

Title: The division problem with maximal capacity constraints

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Abstract: The division problem consists of allocating a given amount of an homogeneous and perfectly divisible good (or task) among a group of agents with single-peaked preferences on the set of their potential shares. A rule proposes a vector of shares for each division problem. The literature has implicitly assumed that all divisions are feasible. In this paper we consider the division problem when each agent has a maximal capacity due to an objective and verifiable feasibility constraint which imposes an upper bound on his share. Each agent has a feasible interval of shares where his preferences are single-peaked. A rule has to propose to each agent a feasible share. We study strategy-proof, efficient and consistent rules and provide alternative characterizations of the extension of the uniform rule that deal explicitly with agents' maximal capacity constraints.