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Complementary approaches to discursive contestation on the effects of the IPR regime on technology transfer in the face of climate change

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ABSTRACT

The effects of intellectual property rights (IPR) on the transfer of environmentally sound technologies (ESTs) has resulted in discursive contestation. On the one hand, the IPR regime is regarded as a catalyst to ESTs transfer. On the other hand, the IPR regime itself is argued to work as a barrier to the transfer of ESTs to developing countries. This contestation moved to another layer of discussion concerning what to do about the current IPR regime and the climate change regime that overlap on the subject matter of technology transfer. The IPR-as-a-catalyst approach prefers the IPR regime to remain as the *status quo* and that the climate change regime construct an enabling environment by lowering the transaction costs of technology transfer and enhancing the regulatory capacity of developing countries. On the contrary, skeptics of the role of the IPR regime in ESTs transfer prefer an active utilization of the flexible mechanisms of the IPR regime and more interventionist actions by the climate change regime for effective IPR-sharing. Regarding this bi-polar contestation, this paper analyzes why and where this discursive contestation occurs based on the economic theories of market failure. The benefits and difficulties of remedial institutional approaches to tackle market failures are explored; then, complementary institutional designs in compatibility with the IPR regime and in response to market failures are explored with exemplary cases under the climate change regime.

1. Introduction

Technology transfer to developing countries has been a central pole of global climate change mitigation efforts under the United Nations Framework Convention on Climate Change (UNFCCC) which was adopted in 1992 (UNFCCC, 1992, article 4(5)). Technology transfer means "a broad set of processes coverings the flows of know-how, experience and equipment for mitigating and adapting to climate change amongst different stakeholders"; and, transfer is defined to "encompass diffusion of technologies and technology cooperation across and within countries" (IPCC, 2000). Here, technologies, particularly, environmentally sound technologies (ESTs), are indispensable tools with which developing countries can meet the incremental costs of mitigating and adapting to climate change.[1] Technology is generally transferred through voluntary economic behaviors of trade-in-goods, foreign direct investment, licensing, labor turnover, and movement of people under the legal protection of intellectual property rights (IPR) (Hoekman et al., 2005). Here, IPR are the exclusive rights given to persons over the use of his or her creations for a certain duration of time, and the creation of technology falls under industrial intellectual property (WTO, 2015a). Technology transfer is governed by the most comprehensive global IPR protection regime, the World Trade Organization (WTO) Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS Agreement), which was developed in the course of the Uruguay Round of the General Agreement on Tariffs and Trade from 1986 and entered into force in 1995 (WTO, 2015b).[2] Accordingly, any institutional design to galvanize the transfer of ESTs within the UNFCCC cannot avoid interaction with the TRIPS Agreement. Here arises a notion of whether the TRIPS Agreement works as a barrier to the north-to-south international transfer of ESTs.

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[1] ESTs refer to technologies that "protect the environment, are less polluting, use all resources in a more sustainable manner, recycle more of their wastes and products, and handle residual wastes in a more acceptable manner than the technologies for which they were substitutes" (Agenda 21, para 34.1).

[2] The TRIPS Agreement stipulates a minimum level of protection rules for global regulatory harmonization and guarantees 20 years of legal protection to WTO members who are IPR holders.

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This notion harbors contestant arguments: on the one hand, the IPR protection regime is a catalyst to ESTs transfer and the lack of regulatory and absorptive capacity in developing countries is a hindrance (Harvey, 2008). On the other hand, the IPR regime is a barrier to the transfer of ESTs to developing countries due to high licensing costs resulting from monopolistic ownership (Correa, 2005; Khor, 2008). This contestation on *the effects of IPR on the transfer of ESTs* moved to a discussion of *what to do about the current IPR and climate change regimes*. Those who see strong IPR protection as a catalyst prefer the TRIPS Agreement to continue as the *status quo* in order to lead market-based voluntary licensing contracts between IPR owners and seekers, with the UNFCCC lowering the transaction costs of technology transfer and enhancing the regulatory capacity of developing countries (Schwartz and Niyogi, 2009). On the contrary, there are arguments for the institutional change or utilization of flexible mechanisms in the TRIPS Agreement. Under this approach, more interventionist actions are expected by the UNFCCC such as the public procurement of EST IPR with the help of global multilateral funding (Shashikant and Khor, 2010). To this contestation, there came a third approach that recognizes the high political cost of institutional change and the necessity for targeted revisions of the TRIPS Agreement (Maskus and Okediji, 2014).

