

# External Effects on Dynamic Competitive of Domestic Airline and High Speed Rail

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## Abstract

Social-economic variables influence transportation demand largely. Analyses of discrete choice model consider social-economic variables to study traveler' s mode choice and demand. However, to calibrate the discrete choice model needs to have plenty of questionnaire survey. Also, an aggregative model is proposed. The historical data of passenger volumes for high speed rail and domestic civil aviation are employed to calibrate and validate the model. In this study, models with different social-economic variables, which are oil price, GDP per capita, CPI and economic growth rate, are compared. From the results, the model with the oil price is better than models with the other social-economic variables.

Keyword : forecasting, passenger volume, dynamic competitive model, social-economic variables, oil price.