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ADB Working Paper Series

**THE PRIVATIZATION OF JAPAN
RAILWAYS AND JAPAN POST:
WHY, HOW, AND NOW**

Chul Ju Kim and Michael C. Huang

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Abstract

The privatizations of Japanese National Railways (JNR) and Japan Post (JP) have been one of the biggest reforms for state-owned enterprises (SOEs). Since the beginning of the privatization processes in 1987 for JNR and 2007 for JP respectively, the outcomes of these reforms have been reflected in productivity, quality of service, as well as in diversification. The paper aims to illustrate the process and consequences for these two cases, representative of the history of SOE reforms. These two reforms have different backgrounds but the structural reform and deregulation along with the application of advanced technology in service diversification have been the key to success. Lessons learned from this process and the innovative measures taken could shed light on the reform of SOEs in the transportation and financial sectors to improve efficiency and create more diversified service platforms for society in many developing countries.

Keywords: Japan Railway (JR), Japan Post (JP), state-owned enterprise (SOEs) reforms, innovation, service platform

JEL Classification: P41, G21, L92

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1. INTRODUCTION

Privatization of state-owned enterprises (SOEs) has been globally prevalent since the 1980s with a primary objective of improving their performance in profitability and provision of better service through the ownership change. Privatization led the transition to a market economy in the Soviet socialist countries, and became a critical aspect of reform packages to enhance public sector management in the 1990s both in developed and developing countries (Tamamura 2004). However, privatization has different nuances depending on the specific country circumstances. In the case of Japan, it was closely related to the process whereby entities called “special public corporations” were converted into regular joint stock companies so that their shares could be offered to the public, while they were still used to deliver government services or operate a monopoly in certain cases like post networks.

Milhaupt and Pargendler (2017) indicates that privatization of special public corporations in Japan has come in two waves influenced by the UK’s Thatcher Revolution. The first reforms were taken by Prime Minister Yasuhiro Nakasone in the 1980s in response to a national debt crisis. Large-scale privatizations of three special public corporations were implemented in this era: Nippon Telegraph and Telephone Public Corporation (NTT), Japan Tobacco & Salt Public Corporation, and Japan National Railways (JNR). The second major privatization included financial institutions affiliated with Japan Post, which was initiated by Prime Minister Junichiro Koizumi in 2005 and its shares were offered to the public as a listed company in 2015. A detailed exploration of these privatizations provides a window onto some distinctive features of Japan’s approach to privatization and the post-privatization governance of enterprises still partially owned by the government.

Strong pressures and demand for the JNR reform led to a series of privatization measures since 1987 that divided the JNR into eight Japan Railway (JR) companies based on the geography and functions. Quite different from the railway privatization experiences in Europe, no separation of infrastructure and operation has enabled the JRs to handle and use their real assets for the diversification of its business lines. This privatization of the JNR was recognized as the first case of reform of a nationwide state-owned railway in the modern history (Kurosaki, 2016). Up to date as of 2019, six over eight JR companies have obtained net profits and even become exporters of its technology and operating system.

As for Japan Post (JP) system, demands to activate world’s biggest deposit of 260 trillion JPY in 1999, for financial mobility and to reduce long lasting operational underperformance have been urgent calling for structural reforms (Yoshino et al., 2018). Within a decade since its kick-off in 2005, the listing of JP Bank and JP Insurance in 2015 at the stock exchange was a milestone accomplishment, while the JP Service and JP Networks remain state-owned because of their non-excludability to the public interests.

The JRs had three decades since the start of privatization, and Japan Post had more than a decade since its launch of reform in 2007. The socio-economy of Japan has undergone drastic changes with population aging and shrinking. Had not been for privatizations and resultant diversification and transformation of business models, they would have not been profitable and dynamic as today. The consequences from privatization of JP and JR are still evolving and could serve important references for developing countries on how to reforms of major SOEs could be done with structural reform and technology development. Building on detailed accounts of their privatization process illustrated in East Japan Railway Company (1995), Kasai (2004), Fink (2016)

and Robinson (2017), the chapter aims to provide a timely and comprehensive review of Japan's experience by looking into key factors for the privatization so as to deepen understanding of such complicated process in reconstructing, deregulation and technology implementation. It would provide valuable lessons for developing countries in which SOE reforms are integral to their economic and social development, and as such should be designed and implemented in a coherent, transparent, and consistent manner.

2. JAPAN RAILWAY

2.1 Why: Looming Threat and Urgent Reasons for Railway Privatization

Since the end of the Second World War, JNR enjoyed its monopolistic position with sizable operating profits in the domestic transport market until the mid-1960s. Key contributing factors were increasing transport demand stemming from high economic growth during that time and less competition with other modes of transportation, such as motor and air transport which still struggled with post-war recovery. However, high economic growth also made it possible for other modes of transport to rapidly develop in the late 1960s, and coupled with the inefficient management of JNR, it started losing its competitiveness and predominance in the rapidly changing market.

The huge organization of JNR spanned the entire country with a large number of employees, resulting in inflexible budget formulation, and a lag in satisfying customer needs. In particular, a lack of a clear understanding of the actual management conditions by region or division made it difficult to implement strong corporate strategies including cross-subsidization, fostering cost awareness and profit targets in each region and business sector, thereby hindering an efficient operation. The large organization could not respond flexibly to and satisfy customers' changing needs. Competition with other transport modes had become intense, but the top management was not oriented to compete with them through efficient and reasonable management. As a result, JNR faced severe public criticism for ineffective management, but the necessary operational reforms could be not pursued mainly due to strong opposition from politicized labor unions (Mizutani and Nakamura 2004).

The inability to cope with major change, combined with increasing competition from other modes of transport eventually led to massive financial failures for JNR. It accumulated long-term debt each year. Kanno (1997) indicates that this costly transportation company with a low rate of return had recorded a deficit of 37.1 trillion JPY, equivalent to \$237.8 billion in 1987 at the time of reform, which was roughly equivalent to the combined national debts of several developing countries (Kurosaki 2016). It became evident that JNR had to enhance its operational efficiency, to transform it into a competitive entity, thereby to reduce the huge government subsidies.

A comprehensive reform of JNR was called for to solve these pressing problems. Such SOE reform is not just for better financial performance but more importantly, for enhanced consumer satisfaction and social welfare (Taghizadeh-Hesary et al. 2019). Accordingly, "privatization" was proposed as a way to solve problems perceived to be attributable to its public enterprise status, and its breaking up into several companies was planned as a way to address problems attributable to the nationwide, monolithic nature of the organization.

2.2 How: From Japan National Railway to Japan Railway Company

The main problem with JNR was two-fold: (i) the company was too large an organization to be managed properly and (ii) it had to operate under political influence as evidenced by its operation of even unprofitable lines built only for political purposes. Thus, it was decided that the company would be split into smaller companies with enough independence for managerial decisions including the rights on operation. After consideration of several options for separation, regional subdivision according to geographical demand was decided upon. This decision created quite a dilemma for smaller JR companies such as Kyushu, Shikoku, and Hokkaido as they would have to meet their customers' local needs and compete to improve their performance.

