UNIVERSITY OF CALIFORNIA - BERKELEY
DEPARTMENT OF AGRICULTURAL AND RESOURCE ECONOMICS

SHUO YU

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Doctoral Studies

University of California, Berkeley
Ph.D., Agricultural and Resource Economics, Expected completion May 2025

PRIMARY FIELDS: Agricultural and Resource Policy
SECONDARY FIELDS: Environmental and Energy Economics, Applied Industrial Organization

Prior Education

Cornell University	M.S. Applied Economics and Management	2019
University of International Business and Economics	B.A. Economics & B.A. Accounting	2017

Grants, Fellowships, and Awards

2024	UC Berkeley Opportunity Lab Fellowship ($7,500), J-PAL K-CAI Full-scale Randomized Evaluations (Co-PI with Aprajit Mahajan and Sayantan Mitra, $225,000), Giannini Mini-Grant (with Jeffrey Perloff, $20,000), PEDL Climate Change Exploratory Research Grant (with Aprajit Mahajan and Sayantan Mitra, £35,480), Graduate Division Conference Travel Grant $\times 2$ ($1,800), AAEA PC52 Post Conference Workshop Travel Grant ($1,000)
2023	CEGA Development Economics Challenge Grant ($8,027), The Katherine S. and James K. Lau Graduate Fellowship in Climate Equity ($2,200), Bioversity International CGIAR (with Aprajit Mahajan and Sayantan Mitra, $50,452), Giannini Mini-Grant (with Francis Annan, $35,000)
2022	J-PAL ATAI Pilot Grant (Co-PI with Aprajit Mahajan and Sayantan Mitra, $74,830), ARE Graduate Student Travel Grant ($1,500), Giannini Mini-Grant (with Ellen Bruno, $30,000)
2021	J-PAL K-CAI Pilot Grant (Co-PI with Aprajit Mahajan and Sayantan Mitra, $74,991), Giannini Mini-Grant (with Jeffrey Perloff and Sara Johns, $30,000)
2020	Graduate Remote Instruction Innovation Fellowship ($2,000), ARE Summer Award ($4,000), Giannini Mini-Grant (with Jeffrey Perloff, $30,000)
2019	Graduate Division Power Top-Off Awards ($3,500)
Earlier	National Scholarship ($1,220), First-class Scholarship ($\times 4$) ($920), Honorable Mention in Mathematical Contest in Modeling, University Outstanding Student Leader Award, University Outstanding Project Award

Job Market Paper

"Payments for Ecosystem Services and Water Quality in the Midwest U.S." (JOB MARKET PAPER)
[Draft forthcoming]

Publication

Shuo Yu*, Nicola Falco, Nivedita Patel, Yuxin Wu, and Haruko Wainwright. **"Diverging climate response of corn yield and carbon use efficiency across the US"**, *Environmental Research Letters*, 18(6), p.064049.(Open Access Version)
* First and Corresponding Author

Working Papers

"Short-Term Impact of the Trade War on U.S. Agricultural Commodities Futures Prices" *[Draft upon request]*

Abstract: This study investigates the short-run effects of the U.S.-China trade war on U.S. agricultural futures prices, focusing on five primary commodities: soybeans, corn, wheat, rice, and oats. Initiated in early 2018 by President Trump, the trade war resulted in substantial tariffs imposed by both countries, severely impacting the U.S. agricultural sector. To mitigate farmers' losses, the U.S. government introduced $28 billion in trade aid packages for farmers. This paper utilizes daily futures price data for these grains from 2004 to 2020 and comprehensive supply and demand factors. Due to the non-stationarity of the data, first-difference regressions are employed to quantify the price effects of tariffs and government payments. The findings indicate that a 25% Chinese tariff on U.S. soybeans led to a significant decrease in soybean and wheat futures prices, highlighting the severe short-term impacts of trade barriers on agricultural markets. Additionally, the analysis reveals that the massive trade aid payments had mixed effects on futures prices, challenging the assumption that such payments would not further distort the market.

