

Absence-proofness: A new cooperative stability concept

Speaker: Emre Doğan

Abstract

We introduce a new cooperative stability concept, *absence-proofness* (AP). Given an allocation problem in a society N , and a solution well defined for all subsocieties, a group of people $S \subseteq N$ may benefit by leaving a subgroup $T \subseteq S$ “out” of the allocation process. After the allocation takes place in the society $N \setminus T$, agents in $S \setminus T$ may reallocate what they received, plus T 's endowments (if they have any) among all of S . This reallocation is profitable if it is Pareto superior to what S would get in the society N had T not been left aside. We call the solutions that are immune to this kind of manipulations absence-proof. Absence-proofness implies core stability by definition. In fair division problems, where core has no bite, AP imposes core-like participation constraints on solutions. In both fair division problems and TU games, well-known *population-monotonicity* (PM) property implies AP. Although solutions that are AP but not PM exist for very specific problems, our work suggests that these properties have very close formal implications. In exchange economies with private endowments we provide many negative results. Particularly, the Walrasian allocation rule is manipulable.