

# Ding Ma, 马丁

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## EDUCATION

National School of Development, Peking University 2021.9-2026.7 (expected)  
Ph.D., Economics, Advisor: Prof. Min Wang  
Charles H. Dyson School of Applied Economics and Management 2024.9.1-2025.8.31  
Cornell University  
Postgraduate Fellow, Advisor: Dean Jinhua Zhao  
College of Environmental Sciences and Engineering, Peking University 2017-2021  
B.S., Environmental Science  
National School of Development, Peking University 2018-2021  
B.A., Economics

## RESEARCH INTEREST

Environmental Economics (environmental policy; climate change; water pollution);  
Health Economics (environmental health; nutrition).

## PUBLICATION

- [1] “Hot and Cold Choices: The Role of Extreme Temperatures in Shaping Industrial Geographical Distribution,” **Ding Ma**, Min Wang, Shuo Li and Xiumei Yu, **Accepted** at *Journal of Environmental Economics and Management*.
- [2] Ding Ma and Shuo Li. “Trends in China’s surface water quality and control policy solutions.” *China Population, Resources and Environment*, 2023,33(05): 27-39.  
马丁, 李硕. 中国地表水水质变化趋势及治理政策应对 [J]. 中国人口·资源与环境, 2023,33(05): 27-39.
- [3] Ding Ma. “An Analysis of Ethiopia’s Foreign Exchange Control.” In *Conflict and Development: Studies on Ethiopian Politics, Economy, and Society*. Beijing: Xinhua Publishing House, 2025: Chapter 6.  
马丁. 埃塞俄比亚外汇管制问题分析. 冲突与发展: 埃塞俄比亚政治、经济与社会研究 [M]. 北京: 新华出版社, 2025: 第六章.

## RESEARCH

- [1] “Hiding Behind the Trees: Pollution Control and Urban Greening in China,” **Ding Ma**, Zhiren Hu and Xintong Li, **Revision requested** at *Journal of Environmental Economics and Management*.
- [2] “Extreme Temperatures Promote High-Fat Diets,” Xi Chen, Shuo Li, **Ding Ma**, and Jintao Xu (Alphabetical order), NBER WP No. w34609, **Under Review** at *Journal of Public Economics*.
- [3] “Environmental Health Benefits of Public Infrastructure: Evidence from Tap Water and Water Pollution in China,” Shuo Li, **Ding Ma**, and Jintao Xu (Alphabetical order), Working Paper.
- [4] “Temperature-Dissolved Oxygen Relationship Challenges Water Quality Management Under Climate Change,” Shuo Li, **Ding Ma**, and Jintao Xu (Alphabetical order), Working Paper.

## TEACHING ASSISTANT

Environmental Economics (Peking University, Undergraduate course)	Spring 2023 and 2024
Urban Economics in Developing Countries (Peking University, Ph.D. course in English)	Fall 2023
Intermediate Macroeconomics (Peking University, Undergraduate core course)	Fall 2022

## SELECTED CONFERENCES & PRESENTATIONS

Doctoral Forum on Quantitative Economics (2025)	Xiamen University
The 25th China Economic Annual Conference (2025)	SJTU
The 10th China Urban Governance Innovation and Discipline Development Symposium (2025)	RUC
The 8th HEOA Doctoral Forum on Health Policy and Economics (2025)	Sichuan University
The 5th PKU - FDU Graduate Forum on Health Economics (2025)	Peking University
The 8th China Health Economics Forum (2025)	Xiamen University
Chinese Economists Society (CES) Annual Conference (2024)	Zhejiang University
The 8th Annual Meeting of the China Labor Economists Forum (2024)	SUFE
The 8th CCER Summer Institute (2024)	Peking University
The 21st Seminar of Chinese Women Economists (2024)	Wuhan University

## AWARDS & FELLOWSHIPS

The Best Poster Award, The 8th HEOA Doctoral Forum on Health Policy and Economics	2025
The Second Award, The 8th HEOA Doctoral Forum on Health Policy and Economics	2025
Excellent Paper Award, The 7th China Health Economic Development Forum	2024
Excellent Paper Award, The 8th Annual Meeting of the China Labor Economists Forum	2024
Excellent Paper Award, The 6th China Health Economic Development Forum	2023
Award for Academic Excellence, Peking University	2022, 2023
Excellent Teaching Assistant Award, Peking University	2022 Fall
National Scholarship	2020
Merit Student, Peking University	2018, 2020

## PROFESSIONAL SERVICE

**Referee services for:** Management Science, Journal of Environmental Economics and Management, China Economic Review, China Economic Quarterly International, China Economic Journal, 经济学 (季刊)

