Abstract

We study a matching problem where agents care not only about the institution they are assigned to but also about the contractual terms of their assignment so that they have preferences over institution-contractual term pairs. Each institution has a target distribution of its slots reserved for different contractual terms. If there is less demand for some groups of slots, then the institution is given the opportunity to redistribute its unassigned slots over other groups. The choice function we construct takes the capacity of each group of seats to be a function of number of the vacant seats of groups considered earlier. We advocate the use of a cumulative offer mechanism (COM) with overall choice functions designed for institutions that allows capacity transfer across different groups of seats as an allocation rule. In applications such as engineering school admissions in India and cadet-branch matching problems at the USMA and ROTC where students are ranked according to test scores (and for each group of seats, corresponding choice functions are induced by them), we show that the COM with a monotonic capacity transfer scheme produces stable outcomes, is strategy proof, and respects improvements. The outcome of the COM with monotonic capacity transfer scheme Pareto dominates the outcome of the COM with no capacity transfer.