A Dynamic Model of Conflict and Cooperation*

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Abstract

We introduce a common-pool contest into a continuous-time, differential game setting to model the dynamic behavior of agents facing a trade-off between socially productive activities and appropriation. We are able to identify multiple Markov perfect equilibrium strategies that are nonlinear in a state space, thus leading the economy to a state where 'partial cooperation' occurs. We show that such cooperation can be seen as a response to conflict. We also discuss the consequences of changes in the effectiveness of appropriation, the number of contenders, and the rate of time preferences on contest equilibria.

Keywords: Conflict, Cooperation, Differential Game, Markov Perfect Equilibrium, Nonlinear Markov strategy

JEL classifications: D 74, L 11

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