

CURRICULUM VITA

CAO Jing

Ph.D., Associate Professor

Department of Economics

School of Economics and Management, Tsinghua University

caojing@sem.tsinghua.edu.cn

Education:

2001-2007	Ph.D. in Public Policy	Harvard University
1998-2001	Master in Environmental Sciences	Peking University
1994-1998	Bachelor in Economics and Geology	Peking University

Academic Experience:

2010-	Associate Professor, School of Economics and Management, Tsinghua University, Beijing, China
2007-2010	Assistant Professor, School of Economics and Management, Tsinghua University, Beijing, China

Other Positions:

2023-2024	Harvard China Project, Visiting Professor
2019-2024	Environmental Defense Fund (EDF) Advisor Council Member
2018-	Vice Director, Institute of Low-Carbon Economy Research, Tsinghua University
2014 -	Vice Director, Hang Lung Center for Real Estate, Tsinghua University
2013 -	Vice Director, Energy Environment Economy (3E) Research Institute, Tsinghua University
2013 -	Non-resident Fellow, Center for Global Development
2007 -	Harvard China Project affiliated Researcher
2002 -	Pre-doctoral Fellow, Harvard Environmental Economics Program

Research Projects/Grants

2023-2027	PI of sub-project, Grant on Assessment of Decarbonization Technology, the China-EU Program of the Ministry of Science and Technology
2023-2025	PI of sub-project, Analyzing Multidimensional Regional Heterogeneity Impact of Carbon Neutrality Energy Transition, CNSF
2021-2024	PI , Grant on Carbon Tax Reform, Ministry of Finance
2021-2022	PI , Grant on natural gas market reform, NDRC
2019-2024	PI , Grant of Green Economy and Sustainable Development, Tsinghua University
2015-2017	PI , Chinese Excellent Youth NSF funding on “Environmental Economics and Policy”
2014-2015	Co-PI , Tsinghua-Berkeley Fund (Co-PI with Prof. Peter Berck at UC Berkeley)
2013-2015	Main Author for “New Climate Economy Project” (China Report)
2012-2015	PI , Chinese NSF funding on “China’s Energy Saving and Pollution Control

- Policies: Macro-level CGE model and Micro-level empirical studies”
- 2012-2013 **Co-PI** with Mun S. Ho, Environmental Economics Unit (EEU) in University of Gothenberg and Environmental Economics Program in China (EEPC) Project on China’s Ex-Ante and Ex-post Policies on Enterprise’ Energy Saving and Emission Reduction
- 2010-2012 Tsinghua University Independent Research Grant: Economic, Environmental and Social Impact Analysis of Climate Change Policies in China (PI: Bai Chong-En)
- 2009-2010 **PI**, Environmental Economics Unit (EEU) in University of Gothenberg and Environmental Economics Program in China (EEPC) Project on China’s gasoline tax reform
- 2009-2011 **PI**, Chinese NSF funding on an Integrated GTAP-CGE modeling on Environmental Taxes (NSF # 70803026)
- 2009-2011 **PI**, Chinese Department of Education, Social Science Grant on Green TFP Measurement in China’s Manufacturing Sectors
- 2008-2010 **PI**, EEPSEA Research Grant, “Decomposition of Changes in China’s Energy Intensity – The Origins and Implications for Long-Run Carbon Emission Projections and Climate Policies”

Publications

Journal Papers (Peer reviewed English Journal)

Jing Cao, Yazhen Gong, Qingfeng Liu, Coordinating Climate Mitigation and Pollution Control Policies: Insights from China’s SO₂ Reduction Mandates, *Energy Economics*, forthcoming

Jing Cao, Xiao Liu, Rong Ma, and Ang Sun, Anti-social Response to the “Coal to Gas” Regulation: An Unintended Consequence of a Residential Energy Policy, *Management Science*, Feb. 11 2025 (online)

Jing Cao, Soo Keong Yong, Management Practices and Energy Efficiency: Evidence from Firms in China, *Journal of Comparative Economics*, 2024, 52(4), 848-870

Jing Cao, Mun S. Ho, Rong Ma, and Yu Zhang, Transition from Plan to Market: Imperfect Regulations in the Electricity Sector of China, *Journal of Comparative Economics*, 2024(52),2, 509-533

Soo Keong Yong, Ulrich J. Wagner, Peiyao Shen, Laure de Preuxss, Mirabelle Muûls, Ralf Martin, and Jing Cao, Management Practices and Climate Policy in China, *Journal of the Association of Environmental and Resources Economists*, 2024(11), 5, 1065-1100

Jing Cao, Rong Ma, Mitigating Agricultural Fires with Carrot or Stick? Evidence from China, *Journal of Development Economics*, 2023 (165), 103173

Jing Cao, Mun Ho and Qingfeng Liu (2023) Analyzing multi-greenhouse gas mitigation of China using a general equilibrium model, *Environmental Research Letters*, 18, 025001.

