

An Historical Overview of the Electric, Rail, and Communication Utilities in Japan

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I Introduction

Public utilities grew rapidly during and after the Industrial Revolution in Japan, which started a century later than in England. They underwent large-scale reorganization as the result of business mergers in the process of their development, national policies during the two world wars, and economic development and democratization after World War II. The three public utilities that were recognized most substantially—electricity, railways, and communications—are examined here.

II Electricity

1 Before World War I

Under the Meiji government, modern industries developed rapidly, and the industrial demand for electric power exceeded residential demand in 1918, when World War I ended. Early in the 20th century, technological innovation made possible the large-scale generation and long-distance transmission of electricity, and this led to the establishment of many large-scale hydroelectric power stations. A problem arose in making use of the surplus power generated during the rainy season, which led to the development of such energy-intensive industries as carbide, lime nitrogen, ammonium sulfate, and soda.

The remarkable growth in demand led to an increased number of producers of both thermoelectric and hydroelectric power. Before World War II, the former accounted for a larger overall share in the industry, but the latter increased at a

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higher rate. Severe competition developed among enterprises, and electric wholesalers emerged when new power plants were established in mountainous locations remote from consumers. All this resulted in high capitalization in the electricity industry (the largest industrial investor in 1925, followed by railroads and banking); great dependence on borrowed capital (the ratio of net worth to total capital dropped from 94.6 percent in 1905, to 68.6 percent in 1925, and to 55.7 percent in 1935); and an increase in the issuance of bonds overseas (the ratio of foreign bonds to the total was 27 percent in 1931).

2 Between World War I and World War II

When World War I ended in November 1918, Japanese industries were experiencing a significant economic depression. Stagnant demand for electric power accelerated the merger of small and weak firms into large companies with more capital. By around 1926, five were dominant—Tokyo Electric Light Co., Toho Electric Power Co., Daido Electric Power Co., Nippon Electric Power Co., and Ujigawa Electricity Co.—and were involved in cutthroat competition, called the Electric Power War, to acquire new markets, since their production capacity exceeded demand. Thus, the time was ripe for them gradually to impose self-control with the aim of avoiding losses due to duplicate investment and the heavy burden of foreign bonds arising from a substantial depreciation of the yen.

In 1932, two events accelerated the shift from competition to monopoly. First, in April, the Electric Power League was formed as a cooperative organization of the five large companies, with the aim of avoiding duplicate investment and promoting harmonious development of the industry under the live-and-let-live principle. Second, the government completely revised the Electricity Industry Act of 1911 in order to stabilize electric power supply, and new legislation in December strengthened the government's regulatory authority.

An increasingly militaristic Japan left the League of Nations in March 1932, and the trend toward government control of all industries grew rapidly. In the context of a wartime economy and stronger statism, a plan for government control of the electric power industry was laid before the Diet and was opposed by the industry and businesses generally, for fear that state control would spread. Opposition was unsuccessful, and the Electric Power League was dissolved in 1938 by the Electric Power Control Act and the Japanese Electricity Generation and Transmission Co. Act. The latter authorized Nippon Hassoden Co., a special business entity of government, which was established in April 1939. Through forced investment in

kind of private companies, it monopolized the generation and transmission of electricity, but government control over distribution was not achieved until an imperial ordinance, based on the National Mobilization Act of 1938, took effect in September 1941. This resulted in the establishment of nine power distribution companies, in Hokkaido, Tohoku, Kanto, Chubu, Hokuriku, Kansai, Chugoku, Shikoku, and Kyushu.

3 After World War II

When World War II ended in August 1945, the electricity industry began a reorganization that reflected the policies of the Allied Forces. In December 1947, the Excessive Economic Power Deconcentration Act was instituted, and in February 1948 it was applied to the Nippon Hassoden Co. and the nine power distribution companies. In accord with the Potsdam Agreement, the Ordinance for the Reorganization of the Electricity Industry and the Ordinance for Public Utility Industries were issued in November 1950, which completed the postwar reorganization of the industry.

This was a readjustment of the wartime system in principle. In May 1951, the Nippon Hassoden Co. was abolished, and nine new private and independent electric power companies were established in the nine areas mentioned above; these were responsible for generation, transmission, and distribution. In May 1972, Okinawa was returned to Japan, and the Okinawa Electric Power Co. was added to the nine as a special business entity, with 99.8 percent of its stock held by the government. Thus, the present system has ten electric power companies.

