



Structure of Neutral and Monotonic Binary Social Decision Rules with Quasi-Transitive Individual Preferences

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Abstract

The paper investigates the structure of neutral and monotonic binary social decision rules (SDRs) with unrestricted domain under the assumption that individual weak preference relations are reflexive, connected and quasi-transitive. Among others, the following characterization theorems have been proved in the paper : (1) A binary SDR is neutral and monotonic iff it satisfies weak Pareto quasi-transitivity. (2) A neutral and monotonic binary SDR yields transitive social weak preference relation for every profile iff it is null. (3) A neutral and monotonic binary SDR yields quasi-transitive social weak preference relation for every profile iff it is null or oligarchic simple game. (4) A condition on the intersection of decisive sets is shown to be necessary and sufficient for a neutral and monotonic binary SDR to yield acyclic social weak preference relation for every profile.

Key Words : Binary Social Decision Rules, Neutrality, Monotonicity, Quasi-Transitivity, Acyclicity

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