<https://doi.org/10.1088/1748-9326/acb0e7>

Fan, Maoyong, Jing Cao, Zhang, Kuangyuan, Lei, Zhen (2022), Command vs. Market in China's Energy Intensity Reduction Strategies: Firm-level Evidence, *PLoS ONE*, 17(2): e0263325

Yang, Jinzhao, Zhao, Yu, Jing Cao, Nielsen, Chris (2021), Co-benefits of carbon and pollution control policies on air quality and health till 2030 in China, *Environment International*, 152: 106482

Jing Cao, Dai, Hancheng, Li, Shantong, Chaoyi Guo, Mun Ho, Wenjia Cai, Jianwu He, Hai Huang, Jifeng Li, Yu Liu, Haoqi Qian, Can Wang, Libo Wu, Xiliang Zhang (2021), The general equilibrium impacts of carbon tax policy in China: A multi-model comparison, *Energy Economics*, 99: 105284.

Zhou, Yalin, Jing Cao, Feng, Yujia (2021), Stock Market Reactions to Pollution Information Disclosure: New Evidence from the Pollution Blacklist Program in China, *Sustainability*, 13(4), 1-13

Jing Cao, Ho, Mun S., Ma, Rong, Teng, Fei (2021), When carbon emission trading meets a regulated industry: Evidence from the electricity sector of China, *Journal of Public Economics*, 200: 104470

Haoqi Qian, Shaodan Xu, Jing Cao, Feizhou Ren, Wendong Wei, Libo Wu (2021), Air pollution reduction and climate co-benefits in China's industries, *Nature Sustainability* 4, 417-425,

Minghao Qiu, Yangqin Weng, Jing Cao, Noelle E. Selin, and Valerie J. Karplus (2020), Improving Evaluation of Energy Policies with Multiple Goals: Comparing Ex Ante and Ex Post Approaches, *Environmental Science & Technology* 54, 15584-15593

Jing Cao, Mun S. Ho, Wenhao Hu and Dale Jorgenson (2020), Urban Household Consumption in China: Price, Income, and Demographic Effects, *Review of Development Economics*, 25: 810–833

Jing Cao, Mun S. Ho, and Rong Ma (2020), Analyzing Carbon Pricing Policies Using a General Equilibrium Model with Production Parameters Estimated Using Firm Data, *Energy Economics* 92, 104958.

Jing Cao, Mun S. Ho, Wenhao Hu and Dale Jorgenson (2020), Effective Labor Supply and Growth Outlook in China, *China Economic Review* 61: 101398

Jing Cao, Mun S. Ho, Wenhao Hu and Dale Jorgenson (2020), Estimating flexible consumption functions for urban and rural households in China. *China Economic Review* 61: 101453

Jing Cao, Mun Ho, Dale W. Jorgenson, Chris P. Nielsen (2019), China's Emissions Trading System and an ETS-carbon tax hybrid, *Energy Economics* 81, 741-753

Ge Zhu, Wenhao Hu, Yifan Liu, Jing Cao, Zongwei Ma, Yu Deng, Clive E. Sabel, Haikun Wang (2019), Health burdens of ambient PM2.5 pollution across Chinese cities during 2006–2015, *Journal of Environmental Management* 243: 250-256

Wenhao Hu, Mun S. Ho, Jing Cao (2019), Energy Consumption of Urban Households in China, *China Economic Review* 58: 101343

Jingxu Wang, Jintai Lin, Kuishuang Feng, Peng Liu, Mingxi Du, Ruijing Ni, Lulu Chen, Hao Kong, Hongjian Weng, Mengyao Liu, Giovanni Baiocchi, Yu Zhao, Zhifu Mi, Jing Cao, Klaus Hubacek (2019), Environmental Taxation and Regional Inequality in China, *Science Bulletin* 64(22): 1691-1699

Jing Cao, Mun Ho, Yating Li, Richard Newell, William Pizer (2019), Chinese Residential Electricity Consumption Estimation and Forecast Using Micro-data, *Resource and Energy Economics* 56: 6-27

Xiaolin Guo, Mun Ho, Liangzhi You, Jing Cao, Yu Fang, Taotao Tu, Yang Hong (2018) Industrial Water Pollution Discharge Taxes in China: A Multi-sector Dynamic Analysis, *Water*, 10(12): 1742

