

The Impact of the Opening of High-Speed Rail on Innovation*

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Abstract

This paper investigates the knowledge diffusion enhanced the reduction of the travel costs through the improvement of the transportation infrastructure. Using the case of the opening of Nagano-Hokuriku Shinkansen, and applying difference-in-differences approach, we estimate the impact of the high-speed rail on the innovative activities along the line. We find that after the opening the high-speed rail, innovative activities by the establishments along the line are significantly increased. Furthermore, collaborative patents across establishments along the line and citations of patents published by the establishments in Tokyo are increased. These imply that the innovative activities along the line is increased through knowledge diffusions from the nearby establishments and those in Tokyo.

Key words: Transport infrastructure; Knowledge diffusion; Railroads

JEL codes: R12; O31

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