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Research and Training

I am a fourth-year doctoral candidate in the Technology and Operations Management unit at Harvard Business School (Innovation Track), and I am writing to express my strong interest in the NBER Tutorial on Digital Economics and AI. My doctoral research, methodological training, and work in progress are closely aligned with the themes of this tutorial, and I believe I would be a highly engaged participant.

My research investigates the human and organizational challenges of digital transformation, with a specific focus on how AI systems are built from human expertise and how workers, firms, and audiences respond once those systems are deployed. My methodological training includes the core economics and econometrics sequence, Organizational Economics I and II, and Machine Learning and Big Data Analytics. Most directly relevant to this tutorial is my coursework in Empirical Studies of Innovation and Digitization with Professor Shane Greenstein, who also serves on my dissertation committee and who deepened my interest in the empirical study of digital markets.

Conceptually, my work is motivated by the idea that AI and human organization are intertwined forces shaping the future of the economy: the systems firms deploy are built from the expertise of the people who work in them, and the returns to deployment depend on how workers and audiences respond. I am especially interested in how workers and traditional firms respond to the challenges and opportunities that AI creates. I see myself as an empiricist, conducting field experiments as well as working with observational data.

Work in Progress

1. **"Training Yourself Out of a Job: The Human–AI Training Paradox"** (solo-authored). This paper studies a core incentive problem in the digital economy. I adapt a principal–agent model to formalize how workers strategically adjust effort when tasked with training AI systems that may ultimately replace them, and I test the model's predictions through a pre-registered laboratory experiment and a field experiment.

2. **"Agentifying Tacit Knowledge and Its Productivity Consequences"**
   (with Raffaella Sadun et al.)
   This project is a field experiment with a global telecommunications provider, funded by the HBS AI Institute. It examines whether tacit knowledge can be agentified — elicited from experienced employees and encoded into AI agents — and how doing so affects productivity. We ask questions central to the economics of AI adoption: which parts of expertise can be transferred to machines, and who captures the gains when that transfer occurs? The project connects the deployment of AI to the organization of human knowledge, and to the productivity consequences of making that knowledge available through an AI-based tool.

3. **"AI-Generated Content and Community Engagement in Media Companies"**
   (with Jacqueline Lane)
   This paper partners with a U.S. media company to study, in a field experiment, how AI-generated content affects community engagement as firms trade off efficiency gains against audience trust. The project extends my research from the workplace production and deployment of AI to audience responses to AI-generated output, connecting organizational adoption to changes in community behavior and engagement.

Dissertation Committee

Feng Zhu (Chair), Shane Greenstein, and Jacqueline Lane.

Interest in the Tutorial

I believe the fourth year of my Ph.D. is an ideal time to attend this tutorial. I have a clear research direction and active projects, and I am eager to deepen my theoretical and empirical understanding while connecting with leading scholars in this community. Attending the subsequent NBER Digital Economics and AI meetings would be an invaluable extension of that experience and would help me better situate my dissertation within the broader research frontier. I have regularly attended NBER productivity seminars in Cambridge over the past two years, and I am excited about the prospect of engaging more fully with the digital economics and AI community.

Thank you for considering my application. I am confident that my research background will allow me to contribute meaningfully to the discussions, and I am excited by the prospect of learning from and collaborating with leaders in digital economics and AI.

A list of my completed PhD courses is attached.

COMPLETED PhD COURSES

Economics Core

Microeconomic Theory I (Harvard)	Luis Armona
Microeconomic Theory II (Harvard)	Christopher Avery, Samuel Richardson
Introduction to Econometrics (Harvard)	Davide Pettenuzzo
Quantitative Social Science Methods (Harvard)	Kosuke Imai
Organizational Economics I (Audited, MIT)	Robert Gibbons, Charles Angelucci
Organizational Economics II (Audited, MIT)	Robert Gibbons, Charles Angelucci

Innovation, Strategy and Entrepreneurship

Empirical Studies of Innovation and Digitization (Harvard)	Shane Greenstein
The Foundations of Strategy (Harvard)	Dennis Yao
Theoretical and Empirical Perspectives on Entrepreneurship and Innovation (Harvard)	Josh Lerner
Empirical Methods in Strategy (Harvard)	Raffaella Sadun
Advanced Topics in Strategy (Audited, Harvard)	Rebecca Karp, Maria Roche

Methods and Data Science

Design of Field Research Methods (Harvard)	Robin Ely
Empirical Technology and Operations Management (Harvard)	Toni Moreno, Kris Ferreira
Field Experiments (Audited, Harvard)	Alex Chan, Leslie John
Machine Learning and Big Data Analytics (Harvard)	Soroush Saghafian
Causal Inference for Management Research (BU)	Raviv Murciano-Goroff