

Structure of Social Decision Rules Which are Simple Games

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ABSTRACT

The purpose of this paper is to study certain aspects of the structure of social decision rules which are simple games. The following characterization theorems have been proved in the paper : (1) A social decision rule (SDR) is a simple game iff it satisfies the conditions of (i) independence of irrelevant alternatives (ii) neutrality and (iii) monotonicity, and its structure is such that (iv) a coalition is blocking iff it is strictly blocking. (2) An SDR is a strong simple game iff it satisfies properties (i) - (iv) and its structure is such that (v) a coalition is blocking iff it is winning. (3) An SDR which is a simple game yields a social ordering for every profile of individual orderings iff it null or dictatorial. An Inada-type necessary and sufficient condition for transitivity under the class of SDRs which are non-dictatorial strong simple games is that the condition of weak Latin Square extremal value restriction holds for every triple of alternatives. An Inada-type necessary and sufficient condition for transitivity under the class of SDRs which are non-null non-strong simple games is that the condition of Latin Square extremal value restriction holds for every triple of alternatives. (4) An SDR which is a simple game yields a quasi-transitive social binary relation for every profile of individual orderings iff it null or oligarchic. An Inada-type necessary and sufficient condition for quasi-transitivity under the class of SDRs which are non-null non-oligarchic simple games is that the condition of Latin Square unique value restriction holds for every triple of alternatives.

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