

Department of Economics,  
Columbia University,  
420 West 118th Street,  
New York, NY, 10027, USA

[ol2193@columbia.edu](mailto:ol2193@columbia.edu)  
<https://ou-liu.github.io/>  
(+1) 732-429-0470

## PLACEMENT CO-CHAIRS

Don Davis

[drd28@columbia.edu](mailto:drd28@columbia.edu)

Suresh Naidu

[sn2430@columbia.edu](mailto:sn2430@columbia.edu)

## PLACEMENT ADMINISTRATOR

Amy Devine

[aed2152@columbia.edu](mailto:aed2152@columbia.edu), (+1) 212-854-6881

## RESEARCH INTERESTS

Macroeconomics, Innovation, Firm Dynamics, Household Finance

## EDUCATION

Ph.D. in Economics, Columbia University	2016 – 2022 (Expected)
M.A. in Economics, Columbia University	2015 – 2016
Ph.D. in Cell and Developmental Biology, Rutgers University	2009 – 2015
B.S. in Pharmaceutical Science, Peking University	2005 – 2009

## REFERENCES

**Matthieu Gomez**

Assistant Professor

Columbia University

[\(+1\) 212-854-1677](tel:+12128541677)[mg3901@columbia.edu](mailto:mg3901@columbia.edu)**Martin Uribe**

Professor

Columbia University

[\(+1\) 212-851-4008](tel:+12128514008)[mu2166@columbia.edu](mailto:mu2166@columbia.edu)**Harrison Hong**John R. Eckel, Jr. Professor  
of Financial Economics

Columbia University

[\(+1\) 212-851-9435](tel:+12128519435)[hh2679@columbia.edu](mailto:hh2679@columbia.edu)

## JOB MARKET PAPER

### **Firm Dynamics and Innovation: Evidence from Decomposing Top Sales Shares**

What do changes in top sales shares signal about changes in firm dynamics? I use an accounting decomposition to identify two sources of top sales share growth: (i) incumbent top firms grow bigger; (ii) new top firms replace old top firms. Over the 1950-2019 period, incumbent top firms contribute about four times as much as new top firms to the growth of sales share accrued to the top 0.01% firms in the US economy. I then build an analytical framework to estimate a firm dynamics process in which firms grow in response to an own innovation shock and shrink at the impact of a creative destruction shock using the empirical decomposition terms of top share growth. I find that own innovation is the major force that drives top sales share growth. The decline in the top sales shares in the 1980s is associated with a higher aggregate productivity growth, while the rise in the top sales shares since the late 1990s implies a slightly lower productivity growth.

## OTHER WORKING PAPERS

### **Employment during the COVID-19 Pandemic: Collapse and Early Recovery** with **Tam Mai**, **[Paper]**

*Abstract:* We use monthly Current Population Survey data to document employment changes during the COVID-19 pandemic at the occupation, industry, and metropolitan statistical area (MSA) levels. Over March-April 2020, jobs losses are larger for occupations with higher physical proximity or lower work-from-home feasibility, especially for lower-paying occupations. Non-essential industries also see greater declines in employment. Such occupational and industrial susceptibility to COVID-19 contributes to the variation in employment changes across MSAs: Employment shrinks more for MSAs with larger pre-crisis fractions of workers employed in occupations with higher infection risk. Over April-June 2020, occupations and industries that are hit harder recoup more jobs, but the recovery is only partial. Moreover, the gains are concentrated in lower-paying occupations and a few industries. Taken together, these abrupt changes in employment following the COVID-19 outbreak are unprecedented and potentially have long-term implications for occupational inequality and regional disparity.

## Income Inequality and Mortgage Credit Allocation [Paper]

*Abstract:* This paper studies how income inequality at the Metropolitan Statistical Area (MSA) level affect mortgage credit allocation along the income distribution of households *within* MSAs. I find that MSA-level income inequality has heterogeneous effect on household-level mortgage debt accumulation. Two measures of inequality, the ratio of 95th-to-80th percentile (p95/p80) and the ratio of 80th-to-50th percentile (p80/p50) of household income, exhibit significant impact. With respect to credit approval along the income distribution, high p95/p80 inequality works more in favor of low-income households while high p80/p50 inequality benefits high-income households more.

