This is the first book to examine the process of railway development in Japan, Korea, Taiwan, and China from historical and comparative perspectives. Moreover, it discusses and compares the East Asian experiences of railway development with cases in Germany, which had been a mainstay of railway development in Europe. Railway technology is a set of technology on locomotives, rolling stock, construction of railways, bridges, tunnels, electricity, metallurgy, and so on. Discussion on railway technology is, therefore, examination of industrial technology as a whole in each national economy.

After the opening of Japan in the mid-nineteenth century, the country achieved import substitution of locomotives in half a century. This book explores the social capability of Meiji Japan to overtake the advanced countries in railway technology. Parallel with the expansion of the Japanese empire, a large team of engineers constructed and operated the colonial government railways of Taiwan and Korea and South Manchuria Railway. This book clearly outlines the education and training of these engineers. The management capabilities of the colonial railways and South Manchuria Railway were transferred to the postwar period. The development of railway in Taiwan, for example, was an integration of “legacy” of colonial times, an influence of Chinese officers or engineers who transferred from Mainland China with Chiang Kai-shek Government, and profound impact of the US aid. Through “dieselization” in postwar years, locomotives were changed from the Japanese-made to American-made in the purchase process under the US aid. These dramatic East Asian experiences of railway technology development are compared with European cases, mainly German railways. In comparison with the experience of the Japanese nationalization of railways, the target of comparison should not be the “Nationalisierung” of railways in German empire but the “State-Owing” of railways in “Land” (local state) such as Kingdom of Prussia.

Five authors of each chapter in this book took part in the session titled “the development of railway technology in East Asia” as presenters and a commentator at the annual meeting of Business History Society of Japan in October 2015. After the examination of many comments given at the session, and brushing up the contents of each presentation, we again made presentation at the session
of the First World Congress on Business History held in Bergen, Norway, in August 2016. Through the discussion at the two sessions in Japan and Norway, we could recognize the significance of comparative history on railway technology. This book is the first step for us to proceed with comparative history of railways that exemplified the industrial level of each national economy.

Finally, I must thank every commentators and participants at the sessions who delivered valuable comments and discussion to help elaborate the contents of this book.

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