



**Bachelor's Seminar in Empirical Labor Economics
SS 2026
Chair of Applied Statistics and Econometrics**

General Description

The bachelor's seminar serves as a preparation for the bachelor's thesis, which is written directly after the seminar. During the processing period, students are expected to write an exposé of their bachelor's thesis and to present it at the seminar. The aim of the seminar (and of the bachelor's thesis) is to empirically investigate research questions from labor economics, such as whether there are gender differences in training participation or whether AI affects workers' well-being, using the software package Stata. During the seminar, students are expected to

- become familiar with the literature from the relevant field
- precisely define the research question to be analysed in the bachelor's thesis
- prepare the data for the bachelor's thesis
- present first regression estimates
- present an outlook for the bachelor's thesis (i.e., students specify which further analysis they intend to carry out)

Requirements

While knowledge from the obligatory lectures *Statistik I*, *Statistik II*, and *Empirische Wirtschaftsforschung* is required, further statistical skills are not necessary. Instead, general interest in statistics and empirical economics and the willingness to conduct your own empirical analysis as well as knowledge of Stata are essential. Further information can be found on our homepage:

<https://www.statistics.economics.uni-mainz.de/teaching/bachelor/seminar/>

For further questions, feel free to contact Ying Liang (liang.ying@uni-mainz.de)

Please note that the seminar will be held in English.

Contact

Prof. Dr. Thorsten Schank (schank@uni-mainz.de)

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Topics Overview

Students are expected to investigate empirically the following topics, based on the cited references:

1. Artificial intelligence and workers' well-being
2. Gender differences in training participation
3. Does union membership lead to better health outcomes?
4. The effect of motherhood on commuting
5. The value of foreign language skills in the German labor market
6. Sickness-related absence and career mobility

Detailed Topics and Literature

1. Artificial intelligence and workers' well-Being

The rapid adoption of artificial intelligence (AI) in the workplace has raised questions about its impact on employees' well-being. On the one hand, AI can reduce repetitive or cognitively demanding tasks, increase efficiency, and improve working conditions, which may enhance life and job satisfaction. On the other hand, AI may introduce uncertainty, increase stress, or raise concerns about job security, potentially lowering overall well-being. This seminar paper examines how occupational AI exposure and self-reported AI use are associated with workers' well-being, including job satisfaction, life satisfaction, and self-rated health. Students are expected to use SOEP data and apply OLS regressions to estimate these relationships.

Literature

Giuntella, Osea, Johannes König, and Luca Stella. "Artificial Intelligence and the Wellbeing of Workers." *Scientific Reports* 15, no. 1 (2025): 20087.

2. Gender differences in training participation

Work-related training may enhance productivity, resulting in wage increases and lower unemployment risk for workers. Therefore, less investment in further training may lead to a wage disadvantage for workers. The economic literature has often found that women invest less in work-related training than men because they anticipate career breaks for childbearing, reducing the returns to training. As possibilities for childcare have improved in the last several years, career breaks have become shorter, which should lead to higher investment by women in further training. The seminar topic analyses gender differences in the probability of participating in training measures and how they evolve over time. It uses OLS and Fixed Effects regressions.

Literature

Arulampalam, Wiji, Alison L. Booth, and Mark L. Bryan. "Training in Europe." *Journal of the European Economic Association* 2, no. 2–3 (2004): 346–360.

3. Does union membership lead to better health outcomes?

It is generally difficult to disentangle the different mechanisms linking union membership to health outcomes. In the U.S., for example, union workers have better access to high-quality health insurance plans, better pensions, and higher lifetime earnings, all of which likely lead to better health. Germany provides an advantageous context for studying the union membership-health nexus because union members have similar if not identical health insurance as non-union members. Thus, potential health disparities between union members and non-members likely reflect other mechanisms such as earnings, pensions, or job satisfaction.

Literature

Ross, Clifford. "The Health Benefits of Extended Union Membership Among Women: A Family Status Perspective." *Social Currents* 11, no. 5 (2024): 437–454.

4. Commuting and the motherhood wage penalty

It is well documented that childbirth reduces wages for new mothers---the so-called motherhood wage penalty. At the same time, previous research finds that workers are willing to accept lower wages to reduce their commuting distance. This topic investigates whether changes in commuting distance can explain the motherhood wage penalty. Students will run OLS and Fixed Effects regressions to investigate this topic.

Literature

Skora, Thomas, Heiko Rüger, and Nico Stawarz. "Commuting and the Motherhood Wage Gap: Evidence from Germany." *Sustainability* 12, no. 14 (2020): 5692.

5. The value of foreign language skills in the German labor market

Germany has an export-oriented economy that is closely connected to the global market, making foreign language skills highly valuable. Beyond communication, language proficiency represents human capital that can improve job opportunities and earnings. This seminar paper explores the relationship between foreign language skills and labor market income in Germany, highlighting the role of language education policy in shaping human capital development. Students will analyze data from the SOEP Innovation Sample, applying OLS regressions or an Instrumental Variable approach, using compulsory English education in school as an instrument.

Literature

Hahm, Sabrina, and Michele Gazzola. "The Value of Foreign Language Skills in the German Labor Market." *Labour Economics* 76 (2022): 102150.

6. Sickness-related absence and career mobility

Frequent sickness-related absences are regularly interpreted by researchers as an indicator of either ill-health or low effort. One could thus expect a link between absenteeism and future career paths. For instance, assuming that firms wish to promote those employees who have performed well, employers may take variations in short-term absence as an indicator of work motivation into consideration.

This seminar topic explores whether absence behavior affects employees' job mobility, such as promotions, dismissals, quits, and transfers. Students are expected to use Fixed Effects regressions or Logit regressions.

Literature

Chadi, Adrian, and Laszlo Goerke. "Missing at Work: Sickness-Related Absence and Subsequent Career Events." *Journal of Economic Behavior & Organization* 153 (2018): 153–176.

Organisation of the Seminar

You can apply for the seminar via Jogustine. Further information on the registration procedure and the registration period is provided by the *Studienbüro*. You will receive final admission to the seminar from the *Studienbüro*.

All topics will be assigned to groups of two or three students directly after the first meeting (Wednesday, May 13th). Please send a transcript from Jogustine to sekretariat.schank@uni-mainz.de prior to the first meeting to inform us of which courses you have participated in.

Group members will present their results jointly on Thursday, June 18th. However, note that each student writes their own exposé independently. The bachelor's thesis is written in the eight weeks following the seminar.

Time Schedule for the Bachelor's Seminar and Bachelor's Thesis

Events	Date	Time	
Introduction, topic assignment and beginning of the processing period	Wednesday, May 13th, 2026	14:00- 16:00	00 311 (HS VI, ReWi II)
Deadline for exposé submission	Thursday, June 11th, 2026	12:00 pm (noon)	<i>Via email to:</i> sekretariat.schank@uni-mainz.de
Exposé presentations	Thursday, June 18th, 2026	09:00- 18:00	-1 161 (ReWi II)
Beginning of the processing time for the bachelor's thesis	Friday, June 19th, 2026	–	–
Bachelor's thesis submission deadline	Friday, August 14th, 2026	12:00 pm (noon)	Official submission to the Studienbüro. Supplementary material via e-mail to sekretariat.schank@uni-mainz.de

Attendance is mandatory for the introductory session (first session) and the exposé presentations. In the case of absence (without presenting valid reasons to the Exam Office), the seminar will not be passed.