REVEALED GROUP PREFERENCES ON NON-CONVEX CHOICE PROBLEMS[1]

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Abstract: This paper studies the conditions under which the basic results of the revealed preference theory can be established on the domain of choice problems which include non-convex feasible sets; the exercise is closely related to the works of Peters and Wakker (1991) and Bossert (1994). We show that while no continuous choice function can satisfy strong Pareto optimality and independence of irrelevant alternatives over the class of all compact and comprehensive choice problems, strong Pareto optimality, Arrow's choice axiom, upper hemicontinuity and a weak compromisation postulate turn out to be necessary and sufficient to represent choice correspondences by *continuous*, *strictly increasing* and *quasiconcave* real-valued functions. Some applications of our main findings to axiomatic bargaining theory are also studied.

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