# YUMENG GU

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### **EDUCATION**

University of California, Davis Davis, CA September 2017 - Present Ph.D. in Economics 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 September 2012 - June 2016 B.Sc. in Applied Mathematics and Economics Lady Margaret Hall, University of Oxford Oxford, UK Undergraduate Exchange September 2014 - July 2015

## RESEARCH INTERESTS

Primary Fields: Macroeconomics, Monetary Economics

# RESEARCH EXPERIENCE

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

Graduate School of Management, UC Davis

Research Assistant (Supervisor: Brad Barber, Professor)

June 2019 - September 2019

### WORKING PAPERS

"Monetary Policy, Intangibles, and the Cyclicality of Markups" (JMP)

Abstract: I study the role of intangible inputs and firm heterogeneity in determining how price-cost markups respond to interest rate changes. Empirically, I find that firm-level markups are conditionally pro-cyclical, i.e., they go up following an interest rate cut, and that firms that intensively use intangible inputs - such as software and marketing - display more pro-cyclical markups. I use a heterogeneous firm New-Keynesian model with sticky prices to show that through the adoption of intangible inputs, firms exhibit pro-cyclical markups following a monetary easing. Meanwhile, the model preserves conditionally pro-cyclical real wages and inflation. I test key predictions of the model in data and find empirical support for this mechanism. In the cross-section, as in the data, larger firms with higher market share adopt intangible inputs aggressively and become larger and more profitable at the expense of smaller firms following a monetary easing. My findings suggest that a monetary easing could induce inflation driven by both rising costs and rising profits margins.

"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	$2020, 2021, 2022(\times 2)$

# TEACHING EXPERIENCE

UC Davis, CA

Teaching Assistant

September 2018 - Present

- Undergraduate level: Intermediate and Advanced Macro Theory, International Macroeconomics, Economics of International Immigration, Economics of Education, Life's Financial Decisions
- 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)

## 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 (UC Davis, Economics Department, 2018)

#### **SKILLS**

Computer Skills: Stata, R, MATLAB, QGIS

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

## REFERENCES

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Sanjay R. Singh

Assistant Professor

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Department of Economics

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