

Risk-Dominance and Perfect Foresight Dynamics in N-Player Games

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ABSTRACT

We investigate perfect foresight dynamics, a dynamic process of equilibrium selection formalized by Matsui and Matsuyama (1995). People are assumed to play random matching games and make rational decisions. Stability concepts under this dynamics are defined. We also introduce the concept of f-dominance, which is a generalization of risk-dominance. We show that stability under perfect foresight dynamics, which is dynamical in nature, is guaranteed in terms of f-dominance, which is a static stability concept. Then we apply this general result to special classes of games: games that have p-dominant equilibria with small p: quasi-bandwagon games (a class which includes supermodular games and marginal bandwagon games). For these games we obtain several selection criteria which are simple and useful. Several known theorems, as well as new results, are obtained as corollaries of the general result. Thus this paper unifies, as well as generalizes, a number of selection criteria.