



Competitiveness and the EU ETS

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Competitiveness Issues in Climate Change Policy –
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Key Messages

- **Notions of Competitiveness**
 - Public debates show little clarity what notion of competitiveness is meant
- **ETS and Post-Kyoto**
 - The ETS is the first well-established trading scheme for emission rights. It has created a European and even world-wide market for carbon. Carbon is a commodity! In addition, it is a open system that can be expanded to a wider coverage than the EU.
- **Disortions of the ETS**
 - Two major distortions have limited the efficiency of the ETS: Only about half of the emissions are covered by the ETS. The free allocation of rights has introduced ill-guided incentives to emittors.
- **Sectoral Competitiveness**
 - The negative competitiveness effects of the ETS are small and depend among others on the design of the ETS as well as the climate policies of the other large emittors outside the EU.

What is Competitiveness?

There are at least four types of competitiveness:

- International competitiveness
- Sectoral competitiveness
(Comparative advantage)
- Success on world markets
(Relative World Market Shares)
- Firm competitiveness
(Long-run Profitability)

Modelling Approach

- General Equilibrium Model „DART“
- Regional Structure
 - 15 EU + 7 Non-EU economies
- Sectoral Structure
 - 5 energy + 6 non-energy sectors
- EU internal carbon market
- CDM project market with transaction costs

„DART“ Model Structure

| EU-West | | EU-East | |
|----------------|----------------------|--------------------|-------------------------------|
| Energy Sectors | | Non-Energy Sectors | |
| COL | Coal Extraction | IMS | Iron, Metal, Steel |
| GAS | Natural Gas | PPP | Pulp & Paper Products |
| CRU | Crude Oil | CEP | Chemical Products |
| OIL | Refined Oil Products | AGR | Agricultural Products |
| EGW | Electricity | MOB | Transportation Services |
| | | OTH | Other Manufactures & Services |

Scenarios I

- **OPT**

The EU target is reached with full EU emissions trading covering all sources of CO₂. No limit on the use of CDM/JI credits. Other Annex B regions USA and “Other Annex B” (OAB) do not undertake any climate policy.

- **ETS**

Emission trading only among the ETS sectors. The emission targets for the non-ETS sectors are reached by means of a uniform national carbon tax. The targets for the ETS and the non-ETS sectors are from the NAPs and the EU climate package. The use of CDM/JI credits by governments is limited to 3% of the non-ETS emission in 2005. The use of CDM in the ETS sectors is limited according to the NAPs for the 2nd trading period of the ETS.

Scenarios II

- **ETS+**

From 2012 on, the ETS is extended to the chemical industry and the transport sector. The relative ETS and non-ETS targets remain the same as in [ETS]. The CDM/JI limits remain the same in relative terms as in [ETS].

- **30P**

Until 2012 same as [ETS]. From 2013 on, non-EU countries face emission reduction targets with per capita emission rights converging until 2050 (“Contraction and Convergence”) and global emissions reduced by 50% relative to 2005. The EU ETS and non-ETS targets are 30% instead of 20%. The non-ETS sectors are allowed to cover 50% of the extra reduction by CDM credits.

