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Carbon Pricing Policies and Decoupling Between Greenhouse Gas Emissions and Economic Growth: A Panel Study of 30 European Countries, 1996-2014

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Abstract

This study explores why the levels of decoupling between greenhouse gas (GHG) emissions and economic growth vary across time and between countries, and examines which factors are driving this decoupling. We argue that the implementation of carbon pricing policies facilitates decoupling, as they are designed to achieve cost-efficient GHG reduction. We analyze the panel data of 30 European countries between 1996 and 2014 to examine the relationships between two carbon pricing policies, emission trading and carbon tax, and emission intensity (GHG emissions per unit of GDP) we use to capture decoupling trends. Our result indicates that while controlling for factors that may affect emission intensity, emission trading contributes to decoupling in all models, whereas carbon tax does not; this has also been suggested in previous literature. Furthermore, emission trading is negatively associated with GHG emissions, implying that it contributes to not weak, but strong decoupling of economic growth from GHG emissions.

Keywords: Decoupling, Carbon pricing, emission trading, carbon tax, emission intensity climate change mitigation

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