

EU ETS Hearing, European Parliament

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Chairman, MEPs. Thank you very much for inviting me here today. I am honored to participate in the work of a Committee whose previous activities and contributions I have been following with interest and respect.

I am here to try to provide an academic perspective on the EU ETS. As a researcher who has been particularly interested in the analysis of market-based climate policies and as director of FSR Climate, at the European University Institute, I am pleased to have the opportunity to share some views on the topic and to try to answer your questions. I actually invite you to follow our research and dissemination activities on the EU ETS and other EU climate policies in Florence: Needless to say, being a EU University, we will be very happy to collaborate with you in the future on these matters.

I will organize my presentation in three parts which, due to the limited time, will necessarily be superficial (more information will be probably conveyed during the question time). After a short reflection on the economic and environmental reasons for emissions trading systems, I will summarize the existing academic empirical evidence on the EU ETS. Finally, I will stress the importance of the EU ETS for the development of climate policies in the EU and beyond and will emphasize the importance of the learning by doing process that keeps an efficient ETS in place.

1. Emissions trading systems: a preferred climate policy option

Let me start by underlining the preference of economists for emissions trading systems. This is based on several characteristics that are particularly useful when tackling climate change. First, they guarantee the attainment of an environmental objective (the emissions cap) and thus can be easily linked to policy targets or international agreements in the field. Second, they do so at minimum cost (cost-effectiveness). This is a very important element when mitigation costs are likely to be sizable, such as in climate change. Third, by putting a price on emissions they incorporate environmental costs and send the adequate signals to producers and consumers so that behavioral/operational changes and investments are promoted. Finally, they are able to provide public revenues that may be used for different policy purposes.

It is true that real-world climate policies, and that is also the case of Emissions Trading Systems, have to depart from idealized handbook descriptions. First, due to a number of reasons and practical constraints, additional climate and energy policy instruments (that themselves have effects on ETS) may be needed for environmental and technological purposes. Second, in the presence of countries with no climate policies in place (as is unfortunately the case), negative effects on

competitiveness with limited or null environmental benefits (that is, presence of carbon leakage), may occur.

The multiple changes seen in the relatively short lifetime of the EU ETS (apart from the increasing environmental ambitions) can actually be seen as a way to deal with the complexities of climate policies when implemented in the real world.

2. Some academic evidence on the EU ETS

More than 10 years have passed since the start of the EU ETS and thus data are already available for academic ex-post assessments. Such assessments complement the theoretical headlines just presented. I next summarize the outcomes of the existing academic (economic) literature on two wide areas: environmental effects (including innovation) and competitiveness and carbon leakage. Although there is an increasing number of high-quality studies, some considerations are necessary. First, there is still quite limited evidence (short time span, the delay in the publication process, etc.), also with the application of different/non-comparable methodologies. Second, results reflect specific EU ETS and overall socio-economic contexts. Therefore, their extrapolation to the future should be cautious.

Although EU GHG emissions showed a substantial reduction during the lifetime of the EU ETS, the quantification of the specific environmental effects of the system is not straightforward (other possible causes advanced by the literature are the economic crisis or the introduction of renewable policies) or technically simple. Yet there is clear evidence, based on both aggregate and firm-level data with sophisticated economic modeling, that the EU ETS has contributed to GHG abatement across all regulated sectors at least until the early stages of Phase 2.

There is also evidence on the positive impacts of the EU ETS on patenting and investments in low carbon technologies, even though renewable promotion policies seem to have had a more important effect due to low EU ETS prices.

Regarding the economic impacts on the regulated industry, existing research based on firm-level and survey data does not indicate that the EU ETS has had negative effects on employment, output or business closures. There is, moreover, evidence of cost pass-through for the power and industrial sectors. Finally, there is no evidence so far of carbon leakage brought about by the EU ETS outside the EU.

3. On the importance of the EU ETS in Europe and beyond

At this stage it is clear that I am bringing a positive message on the EU ETS. It is an instrument with (theoretical and empirical) academic backing and with two important properties, cost-effectiveness and the introduction of a long-term price signal, which make it the perfect candidate to be the cornerstone of EU climate policies.

Moreover, its effects are remarkable outside the EU because the eventual application of similar approaches, after our experience, may facilitate the extension of climate policies across the world. Being an objective in itself, this phenomenon will also be

positive for the EU ETS by reducing competitiveness concerns and expanding its cost-effective properties through linkage.

Indeed, the EU ETS is a sophisticated instrument that is being implemented in a supranational and heterogeneous setting, and thus could be seen as a prototype for the rest of the world.

That internal and external relevance demands, however, a careful fine tuning of the system in the complex context for application which I already mentioned. Modifications, such as the ones now being considered by the Committee, are not new for the EU ETS, which is a clear example of learning by doing and adaptation to changing circumstances. Compromises are necessary but the properties that largely explain the academic attraction to these systems - environmental integrity, long-term signals for operational and technological improvements and cost-effectiveness - should be especially preserved.

Thanks a lot and I look forward to your comments and questions.

Emissions Trading System - ETS

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- Emissions trading systems: A preferred policy option
 - Challenges of climate change
 - Good properties of 'market-based' instruments
 - The complexities of climate policies in reality

 - Some academic evidence on the EU ETS
 - Environmental effects
 - Competitiveness and Leakage



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- **On the importance of the EU ETS in Europe and beyond**
 - **Academic backing: Theory meets practice**
 - **EU: cost-effectiveness and long-term signal**
 - **A prototype for the world**
 - **The importance of Learning by doing**

