



Recent Topics in Macroeconomics: Automation and Economic Development (Summer Term 2025)

Overview

In our seminar series on automation and development we focus this time on artificial intelligence. The introductory reading for all participants is Aghion, P., Jones, B. F., & Jones, C. I. (2017): Artificial intelligence and economic growth [Link to Article](#). This article is also the basis of Lecture 9 of my course Advanced Economic Growth. Participation in the course is recommended but not requested to participate in the seminar.

Structure of the seminar

- **16.04.2025, 16:15, room VG 2.105 : Intro meeting.**
- Until **23.04.2025**: After the intro meeting, you have one week to submit your application for the seminar, via email to matthias.beulmann@uni-goettingen.de. ***You can find the application form as a separate file in StudIP.*** You can name up to 4 topic preferences, with no guarantee given that you will receive one of your preferred topics as your seminar topic. In case that there are more applications than available slots we will distribute the slots according to the study regulation.

Please choose your top priorities carefully to ensure that you are comfortable with your selected topic.

Also: if not done already, this is the time to register for the course in StudIP. All further announcements will be done through StudIP!

- Starting from **23.04.2025: publication of the list of participants and the list of topics.** The list will be published as fast as possible, sometimes the process of allocation takes a few days. After publication, the official work-time for writing the seminar paper begins.
- **23.04.2025 – 19.06.2025**: Period for the binding registration or cancellation for the course via FlexNow.
- **31.05.2025**: submission of your seminar paper no later than 15:00. A .pdf version is to be sent to matthias.beulmann@uni-goettingen.de, a paper copy is not necessary. **Please notice that due to organizational constraints, the submission deadline of the seminar paper cannot be extended by any circumstances (e.g. illness).**
- Starting from **31.05.2025**: publication of the exact schedule for the block meeting and the matching between topics and discussants.
- Until **19.06.2025, 15:00**: submission of the slides of your seminar presentation. A .pdf version is to be sent to matthias.beulmann@uni-goettingen.de. This is to ensure that there is at least a working presentation available on the day of the seminar. You can improve your slides after sending them to me, and use the updated version on the seminar day.
- **20.06.2025, whole day, room VG 1.106** : block seminar.
- **21.06.2025, whole day, room VG 1.106** : block seminar.

Attendance at the whole blocked seminar is compulsory.

Grading

Grading will be based upon the following:

- 1) Seminar paper (15 pages, in English)
- 2) Presentation (30 minutes, in English)
- 3) Discussion of another topic (5 minutes, in English)

The seminar paper accounts for 50% of the final grade. Presentation and discussion account for the other 50% of the final grade. Students need to pass both of these requirements in order to pass the seminar.

Required background knowledge

BA - courses in Mathematics, Econometrics, Macro- and Microeconomics

Read this! ➤ Advice ⇐ Read this!

The seminar paper

Content:

In your seminar paper you should present the **idea and the central mechanisms** of the underlying journal article in your own words. **The objective of the seminar paper is that a reader unfamiliar with the original journal article and chapter is thoroughly familiarized with the topic.**

Formatting:

The seminar paper must not be **longer than 15 pages** (excluding appendices and the list of references). Tables and figures to which you refer to in the text should also be placed in the text, and can be agreed on to not count towards the 15 pages. Please use the following layout:

type size 12, spacing 2.0, indentation 2.5 cm

The seminar paper and the presentation are an optimal opportunity to familiarize yourselves with the open-source typesetting software Latex that is used nowadays in science. If you choose to prepare the paper in Word please use the typeface “Times New Roman”.

Advices for preparing a seminar paper:

- use as few footnotes as possible.
- attach a bibliography to your paper.
- do not include lists of figures, tables or abbreviations. They are not necessary in such a short seminar paper.
- properly cite all sources that you refer to. Follow the practice of international journals. Example: If you want to refer to an article written by Hazan in 2009 cite it in the text as [...](Hazan, 2009). Please do not use footnotes for citation.

Students who copy-paste from any source will automatically be expelled from the course. They are graded with 5.0 and are furthermore reported to the registrar’s office (“Prüfungsamt”). Note that also one-for-one translations from another language account as plagiarism.

The presentation

Every participant of the seminar acts as a presenter of his **own topic (30 minutes)** as well as a **“first participant in discussion” (around 5 minutes)** of another topic of the seminar. The technical equipment for the presentation (laptop, beamer, laser-pointer) will be provided by the institute. **The slides have to be sent to matthias.beulmann@uni-goettingen.de as a .pdf file (no ppt files!) until the day before the seminar, 15:00 latest.**

If you are uncertain about the composition of your presentation the following advices might be helpful.