The process of JR privatization was long and painful, as Mizutani and Nakamura (2004) indicate, such reform could not be accomplished all at once, but rather in a step-by-step manner. It started in 1987 with the establishment of the Japan National Railway Settlement Corporation (JNRSC) – a temporary holding company. The reason why the government established such a company was its deep concern about the JNR's dismal reputation as deficit-laden and inefficient, which could not attract enough interest from investors, negatively affecting the stock prices of newly created railway companies.

In a first step, government control was reduced substantially to the level of regulations equivalent to those for private railways (Table 1). This framework was expected to eliminate unnecessary outside interference, establish management autonomy, and clarify management responsibility. Management would be given full capacity and responsibility over managerial decisions, including the labor-management relationship that is envisaged to be resolved independently between trade unions and management. Equally important, railway companies would be able to diversify and expand into other fields of business aimed at increasing their corporate revenues. The aims of splitting up and privatizing JNR included:

- Eliminate external interference
- Clarify management responsibility
- Normalize labor-management relations
- Diversify business fields
- Create manageable scales
- Strengthen regionalized management and collaboration
- Remove irrational interdependence
- Promote incentives for competition and marketization

The JR companies were formed as the JNRSC's wholly owned joint-stock subsidiaries. Assets and liabilities of JNR were restructured in a way to ensure the competitiveness of the new companies. JNR ceded liabilities to the new companies only to the extent that they would not hinder sound management in the future. Remaining liabilities were assumed and disposed of by the JNRSC. JNR also ceded the minimum assets necessary to make the new companies viable as railway operators. Assets not ceded to the new companies were sold to the public by JNRSC to repay the liabilities left to the JNRSC (Figure 1). The JNRSC began to sell its shares in JR companies in the early 1990s. In 1998, it was dissolved and the Japan Railway Construction Public Corporation was formed to settle the remaining obligations of the JNRSC (Milhaupt and Pargendler 2017).

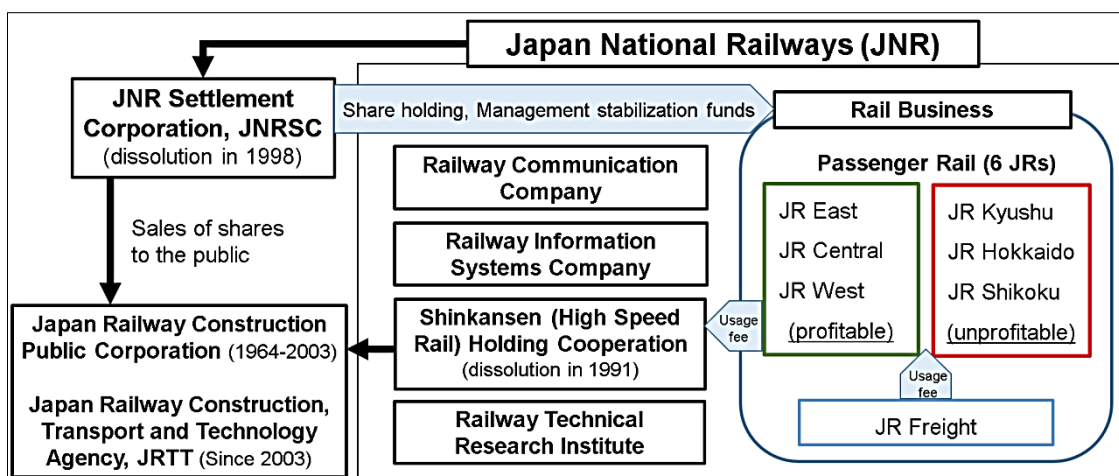
Table 1: Regulation Changes for JR

	JNR	JR	Private Railways
Business fields	Railway only	Free in principle (new business require the approval of the Minister of Transport)	Free
Investment restrictions	By law, approval of the Minister of Transport	None	None
Budget filing procedures	Diet resolution	Approval of the business plan (Revenue and expenditure budget must be presented as attached materials)	None
Borrowing and bonds issuance	Approved of the Minister of Transport (by Diet resolutions)	Long-term borrowing and issue of debentures require the approval of the Minister of Transport	No restrictions
Appointment of executive officers	President: Appointed by the cabinet; Members of the board of auditors and other executives: Appointed and approved by the Minister of Transport	General meeting of shareholders (Representative directors and auditors require the approval of the Minister of Transport)	General meeting of shareholders
Salaries	Determined in principle by the legal total salary system	Negotiations between labor and management	Negotiation between labor and management
Contract methods	In principle by open bids	Decided autonomously	Decided autonomously
Fares	In principle, by Diet resolution (reformed in 1977)	Approval of the Minister of Transport*	Approval of the Minister of Transport*

*The Ministry of Transport merged into the Ministry of Land, Infrastructure, Transport, and Tourism in January 2001. After the JR privatization, fare amendments were made three times for the passenger railway (1989, 1996, 1997), and twice for freight (1989, 1997).

Source: East Japan Railway Company (1995).

Figure 1: Outlines of the JNR Restructuring

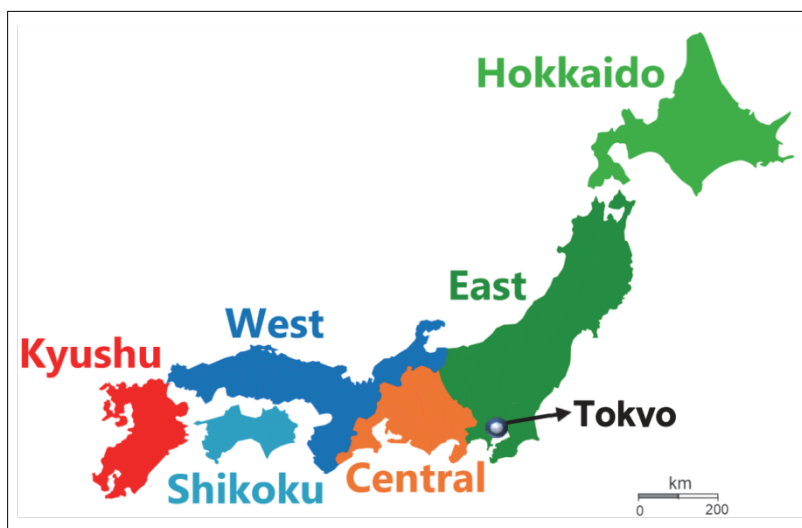


Source: Revised by authors from East Japan Railway Company (1995).

The splitting up of the JNR according to geography and functions led to the restructuring as follows.

- Hokkaido Railway Company (JR Hokkaido)
- East Japan Railway Company (JR East)
- West Japan Railway Company (JR West)
- Central Japan Railway Company (JR Tokai)
- Shikoku Railway Company (JR Shikoku)
- Kyushu Railway Company (JR Kyushu)
- Japan Freight Railway Company (JR Freight)
- Shinkansen (High speed rail)¹ Holding Corporation
- Railway Communication Company²
- Rail Information Systems Company
- Railway Technical Research Institute
- Japanese National Railways Settlement Corporation (JNRSC)

Figure 2: The Split of the Regional JR Passenger Service



Source: Authors.

How to deal with surplus employees as a result of restructuring was a critical issue. As of April 1986, JNR's employees totaled 277,000 of which 93,000 were estimated to be in excess by the Supervisory Committee. Kopicki and Thompson (2010) point out that as a partial way to address the issue, the new JR companies were required to hire 20% more employees than deemed necessary for their railway operations. The JNRSC

¹ The infrastructure would be owned by a state-owned company and leased to JR East, JR Central, and JR West.

