

China's Domestic Value Chains and CO2 Emissions

Topic: Trade and Value Chains

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This paper aims to reveal the creation and distribution pattern of CO₂ emissions in China's domestic-interregional value chains. We use input-output based spatial decomposition technique to measure how regional CO₂ emissions are transferred and outsourced by different routes, such as inner-region route, interregional spillover route and feedback route across domestic regions. We also apply the KWW decomposition technique to measure how a region's export and outflow of goods and services impact on other regions' CO₂ emissions by different value chain route. When combining the value added and CO₂ emissions related estimation results together, using China's interregional environmental Input-Output tables, this paper shows the opportunity cost of environment when a specific region wants to have value added gain in domestic supply chains in detail. This can not only help us know the relationship between value chains and CO₂ emissions, but also provide better reference about how to understand the responsibility of CO₂ emissions between consumers and producers and how to consider the Common but Different Responsibility inside China across regions who are at very different economic development stages.