Kai Wu

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EDUCATION

The University of Texas at Austin, Ph.D. in Economics — Aug. 2021 – Present
Jinan University, M.A. in Economics — Sept. 2018 – Jun. 2021
Northwest University (China), B.A. in Economics — Sept. 2014 – Jun. 2018

RESEARCH FIELDS

Public Economics, Networks, Macroeconomics, Environmental Economics, Urban Economics

REFERENCES

Marika Cabral (Primary)
Department of Economics
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Nitya Pandalai-Nayar
Department of Economics
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Jackson Dorsey
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WORKING PAPERS

Beyond Targeted Firms: Supply Chain Spillovers of Environmental Regulation in China [Job Market Paper]

Abstract: This paper studies how regulatory shocks propagate through production networks and who bears the burden. I exploit a natural experiment—the 2017 Xiong'an pollution shutdown campaign in China, which imposed mandatory closures on polluting industrial operations across a newly designated development zone—combined with administrative VAT data covering the universe of firm-to-firm transactions. Targeted firms' purchases fell by 55% and sales by 53%. The shock propagated in both directions: upstream suppliers at mean exposure lost 11.8% of sales; downstream customers saw purchases drop by 9.5%. Effects extend to second-degree trade partners and persist for at least three years. Small firms bear the entire propagation loss while large firms are completely buffered. The mechanism is two-sided complementarity: for small firms, trading partners are gross complements on both the input and output sides, so that losing one partner forces contraction with all others; for large firms, partners are gross substitutes. A general equilibrium model of shock transmission in production networks with scale economies and size-varying elasticities formalizes these patterns, showing that ignoring supply chain spillovers leads to over-regulation and that network externalities create novel channels through which emissions taxes dominate quantity controls.

Crowding (with Yizhen Gu, Qu Tang, and Ben Zou)

Abstract: Crowding is a common disamenity that exists in many settings, but little is known about its mon-

etary cost. This paper estimates the willingness-to-pay (WTP) to avoid crowding in public transportation with a revealed preference framework. We leverage an off-peak pricing discontinuity in the Beijing Subway that generates exogenous temporal variation in price. Passengers traveling between a pair of stations choose the optimal departure time, trading off between the price, the expected level of crowding, and the deviation from the ideal time of travel. We develop a novel approach to allocate passengers to trains and calculate real-time crowding. To address the endogeneity in crowding, we construct an instrumental variable based on the number of overlapping trips that start from and end in different stations, and are thus driven by plausibly unrelated demand shocks. We estimate the marginal WTP to reduce in-train crowding by one passenger per square meter to be about 40% of the average fare for a typical 40-minute ride. With average crowding of 3.4 persons per square meter, a trip generates a crowding externality of roughly 140% of the fare. An optimal crowding tax to address the externality raises welfare but disproportionately harms low-income passengers; in contrast, a two-class configuration improves welfare for both income groups by soliciting self-selection.

Political Consolidation and Corporate Tax Burden

SELECTED WORK IN PROGRESS

Stock Market Turbulence and Production Networks (with Husang Kim and Rikuto Onishi)
Research question: Does non-fundamental stock price volatility propagate through production networks?

CONFERENCE AND SEMINAR PRESENTATIONS

(* indicates scheduled) UT Austin; ABFER Annual Conference*; SMU Trade Conference*; SEA Annual Meeting* (nominated student)	2026
Texas Applied Microeconomics Student Workshop	2025

TEACHING EXPERIENCE

Teaching Assistant, The University of Texas at Austin

Introduction to Microeconomics	2021, 2022, 2024, 2026
Urban Economics	2022
Business Strategy	2023
Industrial Organization	2023
Economics of Education	2025
Energy and Environmental Economics	2025

RESEARCH EXPERIENCE

Research Assistant for Prof. Yizhen Gu	2018–2021
Research Assistant for Prof. Marika Cabral	2023–2025

SKILLS

Software: Stata, Python, R, ArcGIS, QGIS, LaTeX
Languages: English (fluent), Chinese (native)