Iterated Strict Dominance in General Games

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Abstract

Following Milgrom and Roberts [*Econometrica* **58**(1990), 1255–1278], we offer a definition of iterated elimination of strictly dominated strategies (IESDS*) for games with (in)finite players, (non)compact strategy sets, and (dis)continuous payoff functions. IESDS* is always a well-defined order independent procedure that can be used to solve out Nash equilibrium in dominance-solvable games. We characterize IESDS* by means of a "stability" criterion. We show by an example that IESDS* might generate spurious Nash equilibria in the class of Reny's better-reply secure games. We provide sufficient conditions under which IESDS* preserves the set of Nash equilibria. *JEL Classification*: C70, C72.

Keywords: Game theory, strict dominance, iterated elimination, Nash equilibrium, Reny's better-reply secure games, well-ordering principle

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