

## Abstract

This thesis investigates the impact of high-speed rail (HSR) construction on municipalities in its proximity, focusing on the heterogeneity of these impacts with respect to several municipality characteristics. It focuses on Japan's Shinkansen network lines constructed between 1983 and 2016, using municipality-level data from Statistics Japan and a novel methodology for causal estimation of Difference-in-Difference designs with staggered project launches. It compares municipalities close to Shinkansen stations (impacted by construction) to a control group consisting of municipalities located farther from these stations.

The study found significant positive effects of high-speed railway (HSR) construction on population size, economic output, and tax revenue in impacted municipalities. The heterogeneous effects were the most pronounced in the case of municipality size, with larger municipalities seeing substantial increases in per capita income and only marginal impact observed in smaller municipalities where the impact was marginal. Additionally, the impact on tax revenue was mainly driven by lower-income municipalities, while wealthier areas saw no significant change. No differences were noted between service-oriented and industry-oriented municipalities.

**JEL Classification** F12, F21, F23, H25, H71, H87

**Keywords** High Speed Railways, Shinkansen, Japan, Construction Impact, Callaway and SantAnna Staggered Difference-in-Difference, Exposure Effect

**Title** What influences the impact of high-speed railway construction?