

Environmental Technology Transfer via Free Trade

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Abstract

This paper considers a model of international duopoly with global pollution to investigate the impact of tariff policy and licensing contracts on environmental technology transfer. Our main finding is that free trade is not always preferable. When the protection of intellectual property rights (IPR) is within a certain range, there is a possibility that the total world welfare is higher under a positive tariff rate than under a zero tariff rate. This implies that the protection of IPR beyond the range is a prerequisite for the justification of free trade.

We also show how developing countries are induced to sign a licensing contract. Even if the licensing does not directly improve the competitiveness of the firm in the developing country, raising the tariff rate can increase the revenue of the country. In contrast, when there is no licensing agreement, the local government sets a lower tariff rate and diffuses the products of foreign firms, because the products of local firms are associated with pollution.

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