

# Chapter 8

## The Roles of Railway Freight Transport in Developing the Low-Carbon Society and Relevant Issues

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With the socio-economic changes, the transport system in developed countries has been formed adequately. Users can freely choose their expected transport means according to relevant needs. Railway transport as one of the most available means with environmental-friendliness has been required to play more important roles in developing eco & low-carbon society. In this study, the situations of surface freight and potential demands to be suitable for railway container are analyzed, and the possible predominance ranges of railway in transport cost are estimated by the comparative analysis between railway and truck freight rates in transport distance. Moreover, by a case study, the effects of railway freight transport in the reductions of logistics costs and CO<sub>2</sub> emissions, and the savings of energy are derived. Finally, the relevant issues concerning the actual conditions are discussed.

### Author Biography

**Dr. Li Guoquan** Dr. Li Guoquan is a senior researcher in the transport planning, at Railway Technical Research Institute, mainly working for the followings.

- (1) Infrastructure and railway planning
- (2) Freight transport and Logistics system management
- (3) Regional public transport system based on the socio-economic changes
- (4) Transportation policy and developing strategy
- (5) Laws, acts, regulations concerning transportation.

Dr. Li obtained the Ph.D. in Engineering, laboratory of urban system planning from Kyushu University, and joined the laboratory of transport system engineering as an assistant professor in April 1996. He had/has been a senior researcher in the Institute for Transport Policy Studies from 1999, Railway Technical Research Institute from 2005. Also he is a part time teacher in logistics system, at Tokyo City University.

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