

Report on Master Thesis

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

Student:	Bc. Šimon Scharf
Advisor:	Barbara Pertold-Gebická, Ph.D.
Title of the thesis:	Gender Gap in Math Score: Does Teacher Gender Matter?

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

Short summary

The thesis analyzes the effect of a teacher's gender on the outcomes in standardized math tests of the 4th grade students. The thesis uses TIMSS data from 36 countries and runs propensity matching procedure where the students are matched based on their family background, skills and characteristics before attending the primary school. The thesis conducts a pooled analysis as well as country-specific analysis for each of the 36 countries.

Contribution

In pooled analysis, the effect is negative for boys. In country-specific analyses, the effect is observed only in 4 out of 36 countries and its sign was also gender-specific. This is in line with the literature that doesn't claim strong universal effect; the results are clearly country- (and culture-) specific.

Methods

Propensity Score Matching (PSM) is a relevant method to overcome the selection bias in this context. I specifically appreciate Chapter 6 with robustness checks.

Literature

The covered literature is relevant, sufficiently broad and gives a proper perspective on the problem.

Manuscript form

The thesis is prepared very well. I only found that the Czech title in the abstract („Genderová Propast v Matematických Výsledcích: Má Pohlaví Učitele Vliv?“) should not have upper-case letters.

Overall evaluation and suggested questions for the discussion during the defense

Educational attainment is an important phenomenon in education economics and also in broadly perceived labor economics. I appreciate a solid work on this topic that employs a relevant identification strategy. I have mostly learned that the teacher's gender effect on standardized tests is highly culture-specific and optimal matching of teachers to classes in our environment should reflect different considerations.

I only have two topics for discussion:

- Mean and variance: If I get it correct, gender differences exist not only in mean test scores but also in variance of test scores. Is there any evidence on the effect of a teacher's gender in quantile regressions, i.e., evidence on specific effect on high achievers or students that lag behind? These results may be even more policy-important than the effects on mean scores.
- Let me take a perspective of an individual school with a predetermined set of teachers and students. The school's problem has two dimensions: It matches teachers to classes of students, but also creates classes of students. In addition to the effect measured here, which other effects (observed and discussed in the literature) are important for the optimal solution of

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this matching-and-composition problem (i.e., what is the literature on this problem)? Also, are there any administrative or regulatory constraints to gender composition of classes? Specifically discuss how this matching-and-composition problem looks in countries where the effect of the teacher's gender is significant.

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

In my view, the thesis fulfills the requirements for a Master thesis at IES, Faculty of Social Sciences, Charles University, I recommend it for the defense and suggest a grade A.

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

CATEGORY	POINTS
<i>Contribution</i> (max. 30 points)	25
<i>Methods</i> (max. 30 points)	30
<i>Literature</i> (max. 20 points)	20
<i>Manuscript Form</i> (max. 20 points)	19
TOTAL POINTS (max. 100 points)	94
GRADE (A – B – C – D – E – F)	A

NAME OF THE REFEREE: *doc. Martin Gregor*

DATE OF EVALUATION: *January 24, 2023*

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