# YUMENG GU

1 Shields Ave, Davis, CA 95616  $+1(917)595-7554 \diamond ymgu@ucdavis.edu$ 

#### **EDUCATION**

University of California, Davis Davis, CA Ph.D. in Economics September 2017 - Present University of California, Berkeley Berkeley, CA Graduate Exchange September 2019 - December 2019 Columbia University New York, NY M.A. in Economics August 2016 - July 2017 **Brown University** Providence, RI B.Sc. in Applied Mathematics and Economics September 2012 - June 2016 Oxford, UK

September 2014 - July 2015

Oxford University

Undergraduate Exchange

# RESEARCH INTERESTS

Primary Fields: Macroeconomics, Monetary Economics

## RESEARCH EXPERIENCE

Washington, D.C.\* International Monetary Fund (IMF) Ph.D. Research Intern, Fund Internship Program July 2020 - September 2020 Western Hemisphere Department

Graduate School of Management, UC Davis Davis, CA Research Assistant (Supervisor: Brad Barber, Professor) June 2019 - September 2019

## WORK IN PROGRESS

"Monetary Policy and Cyclicality of Markups in the Intangible Economy" (JMP)

Abstract: I study the role of intangible inputs and firm heterogeneity in determining how do price-cost markups respond to a monetary policy shock. Empirically, I find that firm-level markups are conditionally pro-cyclical, and that larger firms with intangible intensive production technology display more pro-cyclical markups. Motivated by the empirical evidence, I use a heterogeneous firm New Keynesian model to show that the scalability and synergies associated with intangible inputs can help explaining the conditional pro-cyclicality of markups at the aggregate level, and the cross-sectional heterogeneity at the firm level. In the model, larger firm invest more aggressively in intangible inputs following an expansionary monetary shock, leading to increased economies of scale and re-allocation of market shares towards them. My findings suggest that monetary easing could result in a redistribution of income from workers to firm profits and lead to inflation driven by increasing firm market power.

"Distribution of Market Power and Monetary Policy" (with Sanjay R. Singh)

Abstract: We incorporate incumbent innovation in a Keynesian growth framework to generate an endogenous distribution of market power across firms. Existing firms increase markups over time through successful innovation. Entrant innovation disrupts the accumulation of market power by incumbents. Using this environment, we highlight a novel misallocation channel for monetary policy. A contractionary monetary policy shock causes an increase in markup dispersion across firms by discouraging entrant innovation relative to incumbent innovation. Using external instruments, we find empirical support for increased inter-sectoral dispersion in markups, lower aggregate TFP, and lower firm entry following contractionary monetary policy shocks in the US economy.

"Firm-level Productivity and Infrastructure Gaps: Evidence from Canada" (with Troy Matheson)

Abstract: This paper empirically investigates the extent to which Canada's road infrastructure gaps have held back productivity. Specifically, we employ a production function estimation approach to estimate firm-level total factor productivity (TFP), and merge TFP estimated with road network GIS data from Statistics Canada to estimate productivity improvement with respect to reductions in minimal travel time from marginal improvements in road network. Our key finding is that road network improvements increase firm-level productivity. A 1% increase in accessibility leads to a 0.3-0.5% increase in firm productivity. We discuss back-of-the-envelope representation of potential GDP gains and policy implications based on the estimates.

## **PRESENTATIONS**

Australian Meeting of the Econometric Society (virtual)	2021
Society of Economic Dynamics Annual Meeting, Minneapolis, MN	2021
China Meeting of the Econometric Society (virtual)	2021
Asian Meeting of the Econometric Society (virtual)	2021
North American Summer Meeting of the Econometric Society (virtual)	2021
Macro/International Brownbag Seminar, UC Davis	2020, 2021, 2022

# TEACHING EXPERIENCE

UC Davis
Teaching Assistant

Davis, CA
September 2018 - Present

- Undergraduate level: Economics of International Immigration, Economics of Education, Life's Financial Decisions, Intermediate Macro Theory
- Graduate level: Advanced Microeconomic Theory II (Ph.D.), Econometric Foundations (Ph.D.), Financial Theory and Policy (MBA), Time Series Topics (Ph.D.)

## **SERVICE**

Graduate Student Mentor (UC Davis, 2020-2021)

Departmental Macro/International Brownbag Seminar Series, Co-organizer (UC Davis, 2020-2022) Graduate Student Association, Economics Vice President (UC Davis, 2019-2020)

#### WORK EXPERIENCE

## China Construction Bank

Guangzhou, China

Banking Intern, personal loan and mortgage division

June 2014 - August 2014

#### FELLOWSHIPS AND AWARDS

Dean's Summer Graduate Fellowship (UC Davis, 2022)

Graduate Student Travel Award (UC Davis, 2021)

Dean's Distinguished Graduate Fellowship (UC Davis, 2017-2018, 2020-2021)

UC Davis Graduate Fellowship (UC Davis, 2018-2019, 2019-2020)

Best First Year PhD Student Award (awarded for achieving the highest GPA, UC Davis, Economics Department, 2018)

#### **SKILLS**

Computer Skills: Stata, R, MATLAB, QGIS

Language Skills: English(fluent), Chinese(native), Spanish(intermediate), Latin(basic)

## REFERENCES

James Cloyne
Associate Professor
University of California, Davis
Department of Economics
E-mail: jcloyne@ucdavis.edu

Alan M. Taylor Professor University of California, Davis Department of Economics Phone: 530-752-9241

E-mail: amtaylor@ucdavis.edu

Sanjay R. Singh Assistant Professor University of California, Davis Department of Economics Phone: 530-752-9938 E-mail: sjrsingh@ucdavis.edu

Last updated: July 2022

\* The internship is scheduled to take place in Washington, D.C., due to the Covid-19 pandemic, it is done remotely.