Manpreet Singh

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RESEARCH INTERESTS

Market design, Energy Economics, Applied theory, Empirical IO

EDUCATION

Paris School of Economics and ENPC, Paris, France — Sep'20 - present
PhD, Economics
Dissertation Title: Essays in renewable capacity auctions
Thesis Committee: Laurent Lamy, Olivier Tercieux, Philippe Gagnepain

Queen Mary University, London, UK — Nov'24 - Dec'24
Visiting PhD (upcoming), School of Finance and Economics
Host: Emmanuel Guerre

Paris School of Economics and EHESS, Paris, France — Sep'18 - Aug'20
Masters, Analysis and Policy in Economics (APE) — GPA: 15.4/20 (Magna-cum-Laude)
Thesis Grade: 16/20

Indian Institute of Technology (IIT), Kharagpur, India — Jul'11 - May'16
Bachelor and Masters of Science (5 year integrated), Economics — GPA: 8.73/10
Top 1% rank among 485,136 candidates in Joint Entrance Exam to IITs (IITJEE) 2011

RESEARCH

Job market paper

- Title: Designing large procurement auctions: India's utility-scale renewable capacity market
  Synopsis: This paper is studies the design of renewable capacity auctions, which have become an important policy tool in climate change mitigation. Given large clean energy targets, these auctions have capacity procurement targets which often exceed any supplier's capacity, resulting in multiple winners. I study, theoretically and structurally, the design of these auctions in India, where 30% of power generation capacity is solar and wind based. My theoretical results establish that the market clearing rule of these auctions incentivises lower capacity firms to bid more aggressively in Indian design. These firms may get larger contracts even when they may have higher cost. Using structural methods, I estimate bidders cost distributions with a novel dataset. I simulate counterfactual auction designs which reduce the allocation inefficiency and improve the realised payoff of the auctioneer.

Work in progress

- Title: Procurement with rationing of capacity-constrained suppliers
  Abstract: Large-scale procurement auctions with capacity-constrained bidders often have multiple

winners with split awards, where the split percentage is typically pre-specified. However, in certain auctions, such as renewable energy capacity creation auctions in India and Brazil, the auctioneer does not specify the split in advance. Instead, bidders report their capacities before the auction. Following this, in a reverse English auction, bidders compete on price, and the lowest price loser is given a residual quantity to clear the market, thus splitting the award ex-post. The semi-separating Bayes-Nash Equilibrium of the English auction, under the independent private values (IPV) assumption for given quantity bids, is characterized by reduced competitiveness and a strictly positive probability of the higher capacity bidder bidding at the reserve price. I demonstrate that the boundary value problem characterizing this equilibrium has a unique solution. The baseline model is extended to include players with asymmetric cost information and fringe firms.

- Title: Participation, efficiency, and auctioneer's payoff in large auctions: Experimental evidence from designs in India and Philippines (joint with Carlos Vega, Philippines Competition Commission)
  Abstract: Many auction designs in the renewable capacity market include all-pay elements. Given the theoretical difficulties in analyzing asymmetric all-pay auctions, not much can be said about their efficiency, cost to public funds, or participation incentives. In this paper, we address this issue through experiments in which subjects participate in auctions modeled after those designed in India and the Philippines. Since both countries have similar policy objectives that lead to large procurement demands, the experiments aim to reveal which country's auction design has better economic properties.

Publication

- *EPW special article*:
  Singh, M., & Husain, Z. (2016). Self-fulfilling equilibrium and social disparities in urban India. Economic and Political Weekly, 43-51.

CONFERENCES

Econometric Society European Meeting (summer)	2023
HEC Paris PhD conference	2023
CEPR Paris symposium (poster)	2023
European Association for research in Industrial Economics	2023
Society for Advancement of Economic Theory	2023
Stony Brook Game Theory Festival	2023
European Association for Research in Industrial Economics	2024

TEACHING

Université Paris 1 Panthéon Sorbonne Sep'23 - present

- Optimisation and matrix calculus, 2^{nd} year undergraduate, Teaching assistant
- International monetary economics, 3^{rd} year undergraduate, Teaching assistant
- Growth economics, 3^{rd} year undergraduate, Teaching assistant
- Game theory, 1^{st} year masters in Economics and Psychology, Teaching assistant

Ecole National des Ponts et Chausses (ENPC) Jan'22 - Dec'22

- Introduction to economics, Engineering undergraduates, Teaching assistant

Sciences Po Jan'20 - Dec'21

- Mathematics for social sciences, 1^{st} year undergraduate, Course instructor
- Statistics for social sciences, 1^{st} year undergraduate, Course instructor
- Core economics, 1^{st} year undergraduate, Teaching assistant

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GRANTS

Attaché Temporaire de Ensiegnement et Recherche Sep'23 - present
Grant to fund final years of PhD by teaching at Sorbonne

OTHER EXPERIENCES

Research Assistant for Olivier Compte (PSE) Jun'19 - Jan'20
Policy researcher and consultant, NIPFP, New Delhi Sep'17 - Aug'18
Analyst, Prime brokerage, Credit Suisse, Mumbai Jun'16 - Jul'17

SKILLS

Technical: R, Mathematica, LaTeX, Excel
Language: English (bilingual), Hindi (native), Punjabi (native), French (intermediate)
Soft: Public speaking, Critical thinking, Writing

REFERENCES

Laurent Lamy
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