Previous studies have framed these contestant discourses on the effect of IPR on the transfer of ESTs as development versus diffusion of LCTs; they have also clarified which discourse is empirically more adequate across different technologies and described what kinds of policy actions could be taken concerning the IPR regime (Ockwell et al., 2008, 2010). However, previous studies have neither fully explored theoretically why this discursive contestation occurs nor focused on where the current policy trajectories of the UNFCCC should be heading on the subject matter of technology transfer that overlaps with the TRIPS Agreement. Accordingly, rather than clarifying which discourse is right, this article will examine the grounds that have led to contestant discourses using the economic theories of market failure and will see what kinds of institutional remedies can be designed in response to market failures. This article begins by tracing the issue of IPR within the UNFCCC. This is followed by an examination of the theoretical implications of the IPR regime on knowledge production and diffusion. Then, discursive contestation on the effects of IPR on the transfer of ESTs is reframed on the basis of market failures. Hence, this article explores two complementary institutional design options to overcome two lines of market failures in EST transfer and looks at the benefits and challenges of alternative future trajectories of the Technology Mechanism under the UNFCCC.

2. Intellectual property rights under the climate change regime

In the issue area of climate change, the transfer of ESTs from developed countries to developing countries is stipulated as a differentiated responsibility of developed countries in addition to international greenhouse gas mitigation commitments (UNFCCC, 1992, article 4(1–3)).[3] From the first meeting of the Subsidiary Body on Scientific and Technological Advice, which is one of two subsidiary bodies to the UNFCCC with the provision of information and advice on scientific and technological matters, the IPR issue was to be included and further explored as a way that developed countries could fulfill their obligations regarding technology transfer (ENB, 1995a). However, developed countries claimed that payment for IPR-related costs incurred in the process of technology transfer need to be based on a normal commercial and bilateral basis (ENB, 1995b).

Discussion on the IPR issue continued even after the mechanism for technology transfer, the Expert Group on Technology Transfer (EGTT), was established as part of the technology transfer framework. The technology transfer framework was formed at the seventh Conference of Parties (COP-7) to the UNFCCC in 2001 to achieve the effective and meaningful implementation of technology transfer. It included the five themes of i) technology needs assessment, ii) an enabling environment, iii) technology information, iv) capacity-building, and v) mechanisms for technology transfer (UNFCCC, 2001).[4] On the one hand, the IPR issue was subsumed within the theme of an enabling environment which concerns conditions to facilitate EST transfer. In particular, at the UNFCCC workshop on enabling environments for technology transfer, held in April 2003, confronting arguments regarding IPR as a catalyst or a barrier surged (UNFCCC, 2003). Afterward, substantive discussion evolved at the center of the IPR issue at the COP-12 in 2006. Developing countries wanted the EGTT to be elevated to a so-called Technology Transfer and Development Board with the establishment of a Multilateral Technology Acquisition Fund to buy IPR for ESTs, but developed countries preferred the *status quo* or a strengthened EGTT (ENB, 2006; Sterk et al., 2007). After the reconstitution of the EGTT for another five years had been decided (UNFCCC, 2007, 3/CP.13), the IPR issue was discussed within the course of a review and assessment on the effectiveness of the implementation of Articles 4, para 1(c) and 5 of the Convention. There was a suggestion to establish a working group to check the barriers caused by the existing trade agreements and the alternative IPR regime for ESTs (UNFCCC, 2008).

Hence, in the course of "a comprehensive process to enable the full, effective and sustained implementation of the Convention through long-term cooperative action, now, up to and beyond 2012, in order to reach an agreed outcome" (UNFCCC, 2007, para 1 (d)), one of the four contact groups under the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA), which were established to produce the *agreed outcome*, faced the emergence of the IPR issue at its second session in December 2008. Developing countries stood on a notion that IPR work as a barrier to EST transfer. The Group of 77 (G-77) and China expressed that the UNFCCC needed a new partnership apart from the business-as-usual voluntary licensing approach under the TRIPS Agreement. India, Pakistan, and Brazil signaled a bolder insight by referring to the role of the World Health Organization in the case of pharmaceuticals to utilize the flexible mechanisms of the TRIPS Agreement for further access to medicine. They indicated the need for action by the UNFCCC to create flexibilities for climate technologies alike. In advance, China, Brazil and the G-77 suggested the establishment of a multilateral fund to procure technology-related IPR in order to effectively disseminate existing climate technologies among members. Yet, developed countries such as Japan and the US mentioned that IPR were essential to push for inventors' incentives and market competition and that government action should be to protect IPR (Raman, 2008).

IPR are an unending issue that remain dormant but which occasionally erupt like a volcano. After a decade-long governance by the EGTT on technology development and transfer, in 2010, the

[3] The differentiated commitments by developed countries with regard to national mitigation underwent specification by the legally-binding institution of the Kyoto Protocol that sets stringent national emission reduction targets and a five-year timetable (KP, 1997).

[4] The COP, comprising the nation states that are parties to the UNFCCC, works as a decision-making body of the UNFCCC to review the implementation of the Convention and other legal instruments. The COP is held every year (COP, 2014).