Berk Idem

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EDUCATION

Ph.D. Economics, Penn State University 2016 - 2022
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 [Job Market Paper]

In this paper, I introduce a profit-maximizing centralized marketplace into a decentralized market with search frictions. Agents choose between the centralized marketplace and decentralized bilateral trade. I characterize the optimal marketplace in this market choice game using a mechanism design approach. In an equilibrium in undominated strategies, the centralized marketplace and the decentralized trade coexist. I find that the thickness of the centralized marketplace in the coexistence equilibrium does not depend on the search frictions. The profit of the marketplace is always higher than the half of the profit in case of monopoly.

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. 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

In this paper, I show that the existence of a solution to a market design problem can be obtained as long as the designer's and the agents' preferences satisfy any sufficiently well-behaved *abstract convexity*, using 'convex' price orders that rank bundles instead of price vectors. Walrasian Equilibrium is obtained as a special case.

Existence of Stable Matchings without Substitutability

In this paper, I provide two characterizations for the existence of stable matchings in this environment. Moreover, if 'part-time' contracts are allowed, I show that there is always a stable matching. Finally, I introduce a measure of instability in the market, measured as the amount of subsidy needed to 'stabilize' an efficient outcome.

WORK IN PROGRESS

Non-Bayesian Persuasion (with Ece Teoman)

Here, we study the Non-Bayesian Persuasion problems where the agents' non-Bayesian belief updates make some posteriors infeasible. Here we show that the standard tool used by most of the information design literature, concavification, may not be feasible. However, it is possible to modify the concavification approach.

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

We study how a seller can optimally conceal the available quantity to maximize the revenue. We show that introducing any uncertainty increases the expected revenue (compared to the case the quantity available is known with certainty). Then, we find the optimal belief the designer would like the buyers to have. Lastly, we show that the designer cannot improve the revenue in a classical Bayesian persuasion game.

Multi-Agent Hold-Up Problems (with Ece Teoman)
In this paper, we study the problem of revenue-maximization where buyers can first choose how much they want to learn about their valuations. Single-buyer version of this problem has been studied in the literature: There, the buyer optimally balances the costs of knowing too much and too little to be exploited by the seller. However, with multiple buyers, knowing 'less than' the other buyers is itself a disadvantage. We study several selling mechanisms and show that in certain cases, obtaining full information is an equilibrium.

TALKS

European Winter Meeting of the Econometric Society	2021
Delhi Winter School	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)	Since 2020
Research Assistant, PSU (Nima Haghpanah)	Summer 2019
Research Assistant, PSU (Henrique Roscoe de Oliveira)	Summer 2018
Teaching Assistant, PSU (Principles of Economics, Game Theory)	2016-2021
Teaching Assistant, Bilkent (Intermediate Microeconomics, Game Theory)	2014-2016

REFEREEING

Games & Economic Behavior
International Journal of Game Theory
WINE

SKILLS

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

REFERENCES

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