# MIN FANG

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Department of Economics

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1015 Lausanne, Switzerland Status: Citizenship@China; OWP@Canada

I am on the 2021/2022 economics/finance job market for the first time as a University of Rochester graduate.

#### **EMPLOYMENT**

2021-Now	Postdoctoral Researcher, Department of Economics, HEC, University of Lausanne
2021-Now	Postdoctoral Researcher, Geneva Finance Research Institute, University of Geneva
2021-Now	Research Fellow, Geneva School of Economics and Management, University of Geneva

#### **EDUCATION**

2015-2021	Ph.D. in Economics, University of Rochester – Committee: Yan Bai and Narayana Kocherlakota (Co-advisors), Mark Bils, Ronni Pavan
2014-2015	M.S. in Quantitative Economics, Yeshiva University
2010-2014	B.A. in Economics, Zhejiang University

#### **INTERESTS**

Substantive: Macroeconomics, Finance, Urban Economics

Methodology: Computational Methods, Applied Econometrics

Research Topics: Monetary Policy, Financial Fractions, Firm Dynamics, Asset Pricing, Corporate Finance, Inequality, Spatial Misallocation, Market Power, Inflation

## WORKING PAPERS

- Lumpy Investment, Fluctuations in Volatility and Monetary Policy Oct 2021 | Job Market Paper
- 2. Migration, Housing Constraints, and Inequality: A Quantitative Analysis of China Feb 2021  $\mid$  with Zibin Huang
- 3. Regional Convergence or Just An Illusion? Place-based Land Policy and Spatial Misallocation Sep 2021 | with Libin Han, Zibin Huang, Ming Lu, Li Zhang
- 4. Debt Maturity Heterogeneity and Investment Responses to Monetary Policy Oct 2021 | with Minjie Deng | Resubmitted to European Economic Review
- 5. A Note on Nonconvex Adjustment Costs in Lumpy Investment Models: Mean versus Variance Jun 2021 | Resubmitted to Macroeconomic Dynamics

## Work in Progress

- 1. What Do Alibaba Data Tell Us about Quality Growth in China?, with Mark Bils, Zibin Huang, Tianchen Song
- 2. Conglomerate Market Power, with Xiaomei Sui, Tianchen Song
- 3. Financing Innovation with Innovation, with Zhiyuan Chen, Minjie Deng
- 4. Sovereign Default Risk and Inequality, with Minjie Deng, Philipp Renner, Simon Scheidegger
- 5. Equilibrium Asset Pricing with Transaction Costs, with Luca Gaegauf, Simon Scheidegger, Fabio Trojani
- 6. (Where to) Set Up Development Zones? Place-based Development Policy and Spatial Misallocation, with Binkai Chen, Zibin Huang, Ming Lu, Christopher Timmins, Kuanhu Xiang

## RESEARCH PRESENTATIONS

SEMINARS AND CONFERENCES (\*SELECTED TALKS BY COAUTHOR)

2021: AEA/ASSA (Chicago), University of Geneva (GFRI/Finance Brownbag), University of Rochester, UEA Europe Meeting (Copenhagen), Paris School of Economics (T3M Seminar Series), ES NA Summer Meeting (UQAM), Barcelona GSE Summer Forum, CES NA Conference, ES Asian Meeting (Malaysia), ES China Meeting (Shanghai), CCER Summer Institute, EEA Congress (Copenhagen), ES European Summer Meetings (Copenhagen), China Economics Summer Institute (CUHK), University of Lausanne (HEC/Economics Brownbag), CEC-NTU Joint Workshop, Nanjing University, Asian and Australasian Society of Labour Economics, ES European Winter Meeting (Barcelona), \*Fudan University, \*Peking University, \*Zhejiang University, \*Sun Yat-sen University, \*China Finance 40 Forum, \*Jinan-SMU-ABFER Conference on Urban and Regional Economics, \*University of International Business and Economics, \*Tongji University, \*UEA North American Meeting

2020: Junior Migration Webinar, CES NA Conference (Boston), ES World Congress (Milan), EEA Congress (Rotterdam), Young Economist Symposium (Upenn), PhD Economics Virtual Seminar, UEA Annual Meeting (Berkeley), Boston College, Seminars in Economic Geography, University of Rochester, ES European Winter Meeting (Nottingham), International Conference on The Chinese Economy: Past, Present and Future (Beijing)

2019: EGSC (Wash U), Wallis Institute (U Rochester)

#### Discussions

2021: Send Them Back? The Real Estate Consequences of Repatriations, by Gustavo Cortes and Vinicios Sant'Anna, at the UEA Europe Meetings (Copenhagen)

2021: College Location and Migration: Evidence from China's Higher Education Expansion, by Shu Cai, Xiaozhou Ding, and Rui Du, at the ASSA Annual Meetings (Chicago)

2020: Entrepreneurship, Financial Frictions, and the Market for Firms, by Rafael Guntin and Federico Kochen, at the Young Economist Symposium (UPenn)

