

The Welfare Effects of Passenger Transportation Infrastructure: Evidence from China's HSR Network

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Abstract

In this paper, we develop a framework for evaluating the welfare impacts of passenger transportation infrastructure and apply it to study China's High Speed Railway (HSR) network. We exploit newly available data on the universe of Chinese consumers' credit and debit card transactions to construct city-to-city bilateral passenger flows. Using this dataset, along with detailed information on travel costs across different modes of transportation over time, we estimate the parameters of a demand system for travel to, and for consumption of goods at, each city in the country. On average, a direct HSR connection between two city leads to a 35% increase in the number of bilateral trips and a 28% increase in bilateral card transaction value. At our demand parameter estimates, this implies that removing the entire HSR network would lead to a 4.5% reduction in welfare gains from out-of-city consumption and trips.

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