

## Education

Ph.D., Applied Economics and Management, Cornell University	ITHACA, NY, 2022 ( <i>expected</i> )
Committee Members: Shanjun Li ( <i>chair</i> ), Panle Jia Barwick, Ivan Rudik	
M.Sc., Applied Economics and Management, Cornell University	ITHACA, NY, 2017
B.Econ. with Distinction, Energy Economics, Renmin University of China	BEIJING, CHINA, 2015
B.A., English Language and Literature, Renmin University of China	BEIJING, CHINA, 2015

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## Research and Teaching Interests

Environmental Economics, Urban Economics

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## Research

### *Job Market Paper*

“The Role of Environmental Amenities in the Urban Economy: Evidence From a Spatial General Equilibrium Approach”

Environmental amenities could play an important role in residential location decisions, which in turn affect the concentration of consumption and production activities. In practice, the role of environmental amenities may be suppressed by the lack of information on the level of amenities or consumer awareness on their benefit, leading to suboptimal decisions and potential welfare loss. I develop and estimate a spatial general equilibrium model to examine how environmental amenities affect the spatial distribution of urban economic activities and the welfare consequences. The equilibrium model characterizes household location and consumption decisions as well as production decisions while incorporating agglomeration and dispersion forces. The empirical analysis leverages a natural experiment of pollution monitoring and information disclosure program and recovers key underlying parameters using fine-scale travel data on commuting and consumption trips and environmental amenities. The analysis shows that job access, residential amenities, and consumption access account for 49%, 30% and 21% of overall attractiveness of a residential location, respectively. Counterfactual simulations suggest a 8.4% welfare gain if households were to fully incorporate environmental amenities into their decisions, compared to the scenario of not incorporating environmental amenities. The welfare difference is driven by changes in residential and workplace locations as well as consumption and production decisions.

### *Working Papers*

“The Morbidity Cost of Air Pollution: Evidence from Consumer Spending in China,” with Panle Jia Barwick, Shanjun Li, and Nahim Zahur, NBER Working Paper 24688, 2018. *under review*.

Using the universe of credit- and debit-card transactions in China during 2013-2015, this paper provides the first nationwide analysis of the healthcare cost of air pollution, as measured by fine particulate matter (PM<sub>2.5</sub>). We leverage spatial spillovers of PM<sub>2.5</sub> from long-range transport for exogenous variation in local pollution and employ a flexible distributed lag model to capture semi-parametrically the dynamic response of pollution exposure. Our analysis shows a 10  $\mu\text{g}/\text{m}^3$  decrease in PM<sub>2.5</sub> would reduce annual healthcare spending by more than \$9.2 billion, about 1.5% of China’s annual healthcare expenditure.

“Improved Transportation Networks Facilitate Adaptation to Pollution and Temperature Extremes,” with Panle Jia Barwick, Dave Donaldson, Shanjun Li, and Yatang Lin. *under review*.

Based on high-resolution transaction records from the world’s largest payment network, this research shows how China’s rapid expansion of high-speed railways and air-travel networks (HSR/air) has facilitated the use of intercity travel as an effective means of adaptation to extreme pollution and temperature episodes. On average, HSR/air connection would reduce travelers’ exposure to both extreme pollution and temperature by 16% when home cities are experiencing pollution and temperature extremes.

### *Work-in-Progress:*

“Quantifying the Impact of COVID-19 on Production Through Air Pollution,” with Zhengyuan Wu, and Shanjun Li.

“Traffic Congestion and Consumer Spending,” with Nahim Zahur.

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## Teaching Experience

### Teaching Assistant

<a href="#">Econometrics</a> , AEM 7100 (doctorate level), Prof. Shanjun Li	<i>Spring 2020, 2021</i>
<a href="#">Investments</a> , AEM 4670 (undergraduate), Prof. Sumudu Watugala	<i>Fall 2019, 2020</i>
CICER Summer Camp	
<a href="#">Market Simulation</a>	<i>Summer 2019, 2020</i>
Marketing, Prof. Jura Liaukonyte	<i>Summer 2020</i>
Behavioral Economics, Prof. Sarah Jacobson,	<i>Summer 2020</i>
Outstanding Graduate Teaching Assistant, Dyson School of Applied Economics and Management	<i>2020-2021</i>

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## Research Experience

### Research Assistant

Prof. Shanjun Li	ITHACA, 2016, 2018, 2021
<a href="#">Cornell Institute for China Economic Research (CICER)</a>	ITHACA, SHANGHAI & BEIJING, 2016
<a href="#">Cornell Institute for Social and Economic Research (CISER)</a>	ITHACA, 2016
Prof. Ping Qin	BEIJING, 2014, 2015

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## Fellowships, Grants, and Honors

Summer Graduate Research Assistantship, Cornell University	<i>2018-2021</i>
Graduate Fellowship, Cornell University	<i>2017-2018</i>
Scholarship for Master's Study, China Scholarship Council	<i>2015-2017</i>
Scholarship for Academic Excellence (Undergraduate), Renmin University of China	<i>2012-2014</i>

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## Referee Services

Journal of Environmental Economics and Management, Journal of Economic Behavior and Organization, China Economic Review, Bulletin of Economic Research

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## Selected Press Coverage

“How Smog Affects Spending in China,” [The Economist](#), June 2018.  
“The Impact of Air Pollution on Healthcare Spending in China,” etc., with Panle Jia Barwick, Shanjun Li, and Nahim Zahur, in [VoxDev](#) (Apr 2019), [VoxEU](#) (Sept 2018), [VoxChina](#) (Aug 2017).

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## Other Experience

Seminar Committee, Graduate Student Assembly (GSA) of AEM, Cornell University	ITHACA, 2018, 2019
Level II Referee, Chinese Football Association	BEIJING, 2012-2015

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## Software Skills

Programming: STATA, MATLAB, ArcGIS, Python, R, SAS, SPSS, ORACLE, MS SQL  
Language: Mandarin Chinese (native), English (fluent)

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## References

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