

# Essays on the Theory of Indivisible Good Markets

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## Abstract

In this paper, we introduce the following three studies:

1. We consider school choice problems where students may submit only restricted length of preference lists. We propose an acyclicity condition for the priority structure of schools. When schools' priorities are substitutable, we show that a Pareto efficient and stable assignment rule is Nash implementable by the deferred acceptance mechanism if and only if schools' priority structures are acyclic in our sense.
2. In designing matching markets, we assume a set of agents who participate in centralized matching procedures. By imposing individual rationality for a matching procedure, we give such agents incentives for participation. However, in many cases, this is not enough as agents have multiple matching opportunities outside the designing market. This leads to a market structure in which several markets endogenously emerges as a result of agents' choice of markets. We consider a one-to-one two-sided matching market of firms being matched with workers, and introduce a model: after a firm chooses an entry sub-market, a worker participates in all submarkets and then the matching in each submarket is determined via a worker-optimal stable mechanism. Finally workers choose the best firm among those matched in all submarkets. We show that, when firms have non-overlapped preferences, i.e., the firms of the same type have correlated preferences and top-workers for two distinct-types firms are different, the type-separated market structure emerges as an outcome of the subgame perfect equilibrium where all agents are truthful.
3. We analyze a public good provision mechanism with ambiguity averse agents, where each agent is endowed with multiple beliefs about her opponents' valuations. Without ambiguity aversion, there is no mechanism which is efficient, incentive compatible, individually rational, and balanced budget. We show that there exists a mechanism which satisfies the four desirable properties when agents are maxmin expected payoff maximizers who are sufficiently ambiguity averse.