

DISSERTATION PROPOSAL

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“Structural Empirical Analysis on Market Conduct & Performance”

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Via Zoom

The first chapter is joint work with Musab Kurnaz, Hakki Özdenören, and Christopher Sleet. We provide optimal tax equations and Pareto test inequalities for dynamic, discrete choice economies. Our framework is flexible enough to accommodate occupations, firms, locations, skills, or wealth as states. It permits explicit consideration of the implications of slow choice adjustment for tax design and granular policies that tax income-generating activities and rather than incomes themselves. Optimal tax equations highlight the sensitivity of the stationary distribution of agents across income-generating activity states. We provide explicit formulas for such sensitivities that relate them to sensitivities of Markov transitions of agents across states and, hence, to structural primitives. We deploy our approach to analyze the optimal tax implications of a rich dynamic model of occupational choice.

In the second chapter, I look at a non-competitive market where the trade mechanism is sequential bargaining: eBay's Best Offer format. Many large markets are similarly characterized by bargaining as a prevalent trade mechanism, such as real estate, some specific labor markets, and many B2B transactions. Despite their relevance, the microeconomic foundations of such markets are not generally well understood. Noncooperative bargaining with two-sided incomplete information is a natural candidate for modeling them, but general, testable restrictions that identify the primitives given population moments are yet to be found. Because of this, empirical research on these markets has been limited to reduced form approaches or cooperative equilibrium notions. I propose an approach to estimate tight bounds on the primitive distribution of buyers' and sellers' valuation under the assumption that the data generating process be determined by a Bayesian-Nash equilibrium of a non-cooperative bargaining game with two-sided incomplete information. It is then possible to estimate tight bounds on counterfactual surplus from trade under known alternative protocols such as first and second price sealed bid auctions, as well as on the efficiency of trade. In future work, I plan on quantifying how slack these bounds are with respect to the smallest tight set and investigating what additional assumptions can tighten them.