² Railway Communication Company was for trunk line communications; Rail Information Systems Company for operations of nationwide railway information; Railway Technical Research Institute for research and development of the railway; JNRSC for liquidation of JNR's historical debts.

then conducted measures for a three-year period for employees not hired by the new companies to help these employees find new jobs. The restructuring plan made specific provisions for the 93,000 employees deemed surplus: (i) transferring 32,000 to other railway companies; (ii) establishing a special fund for the voluntary early retirement of 20,000; and (iii) assigning the remaining 41,000 to the Settlement Corporation for relocation.

After splitting up the JNR, a simplified organization structure in each company enabled management to make managerial decisions in a way that responded quickly and appropriately to changes in the environment and customers' needs. Management could clearly understand the actual status of each business sector and region, foster cost awareness, and thus vigorously pursue profit targets within the company. This also fostered a mutual sense of competition among the new railway companies.

Another important key to success was the new form of rail management system. Compared to the European way of rail privatization, the so-called "Up and Down Separation Method" or "Vertical Separation" under which train operations are separated from infrastructure ownership, Japan has adopted a system of "Horizontal Separation." This form of railway system allows competition and is expected to reduce operation costs, but this is still inconclusive. Mizutani and Uranishi (2013) find that using a total cost function of a railway organization, horizontal separation reduces railway costs, whereas Nash et al. (2014) find no evidence that vertical separation leads to more competition, or that such an increase in competition reduces costs. As such, the issue of railway operation after privatization continues to be an open question requiring further work to better measure the extent and effects of competition in different markets.

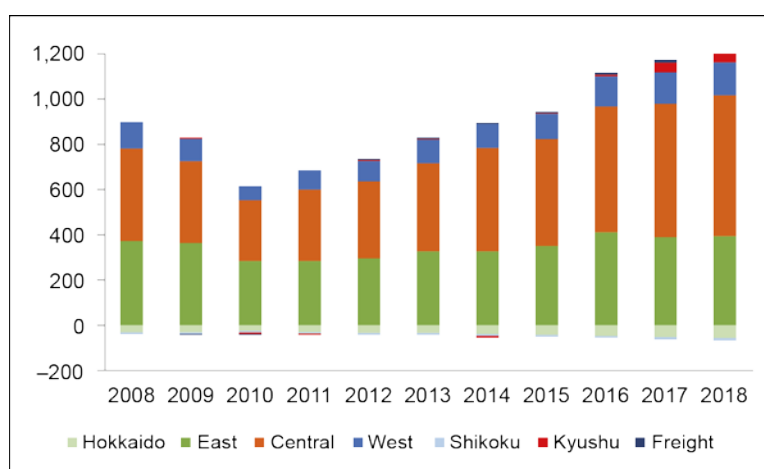
In the Japanese context, horizontal separation that sets a good yardstick of competition among regional subdivisions has improved the overall performance of JR companies. Regional needs have increasingly been met, particularly with improvements in train frequency. The integration of railway services into different regional organizations has been relatively smooth, although the number of interregional rail services has decreased. Each JR company took responsibility for both train operation and infrastructure management within its territory. This means drivers can only drive trains on their own company's track, therefore at the border station, there should be a change of drivers. As such, a fundamental characteristic in the Japanese passenger railway operation has been this clear separation of operational responsibilities at the border station, which is believed to have contributed to smooth, efficient, and safe passenger train operation.

Vertical integration, namely integration of operation and infrastructure, implies that railway companies also manage the stations, depots, and often commercial zones around the stations. For example, Tokyo Station is shared between JR East and JR Central, though their tracks and platforms are completely separated. This vertical integration has increased the productivity of privatized JR companies comparable to large private railways, which are considered the most efficient railway operation in Japan. For instance, Mizutani and Nakamura (2005) estimate, through empirical tests, the effect of privatization on productivity growth amounting to about 29%. However, privatization does not mean that is free of any negative effects. For instance, in April 2005, about a year after the full privatization of JR West, a fatal accident occurred on the Fukuchiyama Line in Hyogo Prefecture. The accident was caused a commuter train (a seven-carriage train) entering a curve at too high a speed, leading to 107 deaths and 562 injuries (Transportation Analysis 2014). This accident was a sharp reminder that continuous improvement in railway management is critically required after privatization.

2.3 Now: Service Diversification and Extension

While the reform of the Japanese railway has been regarded as largely successful, there remain a number of problems to be solved (Mizutani and Nakamura 2004). Privatization per se should not result in a simple transfer of monopolistic power from a public corporation to the private sector; the government should create a conducive environment to promote actual and potential competition in the market through regulatory changes and to foster such competition even within the organization itself through appropriate incentive mechanisms. In this regard, privatization of JNR deserves its own share of the credit. According to Japan Transport and Tourism Research Institute (JTTRI) (2019), the mileage share for railways is more than 75% in Japan, compared to US (1%), UK (10%), France (11%), and Germany (8%). Overlooking the consequences of JR reforms in the past 30 years, the results have been satisfactory regarding service provision following the global financial crisis in 2009 (Figure 3) except for JR Hokkaido and JR Shikoku. The newly established JRs focused on their own markets and provided transport services appropriate for each region as well as JR Freight.

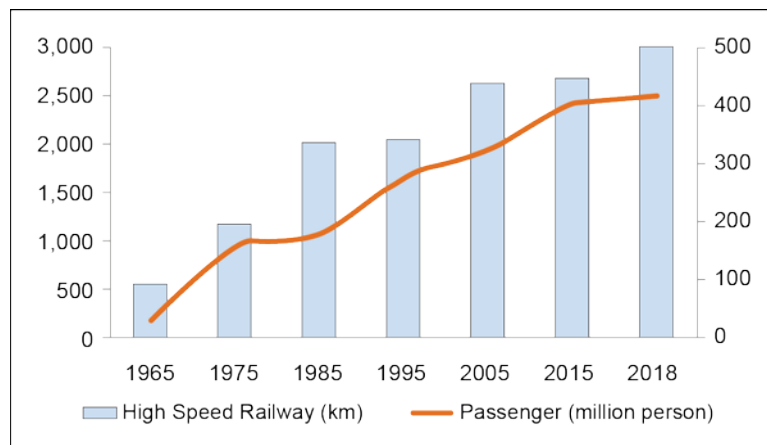
Figure 3: The Performance of JRs from 2008 to 2018
(unit: billion JPY)



Source: JTTRI (2019).

Based on JTTRI statistics, the transport volume (passenger-km) decreased 6% in the decade prior to the JNR reform, but the trend changed course, substantially increasing to 27% in the decade after the reform. As for the passenger sector, since the termination of the cross-subsidy to the freight sector, it has become possible to re-invest the profit to improve passenger services such as high-speed railway (Figure 4). Key indicators for JRs' operation also demonstrate the healthy condition for the major JRs (Table 2). Furthermore, following the business model of other private railways, the JRs also commenced affiliated businesses, actively utilizing and developing the space in and around the stations. Nowadays, especially around large stations, it has become common for group firms of JR companies to promote various kinds of affiliated businesses such as tourism, and the revenue from these business activities has been increasing. Local rail services in small communities have been maintained for the past ten years but there are no guarantees that these will survive any serious financial slump the JRs might someday experience.

