

Provincial CO2 Emission Transfers of China

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Author: Chen Pan

Co-Authors: Jianwu HE, Shantong LI

In the last decade, a large amount of emissions embodied in global trade have been tracked, which lead to concerns of emission transfers from developed countries to developing countries or “carbon leakage”™ that will potentially undermine climate policies. Considering that Chinese sub-national regions have followed different pathways and are in different stages of development, in the early 2010s, several studies investigate the emission transfers between Chinese regions and found that there are significant emission transfers within China from its developing areas to developed areas. These findings have important implications for Chinese climate policies, suggesting that the emissions embodied in the sub-national regions should be considered when making regional policies. Recently, several changes have happened in China: CO2 intensity has decreased, production structure has improved, and the share of emissions from the production for domestic demand has increased. These changes, combined with the Chinese regional economic and climate-related policies, suggest a potential significant change in provincial emission transfers. This issue has important implications for climate policies, and has not been looked into. To investigate this, we build a Chinese multi-regional input-output table for 2012 at the provincial level, and calculate the CO2 emissions from fossil fuel consumption and cement production. The emission transfers between the provinces are then tracked, and the policy implications are discussed based on the findings.