

## Xiangyu Shi

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**Citizenship:** Chinese, F1 visa

**Fields of Concentration:**

Primary Fields: Applied microeconomics, Development economics, International trade  
Secondary Fields: Political economy, Environmental economics, Industrial organization

**Desired Teaching:**

Development economics, International trade, Microeconomics, Macroeconomics,  
(Applied) econometrics

**Comprehensive Examinations Completed:**

2021 (Oral): Development economics, International trade  
2020 (Written): Microeconomics, macroeconomics

**Dissertation Title:** *Four Essays on Social and Economic Networks and Firm Dynamics Across Space: The Case of the Chinese and U.S. Economies*

**Committee:**

Professor Mushfiq Mobarak (Chair)  
Professor Costas Arkolakis (Co-Chair)  
Professor Giovanni Maggi  
Professor Gerard Padro

**Degrees:**

Ph.D., Economics, Yale University, 2024 (expected)  
M.Phil., Economics, Yale University, 2022  
M.A., Economics, Yale University, 2021  
M.A., Economics, Peking University, 2017  
B.A., Economics, Peking University, 2014  
B.S., Chemistry, Peking University, 2014

**Fellowships, Honors and Awards:**

University fellowship, Yale University  
Dissertation fellowship, Yale University

EGC Robert E. Evenson Travel Grant Award, Yale University, 2023

**Teaching Experience:**

Fall 2021, Teaching Assistant to Prof. Michael Boozer, Microeconomics (Master's), Yale IDE

Spring 2022, Teaching Assistant to Prof. Michael Boozer, Development econometrics (Master's), Yale IDE

Fall 2022, Teaching Assistant to Prof. Donald Andrews, Econometrics I (PhD), Yale

Spring 2023, Teaching Assistant to Prof. Mira Frick, Intermediate microeconomic (undergrad), Yale college

Summer 2024, Teaching Assistant to Prof. Zvika Neeman, Game Theory (undergrad), Yale college

Fall 2024, Teaching Assistant to Prof. Guillermo Noguera, Introduction to Data Analysis and Econometrics (undergrad), Yale college

**Publications:**

Race to safety: Political competition, neighborhood effects, and coal mine deaths in China. (with Tianyang Xi) *Journal of Development Economics* (2018)

“Moving Umbrella”: Bureaucratic transfers and the comovement of interregional investments in China. (with Tianyang Xi, Xiaobo Zhang, and Yifan Zhang) *Journal of Development Economics* (2021)

Relative performance evaluation in organizations with information networks. *Economic Theory Bulletin* (2023)

Does national leaders' work experience matter for economic growth? *Economics Letters* (2024)

Helping behavior in networked organizations. *European Economic Review* (2024)

Anti-corruption campaign and economic growth in Chinese cities: The dichotomous mechanism of intra-factional competition. *European Journal of Political Economy* (2024)

**Working Papers:**

The allocative and welfare effects of disrupting supply chains by government interventions (Job Market Paper)

The macroeconomic and spatial distributive effects of political connections

Misallocation in production networks across space: The role of regulations and firm lobbying in the US

Social networks and peer effects of corruption: Theory and evidence from China

Carbon emissions regulation, input-output networks, and firm dynamics: The case of a low-carbon-zone pilot in China (with Chang Wang). *Revision requested, Economic Journal*

**Work in Progress (Preliminary Drafts Available Upon Request):**

Reevaluating environmental regulations in China and the US: Firm dynamics, heterogeneity, and market structure

Dyadic treatment effects: Theory and empirical applications (with Lihua Lei and Ming Li)

**Seminar and Conference Presentations:** 2021 Asian Econometric Society Summer Meeting, 2022 Young Economist Symposium, 2022 European Econometric Society Winter Meeting, 2022 Urban Economic Association European Meeting, 2022 Urban Economic Association North American Meeting, 2023 Asian Econometric Society Summer Meeting (Beijing), 2023 Asian Econometric Society Summer Meeting (Singapore), Stanford SCCEI, Hong Kong University, CUHK, Peking University, Fudan University, Xiamen University, Renmin University

**Referee Service:**

*American Economic Review: Insights, China Economic Review, Economic Modelling, Journal of Law, Economics, and Organization, Governance, Energy Economics, Applied Economics, Environmental Research Letters, Journal of Economic Behavior and Organization, Scandinavian Journal of Economics, Small Business Economics, Journal of Population Economics*

**Languages:**

Mandarin (native), English (fluent), French (beginner), Spanish (beginner)

**References:**

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## Abstracts

### **The allocative and welfare effects of disrupting supply chains by government interventions [Job Market Paper]**

The past COVID-19 pandemic demonstrates that the well-functioning and resilience of supply chains matter for economic efficiency and welfare. However, little is known regarding the role of the government and governmental interventions in fostering or disrupting supply chains. In this paper, I examine the allocative and welfare effects of disrupting supply chains by intentional government interventions, using a nationwide informal practice by local governments, namely intranational Local Content Requirement (LCR) in China, as a case in point. The LCR is a specific form of local protectionism, which disrupts supply chains by requesting local firms to buy the outputs of other local firms as the inputs.

