Integrating emissions transfers into international and national policy-making

Topic: Consumption-Based Carbon Policies and IO Modeling
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Interregional emissions transfers provide a lens on the emissions responsibilities that are driven by the import and consumption demands of a region. Emissions transfers can undermine climate policies in two ways. First, they can undermine the stringency of emissions-reduction targets as regions with emissions-reduction targets can import emissions-intensive products from non-regulating countries. Second, they can affect the distribution of emissions-reduction burden within a regulating region as subregions which are net importers of emissions bear a lower reduction burden than net exporting ones when viewed from a consumption perspective.

The presentation discusses potential policy options for integrating emissions transfers into international and national climate policies. A multiregional computable general equilibrium model of the world economy is used to analyse the environmental and economic impacts of three policy options on the international level: adjusting domestic emissions-reduction targets for emissions transfers, oﬀsetting emissions transfers by financing emissions reductions in the emissions-exporting regions, and implementing border carbon adjustments, i.e., using tariffs and subsidies to adjust import and export prices of goods in proportion to their carbon content. The results indicate that connecting emissions transfers to international offset responsibilities is the most promising option from an environmental and economic perspective and may provide another rationale for international climate ﬁnance.

The national application focuses on China and the economic impacts of distributing China’s national emissions-reduction target among its provinces. A computable general equilibrium model with subnational detail is used to analyse four options for allocating the provincial reduction burden: a production-based approach, a consumption-based approach, a shared-responsibility approach, and a national emissions-trading approach with consumption-based allocation of emissions allowances. The results indicate that an emissions-trading system with consumption-based allowance allocation combines economic efficiency with distributional equity better than the regional alternative options. The presentation closes by discussing distributional preferences and the implications for international burden-sharing approaches.