

# Development of Large Cities and Progress in Railway Transportation

Shinichi Kato

The Japanese economy achieved sharp growth in its heavy and chemical industries after WWI. Tokyo, Osaka and other big cities saw a marked concentration of wealth and population, leading to rapid expansion of urban areas. By the mid-1920s, the population of the Tokyo metropolitan area had already topped 4.1 million. It was against such a backdrop that railways in cities underwent both qualitative development as a means of urban transportation and rapid expansion of networks between the 1920s and early 1930s.

The trunk line network of the national railway constituted the basic framework of the railway transportation in Tokyo. The Tokyo municipal government operated trams running inside the city of Tokyo, while private railway operators complemented the national railway by developing their routes from the edge of downtown areas to suburbs. Development in urban transportation functions of the national railway has already been touched upon in the previous article in this series. National railway urban train routes continued to be extended and played a central role in encouraging the development of railway transportation in Tokyo. Among private railway operators, considerable progress was seen in those companies building new routes to the suburbs. Operators still using steam locomotives adopted electric trains, strongly influenced by expanding electrification of the national railways. These private operators included Tobu Railway Co. (started business in 1899, and electrified in 1924) and Musashino Railway (began operation in 1915, electrified in 1922, and is currently Seibu Railway Co.).

The electric railways were originally laid out based on tram specifications and ran along roads to suburbs. They developed into a rapid transit system with improvements in rails, enlargement of numbers of rolling stock as well as use of elevated or underground lines near the termini.

Among such operators were Keihin Electric Express Railway (started services between Shinagawa and Yokohama in 1905 and is now Keihin Electric Express Railway Co.), Keisei Electric Tramways (started operation in 1912 and is now Keisei Electric Railway Co.) and Keio Electric Tramways (started operation in 1913 and is now Keio Teito Electric Railway Co.). There were newcomers as well. Meguro Kamata Electric Railways (currently Tokyu Corporation) started business in 1923 and developed its network in the southwest part of Tokyo partly by merging with neighbouring operators. Odawara Express Railway (currently Odakyu Electric Railway) opened the entire 82.5-km route between Tokyo (Shinjuku) and Odawara in 1927. Another 94.5 kilometers from Tokyo to Nikko was opened by Tobu Railway Co. Of the new networks, the part within a 30-km radius of Tokyo station can be considered Tokyo urban transportation. The standards of facilities owned by the

private railway companies were generally lower than those of the national railway, so the latter played a vital role in the transportation market.

In Osaka, although the national railway formed the backbone of railway transportation from the initial stages, the transportation market of cities such as Kobe (30 km from Osaka), and Kyoto (45 km from Osaka) was different structurally from Tokyo. Private railway operators were already developing interurban type transit systems. Such companies included Hanshin Electric Railway (opened a route between Osaka and Kobe in 1905), Keihan Electric Railway Co. (started services between Osaka and Kyoto in 1910), Osaka Electric Tramways (began business in 1914 and is now Kinki Nippon Railway Co.) and Hanshin Electric Express Railway (started services between Osaka and Kobe in 1920 and is now Hankyu Corporation). Nankai Railway (now Nankai Electric Railway Co.) had used

*Due to copyright issues, the original photo cannot be shown.*

Shinkeihan Railway Series D100

(Hankyu Corporation)

steam locomotives since its establishment in 1885, but electrified in 1907. These private companies, which competed with rather than complemented the national railway, maintained high standards from the start. But as they were actively engaged in promoting higher-speed electric trains, they consequently enjoyed much higher standards than their counterparts in Tokyo. Osaka, like Tokyo, also saw some newcomers in the railway business, including Shinkeihan Railway (established in 1928 and later merged with Hanshin Electric Express Railway), Hanwa Electric Railway (opened in 1930 and later nationalized) and Sangu Electric Express Railway (opened in 1931 and now Kinki Nippon Railway). They operated high-speed trains incorporating state-of-the-art technologies for the time. Some even outperformed the national railway.

