Group Contributions in TU-games: A class of k-lateral Shapley values

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Abstract

In this paper we introduce the notion of group contributions in TU-games and propose a new class of values which we call the class of k-lateral Shapley values. Most of the values for TU-games implicitly assume that players are independent in deciding to leave or join a coalition. However, in many real life situations players are bound by the decisions taken by their peers. This leads to the idea of group contributions where we consider the marginality of groups upto a certain size. We show that group contributions can play an important role in determining players' shares in the total resource they generate. The proposed value has the flavor of egalitarianism within group contributions. We provide two characterizations of our value.

Speaker Profile

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