

# SHIHAN SHEN

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## EDUCATION

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**University of California, Los Angeles** 2017 - Present

Ph.D., Economics, June 2023 (Expected)

M.A., Economics, March 2019 (*Honor Pass*, Microeconomics, Macroeconomics, Econometrics)

**Peking University** 2010 - 2017

M.A. in Economics (with distinction), National School of Development (CCER), June 2017

B.A. in Economics (with distinction), School of Economics, June 2014

## RESEARCH INTERESTS

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Macroeconomics, Economic Growth, Firm Dynamics, Financial Economics

## JOB MARKET PAPER

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**“Customer Acquisition, Rising Concentration and Productivity Growth Slowdown”**

*Presentations: EWMES 2022 (Scheduled), TADC 2022, 2022 AFA Ph.D. poster session, 2021 Asian Econometric Society Meeting, 2021 China Meeting of the Econometric Society, UCLA Proseminar*

## OTHER WORKING PAPERS

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**“Revisiting Capital-Skill Complementarity, Inequality, and Labor Share”**, with Lee E. Ohanian and Musa Orak.

*Conditionally accepted at Review of Economic Dynamics*

**“Monopoly or Efficiency? Aggregate Impact of Mergers and Acquisitions on Macroeconomic Dynamics”**

**“Private Information, Adverse Selection and Small Business Lending”**

## WORK IN PROGRESS

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**“Market Liquidity and Bond Issuance: Effects of the Fed’s Interventions during the COVID-19 Crisis”**, with Huifeng Chang

**“The Transmission of Shocks Across Industries: Evidence from a Billion News Articles”**, with Bruno Pellegrino

## RA EXPERIENCE

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Research Assistant to Prof. Lee Ohanian and Prof. Jesus Fernandez-Villaverde, 2019-2021

Research Assistant to Prof. Simeon Alder, Prof. David Lagakos and Prof. Lee Ohanian, 2019-2020

## TEACHING EXPERIENCE

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### University of California, Los Angeles

Macroeconomics ( <i>Graduate level</i> ), TA for Prof. Lee Ohanian	Fall 2019, Fall 2020
Investments, TA for Prof. Pierre-Olivier Weill	Winter 2021
Finance, TA for Prof. Patrick Convery	Fall 2021, Winter 2022
Introduction to Econometrics, TA for Prof. Rodrigo Pinto	Fall 2018, Spring 2020
Principles of Economics (Macro, Micro),	Spring 2019, Winter 2019

### Peking University

Empirical Finance and Matlab Programming	Fall 2015
Options, Futures and Other Derivatives	Spring 2015

## CONFERENCE PRESENTATIONS

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- 2022: EWMES (Scheduled), Trans-Atlantic Doctoral Conference (TADC), AFA Ph.D. Poster Session
- 2021: WEAI, Asian Econometric Society Meeting, China Meeting of the Econometric Society, "Labor, Firms, and Macro" Reading Group, UCLA
- 2019: MIT-FARFE Capital Markets Research Workshop, UCLA Proseminar
- 2016: Ronald Coase Institute

## HONORS AND AWARDS

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Dissertation Year Fellowship, Graduate Division, UCLA.	2022-2023
Best Proseminar Presentations Award, UCLA (\$2,500).	2021-2022
Lewis L. Clarke Graduate Fellowship Fund, UCLA (\$3,000).	2020-2021
Graduate Student Travel Grant, UCLA.	2019-2020
Graduate Student Fellowship, UCLA.	2017-2018
Ph.D. Honor Pass in Comprehensive Exams for Micro, Macro and Econometrics, UCLA.	2018
Highest Honored Graduate Award, Peking University.	2014, 2017
Graduate Academic Award, Peking University.	2014, 2016
First-Class Academic Scholarship, Peking University.	2015

## MISCELLANEOUS

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- Computational: MATLAB, Stata, R, SAS
- Languages: English (fluent), Chinese Mandarin (native)
- Personal Information: Chinese citizen; Female

## REFERENCES

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### Lee E. Ohanian

Professor of Economics  
Economics Department, UCLA  
Tel: +1(310) 825-0979  
Email: ohanian@econ.ucla.edu

### Hugo Hopenhayn

Professor of Economics  
Economics Department, UCLA  
Tel: +1(310) 206-8896  
Email: hopen@econ.ucla.edu

### Pierre-Olivier Weill

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Economics Department, UCLA  
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Email: poweill@econ.ucla.edu

## ABSTRACT OF RESEARCH PAPERS

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### **“Customer Acquisition, Rising Concentration and Productivity Growth Slowdown” (JMP)**