III Railways

1 Historical Development

In brief, three points should be made about the historical development of railways in Japan.

First, they grew rapidly after construction of the first line was completed in October 1872, and they held an important position in land transportation up to the mid-1960s. Japan is a small country and has one of the highest population densities in the world, conditions which are well suited to train transportation.

Second, severe competition between railways and the motorcar industry started in Japan in the 1960s, far later than in Western countries, where it began in the late 1920s. Japanese railways enjoyed a comparatively long period of profitable operation

before private cars and long-distance trucks began to cut into revenues. For example, the Japanese National Railways (JNR), long the leader in domestic land transportation, went into the red in 1964, a situation that continued until it was privatized in 1987. By the 1970s, the national and private railways combined accounted for less than half the distance covered by all passenger modes. In terms of freight, trains lagged behind trucks in 1961, and they carried less than half the tonnage distance of trucks in 1970. Also, railways and buses have high labor costs and have not benefited from technological innovation as much as automobiles, which owe a competitive advantage to mass production of larger and faster vehicles.

Third, the track distance served by railways has not decreased significantly overall. Although some of the least profitable lines of both the JNR and private railways were abolished after the 1960s, the JNR established the Shinkansen (special express trunk lines), which increased the total amount of track. The private companies opened some new subway lines in large cities and some commuter railroads in the suburbs, but they abolished some surface railways and certain local lines, resulting in a gradual net decrease in distance covered from 1955 onward.

2 Reorganization

From a broad perspective, three aspects of the Japanese rail system are significant: the public-private mix, mergers, and privatization.

First, the relationship between national and private railways is important. Between nationalization in 1906 and privatization in 1987, the dominant principle was that the government should operate all trunk lines throughout the country and private companies should handle local lines. The former were regulated by the Japanese National Railways Act and the latter by the Local Railways Act before the privatization of national railways in 1987. The historical background for this arrangement merits outlining here.

The Nippon Railways Co., the first private rail company in Japan, was successful from the time it began operating in July 1883. This encouraged others all over the country to apply to the Meiji government to establish similar enterprises, but permission was granted only for local lines, since these would not disturb preparations for the national system. There were two historical reasons for this policy. (1) The Meiji government saw an urgent need for a modern transportation system so that Japan could catch up with the West and formulated a national plan. Private enterprises would only be interested in profitable rail lines, which was not conducive to a national system, but they could construct portions that the government would

purchase when it had the money to spare. (2) The government considered an extensive system essential for military purposes, which reflected lessons learned in the Sino-Japanese War of 1894-95 and the Russo-Japanese War of 1904-05. The government nationalized 17 of 38 private railways in 1906-07. The Tetsudo Sagyo-kyoku (Railways Working Bureau), a government agency responsible for railways, operated 2,465.5 kilometers of track (32.0 percent of the total) in 1905, compared to 5,231.3 kilometers (68.0 percent) for private companies. With one stroke, the national lines expanded to 7,298.3 kilometers (90.9 percent) in 1907, and private companies were reduced to 717 kilometers (9.1 percent).

Second, railway development in Japan can be called the history of mergers. This is especially the case for private railways but for the national system as well. Many weaker companies were absorbed by stronger enterprises, and many low-standard railways were integrated into high-standard ones, in accord with a national transport control (adjustment) policy. A typical example is Kinki Nippon Railway Co., the largest private railway in terms of operating distance, which grew through mergers with more than twenty companies. Osaka Denki Kido (Osaka Electric Line) Co., the direct ancestor of the present Kinki Nippon Railway, accounted for only 20 percent of the present lines. If the lines of Sangu Kyuko Dentetsu (Sangu Express Railways) Co., a Kinki Nippon-affiliated firm, were added, then only about 40 percent of the total would be accounted for.

Third, most Japanese railways were privatized in April 1987, though many government-owned lines remain. The comparatively short subway systems and surface lines in the cities are operated by local authorities. Railways are now regulated by one law, the Railway Industry Act of 1987, instead of by two laws before March 1987.

IV The Communications Industry

1 Telecommunications

Telephone service started in 1890 and has made good profits for the longest period of any Japanese public utility under government management, though it has undergone substantial changes in form and structure. Initially managed by the Ministry of Communications, telephone service was in such demand that there was already a queue by the second year of operations. Expansion was hampered by siphoning revenues into armaments purchases and by national budget allocations that favored the military, so the government could not possibly meet the demand for

telephones.