Figure 4: Increasing Shinkansen (High Speed Rail) Business



Source: JTTRI (2019).

Privatizations of the three JRs (East, Central, and West) have achieved positive balance sheets despite bearing the cost of infrastructure and the burden of the allocated JNR liabilities (Kurosaki 2016). As scheduled, the listings on the Tokyo Stock Exchange of JR East (2002), JR West (2004), JR Central (2006), and JR Kyushu (2016) set out the pathway to privatization with more flexible management and investments that paved the way for the diversification of their businesses³. It was expected to be even more crucial to ensure the profitability of the JR firms given that a significant increase in passenger transport revenue is not expected in the future given the nation's population decline (Japan Times 2017).

Contributing factors to such favorable outcomes would include well-clarified management targets that could speed up faster decision-making through a simplified organizational structure. Meanwhile, the restructuring has improved productivity by stabilizing labor-management relations and reshaping employee attitudes, as well as enhancing services through regionalized management. The improved earning ability through different fields of business has been important for the cross-subsidies in the restructuring process. In addition, the strong commitment of the management team was essential to the successful transition.

One important aspect of the JR privatization was its spill-over effects to other business sectors and the economy as a whole. According to a recent study (Huang, Kim, and Chen, Forthcoming), the JR reforms have led to an improvement in social welfare and substantial growth of the shipping sector with increased diversification, deregulation, and improved connectivity.

Based on such factors, the key lessons emerging from the JNR restructuring experience that have relevance for rail reform in other countries are summarized:

- Strong political support is essential to successful restructuring.
- Practical reorganization plans should be developed by experts with full knowledge and expertise on the sector, rather than politicians and bureaucrats.
- For a railway in JNR's condition, restructuring should precede privatization to increase the probability of success.

³ JR Hokkaido, JR Shikoku, and JR Freight are still governed by the Act for the Passenger Railway Companies and Japan Freight Railway Company and are under the control of the Japan Railway Construction, Transport, and Technology Agency, an Independent Administrative Institution.

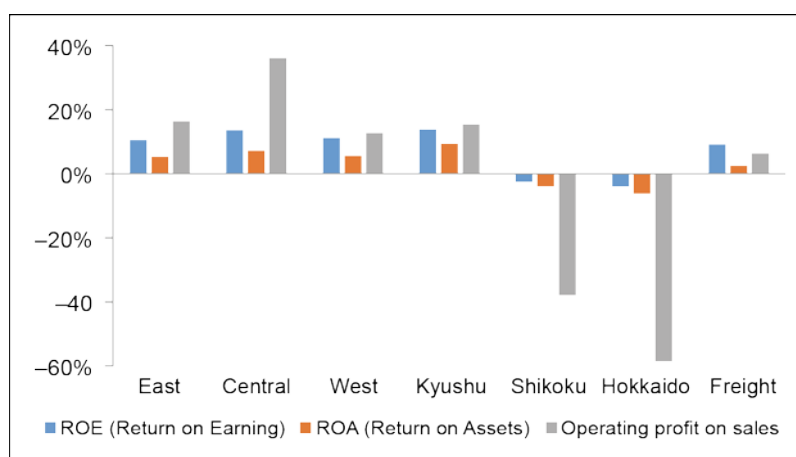
- Short-term issues requiring immediate attention should be prioritized before tackling long-term problems.
- Restructuring should have clear market-focused operating components.
- There should be enough management incentives set early in the reform process to facilitate the reform process.

Table 2: Key Indicators for JR’s Operation as of March 2018

	Hokkaido	East	Central	West	Shikoku	Kyushu	Freight
Operation length (km)	2,552	7,457	1,971	5,007	855	2,273	7,959
Employees (persons)	6,904	47,246	19,619	28,326	2,055	6,129	5,406
Revenue (billion JPY)	84	1,991	1,414	948	28	171	141
Revenue other than railway (billion JPY)	6	83	13	28	3	48	17
Net Profit (billion JPY)	-53	359	625	144	-12	47	11
Fund	682	0	0	0	208	3,887	0
Customers per day (thousand persons)	371	17,565	1,526	5,179	126	908	n.a.
Revenue per mileage/passenger (JPY)	537	283	2,363	449	514	442	n.a.
Net profit per passenger (JPY)	-391	56	1,122	76	-261	142	n.a.

Source: Adapted by authors from the JTTRI (2019).

Figure 5: The Key Indicators for Company Operation (2018)



Source: Adapted by authors from the JR’s annual reports.

The reforms to the Japanese railway, characterized by breaking up into smaller companies and their privatization, can be said to be successful given the improved productivity, decreased overall operating deficits, decreasing fares, better services to customers, and the spill-over effects to other sectors. Milhaupt and Pargendler (2017) point out that the management of JR companies has been sustainable so far based on the original scheme planned at the time of the reform with better performance and public satisfaction.

However, there have been wide variations in performance and challenges among JR companies given the rapid social-economic changes in the railway sector. For instance, JR Hokkaido and JR Shikoku, situated in low population density areas, have suffered from operational disparity. It will be even more challenging to turn these two deficit JRs into profitable entities considering population aging and shrinking in Japan. The companies should take further decisive actions on service diversification following the successful case of JR Kyushu. In addition to diversification, the railway sector as a whole should act urgently to maintain its competitive position, such as to benefit from inbound tourists and collaboration with other transportation services by improving connectivity. While a decision was made to sustain local lines with declining passenger number, certain measures, such as vertical separation, should be introduced to gain financial support from local governments. Finally, political intervention, one of the main culprits for the sluggish JR, has considerably lessened after the reform and privatization along with the drastic change in the social economy.

3. FROM JAPAN POST TO JP HOLDINGS

3.1 Why Privatization

Since its establishment during the Meiji period in 1875, JP grew with the expansion of its business areas that covered postal delivery services, savings bank, and insurance. Currently, Japan's postal system consists of the mail and a huge bank deposit network, simple banking and financial transactions, and insurance purchase. Such a system raised important issues that required fundamental reform and privatization. Broadly speaking, JP was situated as a core institution representing old systems that served well in the past, but hindered further development with inefficiency, corruption, and lack of transparency (Duggan 2017).

There was an urgent need for more efficient use of its huge assets, given that postal savings and postal life insurance together accounted for a quarter of Japan's personal financial assets in the early 2000s. According to the 2010 annual report of JP Bank, it was the biggest deposit holder in the world with 175 trillion JPY (\$1.9 trillion) in 2008, which was about 25% of Japan's total deposits. Indeed, JP played a critical role in the development of the Japanese economy by collecting savings from customers in almost all areas of the country and channeling such savings into investments in SMEs, infrastructure, and housing through the government's loan program. However, as the economy advanced, there has been strong criticism that these investments led to wasteful spending often tied to political motives (Yoshino et al. 2018). Even after this system was finally abolished as part of the 2001 reform, the money, approximately 75% of JP's 177 trillion JPY (\$2.2 trillion) in deposits, has been invested in Japanese government bonds with no substantial role in creating new industries. Many, including Takeda and Mizuoka (2003), argue that it is critically important to encourage the birth and growth of new industries for the upgrading of industries and economies for further development through more efficient use of accumulated funds.

