

Robustness to Incomplete Information in Repeated Games*

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Abstract

This paper extends the framework of Kajii and Morris (1997) to study the question of robustness to incomplete information in repeated games. We show that dynamically robust equilibria can be characterized using a one-shot robustness principle that extends the one-shot deviation principle. Using this result, we compute explicitly the set of dynamically robust equilibrium values in the repeated prisoners' dilemma. We show that robustness requirements have sharp intuitive implications regarding when cooperation can be sustained, what strategies are best suited to sustain cooperation, and how changes in payoffs affect the sustainability of cooperation. We also show that a folk theorem in dynamically robust equilibria holds, but requires stronger identifiability conditions than the pairwise full rank condition of Fudenberg, Levine and Maskin (1994).

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