

Report on Bachelor / Master Thesis

Institute of Economic Studies, Faculty of Social Sciences, Charles University

Student:	Dan Sedláček
Advisor:	Matěj Bajgar, D.Phil.
Title of the thesis:	What influences the impact of high-speed railway construction?

OVERALL ASSESSMENT:

Short summary

This thesis investigates the socioeconomic impacts of High-Speed Rail (HSR) construction on Japanese municipalities from 1980 to 2020 using a Staggered Difference-in-Differences estimation. Proximity to HSR stations is generally found to boost population size, economic output, and tax revenue (with different effects for low and high-income areas), but also reveals increased unemployment and a decreased proportion of working individuals. The effects vary significantly, for example, larger municipalities are found to benefit more from HSR connectivity compared to smaller ones. The study suggests that while HSR fosters economic centralization in larger cities, it does not significantly favor specific economic sectors or wealthier areas. These insights are crucial for urban planning and infrastructure development.

Contribution

The thesis makes a strong and clear contribution by addressing a highly relevant topic, especially as policymakers are increasingly focused on railways for their sustainability and efficiency compared to other transportation methods. The findings provide valuable insights for policymakers evaluating the costs and benefits of modern railway construction beyond environmental concerns. This research stands out from existing literature by employing a novel and robust estimation technique, extending the evaluated time horizon, encompassing a wider region around the HSR, and by considering more variables influencing the effects. This approach allows for a detailed evaluation of the differences in HSR impact on municipalities based on their various characteristics. All hypotheses are clearly stated and contextualized within the existing literature.

Methods

The author employs a novel method that has not yet been used to assess the impact of infrastructure changes. The methods and presented statistics are appropriate and, in my opinion, highly exceed the typical scope of bachelor studies. All choices regarding data and methodology are well justified and supported by meticulous data analysis prior to the estimation increasing the robustness of the results. To enhance the validity of the results, I recommend reestimating the models using different radii to divide municipalities into treatment and control groups. But that would be only an extra additional cherry on top.

Literature

The literature review offers a comprehensive overview of the various impacts of HSR, presenting a detailed background and context. The author demonstrates a strong understanding of the topic and effectively situates his work within the existing body of studies, highlighting both its contributions and the obtained results. Citations are properly used and formatted.

Manuscript form

The thesis is neatly typed in Latex using very good English with only occasional typos. Tables and figures are properly referred to in the text and are properly labeled and described. The thesis is appropriately structured.

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Overall evaluation and suggested questions for the discussion during the defense

The results of the Turnitin analysis do not indicate significant text similarity with other available sources.

In my view, the thesis fulfills (and exceeds) the requirements for a bachelor thesis at IES, Faculty of Social Sciences, Charles University. I recommend it for the defense and suggest a grade A and recommend the thesis for an award, as the work presented significantly exceeds the typical scope of a bachelor's thesis. I also suggest the author to consider rewriting the thesis into a paper for submission to an indexed journal.

Suggested questions for the defense/discussion:

1. How could the findings be utilized by policymakers in the Czech Republic or Europe? Are there specific railways that would bring the greatest benefit if updated to higher-speed railways?
2. The author identifies an interesting impact of HSR construction on (un)employment rates in the affected municipalities. Does the author have any hypotheses about the reasons behind these findings?
3. Similarly, does the author have any theories on why the effect on tax revenue differs between higher and lower-income areas?
4. The study mentions that HSR construction does not significantly favor specific economic sectors. Could the author elaborate on his opinion on why economic orientation did not have a strong influence on HSR's impact?

SUMMARY OF POINTS AWARDED (for details, see below):

CATEGORY	POINTS
Contribution (max. 30 points)	30
Methods (max. 30 points)	20
Literature (max. 20 points)	20
Manuscript Form (max. 20 points)	19
TOTAL POINTS (max. 100 points)	99
GRADE (A – B – C – D – E – F)	A

NAME OF THE REFEREE: Peter Kúdel'a

DATE OF EVALUATION: 20. 05. 2024

Digitally signed (20. 05. 2024):
Peter Kúdel'a
Referee Signature

EXPLANATION OF CATEGORIES AND SCALE:

CONTRIBUTION: *The author presents original ideas on the topic demonstrating critical thinking and ability to draw conclusions based on the knowledge of relevant theory and empirics. There is a distinct value added of the thesis.*

METHODS: *The tools used are relevant to the research question being investigated, and adequate to the author's level of studies. The thesis topic is comprehensively analyzed.*

LITERATURE REVIEW: *The thesis demonstrates author's full understanding and command of recent literature. The author quotes relevant literature in a proper way.*

MANUSCRIPT FORM: *The thesis is well structured. The student uses appropriate language and style, including academic format for graphs and tables. The text effectively refers to graphs and tables and disposes with a complete bibliography.*

Overall grading:

TOTAL	GRADE
91 – 100	A
81 - 90	B
71 - 80	C
61 – 70	D
51 – 60	E
0 – 50	F