

**The Impacts of the
European Emissions Trading Scheme
on
Competitiveness and Employment in Europe
–
a Literature Review**

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Executive Summary

In 2005, the European Emissions Trading Scheme (EU ETS) came into force. This scheme is the cornerstone of the EU member states' efforts to fulfil their emission reduction targets of the Kyoto Protocol. The protocol requires European countries to reduce their greenhouse gas emissions by eight per cent until between 2008 and 2012. Our paper analyses the future impacts of the EU ETS on competitiveness and employment. To achieve this we identify the key determinants and characteristics of efficient emission trading systems, and review the literature dealing with the impacts such schemes can have on competitiveness and employment.

We have identified the choice of the reference scenario as the most critical issue for an appropriate analysis of the relevant literature. The results from all theoretical and simulation studies analysing environmental regulation depend substantially on the reference scenario, i.e. whether the impacts of the EU ETS are compared to a business as usual-scenario (BAU) with no regulation in place at all, or whether the impacts are compared with the impacts of another instrument such as Command and Control regulation (CaC). Given the legally binding framework of the Kyoto Protocol, the EU has no alternative but to engage in environmental regulation to reduce CO₂ emissions.

Apart from this important qualification regarding the reference scenario, our paper puts the ETS related costs and impacts as derived from the models analysed into a wider context. Costs of climate protection – for instance - have to be compared with the costs of inaction, i.e. the external costs caused by global warming. Further, other cost factors such as labour costs have to be taken into account for a realistic assessment of ETS impacts. A certain innovation potential of ETSs also needs to be considered. The EU ETS could significantly be optimised and also grow in scope and scale, especially geographically over time, resulting in a global policy diffusion and corresponding demand. In this case first mover advantages can be expected for the EU.

If the reference scenario and other key assumptions of the models are identified and analysed, it is possible to obtain a relatively clear picture of how the introduction of the EU ETS influences Europe's competitiveness and employment. With regard to competitiveness, most of the studies model the EU ETS and compare it with other regulation scenarios. The reference point is often Kyoto compliance without allowance trading. It makes sense to choose this scenario as it clearly demonstrates the efficiency or cost effects of emissions trading in relation to given environmental objectives. The alternative BAU scenario without emission reductions is used in single cases.

The competitiveness record of the EU ETS is mixed, with emission trading coming out as the cheapest option, if we accept a reality with climate change and Kyoto compliance. Simulation studies suggest that the system offers major cost benefits when compared with Kyoto-based non-trading scenarios. Possible positive innovation effects must also be taken into account, depending on the actual design of the scheme. Winners and losers at the firm and sector level are produced, particularly in comparison with the BAU scenario, but even here the results of the studies analysed suggest only modest costs.

Studies dealing with the power sector disagree on whether the system enables the sector to boost its gains. One thing appears to be clear, however, and that is that the sector is not among the major losers produced by this mechanism. The main reasons for potential negative impacts on Europe's competitiveness found by some studies are the heterogeneous National Allocation Plans and the limitation of emissions trading to a handful of sectors. This means that the mechanism is by no means optimal from an economic point of view. Improvements in the system with significantly lower costs whilst retaining the same ecological goals are certainly possible. The potential this represents for the instrument should not, however, obscure just how much has already been achieved with the EU ETS. If countries were required to comply with their Kyoto commitments without engaging in any trading at all, this would result in a substantial increase in costs. A well designed EU ETS is found to clearly be the cheapest option.

With regard to ETS impacts on employment, evidence is found for both positive and negative impacts of environmental regulation and ETSSs. However, we have to be very careful in deriving robust conclusions from the studies analysed. Only two out of the six available studies are focusing on the EU ETS, and one of the two has been criticised for flaws in the methodology. Further, it is crucial not to ignore the choice of the reference scenario in the studies evaluating employment effects. Almost all studies use BAU scenarios as a reference rather than alternative regulation. Comparing the impacts of ETSSs with the impacts of BAU, it is simple to assume a moderate reduction in employment. However, even compared to BAU neither economic theory nor the simulation studies reviewed suggest high employment reductions. If ETS employment effects are compared to impacts of alternative regulation methods accepting the need to reach the Kyoto targets, the arrangement of the EU ETS is certainly among the better choices. Because of its flexibility and the innovation incentives induced, an ETS should be preferred to non-market instruments.

To conclude, the employment effects of the EU ETS will be smaller than many representatives of the sectors concerned fear. Aggregated job losses will barely be visible,

even if BAU is used as a reference. This is due to the choice of an ETS to achieve the target defined in the Kyoto-Protocol as well as the specific design of the EU ETS. A variation of the mechanism intended to improve its labour market impact would therefore appear to be problematic. The mechanism should not, however, be expected to create jobs. At the firm or even sector level, there will be winners and losers. Some firms and sectors will lay off workers while others will recruit.

However, on the basis of the scientific research available to date one cannot draw solid conclusions regarding the sector-specific ETS impacts on employment. Even if the overall effect for the EU turns out to be negative, our analysis finds that it will certainly be of minor importance.

Summing up, the impacts of the EU ETS on competitiveness and employment are modest, and they are smaller than the impacts of alternative regulation scenarios. Compared to these other regulation methods ETSs can have positive competitiveness effects. However, the EU ETS is not designed to boost Europe's economy. Its prime purpose and justification is to ensure that Europe's CO₂ emissions are brought down and Kyoto targets are reached at minimal costs.

The EU ETS should be justified on environmental grounds. It is especially important that modifications to the system due to economic considerations do not undermine the environmental goals associated with this policy instrument. The EU ETS will not be responsible for a significant reduction of EU competitiveness. Consequently the scheme will also not be a job killer.