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**Economic Policy and Artificial Intelligence
Seminar WS 2018**

Moduls

M.WIWI-VWL.0026 & M.WIWI.VWL-0036

Expected no. of participants

12

Registration

To sign up for the seminar, write an email including preferred topic(s) to lukas.meub@wiwi.uni-goettingen.de

Language

English

Dates

	Date	Time	Location
preliminary discussion	by arrangement		OEC 2.156
Blocked Seminar	27./28.03.2018	8-18 p.m.	t.b.a.

Content

This seminar addresses new challenges and opportunities for economic policy in the advent of effective machine learning techniques and artificial intelligence. We discuss how these transformations might alter economists' understanding of human-decision processes and respective optimal policy design. Topics encompass various fields of interests that are either already influenced by AI or expected to be substantially affected in the future.

Students are expected to develop their own research question expanding on the introductory literature. All research questions should relate to aspects of digital transformation and economic policy. Given the overall exploratory approach as well as the variety and interdisciplinarity of topics, students are encouraged to analyze the bigger picture and hypothesize about likely developments in economic policy.

Topics can be assigned twice. The deadline for handing in the seminar papers is one week before the blocked seminar. The deadline to enroll/withdraw in FlexNow is six weeks before

the blocked seminar.

List of Topics

1. *Prediction Policy Problems*

- Kleinberg, Jon, Jens Ludwig, Sendhil Mullainathan, and Ziad Obermeyer. 2015. Prediction Policy Problems. *American Economic Review*, 105 (5): 491-95.
- Athey, Susan. 2017. Beyond prediction: Using big data for policy problems. *Science*, 355(6324): 483-485
- Athey, Susan. 2018. The Impact of Machine Learning on Economics. <http://www.nber.org/chapters/c14009.pdf>

2. *Labor Markets*

- Acemoglu, Daron and Pascual Restrepo. 2018. Artificial Intelligence, Automation and Work. <https://www.nber.org/chapters/c14027.pdf>
- Acemoglu, Daron and Pascual Restrepo (2016) “The Race Between Machine and Man: Implications of Technology for Growth, Factor Shares and Employment,” forthcoming. *American Economic Review*.
- Frey, Carl Benedict and Michael A. Osborne. 2017. The future of employment: How susceptible are jobs to computerisation? *Technological Forecasting and Social Change*, 114: 254–280.

3. *Financial Markets*

- Philippon, T., 2016. The FinTech opportunity. Unpublished working paper. NBER.
- Royal Academy of Engineering. 2015. Connecting data - driving productivity and innovation. www.raeng.org.uk/connectingdata.
- Hendershott, T., C. M. Jones, and A. J. Menkveld. 2011. Does algorithmic trading improve liquidity? *The Journal of Finance*, 66: 1–33.
- Bank of International Settlements, 2017. FinTech credit. Market structure, business models and financial stability implications.

4. *Criminal Justice System*

- Kleinberg, Jon, Himabindu Lakkaraju, Jure Leskovec, Jens Ludwig, Sendhil Mullainathan. 2018. Human Decisions and Machine Predictions. *The Quarterly Journal of Economics*, Volume 133, Issue 1, Pages 237–293
- Brayne, Sarah. 2017. Big Data Surveillance: The Case of Policing. *American Sociological Review*, 82(5): 977–1008.
- Berk, R. 2012. *Criminal Justice Forecasts of Risk: A Machine Learning Approach*. Springer Verlag.

5. *Healthcare System*

- Conor, Farrington. 2016. Big data meets human health. *Science*, 353(6296): 227.
- Obermeyer, Z. and E. J. Emanuel. 2016. Predicting the future — big data, machine learning, and clinical medicine. *The New England journal of medicine*, 375: 1216–1219.

6. *Business Sector*

- Brynjolfsson, E. and K. McElheran. 2016. The rapid adoption of data-driven decision-making. *American Economic Review* 106, 133–139.
- Corea, F. 2017. Artificial Intelligence and Exponential Technologies: Business Models Evolution and New Investment Opportunities.
- Li, Y., W. Jiang, L. Yang, and T. Wu. 2018. On neural networks and learning systems for business computing. *Neurocomputing* 275: 1150–1159.

Certificates

Seminar paper of max. 12 pages, presentation and discussion in class.