NBER Digital Economics and AI Tutorial Application

Xueyun Luo
SC Johnson College of Business, Cornell University
Email: xl777@cornell.edu
Committee: Chris Forman (Chair), Aija Leiponen, Imke Reimers

November 2026

Since starting my Ph.D. program in Applied Economics and Management at Cornell University in 2021, I have completed five years of graduate coursework. To fulfill our Ph.D. program requirement, I have taken Ph.D. level *microeconomics*, *macroeconomics*, *mathematical economics*, *applied microeconomics*, *game theory*, *general equilibrium*, three-semester *econometrics*. In addition, I have taken other methodology courses, including *dynamic optimization*, *topics in machine learning and econometrics*, *graduate Industrial Organization*. Moreover, related to digital economics, I have taken courses such as *digital marketing*, *AI strategy and applications*, and other Ph.D. seminars and workshops in the field of digital economics. I also have been TA for *digital platform strategy* for Professor Chris Forman for four years and for *digital business strategy* for Professor Aija Leiponen. Additionally, I visited *Stanford Digital Economy Lab* as a visiting PhD researcher in 2026.

My research interests lie at the intersection of strategy and information systems. I focus on two main areas. The first centers on peer-based platforms, where I examine (1) its societal impact and (2) how supply-side participants strategically generate profit. The second area investigates how information technology shapes (IT) labor market dynamics.

There are three projects on peer-based platforms. The first paper studies whether and how user-generated content on Wikipedia affects judicial reasoning, which was published at *Information Systems Research*. The second paper examines the creator economy, exploring the effects of paywalled content on audience engagement and how creators can strategically adjust their content to better monetize behind a paywall. This paper is currently under review at *Management Science*. The third one is my job market paper, where I examine how important professional supply is to the sharing economy. Professional supply involves intentional investment rather than the sharing of underutilized resources to offset costs. Despite their potentially higher quality due to economies of

scale, this practice contradicts the original purpose of the sharing economy and can create tension with local governments. In this paper, combining an analytical model with empirical evidence, I show that reducing competition from professional suppliers yields only short-lived gains for other suppliers in terms of price, demand, and revenue. In the long run, however, it has negative consequences for the growth of sharing-economy platforms: diminished professional participation lowers expected consumer experience, and non-professional suppliers alone cannot sustain platform quality, ultimately pushing consumers toward outside alternatives. Together, these findings shed new light on a long-debated but understudied question regarding the role of professional suppliers in the sharing economy.

Another stream of my research focuses on the impact of information technology on labor market. Specifically, we use non-public US Census microdata to lend some clarity by taking a direct and granular look at human capital flows after new technology adoption. Previous studies would suggest a change in the composition of employee human capital towards skills that complement new technology investments. However, we know little about the flows of human capital that give rise to these changes. Does the inflow of workers, perhaps of certain types, increase? What happens to outflows? Do changes in human capital requirements give rise to accompanying changes in employee retention, or does worker churn increase? We motivate our empirical tests with a parsimonious model of worker flows. A key feature of this model is that firms will face costs of replacing departing workers, and that these replacement costs will increase following new technology adoption. Our empirical results show that our baseline analysis show that following electronic networks adoption, average wages increase at adopting units. This is accompanied by a decline in inflows and outflows.

As a visiting PhD researcher at the *Stanford Digital Economy Lab*, I collaborated with colleagues to study the impact of AI on the future of work. I hope that the progress of my research by next spring will contribute meaningfully to the discussions with professors and graduate students in the Digital Economics and AI Tutorial. I would be grateful for the opportunity to attend the tutorial on campus and gain exposure to frontier research in digital economics and AI. Participating would allow me to engage with colleagues and researchers working in related areas, which would greatly benefit my own study and research. I sincerely look forward to the possibility of joining this prominent event in the Economics of Digitization and AI.