

Self-Enforcing International Environmental Agreements among Asymmetric Countries and Welfare

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Abstract

Theoretical analyses of self-enforcing international environmental agreements (IEAs) have adopted the assumption of identical countries. In this paper, we assume that countries are asymmetric in terms of abatement technologies. By examining the IEA formation and total welfare, we show that i) the asymmetry leads to multiple sizes of self-enforcing IEAs, which corresponds to the multiple equilibria of a coalition formation game Maruta and Okada (2005); ii) technology transfer can lead to a smaller size of self-enforcing IEA, resulting in welfare loss. We also examine the rule of IEA and discuss that the unanimity rule plays an important role in IEA formation.

Reference

Maruta, Toshimasa and Akira Okada, "Group Formation and Heterogeneity in Collective Action Games," *Discussion Papers/Graduate School of Hitotsubashi University*, 2005.