Overview

During the last ten years, a number of countries and sub-national jurisdictions have started greenhouse-gas emissions trading systems (ETSs), and a number of others are in planning and preparation. There is increasing interest in linking these systems, both directly and indirectly via connections to emissions-reduction-credit (ERC) systems, the largest of which is the Clean Development Mechanism (CDM) under the Kyoto Protocol. This research reviews the evidence of the past decade and finds a number of economic, political, and strategic factors influencing policy decisions about whether or not to link. Because the number of proposed and existing linkages is too small to permit a statistical analysis, we qualitatively identify the determinants of policy decisions involving linkage.

Background

As of September 2013, there were international, regional, national, or sub-national ETSs operating or scheduled for launch in 36 countries. Of these, most had established or proposed at least one link with another ETS or ERC. These links fall into four general categories: one-way and two-way linkages between ETSs; one-way linkages between an ETS and an ERC; implicit linkages via national trading under the Kyoto Protocol; and various types of non-traditional linkage.

The current research has implications for the new international agreement to be concluded under the United Nations Framework Convention on Climate Change (UNFCCC) in late 2015. Negotiators working on that agreement favor a hybrid system, combining a bottom-up element of voluntary national policies and actions and a set of top-down elements, such as those related to monitoring progress toward emissions reduction. Some countries will surely choose market systems (ETSs) to reduce their domestic emissions and wish to link. Understanding why they might do so could help with the design and implementation of an effective international climate agreement.

Key Findings and Recommendations

1. The single most significant predictor of two systems linking is geographic proximity. Nearby countries may have similar environmental goals and economic conditions, a history of mutually beneficial engagement on environmental and other issues, or be a more palatable match for domestic audiences.

2. Among economic determinants of linkage, the increased cost-effectiveness that results from a larger pool of potential low-cost abatement opportunities appears foremost in policy decisions to link. Closely related benefits that can play a role in deciding to link are increased liquidity and reduced price volatility.
3. Supportive domestic political leadership is an important predictor of the adoption of an ETS and the decision to link. However, the decision to establish a link is not permanent, as recent delinking cases demonstrate; linkage requires sustained domestic political support. Conversely, domestic political opposition to cap and trade can reduce the chances that a government will decide to link.

4. Although the net social welfare gains from linkage (see (2) above) are an important factor driving linkage, not all regulated entities benefit equally. The relative political power of winners and losers could have strong impacts on governmental support for linking with another system.

5. Linkage decisions may be the result of strategic political behavior to build support for international climate action or the result of nations being coerced into linkage as a condition for receiving some other benefit.

6. Concern about the environmental integrity of allowances in other jurisdictions—especially of CDM and other offset credits—is a significant factor in the decision to link (or not to link). The global offset market has become much smaller in the last several years, making the possibility of achieving near-term cost savings through a system of indirect linkages more difficult.

7. Reduction in allowance prices (see (2) above) generates the cost savings of linkage. However, some jurisdictions may prefer higher prices to incentivize long-term investments in low-carbon infrastructure or in technological innovation.

8. Compatibility (or lack thereof) of ETS-design details and related legal frameworks can determine whether or not systems decide to link—or how much work is involved in doing so. In particular, differences in the ambition of ETSs and resulting price differences appear to be real barriers to linking.

9. Creating a link with another system can mean sacrificing some control over domestic carbon markets. Despite this, many nations and sub-national jurisdictions have chosen to establish links, suggesting that control is not a determinative factor in countries’ linkage decisions, at least when partner nations have similar environmental objectives.

**Conclusions**

It appears that a variety of factors encourage linkage, given the revealed preference of governments over the past decade to link. Incentives for linking are likely to continue to produce direct connections among some regional, national, and sub-national ETSs—including as elements of voluntary actions under the 2015 UNFCCC agreement. Indeed, a growing but decentralized network of linkages among ETSs and ERCs may turn out to be a key part of a future hybrid climate policy architecture.

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**About the Project**

Established in 2007, the goal of the Harvard Project on Climate Agreements is to help identify and advance scientifically sound, economically rational, and politically pragmatic public policy options for addressing global climate change. Drawing upon leading thinkers in Argentina, Australia, China, Europe, India, Japan, and the United States, the Project conducts research on policy architecture, key design elements, and institutional dimensions of international and domestic climate policy.

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