UNIVERSITY OF CALIFORNIA - BERKELEY
DEPARTMENT OF AGRICULTURAL AND RESOURCE ECONOMICS

WEI GUO

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Doctoral Studies
University of California, Berkeley
PhD, Agricultural and Resource Economics, Expected completion May 2023

PRIMARY FIELDS: Environmental Economics, Urban Economics
SECONDARY FIELDS: Economic Geography, Macroeconomics

Professor Maximilian Auffhammer
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Placement Officers

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Prior Education

Peking University	M.A. Economics	2018
Peking University	B.Sc. Mathematics and B.A. Economics	2015

Teaching

UC Berkeley	ARE EEP 100, *Undergraduate Microeconomics,* Leo Simon	2019
Peking University	*Undergraduate Innovation Economics,* Zhen Lei	2017
Peking University	*MBA Managerial Economics,* Zhaofeng Xue	2017

Languages
English (fluent), Mandarin Chinese (native)

Grants, Fellowships, and Awards

2022	Giannini Foundation of Agricultural Economics Grant ($30,000 with Max Auffhammer)
2022	Fisher Center Research Grant ($15,000)
2021	Giannini Foundation of Agricultural Economics Grant ($30,000 with Max Auffhammer)
2019	UC Berkeley Graduate Division Travel Grant ($1,500)
Earlier	Peking University Academic First Prize Fellowship (Tuition + ¥15,000), Leo Koguan Scholarship (¥15,000), May Fourth Undergraduate Scholarship (¥2,000)

Prior Employment

UC Berkeley, Graduate Student Researcher (Prof. Max Auffhammer)	2019 - 2022
Resources for the Future, Research Intern (Fellow Penny Liao)	2022

Jon Market Paper

"The Sharing Economy as a Disaster Remedy: The Case of Airbnb" (JOB MARKET PAPER)
Environmental disasters increasingly displace people without much notice worldwide. The massive growth in sharing economy has unlocked a new source of short-term housing supply for the displaced people. In this paper, I quantify the welfare impacts of home sharing on the short-term displacement in the context of wildfire evacuations for one of the world's largest home-sharing markets - the Los Angeles area. I develop and estimate a structural model of the home-sharing market under informational asymmetry on customer type (refugee versus regular traveler), which highlights two welfare channels, namely the increased choice set of housing as well as the altruistic sharing by hosts. I find that the displacement loss amounts to at least 31% of the property damages by wildfire. Airbnb can reduce this welfare loss by 52%, with a quarter of mitigation contributed by supplier generosity. I show that altruistic sharing is mostly conducted by hosts who are more well-off as indicated by the value of demographics and home characteristics. I also estimate the spillover impacts of free riding by regular travelers. I recommend that a platform targeting on displaced people can improve the efficiency and equity of mitigation gains.

Research Papers

"Collusion in Emission: Evidence from Air Pollution Violation in China.", *Under Review*.
Serious noncompliance with environmental rules is widespread and causes serious damages. In this paper, I examine the environmental violations and the collusion between local authorities and polluting firms for one of the primary polluter countries, China. I exploit a quasi-experimental design based on a seasonal adjustment in the working hours of regulators, as well as an environmental audit in regulatory enforcement by the central government. Using high-frequency pollution measures from monitor stations, I develop an RD design to estimate the differential responses of air quality to this working schedule adjustment with and without the audit in enforcement. I find that without the audit, a 30-minute to 1-hour forward/backward shift in the close-of-business time for regulation staff is causally associated with 20% increase/decrease in the daily average ambient air pollution level. Decomposing the responses by hour, I find the effect is most significant during the off-working time while ignorant during the working time of regulators. I show that the air quality ceases to respond to the adjustment after the central government began auditing, which implies that local regulators collude with polluting firms on noncompliance without the audit.

"Sorting by Political Preference: Evidence from US House Market", *Under Review*.
Geographical political polarization has been increasingly pronounced yet the reason is underexplored. This paper empirically examines the connection between the preference over political party and the residential choice for US households. Using the panel variation in the political map between the presidential elections of 2012 and 2016, I implement a spatial DID design that compares the differential response of property values to the winning of Donald Trump in counties that flipped to the Republican party as opposed to their Democratic neighborhoods. Using geo-referenced data on the universe of house transactions nationwide, I find that the property values in flipped counties have declined by less relative to their Democratic counterparts after the 2016 election. Further discussions on mechanisms suggest that the political sorting is predominantly driven by the expectation of property tax, instead of the self-selection to cluster by partisan preference.

Research in Progress

"Quantifying the Visual Disamenity Value of Windmills" with Max Auffhammer and Leonie Wenz.
Development of wind power has grown rapidly across the US, particularly near populous and urbanized areas. This paper provides a national-level causal evaluation of the externality costs of wind power generation through its impacts on property value. We focus on the visibility impacts of wind turbine installation and the implied costs inferred from losses in visual landscape. We calculate the viewsheds for each windmill drawing on rather advanced geospatial tools from the Computer Science literature. Exploiting the universe of housing transactions nationwide and the geo-referenced records of wind turbine installations, We develop a spatial DID model to estimate the differential response of property value to the windmill installation across areas with and without wind turbine visibility. We find an economically significant impact of windmill visibility to the property values in visible areas nearby, which is not well distributed among all local residents. This highlights a misalignment between the people that benefit from enhanced power access and the people that bear the social burden of renewable energy production.

"Managed Retreat and Flood Recovery: Evidence from the Property Buyout and Acquisition Program" with Penny Liao and Qing Miao.
We assess one of the largest post-disaster buyout and acquisition program, NY Rising in the aftermath of Superstorm Sandy, for its economic and fiscal impacts on local communities. The analysis consists of four parts. We first evaluate the impacts of buyouts and acquisitions on nearby property values. Second, we examine local business performance, survivability, and creation. The third components focus on the demographics of new home buyers, as changes in neighborhood amenities might attract different demographic groups to these areas. Finally, we turn to local government revenues and spending to understand the overall fiscal implications of the program. The findings will contribute to our understanding of how climate adaptation policies might interact with property value capitalization, household sorting, agglomeration effects, and place-based policies, in generating their overall impacts on local communities.

"Economic Value of Shoreline Adaptation against Climate Change" with Jaecheol Lee.

Talks

2022	Resources for the Future, UC Berkeley ERE, UC Berkeley Haas School of Business
2019-2021	UC Berkeley ERE
2019	UC Berkeley ERE, EAERE (Manchester), AAEA (Atlanta)

Activities

2020	PhD Admission Committee, UC Berkeley Department of Agricultural and Resource Economics