- The first 3 minutes of a presentation are crucial because you have the full attention of the audience. Use them to deliver the main point/the takeaway of your talk
- The available speaking time of 30 minutes is not sufficient to say everything that could be said about the topic.
- Practice the presentation several times beforehand to get a feeling for the time constraints etc.

You should pay attention to the following advices when preparing your slides:

- No more than 1 slide per minute
- Every slide should be equipped with a title
- The title should be self-explanatory
- No footnotes, detailed bibliographic information, long formulas, big tables or long sentences
- A slide with too little text is preferable to a slide with too much text, optimal are 20 - 40 words per slide
- A figure or a formula is worth a 1000 words
- Do not use fancy layouts (or other fancy Powerpoint options)

Topics

Please make sure to use the source provided here, and not an alternative working paper version.

1. GPTs are GPTs: Labor market impact potential of LLMs

Reference: Eloundou, T., Manning, S., Mishkin, P., & Rock, D. (2024). GPTs are GPTs: Labor market impact potential of LLMs. *Science*, 384(6702), 1306-1308 (including the online supplementary material).

2. Artificial intelligence and jobs: Evidence from online vacancies

Reference: Acemoglu, D., Autor, D., Hazell, J., & Restrepo, P. (2022). Artificial intelligence and jobs: Evidence from online vacancies. *Journal of Labor Economics*, 40(S1), S293-S340.

3. New technologies and jobs in Europe

Reference: Albanesi, S., Dias da Silva, A., Jimeno, J. F., Lamo, A., & Wabitsch, A. (2024). New technologies and jobs in Europe. *Economic Policy*, forthcoming

4. Artificial intelligence and jobs: Evidence from us commuting zones

Reference: Bonfiglioli, A., Crino, R., Gancia, G., & Papadakis, I. (2024). Artificial intelligence and jobs: Evidence from us commuting zones. *Economic Policy*, forthcoming.

5. Artificial intelligence and industrial innovation: Evidence from German firm-level data

Reference: Rammer, C., Fernández, G. P., & Czarnitzki, D. (2022). Artificial intelligence and industrial innovation: Evidence from German firm-level data. *Research Policy*, 51(7), 104555.

6. The short-term effects of generative artificial intelligence on employment

Reference: Hui, X., Reshef, O., & Zhou, L. (2024). The short-term effects of generative artificial intelligence on employment: Evidence from an online labor market. *Organization Science*, 35(6), 1977-1989.

7. The simple macroeconomics of AI

Reference: Acemoglu, D. (2024). The Simple Macroeconomics of AI. *Economic Policy*, 39(120).

8. The fall of the labor share and the rise of superstar firms

Reference: Autor, D., Dorn, D., Katz, L. F., Patterson, C., & Van Reenen, J. (2020). The fall of the labor share and the rise of superstar firms. *The Quarterly Journal of Economics*, 135(2), 645-709.

9. New frontiers: The origins and content of new work

Reference: Autor, D., Chin, C., Salomons, A., & Seegmiller, B. (2024). New frontiers: The origins and content of new work, 1940–2018. *The Quarterly Journal of Economics*, qjae008.

10. Will the AI revolution cause a great divergence?

Reference: Alonso, C., Berg, A., Kothari, S., Papageorgiou, C., & Rehman, S. (2022). Will the AI revolution cause a great divergence?. *Journal of Monetary Economics*, 127, 18-37.

11. Preparing for the (non-existent?) future of work

Reference: Korinek, A., & Juelfs, M. (2022). Preparing for the (non-existent?) future of work (No. w30172). National Bureau of Economic Research.

12. What will drive global economic growth in the digital age?

Reference: Growiec, J. (2023). What will drive global economic growth in the digital age?. *Studies in Nonlinear Dynamics & Econometrics*, 27(3), 335-354.

13. Are we approaching an economic singularity?

Reference: Nordhaus, W. D. (2021). Are we approaching an economic singularity? Information technology and the future of economic growth. *American Economic Journal: Macroeconomics*, 13(1), 299-332.

14. The AI dilemma: growth versus existential risk

Reference: Jones, C.I. (2023). The AI Dilemma: Growth versus Existential Risk, Discussion Paper. Stanford University.

15. AI-tocracy

Reference: Beraja, M., Kao, A., Yang, D. Y., & Yuchtman, N. (2023). AI-tocracy. *The Quarterly Journal of Economics*, 138(3), 1349-1402.