

Implications of China's accession to the World Trade Organization on global carbon emissions: a historical perspective

Topic: GVC Environment-Economy

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A recent study suggests that international sourcing contributed to an increase in global carbon dioxide emissions due largely to the carbon intensity disparity among high and low wage countries. The role that China's accession to the World Trade Organization (WTO) in 2001 played in shaping the structure of global carbon emission transfer through sourcing has not been fully understood. Here we grouped the global economies into five, namely the U.S., China, European Union (EU27), other OECD countries, and the rest of the world, and decomposed the changes in the global carbon emissions from 1995 to 2001, and from 2001 to 2007. The results show that the structures of global carbon emissions through sourcing between the two periods are strikingly different. Global carbon emission transfers to China through international sourcing was less than 200 million tonnes until 2001, and other low-wage countries dominated the global carbon transfer through sourcing. During this period, international sourcing contributed to a net increase in global carbon emissions by less than 100 million tonnes of CO₂. During the period from 2001 to 2007, however, China absorbed as much as 1,000 million tonnes of carbon transfer not only from the high-wage countries (U.S., EU27, and the rest of the OECD countries) but also from other low-wage countries. Our results suggest that China's accession to WTO has contributed significantly to the shaping of the structure of global carbon transfer through international sourcing. In the light of the international dialogue on Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and the Paris Agreement, our study calls for an attention to the carbon intensity disparity among international trade partners.