### Formation of Urban Private Railway Management

Private railway companies operating on the outskirts of Tokyo and Osaka attempted to diversify their management in order to stimulate passenger transportation demand. They looked at business areas closely related to urban life, such as development and sale of residential land along their lines, construction and operation of department stores and development of tourist sites along the routes as well as inducement of passengers to those sites. A typical example of systematic diversification was seen in the approach taken by Osaka's Hanshin Electric Express Railway (now Hankyu Corporation). The company initially developed and sold residential areas in the suburbs of Osaka with the aim of securing passengers for its first railway route. Then, it began running zoos, sports arenas, theatres and other amusement facilities. Furthermore, a business that started with a small-scale restaurant in its station building at Osaka, later grew, and, as station buildings were

expanded and improved, shops increased. In 1929, the company eventually started operating Hankyu Department Store. All these developments, which served as a role model for diversification of private railway business management, were led by Ichizo Kobayashi, who had headed the company since its establishment. In Tokyo, Keita Goto, the president of Meguro Kamata Electric Railways (currently Tokyo Corporation), learned directly from Kobayashi about management methods and implemented them in his own company's diversification. One of the most characteristic aspects of Goto's approach was how the company attracted universities and other educational institutions originally located in the urban centres to areas along its railway routes. However, for a majority of operators, the railway business was still the mainstay of total revenues. It was only after WWII that the pattern of so-called Japanese-type urban private railways featuring diversified management took shape.

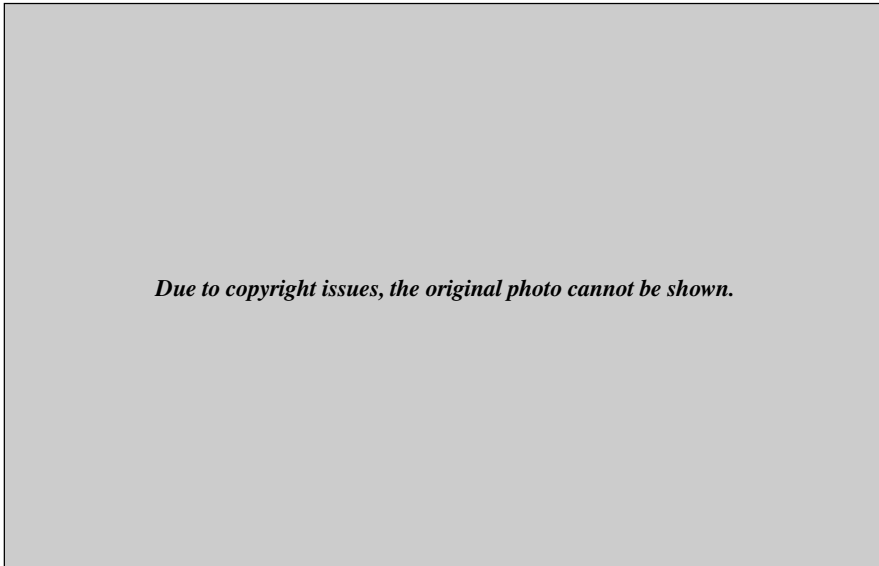
Most significant among the different businesses of the private railway operators were department-store operations and residential land development. It is common practice for urban private railway companies to construct buildings accommodating station facilities as well as department stores or retail shops in the upper floors. This pattern has been sustained into modern times, and owning a department store is something like a status symbol for urban private railway companies. The mainstream Japanese department stores at that time had always been affiliated with major commercial business dating back to the Edo Period (1603 to 1868) and mainly catered to upscale markets. But the newcomers associated with private railway companies targeted the general mass market and came to constitute a second force in the industry, still maintaining that position today. Private railway companies also played a large role in development of residential land in Ja-



(Transportation Museum)