- **limCDM**

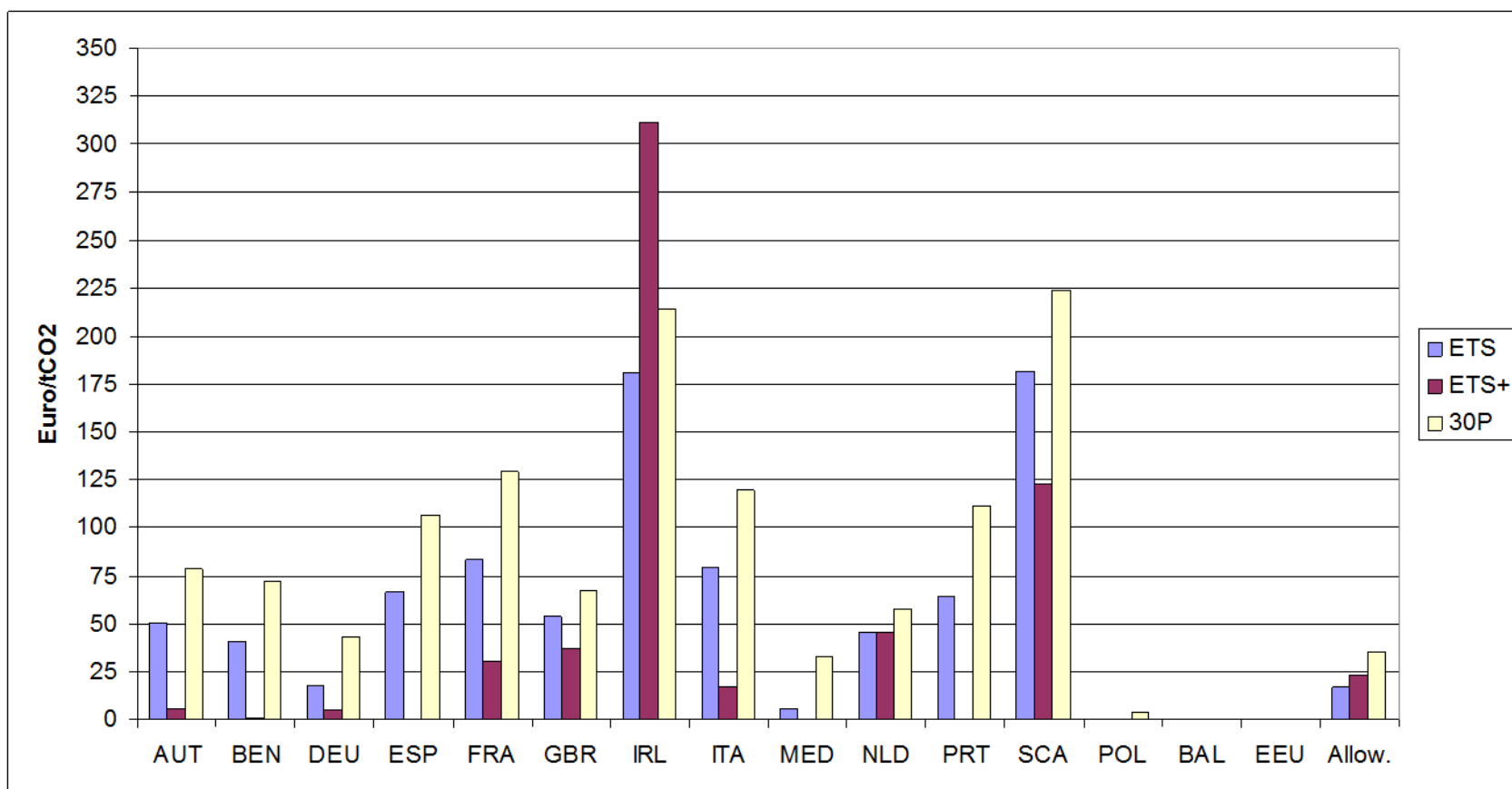
Same scenario as [OPT] but CDM credits limited.

Post-Kyoto

- The ETS has started as a regional program.
- It has been turned into an open system enabling it to become the nucleus for an international trading scheme. This will bring low cost abatement options into practice. In addition, a broader ETS including other national and sub-national trading schemes paves the way for a global trading scheme in a Post-Kyoto world.
- CDM credits have been intensively used by China and recently India. However, the projects are dominated by non-CO₂ GHGs.

