

Impact of Railroad Investments on Regional Economies: an Approach of Spatial CGE Model with a Microsimulation Module of Railroad and Highway Networks

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This paper develops a framework for economic analysis of high-speed railroad of Korea (KTX) in order to estimate the dynamic economic effects of transportation project on the economic growth and the regional disparity in Korea. The framework is composed of a Spatial Computable General Equilibrium (SCGE) model and a microsimulation module or transport model of highway and railroad networks. The latter module measures a change in interregional accessibility by highway and railroad line, while the SCGE model estimates the spatial economic effects of the transportation projects on the GDP and the regional distribution of wages. The simulation allows policy makers to determine which transportation development deserves the priority for investment based on consideration of economic growth and regional economic equity in the long run. The simulation found that overall impacts of the railroad projects are positive on indirect economic benefits of regional economies, but they could have competitive relations with the highway projects.