Research in Progress

"Designing Insurance under Climate Change" with Francis Annan and Sagar Saxena. *[Model development stage]*

"Sitting Solar on Farms" with Sara Johns. *[Analysis stage]*

"Optimal SWD Management in Michigan and North Carolina Blueberry: A Dynamic Structural Model with Unobserved Heterogeneity" with Miguel I. Gómez, Philip Fanning, Rufus Isaacs, Sergio Puerto Gonzalez, and C.-Y. Cynthia Lin Lawell. *[Model development stage]*

"Paying Smallholder Farmers to Increase Carbon Sequestration by Changing Agricultural Practices: Evidence from Odisha" with Aprajit Mahajan and Sayantan Mitra. *[piloting completed, full RCT to start in 2025]*

Abstract: This project incentivizes smallholder farmers in rural India to adopt agricultural practices that improve soil carbon sequestration. We carry out a full RCT that pays farmers as a function of measured improvements in soil organic content in a context with liquidity constraints. The RCT lays the groundwork for developing a larger-scale program that links small farmers to commercial firms providing carbon credits. The project will also explore the potential of satellite data to validate the adoption and impact of regenerative agricultural practices, which will be important for any scale-up.

"Harmonizing Soil Carbon Science and Policy to Meet Climate Goals" with Pranjal Dwivedi, Micah Elias, Allegra Mayer, Charlotte Kwong, Anna Abramova, Tyler Anthony, Tibisay Perez, Vrashabh Kapate, Sangcheol Moon, Jacqueline Gerson, and Whendee Silver. *[Writing stage]*

Abstract: This paper aims to bridge the gap between soil carbon (C) science and policy, providing a comprehensive overview of the current state of soil C sequestration, uncertainties in measurement and estimation, and emerging technologies in soil carbon measurement. It critically evaluates the current policy landscape, both public and private, and identifies key issues with existing approaches, such as the challenges of additionality, permanence, and leakage in soil C programs. The paper also explores innovative solutions, proposing a new regulatory framework that emphasizes a regional biogeographical approach to soil C accounting and management, and suggests ways to improve soil C sequestration strategies through regulatory and market-based approaches. The goal is to foster a more accurate, scalable, and equitable soil C management system that can effectively contribute to climate change mitigation.

Teaching

UC Berkeley	*Introductory Applied Econometrics,* Aprajit Mahajan	2023
UC Berkeley	*Microeconomic Theory with Application to Natural Resources,* Jeffrey Perloff	2021

Prior Employment

UC Berkeley, Graduate Student Researcher (Francis Annan)	2023 - 2024
UC Berkeley, Graduate Student Researcher (Aprajit Mahajan)	2023
UC Berkeley, Graduate Student Researcher (Ellen Bruno)	2022 - 2023
UC Berkeley, Graduate Student Researcher (Jeffrey M. Perloff)	2019 - 2022
Lawrence Berkeley National Laboratory, Graduate Student Researcher (Haruko Wainwright)	2020 - 2021
Cornell University, Graduate Research Assistant (Miguel I. Gómez)	2018 - 2019
Cornell University, Graduate Research Assistant (C.-Y. Cynthia Lin Lawell)	2018 - 2019
Cornell University, Graduate Research Assistant (David R. Just)	2017
University of International Business and Economics, Research Assistant (Wei Tian)	2015 - 2016

Talks	2024	2024 Agricultural and Applied Economics Association Annual Meeting, 2024 Northeastern Agricultural and Resource Economics Association Annual Meeting, Interdisciplinary PhD Workshop in Sustainable Development (Columbia University), Giannini Foundation of Agricultural and Resource Economics Student Conference (UC Berkeley)
	2023	Giannini Foundation of Agricultural and Resource Economics Student Conference (UC Davis)
	2020	AGU Fall Meeting (San Francisco)
Refereeing	*BioResources, Artificial Intelligence for the Earth Systems*	
Activities	2024 - 2025	Mentor: Energy and Environmental Economics Mentoring Program, Opportunity Lab and Energy Institute at Haas School of Business, UC Berkeley
	2023 - 2024	Co-Organizer: 14th and 15th Annual Giannini Foundation of Agricultural and Resource Economics Student Conference
	2023 - 2024	Mentor: Sponsored Projects for Undergraduate Research (SPUR)
	2023 - 2024	Mentor: IRLE Social Sciences Research Pathways (SSRP)
	2022 - 2023	ARE PhD Admissions Committee
Languages	Mandarin (native), English (fluent)	