

International Conference on Ex-Post Evaluation of Emission Trading

Tuesday, 20 June 2023

10:35-12:55 | Session “Competitiveness and Carbon Leakage”

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Title: Heterogeneous Responses to Carbon Pricing: Firm-level Evidence from Beijing Emissions Trading Scheme

Abstract:

Beijing’s emissions trading scheme (ETS) is one of the earliest with sustained high permit price among seven CO₂ ETS pilots in China. Using a fuzzy regression discontinuity design with a unique emissions and allowances allocation data set for firms participating in Beijing’s ETS, we study firms’ reactions to a carbon price. We find that, on average, the ETS reduced firms’ carbon emissions by 39% three years after the policy was introduced, but responses varied: emissions were reduced by about 45% (mainly by reducing coal use) in the industry sector, but there was hardly any change in the service sector. By exploring the effects of allowance allocation on emissions reduction, we further find that free allowances might dampen firms’ abatement, mainly for smaller firms or firms in the service sector. An additional unit of allowances was associated with about 0.14 to 0.4 units of more emissions.

Webpage and programme [here](#).