

A New Random Assignment Rule and Its Axiomatization

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Abstract

We consider the problem of randomly assigning n indivisible objects to n agents without monetary transfers. This paper proposes a new rule called the *probabilistic rank-consumption rule (PRC rule)*. We introduce two new axioms: *sd-rank-fairness* (the prefix "sd" stands for stochastic dominance), and *equal-rank envy-freeness*. Sd-rank-fairness is a refinement of sd-efficiency (and hence of ex post efficiency). Equal-rank envy-freeness is a refinement of equal treatment of equals. Our characterization shows that the a rule satisfies sd-rank-fairness and equal-rank envy-freeness if and only if it is the PRC rule.

Keywords: Random assignment; Probabilistic rank-consumption rule; Sd-rank-fairness; Equal-rank envy-freeness

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