Weizhao Sun

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Education

Ph.D. in Economics Advisor: Sergey Nigai Expected: May, 2025

M.A. in Economics 2021

M.A. in Economics 2019

B.A. in Economics 2017

University of Colorado-Boulder

University of Colorado-Boulder

Duke University

Michigan State University

Research Interests

Primary: International Economics; Regional Economics Secondary: Economic Geography; Political Economy; Urban Economics

Working Papers

Optimal Infrastructure Investment Under a Two-tier Government Structure in the Global Economy (Job Market Paper); Link to Draft

Abstract: This paper develops a quantitative spatial equilibrium model to study endogenous infrastructure under a two-tier government structure where a benevolent national government, followed by self-interested provincial governments, optimally solves the planners' problems by allocating highways and tunnels to maximize aggregated welfare within their jurisdictions. I estimate the trade-cost mitigating effect of highways and tunnels by introducing two novel instrumental variables and incorporating bilateral elevation. The model is calibrated to 309 prefectures across 23 Chinese provinces. Results show that, compared to complete centralization, a two-tier approach promotes equality, lowering inequality measures at the expense of lowering expected utility. In contrast, complete decentralization leads to a substantial decrease in expected utility and a significant increase in inequality.

The Earth Is Not Flat: Bilateral Elevation as a Component of Trade Costs Accepted, Review of International Economics; Link to Draft

Abstract: This paper quantifies the trade effects of effective bilateral elevation (EBE), representing the transportation cost incurred when trucks go uphill and downhill between countries. Introducing an instrumental variable for EBE, the paper reveals that a one-percent rise in EBE leads to a 0.046 percent reduction in trade. This impact varies across regions and industries, with landlocked countries experiencing effects more than ninefold. The impact is more pronounced in industries with higher weight-to-value ratios. Employing a multi-sector Armington model, the paper estimates that removing bilateral elevations could lead to an average 1 percent increase in real wages.

Teaching Experience

Instructor of Record	University of Colorado-Boulder
Course taught:	
Principles of Microeconomics(45-200 students)	FCQ: 5.27/6
Principles of Macroeconomics(100 students)	FCQ: 5.31/6

Awards and Honors

Graduate Part-Time Instructor(GPTI) Teaching Recognition Award University of Colorado-Boulder, The Graduate School

Spring 2023

Fall 2022

April 2023

Stanford Calderwood Student Teaching Award

University of Colorado-Boulder, Department of Economics

Conferences and Presentations

The Earth Is Not Flat: Bilateral Elevation as a Component of Trade Costs Midwest International Trade Conference. Knoxville, Tennessee

Skills

- Programming: MATLAB, Stata, ArcGIS, Python, R, Latex
- Languages: English (Proficient), Chinese (Native)

References

Sergey Nigai (Ph.D. Advisor)	Wolfgang Keller	Jeronimo Carballo
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