A Public Choice View of the European Emissions Trading Scheme – Implications for the Climate and Energy Policy-Mix

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(1) Overview

In this paper, we analyze the EU Emissions Trading Scheme (ETS) from a public choice perspective. That is, we argue that the economic textbook model of the ETS implausibly assumes 1) efficient policy design and 2) climate protection as the single objective of policy intervention. Contrary to these assumptions, we propose that the ETS originates from a political bargaining game within a context of multiple policy objectives. In particular, the emissions cap is negotiated between regulators and emitters with the emitters' abatement costs as crucial bargaining variable. This public choice view yields striking implications for the optimal policy mix. Whereas the textbook model implies that the ETS alone provides sufficient climate protection, our analysis suggests that additional support for renewable energies 1) contributes to a more effective ETS-design and 2) may even increase the overall efficiency of climate and energy policy if other externalities and policy objectives besides climate protection are considered.

(2) Methods/Approach

While it is often argued that the ETS is the first-best policy instrument to promote a transition of the energy sector towards sustainability, we cast a radically different picture from a public choice point of view. That is, we assume that political actors do not primarily act in the interest of public welfare but rather pursue their private interests. In this respect, we argue that the textbook model suffers from two unrealistic assumptions: (1) The design of the ETS perfectly corresponds to the idealized theoretical model. We point out that the design of the ETS may also result from repeated bargaining games between politicians who want to be reelected and interest groups which try to maximize their rents. (2) The sole objective of policy intervention is climate protection. We argue that there may be further objectives such as autonomous RES targets or zero nuclear energy generation. Our paper analyzes what these deviations imply for the design of climate and energy policy. To that aim, we devise a framework comprising four possible cases which have to be differentiated for policy analysis (see Figure 1).

		Objectives of regulation	
		Single Objective: Climate protection	Multiple objectives
ETS design	corresponds to a theoretical model	Case A	Case C
	results from a political bargaining game	Case B	Case D

Figure 1: Taxonomy

(3) Results

Case A. We first replicate the textbook model where the ETS is efficiently designed and only meant to address climate change. We confirm that in this case, any additional policy is welfare-decreasing.

Case B. We demonstrate that if the emissions cap is continuously negotiated, introducing RES-support may politically ease CO_2 reductions. Pushing RES into the energy market lowers the demand for emission permits and brings down permit prices. Thus, RES policies *reduce* abatement costs for ETS participants. In turn, costs (for paying RES subsidies) are transferred to actors outside the ETS. Presuming that emitters are better organized than the general public, RES-support then makes stricter emissions caps politically feasible and may therefore help to attain more ambitious reduction targets.

Case C. We point out that the attainment of objectives beyond climate protection such as an almost full RES-supply by 2050 by the means of the ETS would typically require emission prices of up to several hundreds of euros, i.e. much higher than those necessary for climate protection. This would (1) induce an undesired revival of nuclear power and (2) yield excessively high emission reductions. In line with the classical Tinbergen rule, we therefore conclude that a policy mix is needed to address multiple policy objectives at least cost.

Case D. We argue that most likely climate and energy policy operates in a context where the ETS is continuously negotiated and multiple objectives are to be attained. This makes the case for additional instruments even stronger than under B and C. First, RES policies help to reduce the "political costs" of implementing necessary emissions reductions. These political costs are particularly high in the presence of multiple policy objectives as their attainment would call for particularly high emissions prices. Second, RES-support may actually improve the overall cost-performance of climate and energy policy as it helps to internalize other externalities than climate change.

(4) Conclusions

In sum, a public choice perspective questions whether the ETS alone may provide optimal climate and energy policy. Our analysis suggests that support for renewable energies 1) contributes to a more effective ETS-design and 2) may even increase the overall efficiency of climate and energy policy if other externalities and policy objectives besides climate protection are considered. Thus, our analysis also shows that a public choice view not necessarily entails negative evaluations concerning efficiency and effectiveness of a policy mix.