ETS Regulation and Design Failures, Some lessons from the EU ETS

Hendrik van Senden, Brian Andrew and Andrew Tan
University of Wollongong, Australia

Abstract

As an instrument to combat climate change many governments are mobilising the efficiencies created by the free market mechanism to penalize polluters for their emissions through the creation of emissions trading schemes (ETSs). Due to their relatively immature, unique and complex nature, one of the main arguments against the introduction of an ETS is the potential for manipulation of carbon markets. This paper examines European Union Allowance (EUA) historical price data and current literature to present a theoretical framework of potential drivers that may have, and may continue to be, facilitating manipulation of the largest and most comprehensive ETS to date, the European Union Emissions Trading Scheme (EU ETS). This theoretical framework is applied to the different forms of manipulation in the EU ETS as identified in the literature to illustrate why manipulation may have occurred in the EU ETS. The informational efficiency of EU ETS carbon markets is also subjected to statistical testing using both parametric and non-parametric tests. Testing results indicate that, in line with current literature and market events, the EU ETS carbon markets were informationally inefficient during the first phase but are developing, with indications of strengthening informational efficiency in the second phase. As carbon market manipulation hampers the development of an efficient carbon price signal, which is integral to ETS success, this paper provides some important implications for ETS regulation and design as well as for the overall effectiveness of emissions trading schemes.

Keywords: Emissions Trading Schemes, Market Manipulation, Market Efficiency