#### ■ Ichizo Kobayashi (1873-1957)

Ichizo Kobayashi was the founder of the present Hankyu Corporation and was one of the leading executives of the private railway industry in Japan. As an energetic innovative president, Kobayashi contributed to the progress of railway management as a service industry during the period when the urban private railways were taking shape after main-line railways came under ownership of the national government. As described in the main text, he promoted land development, department store operation, tourist site development, etc., in relation to the mainstay railway business, thereby creating a management style for Japanese urban private railways. His talent for writing (he once wished to be a novelist) as well as his skills in public relations and advertising, helped his appeal to the public. Among the variety of company businesses, a girls' opera troupe, which attracted spectators along the railway lines, is uniquely recognized worldwide and still enjoys nationwide popularity. The company's film and theatre division, which evolved from the opera troupe, is a major player in the industry in Japan. Kobayashi's competence in corporate management brought him the position of president of Tokyo Electric Light Company, Japan's largest electric utility, before WWII. He was also a government minister in 1940 and 1945.



Hankyu Umeda Railway Terminal before WWII

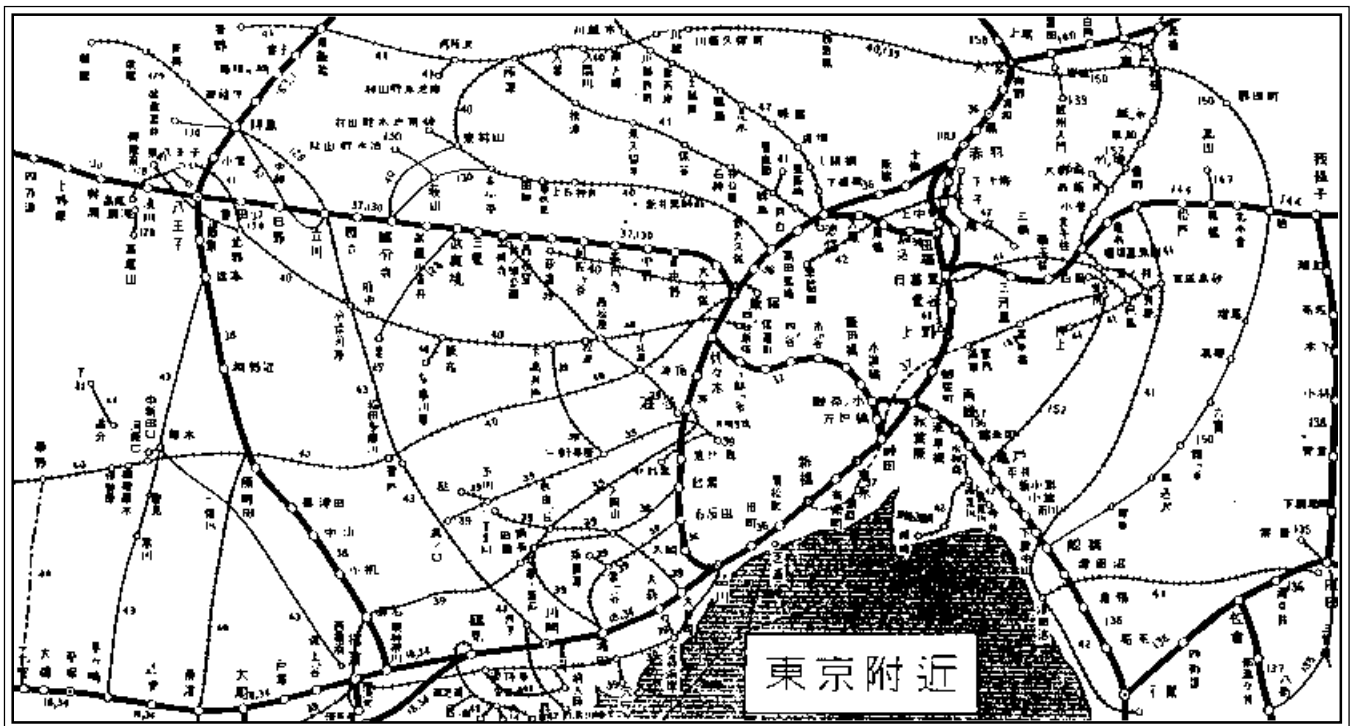
(Hankyu Corporation)

