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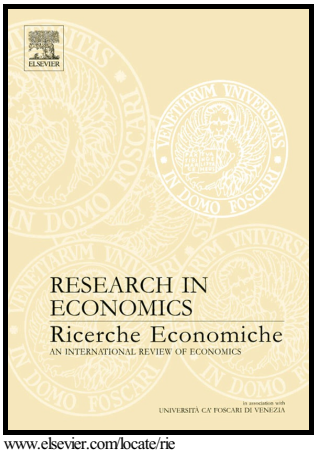

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Feasible elimination procedures in social choice: an axiomatic characterization*

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Abstract

Feasible elimination procedures (Peleg, 1978) play a central role in constructing social choice functions which have the following property: in the associated game form, for any preference profile there exists a strong Nash equilibrium resulting in the sincere outcome. In this paper we provide an axiomatic characterization of the social choice correspondences resulting from applying feasible elimination procedures. The axioms are anonymity, Maskin monotonicity, and independent blocking. We also show that these axioms are logically independent.

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Keywords Feasible elimination procedure, anonymity, Maskin monotonicity, independent blocking, axiomatization

1 Introduction

1.1 Background

We consider the classical social choice model with finitely many voters who have preferences – linear orderings – over a finite set of alternatives. A social choice function assigns an alternative to every profile of preferences, and induces an ordinal game in which every voter has the set of all preferences as strategy space, and evaluates an alternative according to his true, sincere preference. A social choice function is strategy-proof if reporting his sincere preference is a weakly dominant strategy for every player in this game. The theorem of Gibbard (1973) and Satterthwaite (1975) says that every strategy-proof social choice function

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