Application for NBER Digitization Tutorial 2023

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Keywords	diversity, entrepreneurship, innovation, labor market, AI, experimental
Committee Chair	Nicola Lacetera, University of Toronto
Committee Members	Avi Goldfarb, University of Toronto Sarah Kaplan, University of Toronto András Tilcsik, University of Toronto

PhD Courses (completed between 2020 and 2022):

I am a 3rd year PhD student in Strategic Management at Rotman School of Management.

Methods

- Econometrics I/II
- Models and Methods
- Quantitative Methods in the Applied Behavioral Sciences
- Microeconomic Theory I/II
- Computer-Assisted Textual Analysis
- Economic Applications of Machine Learning

Strategy - Fundamentals

- Research Methods in Strategic Management
- Strategy and Economics
- Organizational Theory
- Economic Sociology

Strategy – Special Topics

- Economics of Innovation
- Behavioral Economics
- Stakeholder Theory

Research Interests

Current and Future Direction

I am interested in two research areas. First, how does automation impact the labor market? I am particularely interested in understanding its *heterogeneous effects on different worker groups* with regard to skill and demographic groups - and *how we can re-allocate labor*. The literature suggests that losing a job is costly, but that individual's well-being is increased if the pool of opportunities grows due to technological advances (i.ex. creative destruction; Huikari and Korhonen 2016; Aghion, Akcigit, Deaton 2016; Aghion, Antonin, Bunel 2019). Thus, I believe two research questions are important. First, does automation due to advances in AI lead to an increased pool of opportunities? Second, how can we re-allocate labor from the jobs that have been lost to the newly created ones? Having studied economic development and political science, I also believe that it is important to understand to which extend simple financial compensation for job loss (such as UBI) compares to a system that is designed for (upward) mobility.

Second, I am interested in how diversity impacts the type of technology we develop and whom it serves. Innovation is the main driver of economic growth and the biggest contributor to economic and societal progress. An emerging body of evidence suggests that under the right conditions, minority groups or diverse groups produce the most innovative ideas (Jeppesen and Lakhani (2010); Goncalo et al. (2015); Gompers and Wang (2017); AlShebli, Rahwan, and Woon (2018); Hofstra et al. (2020)) and that diversity changes the direction of innovation (Koning, Samila, and Ferguson 2021; Truffa and Wong 2022). However, diversity, or lack thereof, is currently a problem in positions where ideas matter (Ding, Murray, and Stuart 2006; Chari and Goldsmith-Pinkham 2017; Paul A. Gompers et al. 2020). With my work, I want to study how diversity impacts the type of (technological) innovation we produce. And to which extend it impacts who benefits from it.

With my past work, I have studied how structural interventions can increase the share of qualified women who apply for challenging and rewarding work in online labor markets (*"Whether to Apply")*. Furthermore, I studied how women and men update their beliefs about own ability when given positive or negative feedback (*"Stereotypes and Belief Updating").* With my future work – my dissertation – I plan to move more towards work related to AI and entrepreneurship.

Why I want to attend the NBER Digitization Tutorial

My dissertation should lie at the intersection of entrepreneurship, artificial technology/digitization, and diversity. Since I am in the process of working towards my dissertation topic, this tutorial would provide me with an excellent opportunity to generate research ideas and receive feedback from the leading scholars in the field. The tutorial would also provide me with the opportunity to reach the frontier of the field.

Working Papers

1. **Stereotypes and Belief Updating** ***(joint with Katherine Baldiga Coffman and Leena Kulkarni) R&R at Journal of European Economic Association)***

Abstract: We explore how feedback shapes, and perpetuates, gender gaps in self-assessments. Participants in our experiments take tests of their ability across different domains. We elicit their beliefs of their performance before and after feedback. We find that, even after the provision of highly informative feedback, gender stereotypes influence posterior beliefs, beyond what a Bayesian model would predict.

This is primarily because both men and women update their beliefs more positively in response to good news when it arrives in a more gender congruent domain (i.e., more male-typed domains for men, more female-typed domains for women), fueling persistence in gender gaps.

2. **Whether to Apply** ***(joint with Katherine Baldiga Coffman and Leena Kulkarni) Minor Revisions at Management Science)***

Abstract: Labor market outcomes depend, in part, upon an individual's willingness to put herself forward for different opportunities. We use a series of experiments to explore gender differences in willingness to apply for higher return, more challenging work. We find that, in male-typed domains, qualified women are significantly less likely to apply than similarly well-qualified men. We provide evidence both in a controlled setting and in the field that reducing ambiguity surrounding required qualifications increases the rate at which qualified women apply. The effects are more mixed for men. Our results suggest a path forward for increasing the pool of qualified female applicants.

3. **Gender Gaps in Ph.D. Graduation and Scientific Publishing: A Case Study of East and West Germany** ***(Working Paper)***

Abstract: Gender diversity is a key driver of the rate and direction of innovative activities, but we know little about how to achieve it. I look at the pipeline of potential female inventors and study women's decisions to complete graduate school and their propensity and intensity to publish under two different institutional and normative settings. For that, I turn to the German reunification in 1990 as my empirical setting. At that time, East and West Germany show sizable differences in institutional incentives and attitudes toward working women. Using a newly assembled dataset of German Ph.D. graduates in Science, Medicine, and Technical fields, I show that East Germany graduates significantly and persistently more women doctorates than West Germany. A difference-in-difference approach infers that a change in institutional incentives and norms (namely the reunification) leads to gender gaps in the propensity to publish and an increase in the gender gap in the intensity to publish. This case study offers insights into how to increase gender diversity in science.

<u>Research Projects</u>

4. **Gender and Feedback in Entrepreneurship (joint with Mitchell Hoffman and Daphné Baldassari)**
    - We study the relationship between the gender of the venture founder and the type of feedback the mentor provides in an accelerator program. We have access to the universe of data from the accelerator Creative Destruction Lab (CDL). Particular focus for this project are all the transcribed conversations between mentors, investors, and founders.
5. **The Impact of Hostility on Sorting and Knowledge Contribution (joint with Clémentine Van Effenterre and Avner Seror)**
    - We study how normative constraints impact a participant's willingness to contribute their ideas to gender-incongruent topics in a repeated contribution game setting.