## Honors, Fellowships, Awards, and Grants

2020-2021	Dean's Post-Field Research Dissertation Fellowship, University of Rochester
2019	River Campus Library Dataset Grant, University of Rochester
2019	Conference Travel Grant, University of Rochester
2019-2020	Alibaba <i>Huoshui</i> Scholar, Alibaba Group
2017-2018	W. Allen Wallis Institute Fellowship (researcher in residence), University of Rochester
2017	PEPR Grant, W. Allen Wallis Institute, University of Rochester
2016-2017	Summer Research Grant (×2), University of Rochester
2015-2020	Graduate Fellowship and Tuition Scholarship (17-18 exempt), University of Rochester
2014-2015	Graduate Fellowship, Yeshiva University

## TEACHING EXPERIENCE

DEPARTMENT OF ECONOMICS, UNIVERSITY OF ROCHESTER | INSTRUCTOR, TEACHING ASSISTANT, AND LAB INSTRUCTOR

2019 Summer Principles of Economics (Undergraduate) as Instructor

2019 Spring Macroeconomics Core (PhD) by Prof. Yena Park

2018-2020 Applied Econometrics (Advanced Undergraduate) by Prof. Bin Chen

Intermediate Macroeconomics (Undergraduate) by Prof. Mark Bils 2018 Fall

Economics of Globalization (Undergraduate) by Prof. Yan Bai 2017 Fall

SIMON BUSINESS SCHOOL, UNIVERSITY OF ROCHESTER | TEACHING ASSISTANT AND LAB INSTRUCTOR

Corporate Finance (BA, MBA, MSF) by Prof. Michael Gofman 2018-2020

Game Theory for Managers (MBA, EMBA) by Prof. Heikki Rantakari 2020 Spring

2019 Fall Managerial Economics (MBA, EMBA) by Prof. Heikki Rantakari

Economics & Marketing Strategy (BA, MSBA) by Prof. Paul Nelson 2019-2020

2019 Summer Programming for Analytics (MSBA) by Prof. Yufeng Huang

ECONOMICS DEPARTMENT, YESHIVA UNIVERSITY | TEACHING ASSISTANT AND MENTOR

2015 Spring Intermediate Microeconomics (Undergraduate) by Prof. Ran Shao

2014 Fall Intermediate Microeconomics (Undergraduate) by Prof. Alessandro Citanna

### Professional Activity

Seminar Organizer: Graduate Student Chinese Economy Workshop (GSCE 2020)

Referee for Economics Letters

#### **OTHERS**

Languages: Chinese (native), English (fluent), French (learning)

Computer Skills: Julia, Python, Stata, R, MATLAB, TensorFlow, Linux, LATEX

#### REFERENCES

#### Professor Yan Bai (Co-Advisor)

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#### **Professor Mark Bils**

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#### Professor Narayana Kocherlakota (Co-advisor)

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#### Professor Ronni Pavan

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# **Abstracts for Working Papers**

# Lumpy Investment, Fluctuations in Volatility and Monetary Policy Job Market Paper

I argue that monetary policy is less effective at stimulating investment during periods of elevated volatility in firm-level productivity. Empirically, I document that high volatility weakens investment responses to monetary stimulus. I then develop a heterogeneous firm New Keynesian model with lumpy investment to interpret these findings. In the model, non-convex capital adjustment costs create a sizable extensive margin of investment which is more sensitive to changes in both the interest rate and volatility than the intensive margin. When volatility is high, firms tend to stay inactive at the extensive margin, so monetary stimulus motivates less investment at the extensive margin. I find that the quantitative implications of the model are primarily shaped by the specifications of the capital adjustment costs. Unlike much of the prior literature, I use the dynamic moments of investment to identify this key model element. Based on this parameterization, high volatility reduces the effectiveness of monetary stimulus for investment by 30%. This reduction is about half of what I find in the data. Therefore, the effect of monetary policy depends on both the lumpy nature of firm-level investment and fluctuations in volatility.

# Migration, Housing Constraints, and Inequality: A Quantitative Analysis of China

Joint with Zibin Huang

We investigate the role of migration and housing constraints in determining income inequality within and across Chinese cities. Combining microdata and a spatial equilibrium model, we quantify the impact of the massive spatial reallocation of workers and the rapid growth of housing costs on the national income distribution. We first show several stylized facts detailing the strong positive correlation between migration flows, housing costs, and imputed income inequality among Chinese cities. We then build a spatial equilibrium model featuring workers with heterogeneous skills, housing constraints, and heterogeneous returns from housing ownership to explain these facts. Our quantitative results indicate that reductions in migration costs and the divergent growth in productivity across cities and skills result in the observed massive migration to developed areas. Combined with tight land supply policies in big cities, the expansion of the housing demand causes the rapid growth of housing costs and increases the inequality between local housing owners and migrants. The counterfactual analysis shows that a migration-based land supply reform with regional transfers or a US-level property tax both lower within-city income inequality, by 34% and 21%, respectively. Meanwhile, both reforms lower national income inequality by 20%. However, only the land supply reform encourages more workers to migrate to higher productivity cities.

