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Technological Innovation and the Development of Transportation in Japan

The United Nations University Press, 1993, ISBN 92-808-0551-7, 296 pages, US\$50.00

From 1976-1982, the United Nations University organised 120 Japanese researchers for a joint research project under the theme of *Technology Transfer, Transformation, and Development: The Japanese Experience*. It identified the Western technologies that were introduced to various industries in Japan after the Meiji Restoration (1868) marking the start of Japan's modernisation and industrialisation. Further, it analysed the process of their transformation and settlement in Japan up to recent times from the standpoint of the formation of technological foundations, development of education and human resources, changes in social, economic and other conditions, etc. The part of the results relating to transport was published in Japanese in 1986 by the United Nations Press under the title *Kotsu-un'yu no hatten to gijutsu-kakushin. Technological Innovation and the Development of*

Transportation in Japan is the English translation of that publication. Prof. Yamamoto (Hosei University, editor), and the three other writers are key scholars of the history of modern transportation in Japan. The section on railways is written by Prof. Katsumasa Harada (Wako University), one of the writers for the *Centennial History of Japanese National Railways* published by the former Japanese National Railways (JNR), and by Prof. Eiichi Aoki (Tokyo Gakugei University), who wrote *Dawn of Japanese Railways* in Japan Railway & Transport Review.

Reliable books on the modern history of transportation in Japan are scarce, even in Japanese. This book may be the only one on that topic in English. It outlines traditional means of transportation prior to modernisation, followed by transportation in the transitional period, railway-oriented national policies, the progress of

Japan's original technologies, the formation of national transportation networks, the transportation during World War II, the transportation in post-war Japan, and the progress of transportation during the period of rapid economic growth in the 1960s and 1970s. It outlines transportation policies in various periods and details the progress of different modes of transport including railways, roads, and marine transportation. It does not deal with civil aviation which developed quickly after the 1960s. The book contains many maps to assist readers who are not familiar with Japanese geography. Many statistics are also given. Its appendix contains a detailed chronology and introduction to relevant publications.

In short, this book provides an ideal introduction to the history of modern domestic transport in Japan. ■

[T.Suga]

栗田啓子 (KURITA Keiko)

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(Enjinia-Ekonomisuto – Furansu kokyo-keizaigaku no seiritsu, Tōkyō-daigaku Shuppan-kai, 1992)

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(Keiko KURITA, Les ingénieurs-économistes – Birth of Public Economics in 19th Century France, The University of Tokyo Press, 1992)

Prof. Keiko Kurita (Otaru University of Commerce) is one of the few researchers of European economic history in Japan. This book originates from her doctoral dissertation *La pensée économique des ingénieurs des Ponts et Chaussées dans la période de l'industrialisation en France* submitted to Université Paris-I (Panthon-Sorbonne) in 1990. Unfortunately, her dissertation itself has never been published. Those interested in reading her works in French are referred to the monographs in No. 4, Volume 35 (March 1985) and Nos. 3 and 4, Volume 38 (March 1988) of *Shōgaku-Tōkyū* (The Economic Review), an academic journal published by Otaru University of Commerce.

A large transportation infrastructure was constructed in Europe during the Industrial Revolution. Some of the civil engineers (corps des Ponts et Chaussées) who played an important role in the construction of

roads and railways in France at that time became pioneers of public economics. The most prominent was Jules Dupuit (1804-1866). Their attention was directed to "market failure" in the field of public works which was neglected by classical economists who only dealt with free market competition, in an attempt to clarify the economic role of government. They received the best science education at the Polytechnical School (Ecole Polytechnique) and the National School of Civil Engineering (Ecole Nationale des Ponts et Chaussées) where they mastered mathematics and natural sciences. They tried to verify the importance of government activities in an economy using mathematical methods.

Prof. Kurita clarifies the kind and social role of the education the civil engineers received. Further, she reveals how the economic analysis by the engineer-economists

recognized "market failure" and how they deepened the understanding of the benefits, particularly external effects, of public projects.

She refrains from drawing a lesson for today's problems. However, in the preface, she expresses sympathy with the pioneers in 19th-century France, writing: "If I were to pinpoint a lesson from the engineer economists..., it may be their inclination, as government-hired engineers, to verify by applying the strictest possible methods that the government's activities were useful for the people".

This book was awarded the 1993 Nikkei Prize for Excellent Books in Economic Science. Nikkei stands for Nihon Keizai Shimbun (Japan Economic Journal), a daily newspaper equivalent to the Wall Street Journal or the Financial Times. ■

[T.Suga]