More importantly, there have been deep concerns about fair competition and a level playing field. Indeed, JP had been very successful in its business because it was close, convenient, and reliable for its customers and very cost-effective through its nationwide network of around 24,000 branches. At the same time, it enjoyed a number of privileges and immunities, including state guarantees, premiums for postal deposits, and the remission of property tax. These unfair advantages have created distortions for market functions and saving incentives, leading to further hinder the development of well-functioning financial systems along with a changing environment, let alone the problem of deep political connections to prevent genuine reforms. Furthermore, there has been increasing criticism from major trading partners that advantages enjoyed by Japan's postal service in banking and insurance represent a clear violation of Japan's obligations under the General Agreement on Trade in Service (GATS).

In this sense, it was argued that indefinitely maintaining JP as a government-controlled entity without fundamental reforms would result in potentially increasing system risks in the financial sector of Japan. Porges and Leong (2006) pointed out that the privatization of JP would make it possible to remobilize such assets to the development of private sectors, and to remove distortions to competition in the banking and insurance sectors. Thus, the need to reform this rigid financial system became the most important belief of Junichiro Koizumi when he became the Minister for Post and subsequently Prime Minister, initiating structural reform for the Japan postal system.

3.2 How: From Government Agency to a Privatized Company

3.2.1 Ups and Downs of Privatization

The postal system in Japan started its services in 1871 with the addition of postal savings in 1875 and life insurance in 1916. In early 2001, as part of the reorganization of national bureaucracy by Prime Minister Mori, the Postal Service Agency was established under the then Ministry of Public Management, Home Affairs, Posts, and Telecommunications. Later in 2001, when Koizumi became Japan's Premier, he was determined to pursue the privatization of JP similar to NTT as a holding company system. As a first step, in July 2002, the Postal Service Structural Reform Law was passed through the National Diet and the Postal Service Agency was converted into a public corporation, Japan Post Inc. with the state as a sole shareholder in April 2003. Premier Koizumi went on further with a bold plan for the JP privatization with a package of six privatization bills that finally passed the lower house, but to everyone's surprise, was rejected in the upper house, reflecting the strong opposition to the postal privatization. Premier Koizumi went on to dissolve the Diet calling a snap election, a form of referendum on the postal privatization (Porges and Leong 2006) and received a landslide victory in the lower house in 2005.

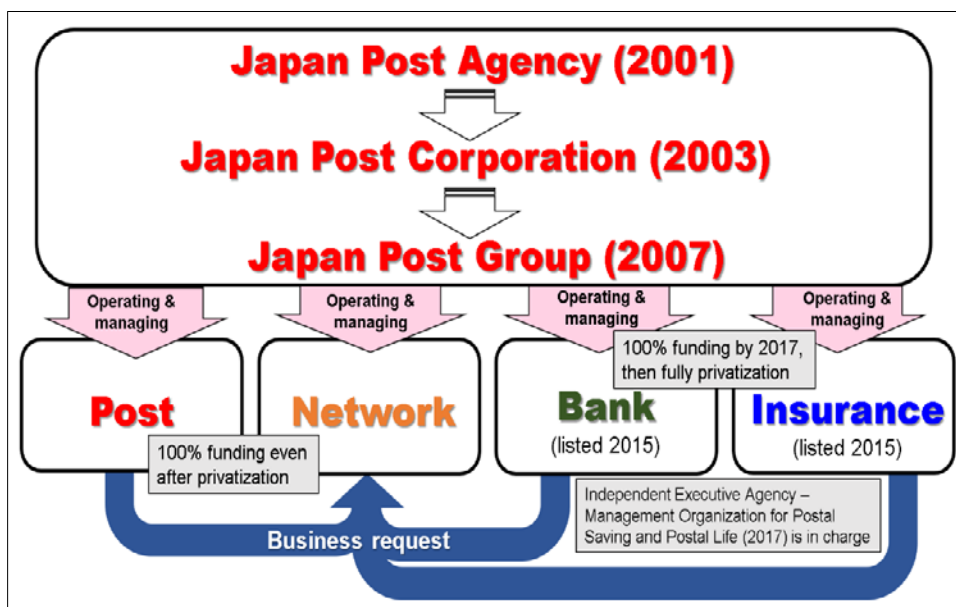
The decision-making on the privatization voting was also complex because of the strong power restoration within the ruling party. Imai (2009) examines the political incentives of Japan's politicians from their voting behavior, finding that politicians with an inclination for large interventionist government had a tendency to oppose postal privatization. Empirical results show a robust positive correlation between politicians' resistance to postal privatization and the prevalence of post offices whose workers and postmasters were anticipated to be adversely affected by the planned privatization. Most interestingly, the factional conflicts played an important role in the eventual votes on the privatization bills.

The postal privatization referendum was a major political shock therapy, but its implementation was much delayed. The resultant reform package included: (1) The Financial Instruments and Exchange Law; (2) New Companies Law; and (3) Postal Privatization Law intended to achieve:

- Market-opening (greater cross-border investment, particularly inward investment)
- Better corporate governance through capital market opening
- A move “from savings to investment” – diversification of household balance sheets

The design of the legislation for privatization represented an attempt to achieve structural separation between the postal delivery and network businesses and financial services businesses. However, privatization of JP was challenging in the sense that the privatized companies had to be viable in the face of fair competition with private players in the market segments, and at the same time, postal delivery, to a certain degree, should meet the requirement of universal service obligations. The Postal Privatization Law passed in October 2005 envisioned three phases of the privatization, namely a preparation phase, a ten-year transition phase starting on the privatization date of 1 April 2007, and a final phase of post-privatization configuration of companies (Figure 6).

Figure 6: The Restructuring and Process of Japan Post Privatization



Source: Revised by authors based on Japan Post.

From the beginning of the privatization procedure, JP Holdings became the shareholder of four to-be-privatized companies, including JP Bank, JP Insurance, JP Network, and JP Service. In the new framework, JP Holdings was initially state-owned but with the commitment that shares should be gradually sold off by 2017. The legislation also established a Cabinet-level Postal Privatization Headquarters, advised by a five-person Postal Privatization Commission (PPC), both of which would be dissolved by October 2017. The succession plan would be developed to resolve key issues such as how the assets, liabilities, and employees of Japan Post would be divided between the successor

companies. The final privatization of the bank and insurance company would complete that process, but only after a ten-year transition.

However, in the political transition in 2009, the reforms came under attack with the victory of the Democratic Party of Japan (DPJ). DJP and its coalition partner, the People's New Party (PNP), initiated a moratorium on share sales of JP companies. They further passed a revised bill in 2012 that (i) allowed the government to maintain a one-third interest in JP Holdings (and indefinite de facto control of the company); (ii) removed binding targets for the share sales of the two financial companies; (iii) installed a provision on universal financial services; and (iv) eased the constraints for entry into new business.

The main argument was that the original plan ignored the needs of consumers focusing too much on profits and having already led to the closures of local post offices. Under the new plan, the government would retain more than one-third of the shares of JP Holdings, enough to allow the government to veto any major changes in the company. Such intervention again implied that Japan scaled back the plan to privatize the world's biggest financial conglomerate to keep control of the state-owned group, which allowed the purchase of more government bonds and underscored the considerable political obstacles to badly needed economic reform in Japan (Sano 2010; CSIS 2012).

