

# Report on Bachelor / Master Thesis

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

<b>Student:</b>	<b>Bc. Samuel Vrbovský</b>
<b>Advisor:</b>	<b>PhDr. Martina Mysíková, Ph.D.</b>
<b>Title of the thesis:</b>	<b>Wage inequality among young college graduates: Can we find any evidence for reverse gender wage differential?</b>

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

*Please provide your assessment of each of the following four categories, summary and suggested questions for the discussion. The minimum length of the report is 300 words.*

This bachelor thesis aims to assess whether there is a reverse gender wage differential (unexplained part of the gender wage gap) among young college graduates in male-dominated job fields in the United States. The author formulates three hypotheses to estimate whether in male-dominated job fields 1) women earn more than comparable men, 2) women working for a large employer earn more than comparable men, and 3) unmarried women working for a large employer earn more than comparable men.

These hypotheses are tested using data from the 2017 National Survey of College Graduates. The final sample consists of 10,548 employed college graduates under 31 years of age (a few additional criteria were applied to create the final sample). The male-dominated fields are according to the data defined as IT and mathematics, physical sciences, engineering, and management.

After controlling for personal and job-related characteristics, the author did not prove the existence of reverse gender wage differential. Most of the model specifications suggest positive wage differential (i.e., women earning more than comparable men); however, these are not statistically significant at 5% level. Alongside, the results do not hint at any potential discrimination of women in these fields.

### **Contribution**

This thesis broadens the sparse literature on reverse gender wage differentials (primarily focusing on male-oriented job fields). It analyses recent data from 2017 following research based on data from 1993 (from the same NSCG database). However, the author here presents his own methodology, i.e., model specifications, and argues why these are more appropriate. The hypotheses formulation is novel in this thesis as well, based on the author's beliefs about gender wage gap differential.

The author clearly presents his ability to draw conclusions based on the knowledge of relevant theory and empirics. The results of this thesis can contribute to the extensive discussions about the gender wage gap and gender wage gap differential in the US.

### **Methods**

The tools used are relevant to the investigated research questions and adequate to the author's level of studies. The author utilizes pooled OLS (mainly for comparisons with other studies) and OLS models to estimate effects on weekly wage (in log form). The author argues the benefits of using weekly wage as opposed to the commonly used hourly wage, mainly because it does not assume the relationship between hours worked and wage outright but estimates it using OLS.

The model specifications are appropriate for testing of the defined hypotheses. They include many variables and their interactions controlling for the personal and job-related characteristics (sex, ethnicity, highest degree, obtained certificates, marriage status, the existence of children, years from graduation, hours worked weekly, type of employer, size of the employer, relation of the job to the field of studies).

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The author also includes the Oaxaca-Blinder decomposition to decompose the within job field gender wage gap into a part that is explained by differences in characteristics between men and women (endowment effect) and a part that is explained by differences in returns to the characteristic between men and women (remuneration effect). Thusly, the author demonstrates his ability to understand and use new methodology autonomously.

The thesis misses a more detailed explanation of how the likelihood-ratio test was constructed. It appears that different datasets were used for the unrestricted and restricted models. The pooled OLS (restricted model) is throughout the thesis estimated for the whole dataset on all job fields (not only male-dominated fields), on the other hand, the separate models (unrestricted model) are estimated using data on the male-dominated fields only. The computation of the joint fit of the four separate models for male-dominated fields is also unclear.

## Literature

The author presents the relevant literature lucidly and quotes it properly. The studies are not only listed and described in the chapter devoted to literature review but also put into context throughout the thesis. The author's suggestions about the used job fields, models' specifications and included variables, as well as effects' predictions, are all compared with the existing literature.

## Manuscript form

The thesis is well structured. The student uses appropriate language and style, including the academic format for graphs and tables. The text effectively refers to graphs and tables and disposes with a complete bibliography. The author explains well his train of thoughts, so the text flows nicely and is understandable to a reader. The text is written in proper English, although quite a lot of mistakes appear in the text (in the abstract as well).

## Summary and suggested questions for the discussion during the defense

The author shows a detailed knowledge of the topic and proves understanding of the used econometric tools to the extent that he is able to suggest methodological advancements from the literature. The thesis includes all explanations needed to understand why the author chooses such models and their specifications. Everything is put into the context of relevant literature.

Suggestions for the discussion during the defence:

1. In all model specifications, the model for *management* has considerably lower explanatory power in comparison to other job fields (according to adjusted  $R^2$ ). To what do you attribute this? How would you change the model, what would you add to increase its explanatory power (independently on the availability of such data)? Does wage in the data include bonuses? How do you expect the bonuses to influence your results?
2. Assuming that *age* is available in the data (as you were able to subset the data according to age), why is it not included in the models? The models comprise years from graduation instead, discuss the advantages/disadvantages of such an approach. Do years from graduation, the highest attained degree, and the existence of children compensate sufficiently for the absence of age in the model? Based on what did you conclude that women study longer?  
(If age is not available in your dataset, you can discuss how it may influence the results.)

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3. You assume that working outside the field of study has "severe implications for wages". Elaborate a bit more on that. Do you presume the wages of individuals working outside their study field to be on average higher or lower? Why?
4. To what extent do you think that the results are transferable to the Czech conditions? Why?

Given the quality of the thesis, I suggest grade A.

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

CATEGORY	POINTS
Contribution (max. 30 points)	30
Methods (max. 30 points)	29
Literature (max. 20 points)	20
Manuscript Form (max. 20 points)	16
<b>TOTAL POINTS</b> (max. 100 points)	<b>95</b>
<b>GRADE</b> (A – B – C – D – E – F)	<b>A</b>

**NAME OF THE REFEREE:** Mgr. Lenka Šlegerová

**DATE OF EVALUATION:** 26. 5. 2020

*Lenka Šlegerová*

\_\_\_\_\_  
**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