

# Junhao Liu

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## Education

Ph.D. in Risk and Insurance, University of Wisconsin–Madison 2014-2019  
- Dissertation: “Policy Form and Rate Regulation in the Property-Liability Insurance Market”  
M.S. in Mathematical Statistics, University of Cambridge 2012  
B.S. in Statistics and Mathematics (First Class Honors), University of Hong Kong 2011

## References

### **Professor J. Tyler Leverty (Chair)**

Wisconsin School of Business  
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### **Professor Joan T. Schmit**

Wisconsin School of Business  
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### **Professor Justin R. Sydnor**

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### **Professor Anita Mukherjee**

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## Research Interests

Economics of Regulation, Household Finance, Risk Management and Insurance

## Publications

### **“Building Financial and Health Literacy at Older Ages: The Role of Online Information”**

with Hessam Bavafa and Anita Mukherjee (Forthcoming, *Journal of Consumer Affairs*)

Improving financial and health literacy is an important step in reducing economic vulnerability in older age, yet the means by which individuals accumulate these types of human capital remains an open question. This paper evaluates the impact of online search activities on the levels of financial and health literacy. We find that using the internet for such information increases literacy significantly: doing so frequently (versus not at all) increases financial literacy by 16 percent, and health literacy by 12 percent. Our results are robust to alternative measures of financial literacy. They are also robust to an instrumental variable approach using other web skills such as email use to proxy for how individuals use the internet.

## **Working Papers**

### **“Compliance Costs of Contract Regulation”** with Ty Leverty

Regulation of contracts plays an important role in U.S. financial markets. In this paper, I estimate the costs of complying with contract regulation by exploiting the rich cross-sectional and time-series variation in regulation in the U.S. property-liability (P/L) insurance industry. The costs of complying with stringent contract regulation are significant, approximately 3.1 percent of the general expenses for the average insurer by line of business and year, or \$1.8 BN for the industry per year. The compliance costs are higher in personal lines of insurance. The burden of these costs falls unevenly on insurers, with the regulatory effects isolated to the firms writing less than \$5 MN in premiums in a line of business per year.

### **“Medicaid and Long-Term Care: Do Eligibility Rules Impact Asset Holdings?”**

with Anita Mukherjee (Revise and Resubmit, *Journal of Risk and Insurance*)

Medicaid provides a critical source of insurance against the rising costs of long-term care, and individuals may strategically offload assets (typically to children) to meet the means-tested eligibility requirement. Yet, evidence on such behaviors is limited. In this paper, we quantify the extent of strategic transfers using variation in the penalty for improper transfers induced by the Deficit Reduction Act of 2005. We estimate difference-in-differences models based on the hypothesis that only individuals with high levels of self-reported nursing home risk (high risk) will alter transfers because of the Act. We find that over a two-year horizon, high risk individuals reduced transfers to children on the extensive margin by 10 percent and that the average total amount of transfers decreased by \$1,700. We do not find any evidence that people adjusted real estate holdings in response to the DRA. We also conduct a triple-differences analysis to examine various forms of heterogeneity. We find that the reduction in transfers comes from high risk individuals who are less financially literate, suggesting that more financially sophisticated households either have other mechanisms to shield assets or are not sensitive to Medicaid eligibility.

## **Research in Progress and Other Work**

### **“Elections and Insurance Rate Regulation”** with Ty Leverty

We test the economic theory of regulation by examining whether elections affect the regulation of insurance prices in the U.S. P/L insurance market.

### **“Does Technology Adoption Save Regulatory Compliance Costs”** with Ty Leverty

We estimate the impact of technology adoption on the costs of complying with product regulation in the U.S. property-liability (P/L) insurance market by exploiting quasi-experimental variation in when states adopt the technology.

### **“Reverse Mortgages”** with J. Michael Collins and Anita Mukherjee

Entry prepared for the Encyclopedia of Gerontology and Population Aging (section: Social Security and Pension Systems), published by Springer, March 2019.

## **Teaching**

**Lecturer, ACT SCI 300 Actuarial Science Methods I** 2017

- University-wide Exam P (Probability) review course
- Developed the syllabus, lecture notes, weekly in-class and homework exercises

**Head Teaching Assistant, GEN BUS 306 Business Analytics I** 2017

- Core course on analytical skills for business undergraduates
- Planned weekly discussion sections and coordinated fellow TAs in teaching

**Teaching Assistant, GEN BUS 306 Business Analytics I (Five Semesters)** 2015-2017

- Received Dean's letter of recognition for designing and implementing an auto-grading system of case projects for 600+ students each semester
- Developed weekly discussion sections and taught 500+ students in 5 semesters

### **Presentations**

JCA/FLEC Research Symposium	2019 (scheduled)
Southwestern Finance Association Conference	2019
Department of Economics, University of Wisconsin–La Crosse	2018
Research Blitz, Wisconsin School of Business, University of Wisconsin–Madison	2018
American Risk and Insurance Association (ARIA) Annual Meeting	2018
APRIA-IRFRC Joint Conference Joint Conference	2018
Ph.D. Student Research Symposium, University of Georgia	2018
Risk and Insurance Department Seminar, University of Wisconsin–Madison	2018

### **Referee Service & Conference Participation**

Ad hoc Referee, The Journal of the Economics of Ageing	2017-2018
Invited Participant, FMA Doctoral Student Consortium	2018
American Risk and Insurance Association (ARIA) Annual Meeting	2017
Annual CEAR-Huebner Summer Risk Institute, Georgia State University	2017
Invited Participant, Price Theory Summer Camp, University of Chicago	2016

### **Research Assistance & Undergraduate Research**

Research Assistant for Professor Anita Mukherjee, Wisconsin School of Business	2017-2018
Research Assistant for Professor Peng Shi, Wisconsin School of Business	2015
Project Manager, Research in Industrial Projects for Students, Institute for Pure and Applied Mathematics, University of California, Los Angeles	2010

### **Honors, Fellowships, & Scholarships**

Honorary Fellow, Institute for Legal Studies, University of Wisconsin Law School	2018
Distinguished Teaching Award, Wisconsin School of Business	2016
Robert Bruce Wisconsin Distinguished Graduate Fellowship, UW–Madison	2014
Finalist, S. T. Yau College Student Mathematics Contest (among top 12 undergraduate students in mathematics in China)	2014

### **Industry Experience and Actuarial Exams**

<b>Actuarial Consulting Analyst, Milliman Inc., Shanghai, China</b>	2013-2014
- Conducted reserving and pricing projects in auto-insurance and healthcare	

#### **Actuarial Exams**

Probability (P); Financial Mathematics (FM); Models for Financial Economics (MFE); Life Contingencies and Statistics (3L)

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