How Does GVC Position Affect CO2 Emissions of Supply Chain Partners?

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Global value chains (GVCs) play a crucial role in shaping carbon emissions, as supply chains integrate upstream and downstream firms. Therefore, this study examines the relationship between firmsâ€™ positions in GVCs and the CO2 emissions of their supply chain partners using a unique dataset of Chinese A-share listed firms, their suppliers, and customers from 2010 to 2014. The findings indicate that: First, firmâ€™s GVC position is negatively correlated with CO2 emissions of upstream and downstream firms. Particularly, improved GVC position exerts a stronger impact on CO2 emissions reduction of their suppliers as compare to their customers. Second, mechanism analysis shows that a firmâ€™s GVC position influences trade credit within the supply chain and generates positive technological spillovers for both upstream and downstream. These spillover effects are further moderated by green innovative activities of firms. Third, the impact of upgrade in GVC position on CO2 emissions reduction is heterogeneous, varying with the ownership of firms, competition in the industry, participation in processing trade, and their scale. Thus, this study is a significant contribution to literature on the empirical side and establishes new evidence for the role of GVCs in reducing CO2 emissions and classifying crucial mechanisms driving these impacts. These findings suggest actionable insights for policymakers targeting to bring into line global value chains with sustainable development goals.