CES Lectures Prof. Felix König

How Technologies Change the Labor Market

Outline

This lecture series investigates how new technologies reshape the labor market, from the structure of labor demand to the mechanics of job search. We begin by analyzing the impact of technology on wages and employment, utilizing standard models to understand how automation substitutes for routine human skills while augmenting others, creating a "race" between the demand and supply of skills. We then examine empirical evidence on specific technological waves, including industrial robotics, winner-take-all markets and Artificial Intelligence. Finally, the series explores the transformation of the job search process, investigating how algorithmic recommendations and matching tools can reduce information frictions, creating the potential for more efficient labor market transitions.

Lecture 1: Wage and Employment effects of New Technologies

Lecture 2: Empirics of Technological Change

Lecture 3: Job Search and Algorithmic Matching Tools

Readings:

Lecture 1: Wage and Employment effects of New Technologies

- **Acemoglu, D. and D. Autor**, "Skills, Tasks and Technologies: Implications for Employment and Earnings," *Handbook of Labor Economics*, vol. 4, 2011. https://www.sciencedirect.com/science/chapter/handbook/pii/S0169721811024105
- **Autor, D.H., L.F. Katz, and M.S. Kearney**, "The Polarization of the U.S. Labor Market," *American Economic Review*, vol. 96, 2006. https://www.aeaweb.org/articles?id=10.1257/000282806777212620
- **Autor, D.H.**, "Why Are There Still So Many Jobs? The History and Future of Workplace Automation," *Journal of Economic Perspectives*, vol. 29, 2015. **[Link]**

Lecture 2: Empirics of Technological Change

- **Acemoglu, D. and P. Restrepo**, "Robots and Jobs: Evidence from US Labor Markets," *Journal of Political Economy*, vol. 128, 2020. **[Link]**
- **Brynjolfsson, E., D. Li, and L.R. Raymond**, "Generative AI at Work," *Working Paper*
- **Koenig, F.**, "Technical Change and Superstar Effects: Evidence from the Rollout of Television," *American Economic Review: Insights*, vol. 5, 2023. **[Link]**

Lecture 3: Job Search and Algorithmic Matching Tools

- **Belot, M., P. Kircher, and P. Muller**, "Advising Job Seekers in Occupations with Poor Prospects: A Field Experiment," *Working Paper*
- **Hensvik, L., T. Le Barbanchon, and R. Rathelot**, "How Can AI Improve Search and Matching? Evidence from 59 Million Personalized Job Recommendations," *Working Paper*
- **Cullen, Z., M. Hoffman, and F. Koenig**, "Labor Shortages and Firm Search," *Working Paper*