Report on **Bachelor Thesis**

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

Student:	**Miriama Sokoláková**
Advisor:	**PhDr. Lenka Šťastná, Ph.D.**
Title of the thesis:	**The Impact of European Funding on Learning Outcomes of Pupils in Slovakia**

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

Short summary

The thesis aims to evaluate the effectiveness of EU funds in Slovakia directed to schools. Using several econometric techniques, the author finds no clear link between EU investment and educational quality, as measured by students' test scores in a standardised test. The findings support the notion of EU funds as money that is „extra" or „free", and as a consequence is not spent wisely – even though this approach ignores the obvious opportunity costs (this is also apparent in Figure 3.3, where spending spikes just before the end of the programming period's n+2 rule).

Beyond evaluating the EU funds, the author identifies other variables that help explain the difference between good- and bad-performing schools. These include the use of ICT (positive correlation) or the location of a school in an economically underperforming area (negative correlation).

Contribution
The author compiles a unique dataset, merging together a Slovak school register with a EU funds register. This is impressive work, although it should ideally be done by the state itself by design. The author's findings can be used in designing future policies regarding EU funds – for example, the results suggest that increasing the IT exposure of students may be a more efficient use of EU funds.

Methods
The author uses three economic models: The Fixed Effects model, the Between estimator (which I have never heard of before) and the Diff-in-Diff. The models are well described and their assumptions carefully evaluated. All the main tests are performed. The results are well discussed, I particularly appreciate the acknowledgement of potential selection issues (e.g. of smarter students to bilingual schools).

Some comments to specific aspects:
- As the dependent variable for primary schools, the author averages students' grades in Maths and Slovak (or Hungarian). I think the analysis could be performed on each of these two subjects separately (at least as a robustness check). Similarly for secondary school students, where Slovak is averaged with English.
- In the FE model, the inclusion of time lags is crucial, as the EU investments should have a long-term impact. I think they are included reasonably well, but I was thinking of an alternative design with just one EU funds variable of all cummulative past investment flows into each school. Also, I think the subscripts in regression formulas should be *t-1* rather than *t+1*.
- I think that the optimal model would be D-i-D with variation in treatment timing. However, in here the author reduces her sample by using only two points in time: averaged years in 2012-2014 (pre) and 2017-2019 (post). This is acceptable in a bachelor's thesis, but it is impossible to evaluate the parallel trends assumption. Also, comparison of R2 between FE and D-i-D is not informative since the dependent variables are different.
- As a small remark, I think the effects of „ratio" variables should be interpreted using percentage points, not percents.

Literature
The literature review is reasonably thorough and well organised: First, the author reviews papers evaluating the impact of EU funds on various aspects of Member States' economies. Second, the author turns to papers on the effect of school resources on student achievement. This is followed by a review of the employed methodology.

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Manuscript form

The thesis is well structured. The student uses appropriate language and style. The figures are very nice. I encountered no typos, just a few minor logical inconsistencies. It was also not immediately clear which figures were compiled by the student and which were taken from a different report (I would guess that all were done by the student except Figure 2.1 and perhaps also Figure 3.1). A more clear figure description could clarify this.

Overall evaluation and suggested questions for the discussion during the defense

I think this is a very nice and interesting thesis, which fulfills 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. The results of the Turnitin analysis do not indicate significant text similarity with other available sources.

I would ask the student the following questions:
- How does a school obtain EU grants? Is it the director's iniciative or the establisher's? Who does the paperwork?
- Could there be an omitted variable bias of „director's talent and effort", which would increase the likelihood of having a EU grant, as well as students' performance through the director's other activities? Which of the three models you use can mitigate such issues?

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

CATEGORY		POINTS
Contribution	*(max. 30 points)*	30
Methods	*(max. 30 points)*	26
Literature	*(max. 20 points)*	20
Manuscript Form	*(max. 20 points)*	19
TOTAL POINTS	*(max. 100 points)*	**95**
GRADE	**(A – B – C – D – E – F)**	**A**

NAME OF THE REFEREE: Daniel Kolář

DATE OF EVALUATION: 1.6.2023

Digitally signed
Daniel Kolář

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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**