"Global Climate Cooperation without Sanctions" by Akira Okada, Hitotsubashi University

Abstract

The negative result on the level of cooperation in the literature of international environmental agreements is caused by the static nature of a two-stage participation game. We present a dynamic coalition formation game where coalitions are irreversible, and countries negotiate transfer schemes to attract non-participants. We show that if countries are sufficiently patient, then there exists a Markov perfect equilibrium where the grand coalition forms immediately. We further show that if countries are impatient, the grand coalition gradually forms in finitely many rounds for every Markov perfect equilibrium under a super-additivity condition. The results hold for any transfer scheme satisfying individual rationality and coalitional efficiency.