Govinda Timilsina, Jing Cao, and Mun Ho (2018) Carbon Tax for Achieving China's NDC: Simulations of Some Design Features using a CGE Model, *Climate Change Economics*, 9(2): 1-17

Nan Zhong, Jing Cao, Yuzhu Wang (2017), Traffic Congestion, Ambient Air Pollution and Health – Evidence from Driving Restrictions in Beijing, *Journal of the Association of Environmental and Resource Economists*, 4(3): 821-856

Hidemichi Fujii, Jing Cao, Shunsuke Managi (2016), Firm-level environmentally sensitive productivity and innovation in China, *Applied Energy*, 184: 915-925.

Jing Cao, Wenhao Hu (2016), A Microsimulation of Property Tax Policy in China, *Journal of Housing Economics*, 33: 128-142.

Jing Cao, Larry Qiu, Mohan Zhou (2016), Who investment More in Advanced Abatement Technology: Theory and Evidence, *Canadian Journal of Economics*, 49(2): 637-662.

Jing Cao, Mun, Ho, Huifang Liang (2016), Household Energy Demand in Urban China: Accounting for Regional Prices and Rapid Income Change, *the Energy Journal* 37(SI 1): 87-110.

Wenlong He, Chong Liu, Jiangyong Lu, Jing Cao, (2015), Impacts of ISO14001 on firm performance: evidence from China, *China Economic Review*, 32: 43-56.

Hidemichi Fujii, Jing Cao, Shunsuke Managi (2015) Decomposition of Productivity Considering Multi-Environmental Pollutants in Chinese Industrial Sector, *Review of Development Economics* 19(1): 75-84.

Felix Groba, and Jing Cao, (2015), Chinese Renewable Energy Technology Exports: The Role of Policy, Innovation and Markets, *Environmental and Resource Economics* 60(2): 243-283.

Jing Cao, Valerie Karplus, (2014) Firm-level determinants of energy and carbon intensity in China, *Energy Policy*, 75: 167-178.

Siqi Zheng, Jing Cao, Matthew Kahn, Cong Sun, (2014) The Real Estate Implications from Cross-Boundary Air Pollution Externalities: Evidence from 85 Chinese Cities, *Journal of Real Estate Finance and Economics* 48: 398-414.

Zhaolin Hu, Jing Cao, L. Jeff Hong (2012) Robust Simulation of Global Warming Policies Using the DICE Model, *Management Science* 58(12): 2190-2206.

Jing Cao (2010), Book Review: Chinese Economic Development and the Environment, *Journal of Environmental Policy & Planning* 12(3): 335-337.

Jing Cao (2010), Reconciling Economic Growth and Carbon Mitigation: Challenges and Policy Options in China, *Asian Economic Policy Review* 5(1): 110-129.

Jing Cao, Richard Garbaccio and Mun Ho (2009), China's 11th Five-Year Plan and the Environment: Reducing SO2 Emissions, *Review of Environmental Economics and Policy* 3(2): 231-250.

Jing Cao, Mun Ho and Dale Jorgenson (2009), The Local and Global Benefits of Green Tax Policies in China, *Review of Environmental Economic and Policy* 3(2): 189-208.

Jing Cao, Mun Ho, Dale Jorgenson, Ruoan Ren, Linlin Sun, Ximing Yue (2009) Industrial and Aggregate Measures of Productivity Growth in China, 1982-2000, *Review of Income and Wealth* 55(1): 485-513.

Jing Cao (2007) Measuring Green Productivity Growth for China's Manufacture Sectors, *Asian Economic Journal*, 21 (4): 423-449.

Working Papers (Peer reviewed English Journal)

Jing Cao, Ming Huang, Chen Xi, Peng Zhang, "Feeling the same heat? Urban-rural inequalities in adapting to extreme temperatures via electricity consumption," *Journal of Development Economics* (Revise and Resubmit).

