

CO-EXISTENCE OF CARBON EMISSIONS TRADING EXEMPLARS

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Overview

The Kyoto Protocol (1997) assigned a crucial role to emission permits trading for mitigating greenhouse gas emissions. In 2005, the EU Emissions Trading Scheme (ETS) was launched. There is no unanimity about the performance and success of the EU ETS. Opinions and positions on ETS differ among climate policy observers and involved organizations. This is mainly due to the diverging definitions and disparate goals people assign to this environmental policy instrument. It seems difficult to strike a common understanding because of several reasons. One reason is unclear and divergent meanings assigned to essential concepts, such as ‘carbon price’, ‘cap’ on the emissions, and more. Another reason is the gap between easy-going textbook economic theory and the world’s human, institutional, social, economic, technical realities. One more reason is the variety of interests and agendas served by participants in the debate, for example politicians, officials, company directors, consultants, NGOs. The presentation offers a scholarly description of the ETS anatomy and of its working mechanisms. Three comprehensive figures are inserted to clarify the arguments.

Methods

The anatomy of ETS dissects four main issues in the composition of actual or proposed ETS: initial allocation of permits (allowances) to the regulated participants; carbon emissions price levels; compliance expenses dependent on the stickiness of emission abatement cost curves and low-carbon innovation opportunities; pursued policy goals with the ETS instrument. All of these components are extensively discussed in the literature. The added value of the presentation is to provide an overview of the main issues involved and primarily to show the linkages across the various issues. The graphical presentation centered on three figures allows to convey the analysis and the linkages within limited time for an audience informed about the economics of emissions trading.

Results

Linking particular selections of the four issues listed above under ‘Methods’ delivers a particular ETS exemplar. In the presentation, two carbon ETS exemplars are identified. One exemplar pursues the goal of safeguarding European industry from leakage, and is most representative for the EU ETS. The other exemplar assigns priority to fast de-carbonization, and functions mainly as a carbon ETS design, unlikely to be implemented with the present power distribution over the engaged stakeholders.

The EU ETS has been fully successful in meeting its industry safeguarding goal. It will continue to do so because it has metamorphosed over time from the advertised ‘cap-and-trade’ instrument to a price-control instrument. The official EU plans for the future EU ETS confirm the price control strategy via the Market Stability Reserve (from 2019 onwards). Academic ETS proponents seem to have accepted the metamorphosis, contributing to the discussion about price floors, ceilings, and collars (Hepburn et al. 2016). This exemplar of carbon ETS is not suited to realize the fast de-carbonization goal.

The other carbon ETS exemplar for pursuing fast de-carbonization is a design, not evident to bring to life. For reaching fast de-carbonization other policies and instruments are required. “The EU ETS on its own may not provide sufficient incentives for fundamental changes in corporate innovation activities” (Rogge et al. 2011). Other instruments are available and have proven their performance, for example in developing the technologies of wind and solar electricity generation.

Proposals and endeavors to boost the carbon emissions permit prices in the EU ETS are little helpful. For example, a “carbon floor price that starts at a significant level and rises over time” “would trigger cost-efficient de-carbonization of the economy” (Edenhofer et al. 2017) sounds good, but the authors provide no convincing roadmap for realizing this idea.

Conclusions

The actual EU ETS constructed and cured by the ‘carbon coalition’ (Meckling 2011) is highly successful in meeting its goals, like safeguarding EU industry from carbon leakage. The other exemplar opts for high carbon emissions prices to induce industrial innovations towards a low-carbon industry. This design exemplar holds internal contradictions and is opposed by incumbent industrial interests. It is unlikely it can flourish within the EU ETS enclaves. Co-existence of the actual and design ETS exemplars is expected to be impossible.

References

- Edenhofer, O., Flachsland, C., Wolff, C., Schmid, L.K., Leipprand, A., Koch, N., Kornek, U., Pahle, M. (2017) Decarbonization and EU ETS Reform: Introducing a price floor to drive low-carbon investments. Mercator Research Institute on Global Commons and Climate Change.
- Hepburn, C., Neuhoff, K., Acworth, W., Burtraw, D., Jotzo, F. (2016). The Economics of the EU ETS market stability reserve. *Journal of Environmental Economics and Management* 80: 1-5
- Meckling, J. (2011). *Carbon Coalitions. Business, Climate Politics, and the Rise of Emissions Trading*. The MIT Press, Cambridge, Massachusetts.
- Rogge, K.S., Schneider, M., Hoffmann, V.H. (2011). The innovation impact of the EU Emission Trading System – Findings of company case studies in the German power sector. *Ecological Economics* 70: 513-523