ENDOGENOUS FORMATION OF COALITIONS WITH POPULAR PLAYERS

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A normal form game of coalition formation is presented in which each player's strategy is a list of coalitions she is willing to form. This is an enrichment of the strategies spaces that have been proposed in the literature. Indeed, in the normal form games proposed by Von Neumann and Morgenstern (1944) and Hart and Kurz (83) one player's strategy is to choose the coalition to which she wants to belong. However, "a priori", when a player is willing to negotiate, she knows that she is willing to form different possible coalitions, even if her objective is to reach the best choice available. Hence, for a given strategy profile, the feasible coalitions are coalitions such that they are in the list-strategy of each member. For each strategy profile, we define the feasible set of coalitions and for each individual, her individual feasible set consists of those elements of the feasible set to which she belongs. In general, the coalitions in a feasible set do not form a partition of the set of players.

Then, I establish a valuation criterion for each individual player for each strategy profile, which defines the payoffs of the coalition formation game. This value gives a first move advantage to players whose individual feasible sets have the largest cardinality and who are thus called *popular players*. These players have a double characteristic. First, they are relatively "open" to negotiation, since they propose more coalitions than other players. Second, they are relatively attractive for other players since their propositions are feasible coalitions, which means that the different members find it acceptable. A popular player's advantage is that she can choose first in her individual feasible set the coalition she wants to form and gets her incremental value in that coalition. When there are several popular players, one is drawn randomly. The members of the first coalition are then removed and yhe process starts again with new popular players. This lasts until each player has a position in a partition. In the Coalition Proof Nash Equilibrium, different partitions can appear with different probabilities, depending on the order in which the different popular players have been drawn.

The equilibrium is characterized for the class of simple games. I give an axiomatization of the value generated at this equilibrium. For each unanimity game with a unique minimal winning coalition, the value is equivalent to the Shapley value but one of the axioms differs from Dubey's (1975) axiomatization of the Shapley value. This is the axiom which characterizes the value for all other simple games. The basic idea is that, in a simple game with two intersecting minimal winning coalitions, the value gives all the power to the players belonging to both coalitions. This represents strategic situations in which individuals bargain in each coalition using their outside alternative.