

FSR Climate Annual Conference 2022 – 8th edition

Thursday 1 December

10:00-12:15 | Session – Environmental taxation

Presenter: Till REQUATE (Kiel University)

Title: *Commitment Timing to Environmental Policy and the Adoption of Low-Pollution Technologies: An Experiment*

Abstract:

The focus of this paper is whether the timing of the regulator's commitment to an environmental policy affects firms' behavior with respect to the adoption of an advanced emission abatement technology. Our experimental design simulates an industry with small asymmetric polluting firms regulated either by emission taxes or by emission permits. We compare two different timing systems: In the ex ante system, the regulator announces the instrument level (tax rate or quantity of permits) before firms make their decisions to adopt a new technology, while in the ex post system, the regulator sets the optimal instrument level after firms have made their decisions to adopt the technology. We find that in both ex ante and ex post regulation (and in tax and licensing policies), the adoption of advanced technologies is close to the social optimum. In terms of static efficiency of emissions and emissions abatement, the fiscal instrument slightly outperforms the permitting policy. Our results argue for a market-oriented environmental policy, as ex-post regulation may be politically easier to implement than ex-ante regulation.

Webpage and programme [here](#)