

Cumulative offer process with continuous transfers

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Abstract

The Kelso and Crawford (1982) model of job matching has been a basis for the analysis of two-sided many-to-one markets. They proved that, under the gross substitutes condition, the cumulative offer process finds a stable matching in the market with discrete transfers. On the other hand, the algorithm cannot be applied to the market with continuous transfers, and in particular, cannot find a competitive equilibrium. The purpose of this paper is to modify the cumulative offer process in a way that it can be applied to the market with continuous transfers. We show that our new algorithm, the cumulative offer process with continuous transfers, finds the maximal competitive price vector in finite steps. Our result offers a clear insight into how the maximal competitive price vector is determined.

Keywords: Job matching; Cumulative offer process; Dynamic auction

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