In December 2012, the Abe administration took office recognizing privatization of the JP as an important part of its economic strategy called "Abenomics." It featured a set of policies intended to revive the economy through monetary policy, fiscal consolidation, and a growth strategy against the long-lasting deflation and the continued conservative investment habits that accompanied rapid population aging (Robinson 2017). In particular, the Abe administration had to scale up the Tohoku earthquake reconstruction efforts that required mobilizing funds including share sales of JP companies. While the administration was still bound by the 2012 revised plan, it expedited the IPO process, eventually leading to the listing of three JP companies, JP Holdings, JP Bank, and JP Insurance in 2015 on the Tokyo Stock Exchange. It can be said that the long-lasting reform of Japan's postal system was completed with such listings, while thereafter the government continued to sell shares of the companies⁴.

3.2.2 Decompositions and Impacts

Restructuring and privatization had a wide-ranging impact on the ways of doing business by the privatized companies. Above all, the cross-subsidy system, under which more profitable banking and insurance branches provided subsidies to the postal delivery branch to keep its prices below cost, was dismantled. In addition, the delivery company is also required to pay the network company for counter and other services that the network company supplies in a private company-based transaction. Therefore, the delivery company would have a strong incentive to take dramatic steps to compensate for the loss of subsidies by entering into new lines of business, increasing its mail volumes, and cutting costs. One such step, already articulated by the JP groups, would be to enter the logistics industry. This is a growing but complex industry, one which may require JP to partner with an established logistics provider at the outset.

⁴ As of the end of July 2019, the state owns 57% of JP Holdings; JP Holdings owns 100% of JP Service, 74.1% of JP Bank, and 64.4% of JP Insurance (Source: Nikkei Asian Review).

One important feature of the postal reform in Japan was enhancing competition. To enable vibrant competition in the postal services, preferential treatment of JP Service should not be allowed even to keep the universal postal service. To the extent that the privatized postal delivery business receives preferential treatment that discriminates against its competitors, the playing field would be tilted toward JP Service, with negative effects on fair competition.

However, given JP's long history as an SOE and the government's high interests in JP Holdings, many private sector competitors in financial services and insurance remained skeptical of the benefits of privatization. Competitors were apprehensive that in the absence of regulatory harmonization, privatization might merely transform an explicit government guarantee to the largest, government-protected players in financial services and insurance. The postal privatization, as Koizumi's signature reform, was of both practical and symbolic value moving from the public to the private sectors concretizing its policy slogan—"from savings to investment." The postal savings balance sheets remained inflated by deposits and cash that had flowed in from households when Japan's "lost decade" was in full swing and sentiment was at its worst (Fink 2016).

Some of the same concerns voiced by foreign competitors in the late 2000s have been repeated again under the Abe administration. Porges and Leong (2006) question whether Japan's policymakers would create a strong postal service, with so much preferential treatment and so many subsidies that it overpowers its competitors and threatens competition in the industry, or a weak postal service that struggles to meet its universal service obligations and its deferred liabilities, ultimately needing a government bailout⁵.

Japanese banks benefitted from massive shifts of deposits out of JP Bank, but at the same time it formed a new competitive threat as JP Bank needed to expand into new business areas to survive as a private company as well as for insurance. An implicitly protected JP Bank and JP Insurance, if awarded a more extensive mandate than before, might dampen rather than promote competition in the financial sector.

As pointed out, postal reform in Japan together with the New Company Law attempted to break down barriers to regional competition in financial services. It was expected to bring fundamental changes to Japan's financial system. When JP Holdings was established in January 2006 according to the law, the Asia-Pacific Economic Cooperation (APEC) aptly lauded it as a "major achievement" (Fink 2016). However, mainly due to the partial nature of the postal reform, implementation delay, and subsequent political pressure combined to make the legislation much less revolutionary than initially anticipated, leading only to muted improvement in financial sector competition. Indeed, JP is not yet fully privatized partly because of its huge networking capability that could remain important in providing non-exclusive benefits to the public in general.

3.3 Now: Still Evolving Process

The reform and privatization of JP is far from finished and still evolving. Indeed, the original reform measures, that if rightly implemented could have reshaped the financial sector entirely, have fallen far short of their ambitious goal. From this experience, important but tentative lessons could be derived and categorized into: (1) elements of its

⁵ After the heated debate, Article one of the Postal Law in 2005 stipulated that Japan Post should deliver to all addresses at a uniform cost as fairly and cheaply as possible.

successful legislation; (2) characteristics of its much delayed and scaled-back implementation; and (3) the necessity for ongoing reform following privatization.

Here, we would like to focus on the further reform process envisaged in the future to ensure the viability of the company in a changing environment. By 2019, the remaining employees, assets, and liabilities were divided among the successor entities. The next steps in the reform process where further developments are expected are:

- Continuing sell-off of cross-held shares and reform of corporate boards, alongside the restructuring of the main bank relationships,
- Ongoing efforts to diversify the Japanese household balance sheet “from savings to investment,”
- Ongoing adaptation of the Financial Instruments and Exchange Law (FIEL) and Corporations Law to reflect new products and technological development with new measures, and
- Using multilateral agreements and regional initiatives as levers to speed domestic reforms (e.g. the Trans-Pacific Partnership (TPP) and Asia Regional Funds Passport).

To face future challenges, Japan Post Group (2018) advocates bolstering the earning power of the three core businesses, namely the logistics industry, financial industry, and technology, and strengthening the Group’s business foundation for total lifestyle support. This will serve its customers through the post office network to create a corporate group with the provision of a variety of products and services tailored to diverse lifestyles and the life stages of customers and support them in realizing safe, secure, comfortable, and enriched lives and lifestyles (Table 3).

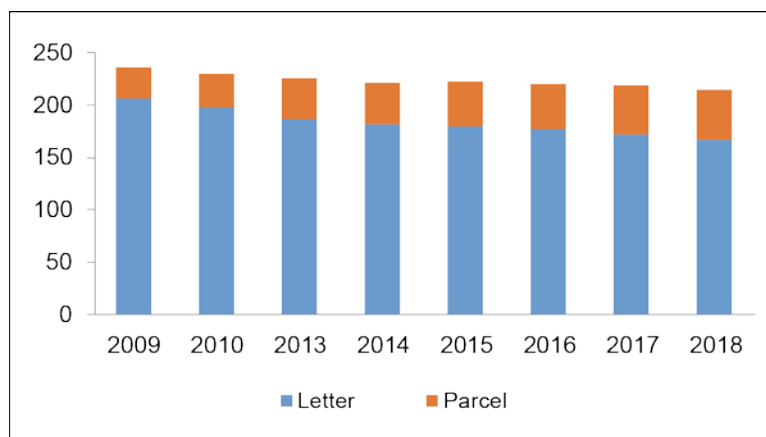
Table 3: The Matrix of JP Group Development

	Main External Environment	Response Policies
Logistics industry	<ul style="list-style-type: none"> • Continuation of declining trend in mail • Continued expansion of the EC market 	<ul style="list-style-type: none"> • Strengthening of logistics functions • Development of comprehensive logistics business in Japan and overseas
Financial industry	<ul style="list-style-type: none"> • Enduring historically low interest rate environment • Consideration of strengthening international financial regulations • Principle of customer-oriented operation of business • Diversification of settlement methods 	<ul style="list-style-type: none"> • Advancement and diversification of asset management and insurance sales activities focusing on protection needs • Securing of appropriate financial soundness • Promotion of fiduciary duty throughout the company • measures and improvement in quality of insurance solicitation • Provision of new transfer settlement services (smartphone settlement, account overdraft, and debit cards)
Socioeconomic Technology	<ul style="list-style-type: none"> • Advent of declining population and ultra-low childbirth and aging society (decline in productive age population) • Increase in personnel expenses and social security-related expense burden • Emergence of new technologies (AI, RPA, automatic driving, drones, Fintech, etc.) 	<ul style="list-style-type: none"> • Improvements in administrative efficiency through use of new technologies and systems • Working style reforms • Use of new technologies aimed at future business development • Enhancement of non-face-to-face channel

Source: Japan Post Group (2018).

