

The CO₂ Emissions Embodied in International Trade: A New World-wide multi-regional Input-output Table Capturing Trade Heterogeneity

Topic: Capturing Production Heterogeneity I

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This paper employs a new multi-regional input-output table where China's productions are distinguished into domestic use, processing exports and non-processing exports, to revisit the global net CO₂ emissions transfers for year 2007. The results show that processing exports in China involve relatively less CO₂ emissions than other production types for the same amount of outputs. As a result, without appropriate distinction of processing exports, the net CO₂ emission exports from China to other regions have been distorted, and in some cases the relative bias reached 15%. The net emissions transfers of regions other than China are distorted as well, especially for the regions that use considerable processing exports of China as intermediates, such as USA, Europe and East Asia. Given the fact that processing exports are prevailing in quite a number of developing countries, such as Mexico and Vietnam, it should be careful to interpret the measurements of net emissions transfers under the ordinary world-wide multi-regional input-output model.