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The effect of allocation above emissions and price uncertainty on abatement investments under the EU ETS

Dr. Frank Maarten Jan Venmans

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Abstract

The European Union Emission Trading Scheme (EU ETS) –by far the largest in its kind- has inspired several other carbon markets in the world. Based on interviews with plant managers from almost all Belgian ceramics, lime and cement producers, this study is the first to describe how manager’s perceptions on emission trading affected investment decisions. In line with behavioural economics, reference-dependence is found to explain why free allocation below emissions creates a greater incentive to abatement investment compared to allocation above emissions. In the ceramics sector, allocation above emissions refrained managers from including carbon gains in payback times. This contradicts the famous Coase theorem, which predicts that free allocation has no effect on abatement incentives. The results indicate that auctioning part of the emission rights will reduce barriers to abatement investment. Carbon price uncertainty is seen as a disincentive for abatement investment by some managers and as an incentive by others. Intermediate levels of uncertainty add option value to abatement investments because the associated gradual learning adds flexibility in an uncertain carbon constrained future. However, high levels of uncertainty, creating a risk of offshoring even when companies innovate, creates an option value to postpone abatement investments. Narrow framing, misperceiving the risk-hedging counter-cyclicity of carbon costs, reinforces the option value to wait. Therefore, policy should aim to reduce price uncertainty for very low and very high carbon prices, not for an intermediary price range.

Keywords: EU ETS, behavioural economics, regulatory uncertainty, over-allocation, Coase theorem

Highlights (max 85 characters including spaces)

- Allocation above emissions is perceived as a lower incentive for abatement.

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