Fair and Efficient Assignment via
the Probabilistic Serial Mechanism[*]

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Abstract

This paper studies the problem of assigning a set of indivisible objects to a set of agents when monetary transfers are not allowed. We offer two characterizations of the prominent lottery assignment mechanism called the *probabilistic serial* (Bogomolnaia and Moulin, 2001) We show that it is the only mechanism satisfying *non-wastefulness* and *ordinal fairness* and the only mechanism satisfying *ordinal efficiency, envy-freeness*, and *upper invariance.*

Keywords: Random assignment; probabilistic serial; ordinal efficiency; ordinal fairness; envy-freeness

JEL classification: C71; C78; D71; D78