

PAN CHEN

Email: pan.chen@colorado.edu
Website: <https://panxchen.github.io>
Phone: +1 (303) 332-9580

University of Colorado-Boulder
Department of Economics
256 UCB
Boulder, CO 80309 USA

Education	University of Colorado-Boulder Ph.D. Economics, 2021 to 2026 (expected)
	University of Colorado-Boulder M.A. Economics, 2021 to 2023
	Huazhong University of Science & Technology, Wuhan, China M.A. Economics, 2015 to 2018
	Huazhong Agricultural University, Wuhan, China B.A. Economics (with distinction), 2011 to 2015
Fields	Primary: Environment, Development Secondary: Economic History, Technical Change, Political Economy
Job Market Paper	Powering the Future: The Long-Term Human Capital Effects of Rural Electrification <i>Abstract:</i> This paper examines the long-run human capital effects of a rural electrification program implemented in China in the late 1990s. The program simultaneously improved key factors of electricity delivery, making it a unique setting to study rural electrification at a time when delivery failures remain pervasive in many low- and middle-income countries and empirical evidence is scarce. I first develop a simple model of human capital investment in which electrification represents a productivity shock in agriculture. The model implies that the effect on children's long-run human capital is theoretically ambiguous. I then examine these implications empirically using a cohort difference-in-differences design, with treatment intensity measured by county-level electricity price reductions. I find that exposure to the program during middle childhood (ages 6 to 11) leads to large long-run gains in human capital. In contrast, exposure only after middle childhood yields negative and statistically insignificant effects. I also find evidence that improved agricultural productivity is an important mechanism, consistent with both the model and existing literature. My paper explains why the effects differ by age at exposure. China's experience in the late 1990s offers insights for rural electrification efforts in developing countries today.
Publication	Industrialization and Pollution: The Long-Term Impact of Early-Life Exposure on Human Capital Formation, January 2025, <i>Journal of Public Economics</i>
Working Paper	Deciding to Participate: The Impact of Air Pollution on Civic Engagement in China
Selected Works in Progress	Text to Data: A Machine Learning Approach to Historical Chinese Documents (with Wolfgang Keller, Carol Shiue, and Sen Yan) Environmental Regulation and Within-Firm Adjustments in Multi-Process Manufacturing (with Feitao Jiang and Yingjun Su)

Honors & Awards	Graduate School Travel Grant, University of Colorado-Boulder, 2025 Graduate School Summer Fellowship, University of Colorado-Boulder, 2025 Third Year Paper Prize, University of Colorado-Boulder, 2024 Graduate Award for Public Policy Research, University of Colorado-Boulder, 2023
Teaching	<p>Instructor of Record Intermediate Macroeconomic Theory, University of Colorado-Boulder, spring 2024</p> <p>Teaching Assistant Natural Resource Economics, University of Colorado-Boulder, fall 2025 Environmental Economics University of Colorado-Boulder, fall 2025 Principles of Microeconomics, University of Colorado-Boulder, fall 2021 to fall 2023, fall 2024 Principles of Macroeconomics, University of Colorado-Boulder, spring 2025</p>
Employment	WISDRI Engineering & Research Incorporation Limited, China, economic analyst – iron and steel industry, 2018 to 2021
Research	Research Assistant, reporting to Professor Carol Shiue, University of Colorado-Boulder, summer 2022 & 2024
Presentations	<p>ASSA/AEA Annual Meeting, Philadelphia, 2026</p> <p>Colorado State University, 2025</p> <p>20th Economics Graduate Student Conference, Washington University in Saint Louis, 2025</p> <p>Southeastern Workshop on Energy & Environmental Economics & Policy (SWEEEP), Georgia Institute of Technology, 2025</p> <p>Association of Environmental and Resource Economists (AERE) Summer Conference, Santa Ana Pueblo, 2025</p> <p>14th Annual Front Range Energy and Environmental Economics Camp, Boulder, 2025</p> <p>25th Annual CU Environmental and Resource Economics Workshop, Vail, 2024</p> <p>24th Annual CU Environmental and Resource Economics Workshop, Vail, 2023</p> <p>Chinese Economists Society (CES) Annual China Conference, Hefei, China, 2018</p> <p>National Graduate Students in Economics Annual Conference, Wuhan, China, 2018</p>
Referee Service	<i>Canadian Journal of Economics, Journal of Development Economics (x2), Journal of Environmental Economics and Management (x2)</i>
Skills & Languages	Software: Stata, MATLAB, Python, ArcGIS, Google Earth Engine Languages: English (fluent), Chinese (native)
Citizenship	Chinese

References**Advisor**

Professor Jonathan Hughes
Department of Economics
University of Colorado-Boulder
256 UCB
Boulder, CO 80309
Email: jonathan.e.hughes@colorado.edu

Committee member

Professor Daniel Kaffine
Department of Economics
University of Colorado-Boulder
256 UCB
Boulder, CO 80309
Email: daniel.kaffine@colorado.edu

Committee member

Professor Taylor Jaworski
Department of Economics
University of Colorado-Boulder
256 UCB
Boulder, CO 80309
Email: taylor.jaworski@colorado.edu

Committee member

Professor Tania Barham
Department of Economics
University of Colorado-Boulder
256 UCB
Boulder, CO 80309
Email: tania.barham@colorado.edu