*Abstract:* The cost of marketing and advertising has declined enormously due to the advance of digital technologies. This paper studies the macroeconomic consequences of lower marketing cost, and finds that it is a critical driving force of several striking macroeconomic trends, including rising market concentration and productivity growth slowdown since the 1990s. I develop an endogenous growth model with product market search frictions. Firms invest in innovation and marketing to build customer base, which is a long-term asset. Then I exogenously feed in the observed large drop of marketing cost into the quantitative model and find that it accounts for 83% of the rise in market concentration, measured by the largest firm’s market share. Cheaper marketing generates a positive level effect and a negative growth effect on productivity. These two effects together explain around 1/3 of the decline in productivity growth rate and successfully captures its “first-rise-then-fall” pattern over time. Finally, I conduct a welfare analysis and find that firms tend to over-invest in marketing compared to the socially optimal allocation, which implies that welfare can be improved by a marketing tax.

**“Revisiting Capital-Skill Complementarity, Inequality, and Labor Share”**, with Lee E. Ohanian and Musa Orak. Conditionally accepted at *Review of Economic Dynamics*

*Abstract:* This paper analyzes the quantitative contribution of capital-skill complementarity in accounting for rising wage inequality, as in Krusell, Ohanian, Rios-Rull, and Violante (KORV, 2000). We study how well the KORV framework accounts for more recent data, including the large changes in labor’s share of income that occurred after the KORV estimation period ended. We also study how using information and communications technology (ICT) capital as the complementary capital stock affects the model’s implications for inequality and overall model fit. We find significant evidence for continued capital-skill complementarity across all model permutations we analyze. Despite nearly 30 years of additional data, we find very little change to the original KORV estimated substitution elasticity estimates when the total stock of capital equipment is used as the complementary capital stock. We find much more capital-skill complementarity when ICT capital is used. The KORV framework continues to closely account for rising wage inequality through 2019, though it misses the three-percentage point decline in labor’s share of income that has occurred since 2000.

### **“Private Information, Adverse Selection and Small Business Lending”**

*Abstract:* Banks and the rising online lenders are the most common sources of external credit for informationally opaque small businesses. I develop a competitive search model to study how information asymmetry leads to distinct lending contracts and credit availability for firm borrowers. Banks and online lenders post different contracts. Firms with various credit risk search for funding, facing the trade-off between a long wait for credit decisions by banks and high interest rates charged by online lenders. The directed search framework delivers a separating equilibrium that requires low-risk borrowers to wait longer than the first-best case, because know they will eventually get approved at low interest rates and want to distinguish themselves with the risky ones. Borrowers’ aversion for high interest rate also leads to inefficiency on the extensive margin as banks post fewer contracts to low-risk borrowers than optimal. These model implications are consistent with data and stylized facts in small business lending survey.

## ABSTRACT OF WORK IN PROGRESS

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**“Market Liquidity and Bond Issuance: Effects of the Fed’s Interventions During the COVID-19 Crisis”**, with Huifeng Chang

*Abstract:* According to the conventional wisdom, firms tend to choose shorter maturity when issuing bonds. Using microdata on corporate bond issuance during the Covid-19 crisis, however, we provide evidence that the average maturity issued is longer. We develop a model of debt maturity choice of firms in the presence of rollover risk and search frictions in the secondary bond market. We use the model to rationalize our empirical findings on bond issuance. The calibrated model can be used as a laboratory to run the counterfactual for policy analysis. We show that the Fed intervention policies improve efficiency by reducing the fixed issuance cost.

**“The Transmission of Shocks Across Industries: Evidence from a Billion News Articles”**, with Bruno Pellegrino

*Abstract:* We leverage an extremely large digital database of news articles, containing 1.5 billion pieces of news from over 32,000 news sources, that have been tagged by topic and industry using artificial intelligence, to construct industry-level measure of firms’ exposure to a variety of economic shocks. After showing how our measurement framework can be applied to study a multiplicity of shocks, ranging from the introduction of artificial intelligence to epidemics, we focus on a specific application. We use our database to study the causality of policy uncertainty on firm equity volatility and capital investment. We ask whether companies that operate in industries more exposed to regulations and policy shocks experience higher stock price volatility and whether they scale back capital investment in response to higher policy uncertainty. While existing data sources only allow to capture time-series variation in policy uncertainty, our data and methodology enable us to investigate the transmission of policy uncertainty shocks to firms on a cross-sectional basis; this can drastically improve our ability to identify the causal impact of policy uncertainty shocks.