Sorting and Decentralized Price Competition*

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Abstract

We investigate the role of search frictions in markets with price competition and how it leads to sorting of heterogeneous agents. There are two aspects of value creation: the match-value when two agents actually trade, and the probability of trading governed by the search technology. We show that positive assortative matching obtains when complementarities in the former outweigh complementarities in the latter. This happens if and only if the match-value function is *root-supermodular*, i.e., its n-th root is supermodular, where n reflects the elasticity of substitution of the search technology. This condition is weaker than the condition required for positive assortative matching in markets with random search.

Keywords. Competitive Search Equilibrium. Directed Search. Two-Sided Matching. Decentralized Price Competition. Complementarity. Root-Supermodularity. Sorting.

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