

# How Does Spillover of Technology Adoption Benefits Affect Environmental Technology Agreements?<sup>☆</sup>

Chisa Kajita\*

## Abstract

We focus on an international technology agreement (ITA) in which the signatories collectively decide whether to conduct R&D regarding environmental technology. The aim of this paper is to investigate the impacts of the spillover of the technology adoption benefits on the effectiveness of the ITA. We show that the social welfare is an increasing function of the degree of the spillover. On the contrary, the number of the signatories is a weakly decreasing function of the degree of the spillover. We conclude that, when the adoption benefits of one country fully spillover into the other countries, the social welfare is maximized, while the number of the signatories is minimized.

Key words: Climate Change, Coalition Formation Game, Environmental R&D, International Environmental Agreements, Spillover

JEL Classification: C72, O32, Q52

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<sup>☆</sup>We are grateful for comments on earlier versions of this paper given by Tetsushi Muraio. This research is financially supported by Japan Society for the Promotion of Science (KAKENHI No. 15H06466).

\* Faculty of Economics, Kyushu University (E-mail: kajita@econ.kyushu-u.ac.jp)