

# SHIYUN XIA

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## EDUCATION

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| Ph.D.in Economics,<br>University of Illinois at Urbana-Champaign (UIUC),<br>M.S.in Economics,                | 08/2012-05/2020 expected |
| Joint program at Kyushu University, Japan and Renmin University, China,<br>B.S.in Economics and Mathematics, | 09/2009-06/2012          |
| Renmin University of China,Beijing, China,                                                                   | 09/2005-06/2009          |

## FIELDS OF CONCENTRATION

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| <b>Primary</b>   | Industrial Organization, Innovation, Entrepreneurial Finance, Microeconomics |
| <b>Secondary</b> | Economic Growth, Corporate Finance                                           |

## WORKING PAPERS

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“The Market for Ideas and Economic Growth” (**Job Market Paper**)  
“The Market for Ideas and Industrial Dynamics”

## RESEARCH IN PROGRESS

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“Patent Collateral, Adverse Selection and Startup Financing”  
“Capital Market Characteristics with Asymmetric information on Investment Opportunities”

## HONOR AND AWARD

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- Department Summer Research Grant, UIUC, 2014
- Cleo Fitzsimmons Best Core Performance Award, UIUC, 2013
- Scholarship for Study, Kyushu University, 2010
- University Scholarship, Renmin University. Top 6% (2005-2008)

## WORK EXPERIENCE

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| Research Assistant, UIUC                                                                                                                    | 01/2015-05/2017                  |
| · Numerical simulations of macroeconomics learning theories using MATLAB and GNU Octave.                                                    |                                  |
| · Computer lab management and Linux system maintenance.                                                                                     |                                  |
| Teaching Assistant for Economic Statistics, UIUC                                                                                            | 08/2014-12/2014, 08/2017-12/2017 |
| Teaching Assistant for Microeconomics, UIUC                                                                                                 | 08/2018-12/2018                  |
| Teaching Assistant for Macroeconomics, UIUC                                                                                                 | 01/2019-05/2019, 01/2019-Now     |
| Internship, Hollyhigh Finance (Beijing)                                                                                                     | 07/2010-09/2010                  |
| · Independently performed industry analysis, company valuation, and company merge market investigation for merger and acquisition business. |                                  |

## TECHNICAL STRENGTHS

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| <b>Programming Languages</b> | MATLAB, Python, R, Stata, Mathematica |
| <b>Operating Systems</b>     | Linux, Windows                        |

## REFERENCES

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**Prof. Dan Bernhardt**

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**Prof. Stefan Krasa**

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## ABSTRACTS

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### *“The Market for Ideas and Economic Growth”*

This article studies the effects of Intellectual property rights (IPR) and antitrust policies on aggregate innovation. I develop a continuous time model in which incumbent firms choose the extent of RD to improve the quality of their products, and inventors who engage in RD choose whether to pursue complementary innovations that they would sell to incumbent firms or a disruptive innovation that would lead them to develop a superior technology that supersedes that of an incumbent firm. I show that public policies usually face the trade-off of innovation of incumbent firms and innovation of independent inventors. Stronger protection for inventors raises innovation by inventors, but because it reduces the equity value of incumbent firms, it reduces incumbent firms’ investment. If inventors only innovate to enter product markets, the trade-off can lead to an inverted U relationship between the economic growth rate and inventors’ ability to benefit from their innovations. However, a strong IPR policy that protects inventors from incumbent firms on the market for ideas always increases aggregate innovation. First, the effect of the IPR policy on the innovation of inventors dominates the effect on innovation of incumbent firms. Second, the IPR policy increases the economic growth rate by encouraging inventors to innovate to sell innovations on the market for ideas instead of innovating to enter product markets.

### *“The Market for Ideas and Heterogeneous Innovations”*

This paper presents a framework identifying the impacts of the market for ideas on industrial dynamics and economic growth. I develop a continuous-time model in which an incumbent firm can hold multiple product lines. In this model, incumbent firms seek internal innovations to improve their products. Incumbent firms and entrants pursue replacement innovations to obtain product lines they do not currently own. Independent inventors pursue innovations complementary to existing products and sell them to incumbent firms. Entrants successfully become incumbent firms when they obtain a product line, and incumbent firms exit when they lose all product lines. Stronger bargaining power of inventors increases complementary innovation by independent inventors. However, because it reduces the value of holding a product line, it reduces incumbent firms’ incentive to improve their products, and it also reduces incumbent firms and entrants’ incentive to obtain another product line. Because of a lower replacement innovation rate, the rate with which an incumbent firm loses a product line decreases. Therefore, exit rates fall, and the average number of product lines holding by a firm rises. For a large set of parameter values, the positive effect of stronger IPR protection on innovation by inventors dominates the negative effect on innovation by incumbent firms and entrants, resulting in faster economic growth.