Jianyu Xu

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Citizenship and Visa Status

China (F-1 visa)

Education

Ph.D. Economics, The Ohio State University, 2021 (expected)
Dissertation: "Essays on Social Learning and Social Network"
Committee: James Peck (chair), Huanxing Yang, Lixin Ye
M.A. Economics, The Ohio State University, 2016
Master of Finance, Peking University, 2015
M.S. Economics, The Chinese University of Hong Kong, 2015
B.S. Physics, Peking University, 2012
Bachelor of Economics, Peking University, 2012

Teaching and Research Fields

Information Economics, Network Economics, Game Theory, Industrial Organization

Research Papers

"Is Truth the Best Spread Rumor?" **(Job Market Paper)**

We model information transmission in a rumor spread approach, where a Rumor Maker's goal is to design the "best" rumor that can spread to the largest possible number of Decision Makers (DM). In our model, Rumor Maker designs and commits to a rumor generating mechanism. After the state is realized, a rumor of the state is generated and sent to the first DM. A DM plays a guessing state game, and also decides whether to spread the rumor or to block it. A DM passes a rumor to the next DM only when she expects this following DM's gain from the rumor is larger than the cost of reading the rumor, otherwise this rumor will be blocked. Besides the rumor, DMs also have a common signal and a private signal about the state. We show that when DM's private signals dominate, always telling the truth is among the best spread rumors; when DM's common signal dominates, the unique best spread rumor is telling the truth with a certain probability. We also show that as the cost of reading a rumor or the accuracy of people's signals increases, the best spread rumor converges to the truth.

"Social Learning and Strategic Delay in Star Network"

We study an endogenous timing learning model over a star network, where there is 1 central player connected with n periphery players. Players in each period face two options: to make an irreversible investment or to wait for another period. Players receive a binary private signal on the profitability of investment at the beginning of the game, and also observe neighbors' actions in past periods. We show that there exists a threshold of network size ($\bar{N}$) : when the size of the network is small ($n \leq \bar{N}$), in equilibrium, periphery players use a pure strategy which fully reveals their private signals to the central player; when the network is large ($n > \bar{N}$), periphery players use mix strategy and only partially reveal their signals to central player. The central player waits in the first period and then makes the final decision on whether to invest at all in the second period (based on the number of first-period investment of periphery players). Among the equilibriums, the central player works as a

crowdsourcing platform, collecting information from some peripheral players and deliver it to the rest players. We also show that asymptotic learning does not occur in star network: the probability of central player making the right action does not converge to 1 as the size of the network increases to infinity, which indicates a failure of information collecting in star structure.

"A Search Model in Housing Market with Restricted Purchase"

This paper develops a search model in the housing market with a restricted purchase policy, where an agent is not allowed to own more than one house. An agent matched with a house receives housing service each period until the match fails; An unmatched agent without a house is the prospective buyer, who visits one house each period and observe the match fitness and price; An unmatched agent with one house for sale is the prospective seller, whose strategy is setting a take-it-or-leave-it price. We show that in equilibrium, the housing price is lower than its value in the free market. By comparing restricted purchase with restricted price policy, we show that to reach the same amount of price decrease, restricted purchase policy generates a larger welfare cost, but a lower temporary excess return for prospective buyers, which attracts less real estate speculators.

"Regional Prestige of Labor Migration----Network Analysis and Empirical Study in China"

We introduce a new measurement, Regional Prestige, on regional attractiveness of labor migration. Comparing to conventional attractiveness measurements which are only based on the number of migrants, the main advantage of Regional Prestige is taking migrant sources into consideration, thus the migrant data becomes a migration network matrix. Assuming that to attract migrants from different regions calls for different levels of attractiveness, we use network analysis to endogenously put different weights on each region, which indicates the Regional Prestige. Using province-level data in China, we find that at the present stage of China, economic factors (such as FDI, wage) are the main determinants of Regional Prestige, while the social factors (such as environment, flat area) have little effect. This result confirms the economic-driven mechanism of Chinese migration raised by previous studies.

Research in Progress

"Network Enforcement in Repeated Prisoners' Dilemma Game"

"Selling Network Information" with Renkun Yang

Teaching Experience

Autumn 2019	Instructor (Full responsibility), Principles of Microeconomics, The Ohio State University (Approximately 80 students per semester)
Spring 2020 Spring 2019 Spring 2018 Autumn 2017	Instructor (Full responsibility), Principles of Macroeconomics, The Ohio State University (Approximately 80 students per semester)
Autumn 2020 Autumn 2018 Spring 2017	Teaching Assistant, Principles of Macroeconomics, The Ohio State University (Approximately 700 students per semester. My responsibilities included leading 3 recitations with approximately 50 students each.)

References

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