Berk Idem

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EDUCATION

Ph.D. Economics, Penn State University — 2016 - 2022 (Expected)
Advisor: Vijay Krishna

M.A. Economics, Bilkent University — 2014-2016

B.A. Economics, Bilkent University — 2009-2014

WORKING PAPERS

Coexistence of Centralized and Decentralized Markets

Centralized marketplaces that provide a venue to trade goods and services, such as Airbnb, Amazon, and Uber, have seen a rapid growth in the last decade. When these marketplaces decide the rules of trade, their goal is to maximize their own profit. I use a mechanism design approach to characterize the optimal rules of a profit-maximizing marketplace in a market where who owns what is known but valuations for the good are not. If the mechanism is the only trading venue, the optimal mechanism ranks agents according to their virtual values and costs and allows trade between two agents as long as their virtual surplus is positive. Building on this characterization, I analyze equilibria of a market choice game where agents choose between the centralized marketplace and decentralized bilateral trade. I show that in the unique equilibrium of this market choice game, both the centralized marketplace and decentralized trade coexist. Agents who have very high and very low valuations for the good join the centralized marketplace while the agents with intermediate valuations choose to decentralized trade. I establish that the equilibrium profit of the marketplace is at least half of what it would be if there were no decentralized trade. The ratio of the profits with and without competition from the decentralized market is independent of the distribution of the values. I provide conditions under which this equilibrium results in higher welfare than either institution on its own. Finally, I consider an alternative trading protocol for the decentralized market and show that under uniform distribution of valuations, all of the main results extend to this environment as well.

Optimal Marketplace Design

In financial markets as well as online marketplaces, each user can be a buyer or a seller depending on the market conditions and their endowments. Here, I consider the problem of designing a marketplace for such a market with a divisible good to maximize profit. I first focus on Dominant-Strategy Implementable mechanisms and invoke the revelation principle. I show that the designer's profit is the expected virtual surplus. Then, I describe the optimal allocation through an algorithm. The algorithm ranks agents according to their virtual values and costs and allows trade between two agents if one's value is greater than the other's cost. The volume of trade is determined by their endowments. After finding the optimal Dominant Strategy Implementable mechanism, I argue that this mechanism is in fact optimal within the class of Bayesian Implementable mechanisms as well. Finally, I consider an extension where the marketplace itself can own some endowments and illustrate the type of inefficiency this can lead.

Competitive Equilibria and Mechanism Design in Convex Economies

Existence of Stable Matchings without Substitutability

WORKS IN PROGRESS

Non-Bayesian Persuasion (w. Ece Teoman)

Hiding the Picasso's in the Cellar: Sequential Auctions (w. Ece Teoman)

Learning with Ordinal Preferences (w. Ece Teoman)

Multi-Agent Hold-Up Problems (w. Ece Teoman)

TALKS

European Winter Meeting of the Econometric Society 2021

Applied Micro Seminar at Penn State 2021

Midwest Economic Theory Conference 2021

EC (ACM Conference on Economics & Computation) (Poster Presentation) 2021

Stony Brook Game Theory Conference (Poster Presentation) 2021

Pennsylvania Economic Theory Conference (Poster Presentation) 2021

Conference on Mechanism and Institution Design 2020

WORK EXPERIENCE

Research Assistant, PSU (Vijay Krishna) Summer 2021
Research Assistant, PSU (Vijay Krishna) Summer 2020
Research Assistant, PSU (Nima Haghpanah) Summer 2019
Research Assistant, PSU (Henrique Roscoe de Oliveira) Summer 2018
Teaching Assistant, PSU (Game Theory) 2016-Present

OTHER

Programming Experiences: Python, Matlab and Mathematica.
Languages: English (Fluent), Turkish (Native), Spanish (Intermediate), Classical Latin (Beginner)