

Carbon border adjustment policies: Potential impacts on the Asia-Pacific region

In this study, we explore potential impacts on the Asia-Pacific region of the implementation of policies to reduce emissions, including carbon border adjustment taxes. While carbon pricing can help to incentivize reductions in emissions, efforts to reduce emissions in one region could be undermined by carbon leakage from international partners, with production shifting to countries with more lenient emission policies. To address this concern, the European Union (EU) and other countries have proposed carbon border adjustment mechanisms to tax imports on goods manufactured in countries with less stringent policies (Marcu, Mehling & Cosbey, 2020). Such policies may have significant impacts on trading partner economies (Aylor et al., 2020).

To assess the potential impacts of carbon border policies on the Asia-Pacific region, we use the new GTAP-E model. GTAP-E is based on the well-known Global Trade Analysis Project model (GTAP) (Hertel, 1997; Corong et al., 2017), extended to include the latest energy version of the GTAP model (Corong et al., 2020). In addition to capturing intersectoral and international linkages within a consistent framework, the GTAP-E model enables us to include a relatively detailed specification of energy inputs and associated carbon emissions. This framework facilitates modelling of carbon taxes applied at international borders.

We use the GTAP version 10 database, with a base year of 2014 (Aguiar et al., 2019). We then model several alternative scenarios, including the impact of carbon prices and border tax adjustments implemented by the EU and other Asia-Pacific regions. We focus our analysis on the Asia-Pacific region, including exploring the differential impacts on real GDP, investment and trade, as well as examining broad sectoral impacts to draw insights into the sectors likely to be most heavily impacted by these policies.

Initial results indicate that, as a result of carbon pricing or border tax adjustment, emissions in implementing economies fall, as anticipated. The net global impact, however, is ambiguous as it is possible that to address “clean” demand in regions such as the EU, carbon heavy manufacturing is redirected to non-participating countries through trade diversion. It is therefore important for Asia-Pacific economies to examine early the ramifications of upcoming carbon-mitigating mechanisms, and implement appropriate domestic policy reforms accordingly (ESCAP, 2017).

References

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