

JOHANNES HIRVONEN

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EDUCATION

Aalto University School of Business

Espoo, Finland

M.Sc. in Economics (Grade: Distinction)

2019 - 2021

Thesis: "*Measuring New Technologies: Evaluation of the Effects of Receiving a Technology Subsidy in Finnish Manufacturing*" (Grade: 5/5, Excellent)

Aalto University School of Business

Espoo, Finland

B.Sc. in Economics (Grade: Distinction)

2015 - 2019

Thesis: "*Effects of Generic Substitution on Medicine Prices: Theoretical Analysis*" (Grade: 5/5, Excellent)

University of Helsinki

Helsinki, Finland

Non-degree studies in Mathematics

2018 - 2021

- Took courses in e.g. real analysis, topology, and measure theory but did not pursue a degree

WORKING PAPERS

New Evidence on the Effect of Technology on Employment and Skill Demand [\[link\]](#)

with Aapo Stenhammar (Aalto University) and Joonas Tuhkuri (MIT), April 2022.

Abstract: We present novel evidence on the effects of advanced technologies on employment, skill demand, and firm performance. The main finding is that advanced technologies led to increases in employment and no change in skill composition. Our main research design focuses on a technology subsidy program in Finland that induced sharp increases in technology investment in manufacturing firms. Our data directly measure multiple technologies and skills and track firms and workers over time. We demonstrate novel text analysis and machine learning methods to perform matching and to measure specific technological changes. To explain our findings, we outline a theoretical framework that contrasts two types of technological change: process versus product. We document that firms used new technologies to produce new types of output rather than replace workers with technologies within the same type of production. The results contrast with the ideas that technologies necessarily replace workers or are skill biased.

- Submitted
- Featured in The Economist ([article](#), [leader](#)) and [Wired](#)

POLICY REPORTS

Policy Brief: New Evidence on the Effect of Technology on Employment and Skill Demand (in Finnish) [\[link\]](#)

with Aapo Stenhammar (Aalto University) and Joonas Tuhkuri (MIT), April 2022.

- Policy brief of the paper with the same name for Finnish media and readers

In Search of Upcoming Supply Chain Surprises: The World Export Market Shares of Belarus, Russia and Ukraine [\[link\]](#)

with Jyrki Ali-Yrkkö (Etla) and Petri Rouvinen (VTT), March 2022.

- Featured in 5+ Finnish newspapers and media outlets (e.g. [Kauppalehti](#), [Talouselämä](#))

The Significance of Russia for Finnish Companies (in Finnish) [\[link\]](#)

with Jyrki Ali-Yrkkö (Etla) and Aki Kangasharju (Etla), March 2022.

- Featured in 40+ Finnish newspapers and media outlets (e.g. [YLE](#), [HS](#), [MTV](#), [KL](#), [Talouselämä](#))

EMPLOYMENT

Etla Economic Research Researcher	Helsinki, Finland 2022 -
<ul style="list-style-type: none">• Research on topics around firm innovation and resilience	
Etla Economic Research Research Trainee	Helsinki, Finland 2019 - 2021
<ul style="list-style-type: none">• Research on the effects of new technologies on skill demand and employment	
Aalto University Research Assistant for Professor Otto Toivanen	Espoo, Finland 2019
<ul style="list-style-type: none">• Research on pharmaceutical market competition in the Nordic countries	
Aalto University Teaching Assistant	Espoo, Finland 2019, 2020
<i>Intermediate Microeconomics, Microeconomics: Pricing and Strategy, Money and Banking</i>	

CONFERENCES AND PRESENTATIONS

Presentations by a coauthor are marked by an asterisk (*). Includes scheduled.

NBER Summer Institute, IT and Digitization*	2022
AI-Econ Lab, The Impact of AI on White Collar Work	2022
Summer Seminar of Finnish Economists*	2022
Ministry of Employment and the Economy of Finland	2022
Nordic Summer Institute in Labor Economics*	2022
Etla Economic Research Seminar Series	2021

GRANT AND AWARDS

ASLA-Fulbright Graduate Grant For completing a doctoral degree in the U.S., \$25,000 (declined)	2021
Business Subsidies Division, Ministry of Employment and the Economy of Finland Co-applicant for research funding, €20,000	2021
Foundation for Economic Education Co-applicant for research funding, €18,000	2021

COMPUTER SKILLS

Python (including multiple data science related libraries), Stata, MS Office, \LaTeX

LANGUAGES

Finnish (native), English (fluent), German (basic), Swedish (basic)

OTHER

Aalto Economics Vice President	Espoo, Finland 2020 - 2021
<ul style="list-style-type: none">• Daily operation of the student organization for economics students at Aalto University together with the President	
The Finnish Defence Forces Conscript	Helsinki, Finland 2016 - 2017
<ul style="list-style-type: none">• Compulsory one-year military service	