### PUBLICATIONS (IN BIOMEDICAL SCIENCE, FROM PREVIOUS PHD STUDY)

1. Shi, A., **Liu, O.**, Koenig, S., Banerjee, R., Chen, C. C. H., Eimer, S., Grant, B. D. (2012). RAB-10-GTPase-mediated regulation of endosomal phosphatidylinositol-4, 5-bisphosphate. *Proceedings of the National Academy of Sciences*, 109(35), E2306-E2315. [Paper]
2. Sun, L., **Liu, O.**, Desai, J., Karbassi, F., Sylvain, M. A., Shi, A., Grant, B. D. (2012). CED-10/Rac1 regulates endocytic recycling through the RAB-5 GAP TBC-2. *PLoS genetics*, 8(7), e1002785. [Paper]
3. **Liu, O.**, Grant, B. D. (2015). Basolateral endocytic recycling requires RAB-10 and AMPH-1 mediated recruitment of RAB-5 GAP TBC-2 to endosomes. *PLoS genetics*, 11(9), e1005514. [Paper]
4. Wang, P., Liu, H., Wang, Y., **Liu, O.**, Zhang, J., Gleason, A., Grant, B. D. (2016). RAB-10 promotes EHBP-1 bridging of filamentous actin and tubular recycling endosomes. *PLoS genetics*, 12(6), e1006093. [Paper]
5. (In Chinese.) Li, X. T., Yuan, Y. L., Xia, Y. Y., Yu, B. Z., Zhang, T. J., **Liu, O.**, Zhan, S. Y. (2009). Genetic polymorphism of glutathione-S-transferase M1 and T1: a systematic review in Chinese population and a pilot study in smear-positive pulmonary tuberculosis cases of Jilin province. *Chinese Journal of Epidemiology*, 30(5):502-6.

## TEACHING EXPERIENCE

### TEACHING FELLOW

#### **Columbia University**

Finance and the Real Economy (Undergraduate) Spring 2019, Spring 2020

Instructor: Matthieu Gomez

Corporate Finance (Undergraduate) Fall 2018, Fall 2019, Fall 2020

Instructors: Olivier Darmouni and Ethan Namvar

Intermediate Macroeconomics (Undergraduate) Fall 2017, Spring 2018

Instructors: Irasema Alonso and Jón Steinsson

#### **Rutgers University**

Genetics (Undergraduate) Fall 2013, Spring 2014, Fall 2014, Spring 2015

### INSTRUCTOR

#### **Institute of Industrial Economics of Chinese Academy of Social Sciences**

Macroeconomics (1st-year PhD level, equiv. 1.5 credit minicourse) Summer 2018

### LAB MENTOR

#### **Rutgers University**

Mentored pre-med, master and PhD students during their lab rotations 2011-2015

## FELLOWSHIPS

Dissertation Fellowship, 2021-2022, Columbia University

Dean's Fellowship, 2016 – 2021, Columbia University

Anne B. and James B. Leathem Fellowship, Summer 2011 – 2014, Rutgers University

Excellence Fellowship, 2009 – 2010, Rutgers University

## PERSONAL INFORMATION

### LANGUAGES:

Chinese (native)      English (fluent)      French (intermediate)      German(basic)

- French: Diplôme de Français professionnel-Affaires B2 awarded by the Paris Chamber of Commerce
- German: Goethe-Zertifikat B1

PROGRAMMING: Python, Stata, Matlab

CITIZENSHIP: Chinese

DATE OF BIRTH: Oct. 24th, 1988

SPORT: player on Table Tennis women's team at Peking University (2005 – 2008) and at Columbia University (2016 – 2017)