In 1949 the Ministry of Communications was divided into the Ministry of Postal Services and the Ministry of Telecommunications, with telephone service operated by the latter, and in 1952 the Nippon Telegraph and Telephone Public Corporation (NTTPC) took over until its privatization in 1985. Thus, direct government management was the rule for 62 years, followed by indirect government management in the form of the NTTPC for 32 years. In 1958, the corporation set two objectives: satisfy the waiting list and set up nationwide automatic direct-distance dialing. The first was attained in March 1978, the second in March 1979. Telephone subscriptions increased from 1.8 per 100 persons in 1952 to 38.0 per 100 in 1986.

Meanwhile, technological innovation progressed rapidly, and user requirements became diversified and sophisticated. It was clear that services could better be handled by several competing enterprises than by the NTTPC monopoly, which was privatized in April 1985, and private enterprises were allowed to enter the industry freely. As of 1995 there were 86 Type 1 operators (common carriers), including the privatized NTT, with their own telephone circuits, and 1,697 Type 2 companies that lease capacity from them (40 special operators to supply nationwide or international services and 1,657 other general operators).

2 Broadcasting

Japanese broadcasting started in 1925. Its history is marked by changes in entry and organization as well as by technological advances that have resulted in service diversification.

Changes in broadcasting systems are as follows. The Nippon Hoso Kyokai (NHK, Japanese Broadcasting Corporation) was established in 1925 as a public corporate entity under very strict government control. The aim was a nationwide network funded from the national budget. By 1928 the basic system was completed, speeded by the view that radio was an important source of information and education and by the desire to disseminate nationalist propaganda and justify imperialistic policies.

Amendments to the Broadcasting Act in May 1950 resulted in two changes. First, NHK became an independent entity deliberately divorced from direct parliamentary control. Its aim was to broadcast in the public interest, not in the government's interest, and its source of income was from contracted reception fees. Second, commercial broadcasting was allowed. Its aim was profit making, and its source of income was advertising revenues. Commercial broadcasting broke down

the monopoly under direct government management which had continued for a quarter century, and resulted in competition between public and commercial broadcasters. The NHK is conscious of its nationwide audience, while commercial broadcasters serve a more local taste.

As for technical developments, radio broadcasting was followed by television in 1953, color television in 1960, FM broadcasts in 1969, voice multiplex broadcasts in 1982, letter-multiplex broadcasts in 1983, and satellite broadcasts in 1984. As of 1995, there were 225 surface broadcasters (two of them public and the rest commercial) and 17 commercial satellite broadcasters in addition to the NHK.

3 Postal Services

Unlike electricity and telecommunications, postal service has been largely unchanged since 1871, when it shifted from private operation to government management. Responsibility passed to the Teishin-sho (Ministry of Communications), established in 1885, and then the Yusei-sho (Ministry of Postal Services), where it has remained since 1949. After the privatization of the three large public corporations, privatization of the postal service, a typical government enterprise, has been much discussed in recent years.

The Yusei-sho operates three kinds of business: postal services, postal savings, and postal insurance and annuities, all of which are in severe competition with private enterprises. About 90 percent of postal service involves handling mail (letters and cards), which is a government monopoly. Many new kinds of technology, such as videotex, personal computers, and facsimile, are affecting this line of business. In package delivery, there are many competing private companies. Postal savings are in competition with private banking. In the prolonged economic slump of the 1990s, even large and famous banks have gone under, so there has been a significant shift from private banks to postal saving. In 1990, bank deposits were 454,485.4 billion yen, compared to postal savings of 133,698.0 billion yen; in 1995 the respective figures were 470,022.3 billion yen and 210,698.6 billion yen. Over the past five years, bank deposits increased by only 0.67 percent on average per year, but postal savings grew by 9.52 percent, a much higher rate. The insurance services of the Post Office also have experienced a fund shift from the private sector companies.

Under last Prime Minister Ryutaro Hashimoto, the government has decided that the three businesses of the Yusei-sho will not be privatized but will become a public corporation rather than a government department. This policy is embodied in the Fundamental Bill for Reform of the Central Government Departments and Agencies,

which has passed the House of Representatives and was being discussed in the House of Councilors as of June 1998. If it passes, it will take effect within two and a half years.

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