

## **Leveraging multinational enterprises to reduce the escalating regional carbon inequality in China**

Topic: Regional analysis

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Multinational enterprises (MNEs) affect inequality as they exert substantial yet unequal economic and environmental effects across different regions. This study estimates the effects of MNEs on China's regional carbon emission inequality relative to value-added gains by adopting a novel interprovincial input-output model that differentiates MNEs activities across China's 31 provinces. We find that over 80% of MNEs concentrated in developed coastal provinces over the 2002–2012 period and the less developed inland provinces which held less than 30% of the total value-added generated by MNEs emitted more than 50% of the total carbon emissions generated by MNEs. Consequently, MNEs exacerbated China's escalating regional carbon inequality during this period. By 2017, a transformative shift occurred as MNEs increasingly relocated to inland provinces and augmented investments in clean technology-intensive industries. This transition significantly mitigated carbon inequality. Furthermore, we highlight the potential to leverage knowledge spillover effects from MNEs to substantially reduce carbon emissions by 8.8%–27.7% and carbon inequality by 12.5%–31.3%. This study provides valuable policy insights at both global and national levels, suggesting the strategic deployment of MNEs to address inequality and climate change's crucial goals in sustainable development.