### Transportation inside Tokyo

In late 1880s, when building of electric railways in Tokyo was planned, heated discussion took place as to whether the railways should be public or private. The private sector won the debate and three private operators, which initially took up the task, merged into a single organization in 1906. But this, in turn, was acquired by the municipal government of Tokyo in 1911 and came under public management. The total length of tram routes operated commercially by the Tokyo city government reached 140 km in the 1920s and peaked in the 1930s at 210 km. The maximum number of tramcars was 1,400 during the peak, and the average number of passengers each day passed 1.3 million. Thus, the electric trams in Tokyo were among the largest scale in the world. But the facilities were poor quality. Consequently, the trams went through management hardships dur-

pan. While many of the specialized residential land developers were extremely small, urban private railway operators were outstanding in both business scale and social trust they enjoyed. As the resi-

dential land development business boomed in the suburbs of big cities after WWII, the role of private railway operators as land developers inevitably increased.



Suburban Tokyo Rail Network in 1934 (Ministry of Railways Official Timetable)

ing the 1920s. The first reason was the enormous demand for transportation in the city, causing difficulties in meeting demand. The tram railway was always preoccupied with increasing and reinforcing facilities aimed at securing quantity rather than quality. Second, since the municipally-operated transport business was limited to inside Tokyo due to administrative zoning, it could not keep pace with the changes taking place in the market structure as the Tokyo metropolitan area expanded to include neighbouring regions. The national railway in Tokyo also dealt a blow to trams because it was beginning to take on the functions of city transport. The third reason was that intervention by politicians forced the Tokyo municipal government to pay a high price to acquire the private railway company originally operating the tram railway. As a result, capital costs burdened its management. Further pressure on the city trams was caused by costs incurred to repair the tram railway, which suffered enormous