Jing Cao, Naixing Huang, Ting Ji, Yi Lu, "International Climate Finance: A Quantitative Economic Evaluation," *Review of Economic Studies* (under review)

Jing Cao, Yu Lin, Rong Ma, Zhufeng Xu, Distributional Impacts of Green Energy Expansion: Evidence from Residential Solar Power Projects of China (accepted AERE conference paper, 2025)

Journal Papers (Peer reviewed Chinese Journal)

Wang K., Wang C., Li L., Wang T., Wu G., Jing Cao, Interactions of natural and anthropogenic parameters over the land: progress of the National Key R&D Program of China for Global Change and Response, *Transactions of Atmospheric Sciences*, 2024(1),47, pp.1-22.ss (in Chinese)

- Jing Cao, Chen Xi, Chengming Ji (2023) "Development of the Digital Economy and Migrant Workers' Willingness to Stay in Cities—An Analysis from the Perspective of Human Capital Heterogeneity," *China Economic Issues*, Issue 03, pp. 77-91. (in Chinese)
- Jing Cao, Zhixin Li, Wenhao Hu (2020) "The Impact of Housing Prices on Urban Household Consumption—Evidence from Multi-Period Micro Panel Data," *Journal of Economics*, 7(2): 113-138. (in Chinese)
- Siwei Guo, Mingang Zhang, Jing Cao (2019) "Can Education Really Affect Health?—Evidence from the Implementation of China's 1986 Compulsory Education Law," *Journal of Economics*, 6(3): 148-187. (in Chinese)
- Jing Cao, Wenhao Hu (2018) "Estimation and Prediction of Rural Household Consumption Functions in China," *Journal of Economics*, Vol. 5, pp. 117-146. (in Chinese)
- Jing Cao, Wenhao Hu (2018) "Estimation of Gasoline Demand Elasticity in Chinese Urban Households," *Journal of Tsinghua University (Natural Science Edition)*, 58(5): 489-493. (in Chinese)
- Jing Cao, Yalin Zhou (2018) "Research Progress on the Economic Impact of Artificial Intelligence," *Economic Perspective*, pp. 103-115. (in Chinese)
- Jinke Li, Jing Cao (2017) "Empirical Study on the Impact of Centralized Heating on Air Pollution in China," *Journal of Economics*, Vol. 4, Issue 4, pp. 138-150. (in Chinese)
- Jing Cao, Yalin Zhou (2017) "Design and Development Prospects of China's Carbon Emission Trading Market," *Reform*, Issue 11, pp. 126-135. (in Chinese)
- Huifang Liang, Jing Cao (2015) "Whether Improving Energy Efficiency Will Lead to Energy Saving – A Review of Energy Rebound Effects," *Exploration and Free Views*, 12, 64-69. (in Chinese)
- Jing Cao, Xin Wang, Xiaohan Zhong (2014) "Has the Traffic Restriction Policy Improved Beijing's Air Quality?" *Quarterly Journal of Economics*, 13(3): 280-315. (in Chinese)
- Xue Qiao, Jing Cao, Liyang Tang (2011) "Dynamic Inefficiency, Environmental Taxation, and Climate Change—An Analysis Using an Overlapping Generations Model." *Journal of Economics*, 5, 193-212. (in Chinese)
- Jing Cao, Yang Xie. "Elasticity of Per Capita Diesel Demand in China from 1999 to 2007." *Journal of Tsinghua University (Natural Science Edition)*, Issue 2, 2011, 51(2): 241-244. (in Chinese)
- Jing Cao, Hao Zhan (2011) "The Impact of Environmental Regulation on Total Factor Productivity in China's Manufacturing Industry—A Test of the Porter Hypothesis." *Environmental Economics and Policy*, 2, 8-23. (in Chinese)

Siqi Zheng, Yi Huo, Jing Cao (2011) "Estimating the Elasticity of Urban Residential Carbon Emissions and Analyzing Intercity Differences in China." *Exploration of Economic Issues*, Issue 9. (in Chinese)

Jing Cao, Ming Su (2010) "Exploring Fairness and Effectiveness in Addressing Climate Change." *Financial Development Review*, 1, 98-106. (in Chinese)

Gang Fan, Ming Su, Jing Cao (2010) "An Economic Analysis of Consumption and Carbon Emission Responsibility," *Economic Research Journal*, 1 4-14. (in Chinese)

Cuicui Chen (2010) "Carbon Tariff: Current Scholarly Debate and Literature Review," *Economic Perspective*, 1, 79-83. (in Chinese)

Jing Cao (2009) "Pursuing a low-carbon development path: A CGE model of China's carbon tax policy and Related Policy Design," *Journal of Financial Research*, 12, 19-29. (in Chinese)

Xue Qiao, Jing Cao. and Liyang Tang, (2011), Dynamic Inefficiencies, Environmental Tax and Climate Change – An Over-Lapping General Equilibrium Model Analysis, *China Journal of Economics*, May 2011, pp 193-212. (in Chinese)

Book Chapters:

Jing Cao, Mun Ho, Wenhao Hu (2019), "Analyzing Carbon Price Policies using a General Equilibrium Model with Household Energy Demand Functions (Chapter 20)", in Barbara M. Fraumeni (eds), *Measuring Economic Growth and Productivity, Foundations, KLEMS Production Functions, and Extensions*, Academic Press, pp. 455-480

Jing Cao (2015), Environmental Taxes – Practices, (Chapter 6) in Shunsuke Managi (eds.) *The Routledge Handbook of Environmental Economics in Asia*, pp. 122-134.

