Dear Madam or Sir,

I hope you and your family are staying safe and well!

I am genuinely excited to apply for the NBER Digitization Tutorial. Thank you very much for organizing such a great event. I am teaching an undergraduate course in this quite different online semester and was actually discussing with my students the impact of digitization on firm financials. My research interests lie in understanding the economic impact and process of digitization on firm dynamics and capital markets. One of my projects will be presented in the upcoming NBER Big Data and Securities Markets Conference. I am very passionate about studying related topics and hoping to contribute to the field in the future.

Education and Motivation

My name is AJ Chen. I am a fourth-year PhD candidate at the University of Southern California Marshall School of Business. I witnessed my passion for and the importance of digitization through my work and education experiences. Before PhD, I was studying financial engineering at MIT. I also completed my undergraduate study at Boston University and graduated with *summa cum laude*. After graduation, I worked as an associate in the investment banking industry, as well as analyst in commodities trading. This series of events in my life has exposed me to the importance of digitization (e.g., I observed how digitization has transformed the U.S. energy firms when I was in the commodities trading industry). My interest in digitization is also in part the direct result of the influence from my USC, MIT, and BU faculties and colleagues. It was an amazing experience as my professors employ advanced methodologies to answer importance research questions in this field.

Relevant & Selected Research Projects

My research focuses on the capital markets, product markets, and financial intermediation. How did they evolve, and how can we improve them? My work is currently centered on the role of technology (and digitization) and the flow of information across firms, as the primary mechanisms to understand the economic dynamics in those areas.

My current research projects include “Life Cycles of Firm Disclosures” with Gerald Hoberg (USC) and Vojislav Maksimovic (University of Maryland). This project provides possible insights on how firms learn about peers’ technologies and search for asset complementarities. We propose that the product life cycle is important in understanding the firm's disclosure policy and test this hypothesis using a 4-dimensional text-based life cycle model. Mature-stage life cycle firms disclose more, consistent with an outward-focused investment strategy that lowers search costs for finding synergistic alliance partners. Early-stage life cycle firms are secretive, consistent with inward-focused organic investment and mitigating competitive threats. These results obtain across disclosure measures relating to intellectual property, redaction of contracts, and readability. A quasi-natural experiment based on waves of rapid depreciation of protected intellectual property, and analysis of pairwise co-search of peer filings on the SEC EDGAR website, reinforce this interpretation. SSRN to the paper: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3703931 (the paper is also in the 2021 American Finance Association program).

In a theory project with Suk Lee (Bank of Korea) and Fernando Zapatero (Boston University), we present a novel model to understand financial misconducts. We hope the model can also help us understand economic crimes in a digital age. In the meantime, we are also initiating a new project to explore algorithmic fairness from a theoretical perspective.

With my interest in financial intermediation, I am also very intrigued by the emergence of FinTech. My coauthor and I are currently collaborating with a few FinTech lenders to study the digitization in the mortgage & lending market. The technological advancement in the lending market has a major impact on the competitive landscape between traditional banks and shadow banks.

In another work-in-progress, my coauthors and I are working on understand firms' product distribution channels. We have obtained a very comprehensive dataset to understand firm's online vs. offline distribution of the same products. It is also important to understand the impact of automation on the labor market. My coauthor and I are exploring how automation of labor force affects market structure in an early-stage project. I have also finished a book project on the effect of innovation on macroeconomic issues.

Contact Info and Thank You

I want to thank you very much again for this amazing Tutorial. I am hoping to learn from and interact with the research leaders in the field. I am also a fan of the research by Prof. Catherine Tucker and Prof. Avi Goldfarb, so it is a true pleasure to see they are the organizers of the Tutorial. This Tutorial is very special to me and I really value this opportunity. I hope I can also further the study of Economics of Digitization in the years to come. Please do not hesitate to let me know if you need any further information from me. You can reach me at chen663@usc.edu. Thank you very much for all your consideration and help. Best wishes!

.