YIRAN ZHANG

CURRENT EMPLOYMENT

Assistant Professor, School of Economics Fudan University, 2021−

EDUCATION

P.h.D in Economics, The Chinese University of Hong Kong 2021
M.A. in Economics, Renmin University of China 2016
Exchange Student, Kyoto University 2014
B.A. in Economics, Renmin University of China 2014

FIELDS OF INTERESTS

Macroeconomics, Growth and Innovation, Chinese Economy

WORKING PAPERS

Quantitative Assessment on Frictions in Technology Market [Job Market Paper]

In this paper, I first document several novel stylized facts from Chinese patent transaction data matched with manufacturing firm data. A key finding is that Chinese patent market is significantly less developed than the U.S. To understand the causes and consequences, I build a model that endogenizes firm R&D investment, patent trading decision and productivity growth. I structurally estimate the model and find the following two main results. First, Chinese patent market plays a small role in growth. It only accounts for 5% of China's GDP growth rate, as opposed to 17% in the U.S. Second, I evaluate the importance of three frictions calibrated to Chinese patent market: search cost, fixed transaction cost and information asymmetry. Search cost turns out to be the main friction to explain the gap of patent market size. If search cost was reduced to the US level, China's productivity growth would increase by 0.16 percentage points.

An Anatomy of the Patent Quality: China vs. US (Joint with Hanming Fang, Zheng (Michael) Song and Hanyi Tao)

We construct various quality measures to investigate the evolution of the quality of granted Chinese patents, relative to that of the US patents, over the period of 1985 and 2015. We mainly develop two novel measurements of patent quality that can be comparable across countries: the forward citation numbers standardized by dual-listed patents and machine learning analysis on new words in patents files. Some measures based on network analysis or traditional patent quality measures are investigated as well, like originality and generality, centrality, and patent renewals. Standardized forward citation measure indicates that on average, US patents' quality is two times higher than Chinese; However the quality gap is narrowing, especially in electrical engineering industry which is consistent with the findings in new word analysis, that during 1986-1990, 72.1% of new words that appeared in the Chinese patents were words that already appeared in the US; this fraction continuously dropped, and was 25.3% for the new words that appeared in Chinese patents filed in 2011-2015. In terms of cross-country knowledge transfer as proxied by patent citations and new word citations. We find that the knowledge flowed mostly from the US patents to Chinese patents, though in some technology classes, particularly electric communication technique (H04) and basic electric elements (H01), knowledge started to flow from China to the US from around 2001, though in 2015, the knowledge transfer from China to the US accounted for only 0.91% of the total China-US knowledge transfer.

PUBLICATIONS

In English

Superstitions, Street Traffic, and Subjective Well-being. Michael L. Anderson, Fangwen Lu, Yiran Zhang, Jun Yang and Ping Qin. *Journal of Public Economics*, 2016.

In Chinese

Do Institutions Mitigate the Negative Effect of Social Conflict on Enterprises' Risk-taking? Ruilong Yang, Yiran Zhang and Jidong Yang. *Economic Research Journal (*经济研究*)*, 2017.

Political Identity and Income Gap. Jidong Yang and Yiran Zhang. *World Economic Papers (*世界经济文汇*)*, 2016.

Using Happiness Surveys to Value Air Pollution. Jidong Yang and Yiran Zhang. *The Journal of World Economy (*世界经济*)*, 2014.

PROFESSIONAL ACTIVITIES

Presentations at conferences or seminars

2020: CUHK(brown-bag),HKBU
2021: SUFE IAR, CUFE, Renmin University of China

FELLOWSHIPS AND AWARDS

Hong Kong PhD Fellowship Scheme, Hong Kong Government, 2016-2019
Summer Research Fellowship, CUHK, 2016-2019
The Third Xiang Zhang Economics (CEC) Outstanding English Research Paper Award, 2017
Outstanding Graduate Award of Renmin University of China, 2014, 2016
China National Scholarship, 2013-2014, 2014-2015, 2015-2016
National Economics Annual Conference of Undergraduates Outstanding Paper Award, The School of Economics of SUFE, 2013

TEACHING EXPERIENCE

As teacher assistant at The Chinese University of Hong Kong

Econ2021: Basic Macroeconomics   2017-18, 2019-20
Econ1902: A Guide to Learning Economics   2018-19

As teacher assistant at Renmin University of China

Introductory Econometrics   2013-14, 2015-16

OTHER INFORMATION

Citizenship: China
Date of birth: April, 1992
Languages: Mandarin (Native), English (Proficient), Cantonese (Intermediate), Japanese (Elementary)