880 (100.0)	430 (100.0)
1980	4,256 (103.2)	6,824 (96.8)	2,197,585 (171.6)	414 (96.3)
1985	3,949 (95.8)	6,941 (98.5)	2,892,676 (225.8)	277 (64.4)
1987	4,025 (100.0)	7,356 (100.0)	3,368,797 (100.0)	187 (100.0)
1988	4,255 (105.7)	7,761 (105.5)	3,595,157 (106.7)	186 (199.5)
1989	4,558 (113.2)	7,980 (108.5)	3,712,649 (110.2)	180 (96.3)
1990	4,730 (117.5)	8,356 (113.6)	3,963,095 (117.6)	179 (95.7)
1991	4,800 (116.4)	8,676 (117.9)	4,137,111 (122.8)	180 (96.3)
1992	4,618 (114.7)	8,818 (119.9)	4,154,891 (123.3)	179 (95.7)
1993	4,886 (121.3)	8,906 (125.1)	4,175,216 (123.9)	179 (95.7)
1994	4,802 (116.4)	8,884 (126.0)	4,061,579 (120.6)	179 (95.7)

1. Results for six JRs (JNR before 1987)
2. Results in ( ) indexed to 1975 baseline for JNR and 1987 for JR
3. Post-1987 figures exclude JR Freight
   (Railway Statistics, and Ministry of Transport)

JNR Train plastered with labour union protest slogans in early 1970s (Transportation News)

profitable areas, which had been one cause of the snowballing debt.

A major success has been the separation of many loss-making rural railways from the JRs. Local communities were given the option of taking over operation of rural lines falling beneath government criteria for continued operation by the JRs, or of replacing them with other transport modes. This greatly reduced the JR burden of operating non-profitable lines.

Changing Economic Environment and New Challenges

The Japanese and global economies have also seen dramatic changes in the 10 years since the JNR privatization.

Globalization

The collapse of the planned economies which had created severe economic conflicts during the twentieth century, ushered in rapid economic globalization.

Japan came under pressure to meet the challenges of the borderless economy, the hollowing out of its industries with many of its manufacturing activities transferred to other Asian countries, and increasing foreign demand to open its markets further.

Japan first built its roads and railways to serve the entirely domestic transport needs of an island nation. However, today's competitive globalized economy means that services and costs must be more in line with world standards. Failure to meet this requirement will jeopardize the national economy and the people's living standards.

Transport infrastructure can either be government, or privately owned. The entire infrastructure was transferred to the new JRs under the easy assumption that the JRs could just follow the model of existing private railways in both owning the infrastructure and operating the lines.

However, this decision ignored the fact that transport infrastructure serves society as a whole and has a national impact. In contrast to the era when JNR dominated the nation's railways, the subsequent privatization into different operators has resulted in a lack of a coherent national policy for financing new projects and rehabilitating the existing network—an advantage still enjoyed by roads, ports, and airports. This lack of a national policy will greatly hamper Japan's ability to cope with economic changes and to meet the challenges of globalization. The trend towards vertical separation in European railways, where infrastructure remains in government ownership while operation and management are left to the private sector, suggests another possible future for Japan. Globalization necessitates close integration between domestic and international transportation, leaving room for discussion as to whether network development and fare structures should be left entirely to market forces. This may be a political issue that needs to be solved by the government rather than by the JRs.

Burst bubble and low growth

The collapse of the so-called bubble economy in the early 1990s has created the worst recession in Japan since World War II. Huge losses incurred by the real-estate industry as a result of plummeting land values, especially in large cities, have surfaced in the form of unrecoverable bad debts for many banks and financial institutions. The Bank of Japan's response of a super-low interest rate policy has damaged Tokyo's reputation as an inter-

Table 4 JRs' Railway Operating Profits and Losses in 1996(¥ billion)

Company	Income	Operating Cost	Operating Profit	Deficit Years
JR Hokkaido	93	131	▲38	1987 to 1996
JR East	1,896	1,521	375	—
JR Central	1,136	759	378	—
JR West	937	817	120	—
JR Shikoku	43	49	▲ 6	1987 to 1996
JR Kyushu	155	169	▲14	1987 to 1996
JR Freight	191	196	▲ 5	1994 to 1996

* Railway operations only, data obtained from JRs' 1996 financial reports

national financial centre. On the other hand, a government-spending-led recovery is made difficult by declining revenue from taxes.

The long-range perspectives for Japan are low growth, falling population and a maturing economy. Although privatization was successful as a result of increased demand due to the bubble economy, the future outlook is essentially bleak, and severe competition coupled with further cost reduction are likely.

