

The Impacts of Conservation Auction Design on Auction Performance and Community Welfare: Evidence from Lab and Artefactual Experiments

Simanti Banerjee

University of Nebraska-Lincoln (UNL)

&

Marc Conte

Fordham University

Progress Report

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United States
Department of
Agriculture

National Institute
of Food and
Agriculture

Background

- The Conservation Reserve Program (CRP) has employed reverse auctions to cost effectively retire land out of agricultural uses and generate ecosystem services benefits
- Why auctions:
 - Regulator has information about benefits
 - Producers have information about costs
- This research: Design and test different conservation auction mechanisms in the lab and in the field (artefactual experiments) under multiple conditions
- Main objective: Identify conditions/features that promote cost-effective project selection given asymmetric information
- Our focus/treatments: Role of
 - Information about Environmental Benefits
 - Communication
 - Transaction Costs of Participation
 - Non-Economic Motivations

Key Questions

- Experiment 1: How does **information about the benefits** of different land use activities impact auction outcomes? (Lab)
- Experiment 2: What is the role of communication and information about land use benefits in ensuring cost effective selection of **spatially adjacent environmental projects**? (Lab + Field)
- Experiment 3: What is the role of participants' **non-economic motivations** (altruism, community identity) on bidding behavior and auction efficiency (Lab + Field)
- Experiment 4: How does **transaction costs of participation** & impact auction performance? (Lab)

Project Timeline

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Task	2016		2017		2018		2019	
	Spr	Fall	Spr	Fall	Spr	Fall	Spr	Fall
Develop z-Tree code								
Obtain IRB approvals (both institutions)								
Pilot test all designs (both institutions)								
Data collection (Experiments 1-2)								
Schedule sessions with stakeholders								
Conduct artefactual field experiments								
Software design (Experiments 3-4)								
Complete pilot testing (Experiments 3-4)								
Lab experiments (Experiments 3-4)								
Collate findings; prepare final artefactual field experiments (Experiment 4)								
Complete final set of artefactual field experiments (Experiment 4)								
Compile, synthesize and prepare research results for circulation through peer reviewed and non-peer reviewed outlets								
*Spr (Spring) corresponds to January – June; Fall corresponds to July – December.								

Project Progress: Tasks completed or ongoing

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- Experiment 1: Data collection recently completed at Fordham University
- Results are being analyzed and will be presented at CBEAR-MAAP Workshop (paper)
- Paper selected as part of Special Session on Agri-environmental Schemes at the American Economic Association (AEA) Meetings January 2018

- Experiment 2 (Lab): Data collection ongoing at UNL
- Results will be presented at CBEAR-MAAP Workshop (poster)

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- Experimental design for Experiment 3 & 4 complete (Lab)
- Experiments are being coded in Ztree (Fishbacher 2007)
- Banerjee is working on building relationships with Nebraska organizations (NRCS, FSA, Commodity Groups, UNL Extension) who will facilitate access to Nebraska producers to conduct field experiments
- Two graduate students (1 Phd & 1 MS) with interests in behavioral, experimental & environmental economics are involved in this project