Application: NBER Digital Economics and AI Tutorial

Johannes Hirvonen

Contact Information

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Graduate Study

I am a fourth-year student in the economics PhD program at Northwestern University, where I have been enrolled since fall 2023. My fields are industrial organization and labor economics, and I expect to be on the job market in 2028. Before the PhD program, I completed a BSc and an MSc in economics at Aalto University in Finland and worked as a researcher at Etla Economic Research, a research institute in Helsinki.

Research

My research interests are in digital economics and technological change. My primary current project studies rating design using proprietary data from a global food-delivery platform, including newly obtained order-level data. I focus on how rating systems should be designed to encourage consumers to explore new sellers, who are often starved of purchases and, as a result, of reviews.

In addition, my coauthors and I are completing the final revisions of our paper on how grants for new manufacturing technologies (such as robots) affect employment and skill demand, using administrative data from Finland. The paper is conditionally accepted at the *Quarterly Journal of Economics*.

In another paper, my coauthor and I study how first patent grants shape the direction of corporate inventors' subsequent work. We use patent texts both to build our identification strategy, by controlling for the content of each application's claims, and to measure the technological distance between patents. I also have a working paper on the labor mobility effects of COVID-19 subsidies, which was one of the winners of my department's annual Susan Schmidt Bies Prize for the best third-year paper on economic policy.

I am also working on a short paper using Amazon review data, which studies how a change in Amazon's review policy (dropping its minimum word requirement for written reviews) changed reviewing behavior. The paper adds to the literature on how platforms can encourage consumers to leave reviews. In a new project, I plan to study how an early AI-assisted prior-art search tool used by patent examiners at the U.S. Patent and Trademark Office (USPTO) changed the examination process and downstream outcomes for patent applicants. I have filed a Freedom of Information Act request for details of the tool's rollout, which the

USPTO is currently processing.

Committee

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