This anticipated low growth is particularly serious for the smaller JRs with a weak business foundation. JR East, JR Central, and JR West inherited the profitable shinkansen, which carry nearly 30% of the total passenger-kilometers and have a productivity around four times that of conventional lines (34.8 million versus 9.1 million passengers per km). JR Hokkaido, JR Shikoku, JR Kyushu, and JR Freight cannot base their business on revenue from shinkansen and this difference is reflected in their business results; they have reported losses every year since privatization (Table 4). It is essential that serious consideration is given to strengthening their business foundation. From this perspective, it might be worthwhile re-evaluating the projects to complete the shinkansen through the Seikan Tunnel (linking Hokkaido and Honshu), and across the Great Seto bridges (linking Shikoku and Honshu).

As far as JR Freight is concerned, we need to review the basics starting with ways to recapture market share.

Loss of international competitiveness

Japan's international competitiveness has been relatively weakened by the rapid industrialization of her Asian neighbours. The economy is suffering from high costs resulting in reduced exports of manufactured goods and increased imports. Today, Japan's post-war export-driven economy faces severe structural change with pressure for cost reduction in both production and distribution. An aggravating but unavoidable factor has been the loss of most of Kobe Port's function as an international hub for shipping to Pusan in Korea following the Great Hanshin Earthquake in 1995.

Cost reduction is not limited to the JRs alone. Domestic costs for both passengers and freight are generally high in comparison to international transportation markets. This lowers Japan's international competitiveness and hampers establishment of a good living standards. From the cost-reduction viewpoint, the first decade of privatization successfully suppressed fare increases through introduction of automation, reduction of labour, development of new technologies, etc. While privatization has provided an important lesson for the future, further effort is necessary in broader areas to encourage competition, to maximize the use of existing infrastructure, to establish an integrated transportation network, to cut costs through technical progress, and to examine the costs and benefits, etc.

Environmental issues

Over the past decade, people worldwide have become more aware of environmental issues such as global warming, and acid rain, and their impact on further economic development. The West is reviewing conventional transportation policy which is primarily centred on the motor car and aviation, with a shift to more environmentally friendly transportation. As a result, the railway mode is the focus of new attention, as typified by Paris and Los Angeles where new networks are under construction. Japan is following suit with a general review of transportation from the environmental viewpoint.

Financial restructuring

The Japanese government faces unprecedented deficits requiring public-spending cuts, and reform of the excessively rigid administration.

The nation as a whole must carefully evaluate past results and establish new policies. This is true for railways too.

While the immediate general concern is solving the huge bad debts resulting from the collapse of the bubble economy, the people's tax burden must be held at an

Expensive construction of a shinkansen station at Takasaki in the early 1980s *(JNR/JRCPC)* appropriate level. The government's conventional reliance on deficit-financing bonds is not feasible in the longer term and a review of public-spending projects is essential in coping with the financial constraints. Unnecessary projects must be abandoned, and the central and local governments must cut expenditure. The success of the privatized JRs could serve as a model for these financial and administrative reforms.

The largest problem in the previous government's public spending was the placing of priority on investment to stimulate the economy rather than on the necessary infrastructure. In Japan, funding these investments by treasury bonds and interest-bearing loans has often lead to costly unnecessary infrastructure. The privatized JRs must not fall victim to the same pitfalls. They must clarify their infrastructure needs and invest in projects that strengthen their business foundation using interest-free funds. To better fulfill the social purposes of transportation, unified funding sources should be made available, instead of the current system split between different ministries. Private funding should not be ruled out if business conditions permit it.

In theory, privatization should eliminate government intervention, but no firm rule has been established in Japan to preclude such intervention. If rules governing this point are not established and if only funds with interest-burdens are available to the JRs, they may follow the same downward path as JNR.

The railway can best deliver its inter-city transport services if it is organized as a national network. How to address the imbalance between the three strong main-island JRs and the three weak island JRs must be reviewed based on the experience of the last 10 years.

Finally, JR Freight must seek to strengthen demand by enhancing service quality, and by promoting its environmental friendliness.

JR West Nozomi Series 500 on Sanyo Shinkansen running at 300 km/h *(JR West)*

10 More Successful Years

The JRs' achievements in regaining customer support, holding fare increases to minimum levels, and providing high quality services has been a pleasant surprise in comparison to the chaos that characterized JNR's final days.

The main-island JRs are registering good operating profits, although the three island JRs and JR Freight still need to improve their business results. The division of JNR into six regional passenger operators has not led to any problem in through operation nor in coordination between the companies, as feared before privatization. However, the companies' different strengths mean that the fares set by JR Hokkaido, JR Shikoku, and JR Kyushu are about 10% higher than the fares of the JRs operating shinkansen. This point requires close attention.

Most of the old JNR problems have been solved. However, the largest outstanding issue is how the JRs will cope with the economic changes that have occurred during the first 10 years after privatization and that have a direct impact on the future. This issue is directly associated with the structural reform of Japan's economy. The railways will only establish a strong foothold in the next century when this issue is dealt with.

Whether privatization is successful or not depends on the next decade. The JRs' managements and workers must continue their efforts and the JRs' autonomy must continue to be respected. At the same time, the government must start to play a larger role in solving future problems by setting a coherent transport policy. ■

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