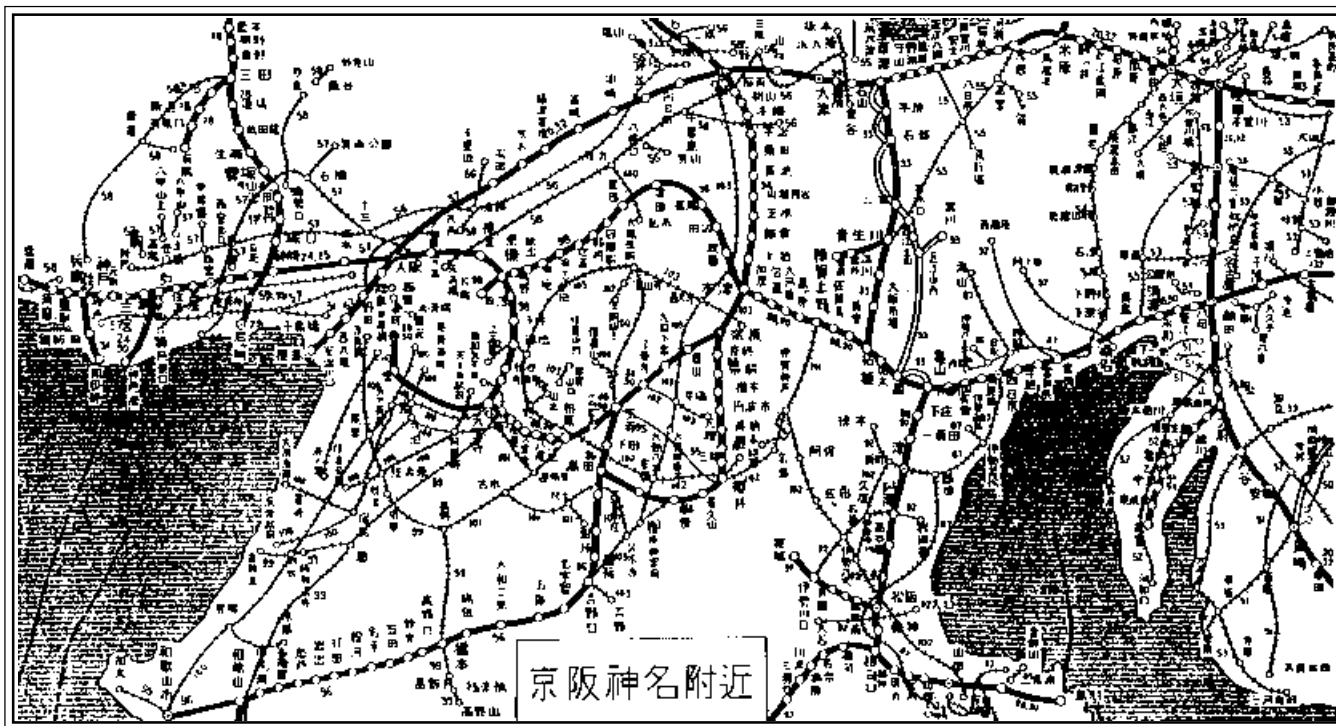


Trams in Nihonbashi in 1935

(Transportation Museum)

ous damage in the Great Kanto Earthquake of 1923. No subsidies or loans were then extended by the national government for transport run by local government.

Because the transport programmes operated by the Tokyo municipal government were in such difficulties, the government could not take the initiative in improving and operating the urban transport system



Suburban Rail Network around Osaka, Kobe, Kyoto and Nagoya in 1934 (Ministry of Railways Official Timetable)

as a whole in Tokyo. In the 1930s, when discussion emerged about unification of the transit system under public management modelled after experiences in Europe, Tokyo city ran an active campaign to gain control, but conditions did not allow it.

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### Arrival of Subways

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The first application for approval to build an urban underground railway was submitted in 1917 by Tokuji Hayakawa, a pioneer in this field. After researching actual systems in London, Paris and New York, Hayakawa advocated subway construction in Tokyo. He succeeded in organizing a private company called Tokyo Underground Railway Company and opened initial services of 2.2-km in 1927. By 1934, the company extended the line to 8.0 km connecting Asakusa and Shimbashi through the busiest commercial district of Tokyo at that time. In a separate move, another company set up in 1934, called Tokyo Rapid Transit Company opened a 6.3-km route between Shibuya and Shimbashi. Both were operated practically as a single line, forming the only subway route in Tokyo before WWII. Tunnel structure, the third-rail method, and other technical specifications were modelled after the New York Subway System.

The task facing the Tokyo city subway plan was to develop a high-speed railway network within the city comparable to the one forming between the city and the suburbs, and thus to complete a rapid transit system in the Tokyo metropolitan area. The obvious limits to the potential of the tram railway stimulated the government to respond to the activities of Hayakawa and others. Finally, in 1920 a master plan for developing subways lines totalling 80 km in length was adopted as part of the Tokyo Metropolitan City Plan. Generally speaking, the development of subway



Early Subway at Ueno Station

(Transportation Museum)

routes in Tokyo fell under the responsibility of the municipal government. However, the problem was that constraints in procuring funds hindered it from working on the plan, causing construction delays. As a second best option, private companies were given exceptional permission to build subways, but no subsidies or assistance programs were available for urban transportation before WWII. As a result, Tokyo ended up with subways built only on those routes with a potential for high profits. The two private companies that opened subway services constructed and ran the businesses with no public assistance at all. The master plan formulated in 1920 survived until the 1960s and 1970s and route development was conducted based on the plan.

In Osaka, a 7.4-km underground railway was built by the municipal government before WWII, becoming Japan's first public subway. The relatively healthy financial structure of the transport business in the city contributed to its success. The project was characterized by its method of financing construction, whereby beneficiaries were asked to bear costs.



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Mr Kato graduated in economics from Tokyo University in 1973, and, after joining the Ministry of Finance where his responsibilities included research into fiscal policy and railway history, he became Professor of Finance Study in the Department of Economics at Teikyo University in June 1996.

He is the author of *Fiscal and Monetary Policies During the Reconstruction and High-Growth Period*, and *Bibliography of Japanese Private Railways and Bus History*. He is currently a board member of the Railway History Society.