Jing Cao, Mun Ho, Dale Jorgenson, "The Economics of Environmental Policies in China," Chapter 9, in Nielsen and Ho (eds), *Clearer Skies Over China: Reconciling Air Quality, Climate and Economic Goals*, MIT Press, 2013

Chris P. Nielsen, Mun S. Ho, Yu Zhao, Yuxuan Wang, Yu Lei, and Jing Cao, Summary: Carbon Taxes for 2013-2020, Chapter 3 in Chris Nielsen and Mun Ho (eds), *Clearer Skies Over China*, MIT Press, 2013

Jing Cao, Mun Ho, Dale Jorgenson, An Integrated Assessment of the Economic Costs and Environmental Benefits of Pollution and Carbon Control, Chapter 10 in Aoki et.al (eds) *China's Economic Development: Past, Present and Future*, Volume IV of IEA proceedings, Edward Elgar, 2013, pp 231-256.

Kris Bachus and Jing Cao (2011), "Lagging behind or catching up? A comparison of Chinese and European environmental related taxes", chapter 3 in Kreiser et al. (2011), *Environmental Taxation in China and Asia-Pacific: Achieving Environmental Sustainability through Fiscal Policy*

Cao, J. (2011), "Exploring Carbon Tax in China," in Fan et.al (ed.) *The Economics of Climate Change in*

China —Towards a Low Carbon Economy, Earthscan Publishing.

Cao, J. (2012), “Is Fuel Taxation Progressive or Regressive in China?” in Sterner (ed.) *Fuel Taxes and the Poor: The Distributional Effects of Gasoline Taxation and Their Implications for Climate Policy*, *RFF Press*, pp. 128-140. *RFF Press*.

Cao, J. (2010) “Reconcile Human Development and Climate Protection –A Multi-Stage Hybrid Climate Policy Architecture,” in Joseph E. Aldy and Robert N. Stavins (ed.) *Post-Kyoto International Climate Policy: Implementing Architectures for Agreement: Addressing Global Climate Change in the Post-Kyoto World*, Cambridge Press, pp 563-598.

Cao Jing, Weng Yangqin (2020) “A New Perspective on the 'Pollution Haven' Hypothesis: International Trade and Corporate Environmental Pollution,” in *Research on Key Issues in Green and Low-Carbon Transition*, edited by Qian Xiaojun and Zhou Jian, Chapter 6, Dongbei University of Finance and Economics Press, pp. 224-255. (in Chinese)

Cao Jing, Mun S. Ho, Dale Jorgenson, Liu Qingfeng (2018) “Analysis and Prospects of China’s Carbon Pricing Policy,” in *Green Low-Carbon Development and Transition in the New Era*, edited by Qian Xiaojun, Zhou Jian, and Wu Jinxi, Chapter 12, Tsinghua University Press, pp. 364-387. (in Chinese)

Cao Jing, Mun S. Ho, Guo Xiaolin (2017) “Addressing Climate Change and Implementing the Paris Agreement: Analysis and Simulation of China’s Carbon Pricing and Renewable Energy Policies,” in *Research on China's Green and Low-Carbon Transition Under the New Economic Normal*, edited by Qian Xiaojun, Zhou Jian, and Wu Jinxi, Chapter 9, Tsinghua University Press, pp. 316-345. (in Chinese)

Honors and Awards:

2023 Elsevier Highly Cited Scholar

2010 McKinsey China Economics Award

2009 Tsinghua University (School of Economics and Management) Teaching Award

2008 Tsinghua University (School of Economics and Management) Teaching Award

2006-2007 Harvard University Graduate Society Dissertation Completion Fellowship

2006-2007 M.T. Geoffrey Yeh Fund, Harvard University

2005-2006 Harvard University Graduate Society Term -Time Graduate Student Merit Fellowship

2005-2006 Gregory Chow Best Paper Award

2005-2006 Chinese Government Award for Outstanding Self-financed Students Abroad

2004-2005 Best Paper Award for East Asian Economic Association Conference

2003, Summer Internship in Center for International Development at Harvard University

2002, Roy Family Internship, J.F. Kennedy School of Government, Harvard University

2001-2003 Pre-Doctoral Fellowship, J.F. Kennedy School of Government, Harvard University