To begin with, I build a multi-sector spatial general equilibrium model to theoretically examine the allocative and welfare effects of LCR. Firms post costly advertisements to search and match with others firm (buyer or supplier) in a different sector-location pair, and the probability of successfully establishing supply chains is determined by the matching technology. Local governments implement LCR by simultaneously levying a sector-specific tax on firm-to-firm trade across provinces. I focus on the pure-strategy Nash equilibrium of these strategic interactions. The model predicts the existence of a mismatch between buyers and suppliers and between firm entries and locations, and, provides a framework for quantitative analysis.

Next, I conduct a set of reduced-form empirical analyses by estimating the border effect on firms' location choices, whose estimating equation is derived from the structural equation of the model. Under LCR, firms are no longer indifferent regarding their location choices closely adjacent to provincial borders, and this gives rise to border effects on firm entry. To measure the firm entry and the density of buyers and suppliers in the empirical analysis, I use the data set of the universe of firm registration in China and regional input-output tables. The border effect only exists for provincial borders, not city or county borders within a province. This is consistent with the fact that LCR is implemented at the provincial level. For causal identification, I control for a full set of interactive three-way fixed effects and control variables, including language barriers and infrastructures, to rule out the case that the estimated border effects are driven by confounding factors. I also exploit a Bartik instrumental variable approach and obtain robust results. Next, I associate the estimated border effects with a measure of LCR: the number of LCR-related contractual disputes. I find that the estimated border effects are indeed larger when LCR is more intensely implemented. In the following step, I empirically show that under LCR, firms have to be matched with low-productivity buyers/suppliers within the same province, and have to be located in provinces with more buyers or sellers, but not better resource endowments and infrastructures, suggesting that LCR creates a mismatch between buyers and suppliers across space, and between firm entries and locations. Furthermore, I empirically show that LCR may boost the locality's own economic outcomes including growth and investment, but exerts negative externalities for geographical neighbors. The positive effects on the locality's own outcomes are more salient for sectors aligned with its comparative advantage.

After calibrating and estimating the model, I conduct a series of counterfactual experiments, and the results indicate that eradicating LCR improves welfare by 7.745%. I also decompose, quantitatively, the welfare effects into the previous two sources of mismatch, and their contributions are similar.

### **The macroeconomic and spatial distributive effects of political connections**

Government officials' informal connections with market entities play an important role in development. However, the macro-level implications of the connections are rarely discussed in the literature. I examine their macroeconomic and spatial distributional effects by documenting that the leaders attract more corporate capital investments from their hometowns than other places by 15%. Further evidence indicates that leaders reduce entry barriers and improve firm-location matching efficiency for investors from hometowns with smaller information asymmetry of firms' quality. The effects of hometown connections are driven by promotion incentives and are beneficial to local development. A dynamic spatial general equilibrium model and associated quantitative exercise suggest that hometown connections have distributional effects on economic activities and spatial growth.

### **Misallocation in production networks across space: The role of regulations and firm lobbying in the US**

I examine how regulations and firm lobbying shape the structure of US production networks and their implications for misallocation in production networks across space. Shift-share instrumental variable and difference-in-differences regressions establish that lobbying increases the number of buyers and suppliers, and such effects are more pronounced for larger firms, distant buyer-supplier relationships, and when regulations are more stringent and pervasive. A model of spatial production networks develops a sufficient statistic approach to measure the level of misallocation. Quantitative analysis indicates that lobbying reduces misallocation due to regulations by 22% and explains 3.2% of the gain of aggregate productivity during 1999-2020. Models without production networks or space deliver quantitatively and even qualitatively different results.

### **Social networks and peer effects of corruption: Theory and evidence from China**

I provide the first theoretical model and reduced-form and structural empirical analysis of peer effects of corruption using observational data from China. Using a novel instrumental variable approach that exploits random termination of politicians' careers (unexpected deaths and dismissals), I find that hometown and college ties with peers who have been investigated for corruption are associated with significant reductions in investigation probability. Evidence suggests that when anti-corruption efforts are high, being connected to a corrupt official makes one distance himself from him and less willing to engage in corruption to avoid being implicated. I structurally estimate a networked game-theoretic model, and the estimates also indicate that such negative spillover of investigations is dominating. I discuss the implications on network-based anti-corruption strategies and organizational designs.