To achieve these objectives, it is indispensable to fulfill JP's obligation to provide universal services to local communities. According to Ministry of Internal Affairs and Communications (2019), the popularity of internet accessibility has increased from 46.3% in 2001 to 80.9% in 2017, smart phone from 1.1% in 2008 and 47.2% in 2016, respectively. Despite the domestic postal demand shows an annual decrease of 2.5%, the share of parcels has gradually increased (Figure 7). Among all competitors in delivery service providers, the JP Network has dominated the letter pack market; on the other hand, the parcel market shows healthier competition. Initiatives for revenue growth including the domestic logistics business and international operations business by improving services such as EMS and international parcel deliveries are being initiated. With the boom in Internet commerce and the value-added network, the trade volume has risen substantially. According to the annual report in 2019, the revenue share was 20% and expected to reach 50% in 2030.

Figure 7: The Transition of Letter and Parcel Numbers
(unit: million)



Source: Ministry of Internal Affairs and Communications (2019).

With this aim, it will be important to enhance its corporate value as an organic combination of the post office network and two financial companies, and to pursue this organic combination with banking and insurance services to build a new network. JP remains a huge organization continuously redefining its position. It has strived for service diversification by utilizing its networking system, not just delivery of letters and parcels but also a reliable nearby service provider. With Japan being a super-aged society, mail carriers now have a new mission to provide regular visits to senior citizens for communication and safety checks. The monthly greeting service became more popular in rural areas and provided another spillover effect to civil society.

One strong factor pushing for the reform is rapid technological development in ICT and Internet-based platforms. The JP group has set an agenda for IT reform to establish market positions in major industries such as energy, retail, and engineering through the aggregation of IT distributed in each business division. Countries with advanced data analysis technology such as Australia, Singapore, and the US have been expanding these emerging fields. Strengthening of synergy and developing new business would contribute to the creation of products and services that are necessary for every stage of the lives of customers through the use of the huge post office network as an important

infrastructure for society (Figure 13). Such provision of universal services through the post office network would contribute to securing a prosperous society where everyone can live a safe and healthy life.

The provision of reliable financial services in Japan through the largest network requires improving the Internet service and call center creating an “Organic integration” of post offices (client base/information) with better functions “through the eyes of customers.” However, the mismanagement of insurance sales was observed in the making of double premiums. Other private insurance providers also criticized the binding “insurance retail” between JP Insurance and JP Networks. This incident of miscalculation would significantly affect the reliable image of the insurance provision at JP Networks (Nippon.com 2019).

Having said this, it should be pointed out that JP faces historic challenges. As a partially privatized SOE, there is always a risk that the actions of politicians and government officials would serve their own interest in enhancing power and wealth, rather than the interests of citizens. Listed SOEs may face different problems depending on how the state behaves as a shareholder. If it acts as a passive or absentee owner, managerial agency problems will prevail, so SOEs may suffer from managerial slack and managerial tunneling (i.e., the theft of corporate assets). More broadly, JP will have to take active steps to further redefine and adjust its business models to align with rapid socioeconomic structural changes including population aging and the increasing trend of the cyber lifestyle in the 21st century (Kuroda et al. 2018). JP’s huge networking capacity could provide an important platform for this transformation through a wiser use of its post office network and the diversification of its services.

In this vein, the privatization of JP is not simply the reform of one single company, but of the society as a whole because its spillover effect could also contribute to creating a platform for addressing the structural changes faced. The brand value of JP strengthened by a series of reforms and privatization and reliability still rooted in the society could enable it to be a promising system provider with advanced technology and extensive experience in quality services in the 21st century.

4. CONCLUDING REMARKS

The still evolving privatization of JR and JP is fertile ground to provide important lessons for SOE reforms, not just because of the size involved, but because of the process, influences, and spillover effect toward socioeconomic changes. The process has never been easy or peaceful, rather characterized as full of pain, struggle, and with an information gap. It took more time than planned to overcome such obstacles and fluctuations. Most notably during the privatization process of the two giant companies, the reform took place at the turning point of Japan’s transition from periods of high economic growth to ones of falling economic vitality with an aging and shrinking population. Such reforms also had to cope with deteriorating government finances.

The evolving process of the privatization also contained significant elements of rapid technological development. For JR, the split of the company led to more freedom and incentives for R&D activities, especially towards the high-speed railway system. As of 2019, JR Central, JR West, JR East, JR Kyushu, and JR Hokkaido all maintain capacity for high-speed rail (Shinkansen) technology, featuring resilience toward weather conditions, high speed, even artistic design, and most of all, safety devices. The Shinkansen is still the pride of R&D for export, as well as a vital attraction for inbound tourists. According to the Japan National Tourism Organization, the number of tourists has increased from 5 million in 2002 to 30 million in 2018, implying

the continuous demand for a convenient public transportation system and other businesses such as hotels, shopping areas, and recreation services. In addition, the implementation of the IC card system since the 2000s has now spread all over Japan, contributing to efficient commuting and cashless payment.

Regarding JP, the integrated system created by privatization combining post-delivery, banking, and insurance will be an even more influential platform supporting better lifestyles. That is to say, the information collected in various services could contribute to big data analysis to further enable the service provision through the JP network in a smarter facility while reducing the knowledge gap. The privatization of JR and JP could gradually provide solutions for the concept of the so-called Society 5.0, which is capable of providing the necessary goods and services to the people who need them at the required time and in just the right amount.

To conclude, we integrate three key policy implementations from JR and JP privatization as follows:

- Strong commitment and clear strategy for structural reform: To help the stakeholders work toward a clear target and time horizon for reforms.
- Deregulation: To provide incentives for innovative solutions and involvement for more stakeholders to contribute to market efficiency and social welfare.
- Promote technology: To apply advanced technology for effective information management in order to capture the development and adjust the change for further reform.

The most important lesson from the reforms of JR and JP is that privatization, deregulation, and decentralization could create a powerful platform not only for the company but for the society as a whole. The privatization of JR and JP was not just the privatization of two giant SOEs, releasing their capacity to make more profit. Rather, it was the process to bring social welfare improvement by encouraging innovative services and creating more value-added public interests to facilitate sustainable development for the society. While the process of full privatization is still ongoing and evolving, these experiences will serve as good reference points for other countries in the 21st century.

