Abstract
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Surplus distribution and coalition formation have been at the heart of economics and game theory. Although surplus distribution has been intensively studied in both fields, coalition formation has been often avoided by implicitly or explicitly assuming that players form the largest coalition that consists of all players. Moreover, in many models including matching problems and cooperative games, players can form a coalition by simply "agreeing" to join a coalition. This simplification allows us to introduce the concept of a coalition into these models in a straightforward way. However, it omits the formulation of the step of consensus building among players to form a coalition.

To formulate consensus building among players, we employ a coalition aggregation function, which assigns a coalition structure to a profile of players' coalition choices. We first axiomatize Hart and Kurz's (1983) two coalition aggregation functions known as the gamma-function and the delta-function. Through our axiomatization results, we observe that neither the gamma-function nor the delta-function satisfies monotonicity. We propose a monotonic function and axiomatically characterize it. In addition, an impossibility result on monotonicity is provided.