**Data and code reviewer:** 经济学 (季刊)

## PERSONAL SKILLS

**Languages:** Chinese Mandarin (native), English (fluent)

**Programming:** STATA, R, ArcGIS,  $\text{\LaTeX}$

## REFERENCES

### **Min Wang**

Associate Professor, National School of Development, Peking University

Deputy Director, China Center for Energy and Development, Peking University

Co-Editor, China Economic Review

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### **Jintao Xu**

Professor, National School of Development, Peking University

Director, China Center for Energy and Development, Peking University

Boya Distinguished Professor, Peking University

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### **Xianling Long**

Assistant Professor, National School of Development, Peking University

Boya Young Scholar, Peking University

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## RESEARCH ABSTRACT

### **Hot and Cold Choices: The Role of Extreme Temperatures in Shaping Industrial Geographical Distribution**

**Abstract:** This paper examines how extreme temperatures shape firm entry decisions and industrial geography. Leveraging comprehensive firm registration data from China, we identify an inverted U-shaped relationship between temperature and firm entry, while firm exit remains largely unresponsive. Mechanism analyses reveal that temperature shocks disproportionately reduce entry in labor-intensive industries within tradable sectors. This effect operates through temperature-induced labor productivity losses, whereas entry in non-tradable sectors, such as services, declines indirectly

through reduced local demand from downstream industrial clients. Firms also adapt by shifting equity investments toward new firm establishments in regions with milder climates. Climate projections indicate that continued warming will substantially reshape industrial geography. These findings highlight firm location choice as a critical channel of climate adaptation and underscore the role of temperature risk in driving long-term spatial economic change.

### **Hiding Behind the Trees: Pollution Control and Urban Greening in China**

**Abstract:** China's rapid surge in urban greening over the past decade presents a puzzling deviation from the global pattern of insufficient green space in developing economies. In this study, we document three facts about urban greening in China over the past two decades. First, urban greening remained stable between 2001 and 2013 but expanded rapidly thereafter, coinciding with the timing of China's air pollution control efforts. Second, compared with other cities, those suffering from heavier pollution experienced faster urban greening growth. Third, urban greening has been disproportionately concentrated around air quality monitoring stations. Taken together, these findings suggest that local governments strategically used urban greening to respond to the political pressure arising from air pollution control, which improved the supply of urban green space while distorting air quality monitoring simultaneously.

### **Extreme Temperatures Promote High-Fat Diets**

**Abstract:** Extreme temperatures threaten agriculture and exacerbate global food insecurity, yet their direct impact on dietary choices remains poorly understood. We provide novel evidence of how short-term exposures to extreme temperatures affect macronutrient intake in China. We show that both hot and cold weather elevate high-fat diet risks. In particular, hot weather reduces carbohydrate and protein consumption but not fat intake, while cold weather increases all nutrient intake, particularly fats. Temperature-induced dietary changes are shaped primarily by physiological responses to thermal stress, whereas physical activities demonstrate little effect. Technologies that improve indoor thermal comfort (via fans, air conditioners, and heating systems) substantially mitigate high-fat diet risks. Socioeconomic disparities are evident, with rural and poor individuals more likely to adopt high-fat diets under hot or cold weather. Projections indicate that more extreme temperatures due to climate change may increase the prevalence of high-fat diets nationally, while substantial regional heterogeneity emerges, with declines in northeast China and increases in southern China. These results highlight a crucial but overlooked pathway linking climate change to dietary health inequality.

### **Environmental Health Benefits of Public Infrastructure: Evidence from Tap Water and Water Pollution in China**

**Abstract:** Based on data from the China Health and Nutrition Survey and Surface Water Quality Weekly Report, we estimate the effects of water pollution, tap water, and their interaction on individual health status. Using the panel IV regression method, we find that water pollution significantly increases the morbidity rate, while ignoring the different levels of pollution exposure caused by the use of tap water may lead to a serious underestimate of the impact of water pollution. Regression results show that tap water can offset about 60% of the negative health effects of water pollution, and the non-offsetting part may come from pollutants that cannot be eliminated by treatment processes

in waterworks. Finally, comparing the disease cost and the total health cost caused by water pollution, we find that nearly 2/3 of the health cost can be attributed to the disease cost. As one of the most important infrastructure investments, the adoption of tap water greatly eliminates the negative impact of water pollution on the health of Chinese residents. This has important general implications for low-income countries with a low proportion of tap water supply worldwide.

### **Temperature-Dissolved Oxygen Relationship Challenges Water Quality Management Under Climate Change**

**Abstract:** Climate change is reshaping water quality management by altering the dynamics of coupled human – natural systems in ways that undermine progress toward sustainable development. Using national-scale monitoring data from China, we show that dissolved oxygen (DO)-a key indicator for both aquatic ecosystem health and drinking water safety-is systematically distorted by rising temperatures. While organic and nutrient pollution indicators such as COD<sub>Mn</sub> and NH<sub>3</sub>-N improve in summer due to hydrologic flushing, DO concentrations paradoxically decline, with econometric analysis confirming that these reductions reflect physical solubility effects rather than increased pollution. This climate-driven distortion leads to widespread misclassification of water quality, affecting nearly 28% of summer assessments and disproportionately impacting warmer southern regions. Such distortions risk diverting resources away from actual pollution pressures, weakening resilience in water governance. Therefore, we recommend selecting metrics that match each specific water use purpose. Drinking water standards should rely on DO saturation, whereas DO concentration should be retained for criteria that protect aquatic biodiversity. Although focused on China, the findings are globally relevant, highlighting how climate change threatens progress on Sustainable Development Goals (SDGs) and underscoring the urgency of sustainable, climate-informed management strategies.

*Last updated: 2026-01-21*