# Regional Convergence or Just An Illusion? Place-based Land Policy and Spatial Misallocation

Joint with Libin Han, Zibin Huang, Ming Lu, Li Zhang

We study how place-based land allocation policy can create spatial misallocation. Combining microdata and a spatial equilibrium model, we investigate a major policy change of distributing more land to underdeveloped inland regions in China. First, by a method combining RD and DID, we show causal evidence that this inland-favoring policy increased land prices and decreased firm-level TFP in more developed eastern regions relative to inland regions. Second, we build a spatial equilibrium model featuring worker mobility and floor space constraints on housing and production. The inland-favoring policy is neither fair nor efficient. Counterfactuals reveal that national TFP and urban output would have been 7.3% and 2.4% higher in 2010 if the policy had not been implemented. Moreover, wage and income of workers from underdeveloped regions would have increased by 1% to 2%. The inland-favoring policy seems to reduce regional output gaps, however, it actually hurts workers from underdeveloped regions by hindering their migration to developed regions with high wages while causing aggregate TFP and output losses. We then show that instead of the inland-favoring land policy, a direct regional transfer can increase the income of people from underdeveloped regions without causing substantial efficiency loss.

# **Debt Maturity Heterogeneity and Investment Responses to Monetary Policy**

Joint with Minjie Deng

# Resubmitted to European Economic Review

We first document that debt maturity significantly affects the responses of firm-level investment to conventional monetary policy shocks: firms who hold more long-term debt are less responsive to monetary shocks. The magnitude of responses due to debt maturity heterogeneity is comparable to the well-documented responses due to debt level heterogeneity. Evidence from credit ratings and borrowing responses indicates that the higher future default risk embedded in long-term debt plays an essential role. We then develop a heterogeneous firm model with investment, long-term and short-term debt, and default risk to quantitatively interpret these facts. Conditional on the level of debt, firms with more long-term debt are more likely to default on their external debt and consequently face a higher marginal cost of external finance. As a result, these firms are less responsive in terms of investment to expansionary monetary shocks. The effect of monetary policy on aggregate investment, therefore, depends on the distribution of debt maturity.

# A Note on Nonconvex Adjustment Costs in Lumpy Investment Models: Mean versus Variance

Resubmitted to Macroeconomic Dynamics

This paper revisits the canonical assumption of nonconvex capital adjustment costs in lumpy investment models as in Khan and Thomas (2008), which are assumed to follow a uniform distribution from zero to an upper bound, without distinguishing between the mean and the variance of the distribution. Unlike the usual claim that the upper bound stands for the size (represented by the mean) of a nonconvex cost, I show that in order to generate an empirically consistent interest elasticity of aggregate investment, both a sizable mean and a sizable variance are necessary. The mean governs the importance of the extensive margin in aggregate investment dynamics, while the variance governs how sensitive the extensive margin is to changes in the real interest rate. As a result, both the mean and the variance are quantitatively important for aggregate investment dynamics.

# Abstracts for Selected Work-in-Progress

## What Do Alibaba Data Tell Us about Quality Growth in China?

Joint with Mark Bils, Zibin Huang, Tianchen Song

In this paper, we aim to understand how much does the Consumer Price Index (CPI) inflation for consumer durables reflect quality growth and inflation. This well-known question lies at the core of evaluating inflation and quality growth over time due to measurement frictions at the micro-level. In this project, we try to account for quality growth in measuring inflation. As we know, households can substitute for low-quality goods with high-quality ones. If we do not account for quality changes when calculating the inflation, it can lead to an overestimation of the "pure" price increase. The problem is even more severe in developing countries with fast economic growth such as China. In this study, we collaborate with Alibaba Group and use detailed sales and price data for different goods in different regions. We have measure quality growth and how much it contributes to the mobile phone category's overall price growth. In the current stage, we are working on collecting real-time data of broader categories on Alibaba Platform and trying to quantify the quality growth for China's whole retailing market.

## **Financing Innovation with Innovation**

Joint with Minjie Deng, Zhiyuan Chen

We study how firms could alleviate financial frictions through financing innovation using their innovation capital as collateral. We document that firms increasingly finance innovation with their stock of innovation, measured as patents. Drawing on patent collateral data from the US and China, we find that both the number of pledged patents and the share of patents being used as collateral have been rising steadily in the US and China. However, US patent holders employ patents as collateral at a greater scale and intensity than Chinese patent owners. We show that this difference is probably not due to the liquidity of patent assets, but due to the laggard inspection technology for evaluating patent collaterals for investors. We then construct a heterogeneous firm model featuring idiosyncratic risk, innovation capital, and collateral constraints. In the model, firms can borrow against innovation capital after paying fixed evaluation costs. We parameterize the model to both the US and China and find that the fixed evaluation cost is decreasing over time, but is still much higher in China than in the US. Counterfactual analysis shows that the gains in innovation investment and welfare from reducing frictions in China to the US level are substantial.