The Uniform Rule with Several Commodities: A Generalization of Sprumont's Characterization

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Abstract

We consider the problem of allocating multiple divisible commodities among a group of agents with single-peaked preferences. We show that the uniform rule is the only allocation rule that satisfies *strategy-proofness*, *envy-freeness*, and *same-sidedness*, which is a necessary condition for *Pareto efficiency*. It is well known that same-sidedness is equivalent to Pareto efficiency in the single commodity case. Therefore, this result generalizes the characterization of the uniform rule by Sprumont (Econometrica 59: 509–519 (1991)) in the single commodity case: it is the only rule satisfying strategy-proofness, envy-freeness, and Pareto efficiency.

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