Ruyu Chen

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EDUCATION

Cornell University, SC Johnson College of Business — Ithaca, USA
PhD in Applied Economics and Management — *2016 - 2022 (expected)*

Renmin University of China — Beijing, China
BS in Applied Economics (Honor of Excellence Graduate)) — *2014*

University of Copenhagen — Copenhagen, Denmark
Exchange Student in Mathematics and Applied Economics — *2012 - 2013*

RESEARCH INTEREST

Technology Adoption, Commercialization of AI, AI and Human Capital

PHD COURSEWORK

Microeconomic Theory I & II, Macroeconomics I, Intermediate Math Econ, Econometrics I & II, Applied Microeconomics I & II, Dynamic Optimization, Applied Microeconomic Research I, Environmental Economics, Empirical Strategies II, Industrial Organization & Regulation I & II, Economics of Development, Machine Learning Data Science, Introduction to Artificial Intelligence

WORKING IN PROGRESS

The effects of labor mobility on firm AI adoption decisions (with Chris Forman and Natarajan Balasubramanian)
How does IT technology impact interfirm collaboration and innovation? (with Chris Forman)

AWARDS

Cornell Johnson College of Business IET Small Research Grant — *2020*
Dyson Scholarship — *2016, 2020*
China National Scholarship for US Graduate Study ($80k) — *2014*

CONFERENCE PARTICIPATES

NBER's Digitization Tutorial for Economic Graduates — Stanford, CA, *2020*
NBER conference on Economics of Digitization — Stanford, CA, *2020*
NBER Young Scholars Workshop on the Economics of Artificial Intelligence — Toronto, *2019*
NBER Economics of Artificial Intelligence Conference 2019 — Toronto, *2019*

SKILLS & OTHER

Software: STATA, Matlab, R, Python, and ArcGIS
Languages: Chinese (native), English (fluent)
Interests: Oil Painting, Cooking, Swimming, Travelling(backpack traveler in 34 European cities).

Summary of Research Interest

Ruyu Chen (rc723@cornell.edu)

My primary research interests lie at intersection of Information Technology adoption and human capital. Successful adoption of new AI systems requires the presence of complementary investments to achieve productivity gains (e.g, Bresnahan, Brynjolfsson, and Hitt 2002; Bloom, Sadun, and Van Reenen 2012). Skilled human capitals to implement such new IT systems are one key complementary investment. My current paper thus explores how the mobility of human capitals might impact frontier IT adoption. Using a rich commercial dataset (CI data) that includes detailed software and hardware installation, we identify the adoption of advanced enterprise software enabled by machine learning in 2018 from over 130,000 establishments. Employing a difference-in-difference analysis, we find that increased labor mobility, as measured by a loosening of enforceability of Non-compete Agreements, is associated with an 8.3% reduction in the probability of adopting advanced analytic software by private firms. In ongoing work, we are probing the mechanisms through which these changes influence adoption patterns and heterogeneity in the effects of NCA changes across establishments.

My future interest includes the impact of remote work on diffusion of AI technology among commercial firms, and how this might affect the business process innovation related to human capitals.