China’s Domestic Value Chains and CO2 Emissions

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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.