

# Report on Bachelor / Master Thesis

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

<b>Student:</b>	<b>Jakub Komárek Bsc.</b>
<b>Advisor:</b>	<b>PhDr. Václav Korbek Ph.D.</b>
<b>Title of the thesis:</b>	<b>Estimating the Effect of Teaching Assistant Support on Pupils' Educational Outcomes</b>

## **OVERALL ASSESSMENT** (provided in English, Czech, or Slovak):

*Please provide a short summary of the thesis, your assessment of each of the four key categories, and an overall evaluation and suggested questions for the discussion. The minimum length of the report is 300 words.*

### **Short summary**

Jakub Komárek's analysis focuses on the impact of teaching assistant (TA) support in primary schools on the educational outcomes of pupils. This research question holds academic and policy significance, as there is limited causal evidence in the existing literature and no impact evaluation for one of the major education reforms in the past decade. Through various methodological approaches (OLS, PSM, IV) that address endogeneity concerns, the author finds no evidence to reject the hypothesis that teaching assistants have no effect on educational outcomes.

### **Contribution**

The contribution of the thesis is twofold. Firstly, it explores a novel instrumental variable approach, specifically utilizing the distance from the nearest educational advisory facility. Since the assignment of TAs is endogenous, estimating the causal effect becomes complex. Although the distance does not prove to be a strong instrument, its inclusion highlights the potential of creative estimation techniques for evaluating reforms with non-random assignments. Secondly, the thesis represents the first empirical evaluation of the education inclusion reform in the Czech context.

### **Methods**

Jakub employs three empirical strategies: OLS, propensity score matching (PSM), and instrumental variable (IV) models. Due to data limitations, which I discuss below, none of these techniques prove to be ideal for addressing the research question. However, Jakub correctly utilizes each estimation method, including assessing the assumptions and carefully interpreting the results. This aligns with the main objective of the diploma thesis. Furthermore, the use of an advanced microeconometrics technique such as instrumental variable analysis goes beyond the expectations for a master's thesis.

The analysis does not establish a causal effect due to several data limitations: the effect can only be estimated at the school level, the outcome variables (grade repetition and non-completion rate) do not capture all variations in school outcomes, and the distance may not be entirely exogenous to the outcomes. All these limitations are transparently acknowledged and discussed in the thesis. While there are a few minor points that could enhance the presented analysis, it's important to note that we extensively discussed all methods, and these points came to mind after reading the submitted version. They can be further discussed during the defense:

- Using road distance to the nearest facility instead of beeline distance.
- Ensuring consistency in control variables across empirical strategies. For example, including regions in both OLS and PSM, as well as including the distance to the nearest educational advisory in OLS and PSM.
- Employing alternative cutoffs in the PSM strategy to examine robustness.

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## Literature

The literature review is excellent, covering older studies primarily reliant on observational research as well as more recent studies that utilize experimental and quasi-experimental strategies. I particularly appreciate Jakub's deep understanding of the different mechanisms through which TAs can influence educational outcomes. This enables him to discuss not only overall effects but also potential explanations for these effects (e.g., intensity, qualifications, subjects, etc.).

## Manuscript form

The manuscript is logically structured, the text is concise and written in excellent English. The concluding chapters (7.5-10) could be shorter. It would be also beneficial to present the estimation results from PSM in a table, in addition to discussing the effects in the text. However, these are minor points.

## Overall evaluation and suggested questions for the discussion during the defense

The thesis investigates an important policy question using a nationwide dataset and employs creative empirical strategies. It is of high quality and meets the requirements for a master's thesis at IES, Faculty of Social Sciences, Charles University. I strongly recommend it for the defense and suggest a grade of A. The results of the Turnitin analysis indicate no significant text similarity with other available sources.

Questions for the discussion:

- Imagine there is no data limitation. What would be the ideal quasi-experimental strategy in the Czech context?
- How does the effect of TAs interact with other positions within school (teachers, psychologists, principals etc.)
- Do you expect heterogeneous effects for different types of pupils?

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

<b>CATEGORY</b>	<b>POINTS</b>
<i>Contribution (max. 30 points)</i>	26
<i>Methods (max. 30 points)</i>	27
<i>Literature (max. 20 points)</i>	20
<i>Manuscript Form (max. 20 points)</i>	18
<b>TOTAL POINTS (max. 100 points)</b>	<b>91</b>
<b>GRADE (A – B – C – D – E – F)</b>	<b>A</b>

**NAME OF THE REFEREE:** Václav Korbek

**DATE OF EVALUATION:**

*Digitally signed (10.6.2023)  
Václav Korbek*

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**Referee Signature**

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**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