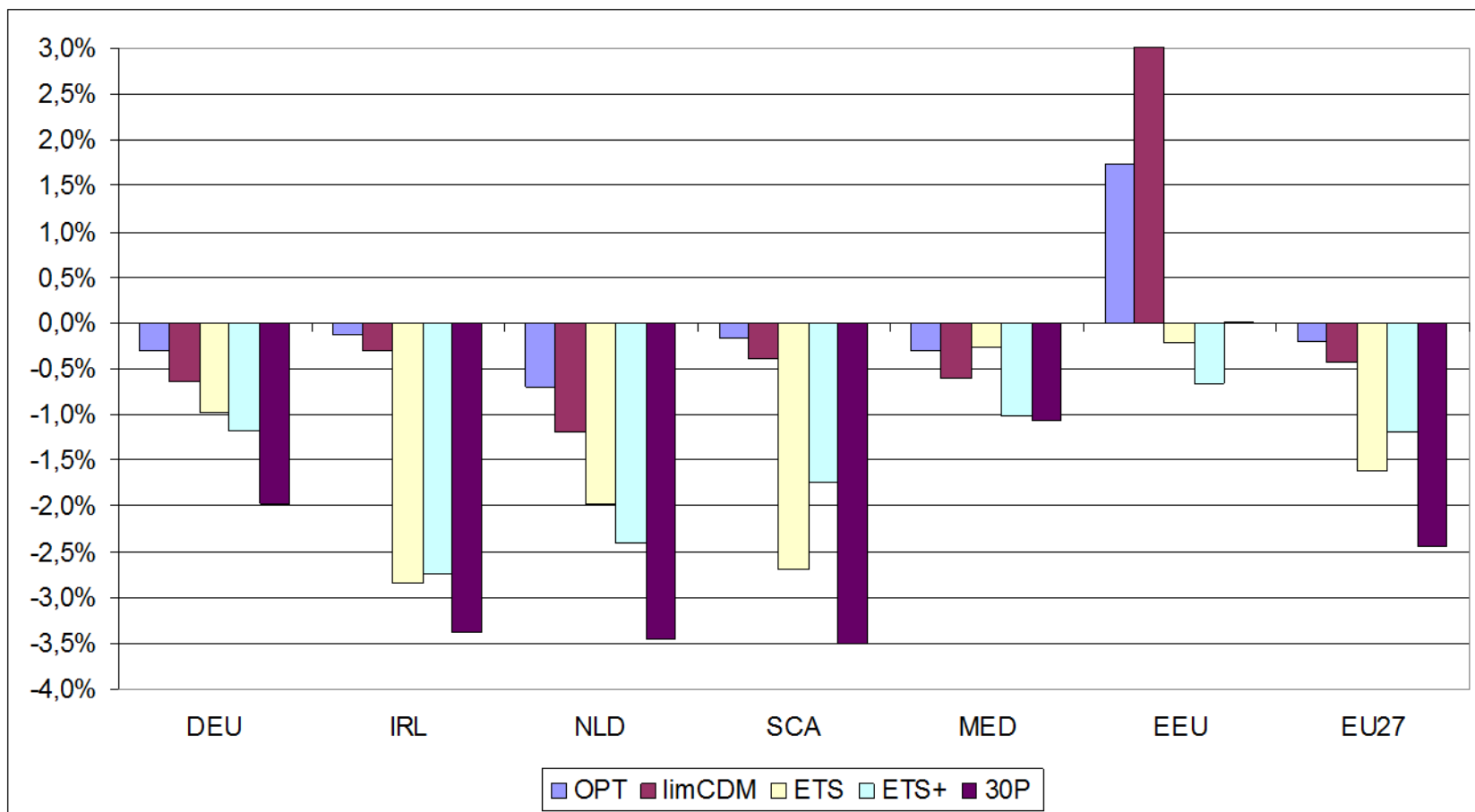
How Efficient is the ETS ?