REFERENCES

- CSIS (2012) *Japan post reform: Return to sender*. Simon Chair in Political Economy, Center for Strategic and International Studies. <https://www.csis.org/analysis/japan-post-reform-return-sender>. Accessed 5 Jan 2019.
- Duggan, A.J. (2017) "Postal Reform in Japan: Comparative New Zealand-Japan Study of Economic Issues in Privatizing a Postal System." A PhD Thesis at the University of Waikato
- East Japan Railway Company (1995) *The Privatization of railways in Japan*. Tokyo: East Japan Railway Culture Foundation.
- Fink, N. (2016) *Lessons from Koizumi-era financial services sector reforms*. Discussion paper series 80: APEC Study Center, Columbia University. <https://www8.gsb.columbia.edu/apec/sites/apec/files/DP%2080.Naomi%20Fink.Lessons%20from%20Koizumi.pdf>. Accessed 5 Jan 2019.
- Huang, M., C. Kim & C. Chen. (Forthcoming) "Reforming State-Owned Enterprises via Government R& D Investment towards Sustainable Future: Policy Simulations for Japan Railways and Japan Post, *Cities*.
- Imai, M. (2009) "Ideologies, vested interest groups, and postal saving privatization in Japan." *Public Choice* 138: 137–160.
- Japan Post Group (2015) *Medium-term management plan: New Japan post group network creation plan 2017*. Japan Post Group. <https://www.jp-bank.japanpost.jp/en/aboutus/company/pdf/managementplan.pdf>. Accessed 5 Jan 2019.
- . (2018) *Japan post group medium-term management Plan 2020*. Japan Post Group. https://www.jp-life.japanpost.jp/en/aboutus/company/pdf/mt_managementplan2020.pdf. Accessed 5 Jan 2019.
- Japan Times (2017) "Privatization of JNR, 30 years on." <https://www.japantimes.co.jp/opinion/2017/04/04/editorials/privatization-jnr-30-years/#.XIG-Zij7RPY>. Accessed 5 Jan 2019.
- Japan Transport and Tourism Research Institute (JTTRI) (2019) *Railway 2019 from numerical perspectives*. Tokyo: JTTRI (In Japanese).
- Kasai, Y. (2004) *Japanese National Railways: Its break-up and privatization*. London: Global Oriental.
- Konno, S. (1997) "JNR Privatization-JR's first 10 years and future perspectives." *Japan Railway and Transport Review* 13: 34–38.
- Kopicki, R., and L. Thompson. (2010) *Best methods of railway restructuring and privatization*. CFS Discussion Paper Series 111, World Bank, DC. <http://siteresources.worldbank.org/INTRAILWAYS/Resources/b35.pdf>. Accessed 5 Jan 2019.
- Kuroda, M., K. Ikeuchi, Hara Ikeuchi, and M. Huang (2018) "Assessments of ICT policy options: The framework of input-output table linked with intangible knowledge stock." In *Applications of input-output model*, edited by K. Mukhopadhyay, 65–110. Springer.
- Kurosaki, F. (2016) "Reform of the Japanese national railways (JNR)." *Network Industries Newsletter* 18(4): 8–11.

- Maruyama, S. (2006) Competition Structure and Future Postal Reform in Japan. In *Progress toward Liberalization of the Postal and Delivery Sector*, edited by M. Crew and P. Kleindorfer, 369–84. Boston: Springer.
- Milhaupt, C., and M. Pargendler. (2017) “Governance challenges of listed state-owned enterprises around the world: National experiences and a framework for reform.” *Cornell Intl Law J* 50, 3(3).
- Ministry of Internal Affairs and Communications (2019) Review and Perspectives of Post Service (in Japanese) http://www.soumu.go.jp/main_content/000637335.pdf. Accessed 28 Oct 2019.
- . (2019) *White Paper Information and Communication in Japan*, www.soumu.go.jp/johotsusintokei/whitepaper/ja/r01/html/nd234130.html. Accessed 28 Oct 2019.
- Mizutani, F., and S. Uraishi. (2013) “Does vertical separation reduce cost? An empirical analysis of the rail industry in European and East Asian OECD Countries.” *Journal of Regulatory Economics* 43(1): 31–59.
- . (2007) “The effects of privatization on productivity and capital adjustment.” *International Journal of Transport Economics* 34(2): 197–224.
- Mizutani, F., and K. Nakamura. (2005) “Effects of Japan national railways' privatization on labor productivity.” *Regional Science* 75(2): 177–199.
- . (2004) “The Japanese experience with railway restructuring.” In *The Japanese experience with railway restructuring in governance, regulation, and privatization in the Asia-pacific region*, edited by T. Ito and A. Krueger, 305–42. New York: University of Chicago Press.
- Mizutani, F. (1999) “An assessment of the Japan railway companies since privatization: Performance, local rail service and debts.” *Transport Reviews* 19(2): 117–39.
- Nash, A., A. Smith, D. De Velde, F. Mizutani, and S. Uranishi. (2014) “Structural reforms in the railways: Incentive misalignment and cost implications.” *Research in Transportation Economics* 48: 16–23.
- The Nippon.com (2019) “Japan Post mulling halt to commissioned insurance sales.” 28 Jul 2019 <https://www.nippon.com/en/news/yjj2019072700459/japan-post-mulling-halt-to-commissioned-insurance-sales.html>. Accessed 30 Jul 2019.
- Porges, A., and J. Leong. (2006) “The privatization of Japan post.” In *Progress toward liberalization of the postal and delivery Sector*, edited by M. Crew and P. Kleindorfer, 385–400. Boston: Springer.
- Robinson, G. (2017) “Pragmatic financialisation: the role of the Japanese Post Office.” *New Political Economy* 22(1): 61–75.
- Sano, H. (2010) “Japan scales back Japan Post privatization.” Reuters. <https://www.reuters.com/article/us-japan-markets-japanpost-idUSTRE62N1TX20100324>. Accessed 5 Jan 2019.
- Taghizadeh-Hesary, F., N. Yoshino, C. J. Kim, and A. Mortha. 2019. *A Comprehensive Evaluation Framework on the Economic Performance of State-Owned Enterprises*. ADBI Working Paper 949. Tokyo: Asian Development Bank Institute.

- Takeda, I. and F. Mizuoka. (2003) "The privatization of the Japan national railways: The myth of neo-liberal reform and spatial configurations of the rail network in Japan – a view from critical geography." In *Making urban transport sustainable*, edited by N. Low and B. Gleeson, 149–64. London: Palgrave Macmillan.
- Tamamura, H. (2004) "The actual state and effect of privatization. East Asia competition policy forum." <https://www.jftc.go.jp/eacpf/03/privatization.pdf>. Accessed 5 Jan 2019.
- Transport Analysis (2014) *Railway in Sweden and Japan – a comparative study Report*. Stockholm: Brita Saxton.
https://www.trafa.se/globalassets/rapporter/2010-2015/2014/report_2014_12_railway_in_sweden_and_japan_-_a_comparative_study.pdf. Accessed 5 Jan 2019
- Yoshino, N., M. Helble, A. Takeda, and S. Shimazaki. (2018) "Postal savings and financial inclusion in Japan." In *Postal savings: Reaching everyone in Asia*. N. Yoshino, J. Ansón, and M. Helble, 268–85. Tokyo: ADBI Press.