HUIYAN ZHANG

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EDUCATION

Heinz College, Carnegie Mellon University
Catlica Lisbon School of Business and Economics *August 2016 - Present*
PhD in technological change and entrepreneurship

Tsinghua University *2009 - 2012*
M.A. in Public Policy and Management

Peking University *2005 - 2009*
B.A. in Political Science; Double degree in Economics

PHD COURSEWORK

Introduction to machine learning; Economics of technological change ; Seminar in industrial organization; Dynamic models of decision making; Econometric theory and method; Phd microeconomics; Entrepreneurship, growth and individual Choice; Behavioral economics; Fundamental social network analysis; Organizations theory; Probability and mathematical statistics; Introduction to Python

UNPUBLISHED PAPERS

Welcome to the Jungle: an initial expedition into China's patent thicket
An empirical study on China's patent litigation cases; from comparing litigated and non-litigated patents, I find several anomalies in China's patent litigation practice, which implies a rising patent thicket, and with the thicket, the strengthening patent protection in China might put the country's innovation into a difficult dilemma. Methodology used: casual inference; text mining; game theory modeling.

How does users knowledge input influence firms innovation productivity? Evidence in American medical device industry
I examine how the close firm-physician connections, which have raised many questions in U.S., impact firms' innovation productivity. By using panel-data method and quasi-experiments, my purpose is to take a look at whether such "clearing" policies discouraged firms' innovation performance.

CONFERENCE

"Welcome to the Jungle: an initial expedition into China's patent thicket"
Wharton Technology and Innovation Conference 2019 *Philidalphia, US, April, 2019*
17th International Schumpeter Society Conference *Seoul, South Korea, July, 2019*

WORK EXPERIENCE

Research Centre, State Intellectual Property Office of the P.R. China August 2012-July 2016
Junior Researcher

· Research mainly focus on patent analysis, science and technology policy making. Hosted 4 national granted projects, and participated 7 projects.

Research Statement

I am highly interested in the dynamics of emerging AI technologies with a focus on China, one of leading powerhouses for AI development globally. Specifically, I am curious about what factors determine the diffusion and adoption of AI technologies, and how this new generation of GPT (general purpose technology) would facilitate more technological changes and thus contribute to economic growth. To begin with, I plan to explore the basic pattern in China's AI patenting, and compare it with AI patenting patterns discovered in US. Based on the facts discovered, I plan to examine what determines the rate and direction of technological changes enabled by AI technologies, and how these new inventions or co-inventions impact, in return, the rate and direction of AI technological change. I am also interested in the challenges and opportunities opened up in management, organization and policy by these new technologies.

My previous coursework, work and research histories equip me well with skills and experiences for this research topic. In the past three-year doctoral study, I have taken a phd-level machine learning course by the Computer Science Department in Carnegie Mellon University, allowing me to have a fundamental understanding of the AI technology in details. Besides, the phd seminar course by Duke's Fuqua Business School provides me a comprehensive road map for theories and empirical work in economics of innovation, making me realize the rising of AI, as a new GPT, provides an excellent opportunity to examine and extend current theories in this field. Prior to the doctoral study, I have been working as a senior researcher in China's Patent Office, which provides me a deep understanding of the innovation practice in China. This job experience also gives me affluent experiences in patent analysis, which has already been employed in my current study on China's patent litigation.