Report on **Bachelor / Master Thesis**

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

Student:	Petr Čala
Advisor:	Zuzana Havránková
Title of the thesis:	Ability bias in the returns to schooling: How large it is and why it matters

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

The diploma thesis by Petr Čala aims at identifying the ability bias that might atenuate returns to schooling, usually estimated by a Mincerian regression. To this end, the author conducts a meta-analysis. Analyzing a large number of studies, he finds that „including a measure of ability in the model, or a proxy for it, significantly reduces the overall effect of the returns to schooling", which is a sign of ability bias. He further turns to specific studies, which compare identical twins with differen education levels, and finds even stronger evidence of ability bias – as these studies produce lover estimates of returns to schooling.
However, the bility bias is not correctly defined in the thesis (even though the author later works with it in the correct manner). In the introduction we read: „(…) the ability bias, which is the tendency for the economic returns to schooling to rise among those with high ability". In the economic literature, the ability bias is basically the sorting effect, i.e. those with higher ability choosing to obtain higher levels of education, which results in omitted variable bias and, possibly, also in problems with common support, sometimes referred to as inseparability of ability and education (Black and Smith 2004; Hekman and Vytlacil, 2001; Kaymak, 2009).

Contribution

This is a large piece of work with puts together older and recent literature on returns to schooling. Thanks to its systematic approach and careful analysis of different econometric approaches – including special zoom-in on twin studies – this thesis brings a significant contribution to the field.

Methods

The thesis uses rigorous meta-analytical methods and follows the standard scheme of meta-analytical studies. I like the discussion of different ways of measuring schooling (in years or in levels) and the proposed way of dealing with it. Meta-analytical results are clearly presented and correctly reported. One proposal for improvement: Given the evelution of this field of research, I suggest including the year of publication effect, which is different than the effect of the year whan the data comes from.

On the other hand, I am afraid that the author did not fully understand (or did not manage to explain it?) the methods used in the reviewed studies to deal with the ability bias. For example, there is some confusion when writing about proxy variables and instrumental variable estimation (see page 17). I suggest that Petr explains this during the defense.

Literature

The literature included in meta-analysis is carefully chosen and represents a huge sample of empirical studies devoted to the estimation of returns to schooling. I have no critical comments to this part of the thesis, rather prising the numbero of studies that had to be read and prepared for the analysis.
The discussive part of the literature review (Chapter 2) is, however, somehow weaker. The author identifies just a few studies and sumamrizes the literature as inconclusive. This is true to some extent, especially if one looks at the whole spectrum of published papers. However, top research in

Report on **Bachelor / Master Thesis**

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

Student:	Petr Čala
Advisor:	Zuzana Havránková
Title of the thesis:	Ability bias in the returns to schooling: How large it is and why it matters

economics is consistent in acknowledging the existence of ability bias and in dealing with it. Over time different approaches were proposed: usind instrumental variables (e.g. papers of David Card), including proxies for ability (e.g. papers published on the NLSY data), twin-studies and other quasi-experimental evidence, matching estimation, etc. Another issue is that the understanding of the estimation problem that is caused by ability has improved over time. First, authors only identified it as an omitted variable bias, later the problem of limitted common support (difficulty to separate education and ability) was identified, more recently a related problem of heterogeneous returns to education was added. All these have different consequences and different potential solutions. In the thesis, they are discussed as one big problem.

Manuscript form

The manuscript is well-organized and reads good. It was a pleasure to read this work, with smooth test, clear figures and well-defined sections. One flaw, that slightly reduces the impression, is a typo (or rather a mising word) directly in the abstract: „In this work, I assemble a dataset containing 1754 from 154 studies“.

Overall evaluation and suggested questions for the discussion during the defense

This is a nice diploma thesis following the standard of other meta-analyses prepared at IES. The value added of this work in comparison to other meta-analytical theses is that on top of the standard publication-bias analysis and presentation of the best practice estimate, it also zooms on method-specific studies (twin-based natural experiments) trying to quantify the ability bias. The weaker side of the thesis is discussion of the ability bias itself and presentation of methods that were developed to deal with it. This is why I suggest that this part is discussed during the defense.

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 B.

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

Suggested questions:

- Explain (not just list) the most common methods used in the literature to deal with the ability bias. Which of them do you find the most trustworthy?
- What is your answer to the wuestion posted in the thess title: How large is the ability bias and why it matters?

Report on **Bachelor / Master Thesis**

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

Student:	Petr Čala
Advisor:	Zuzana Havránková
Title of the thesis:	Ability bias in the returns to schooling: How large it is and why it matters

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

CATEGORY		**POINTS**
Contribution	*(max. 30 points)*	27
Methods	*(max. 30 points)*	25
Literature	*(max. 20 points)*	17
Manuscript Form	*(max. 20 points)*	19
TOTAL POINTS	*(max. 100 points)*	**88**
GRADE	**(A – B – C – D – E – F)**	**B**

NAME OF THE REFEREE: Barbara Pertold-Gebicka

DATE OF EVALUATION: 10.6.2024

Digitálně podepsáno (10.6.2024)
Barbara Pertold-Gebicka

_____

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**