Implicit Carbon Prices for the Non-ETS Sectors (2020)

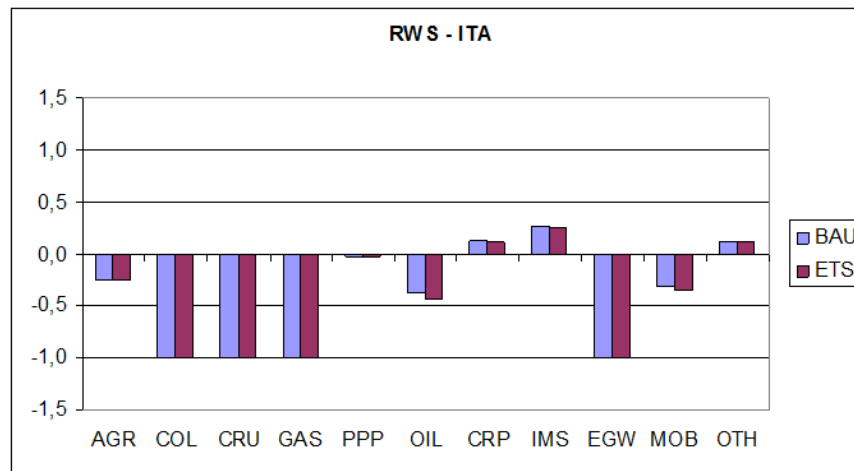
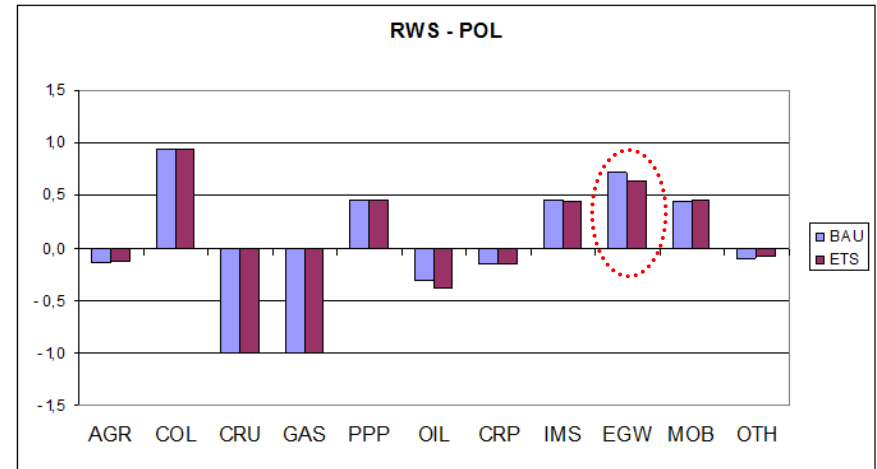
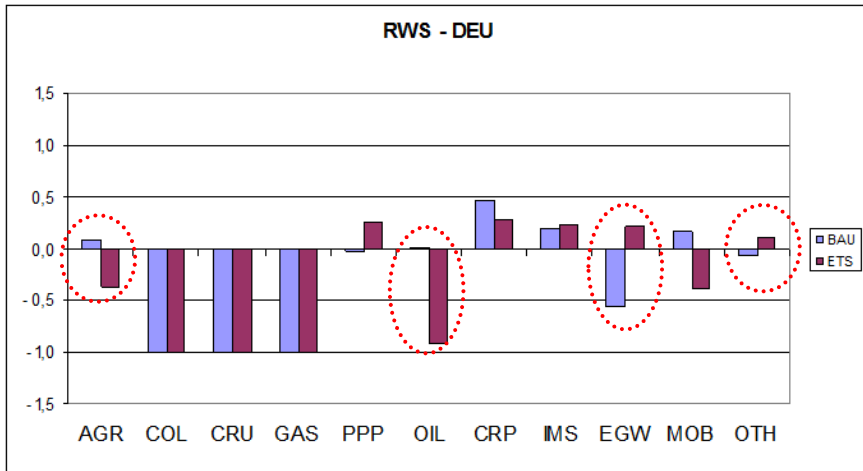


International Competitiveness

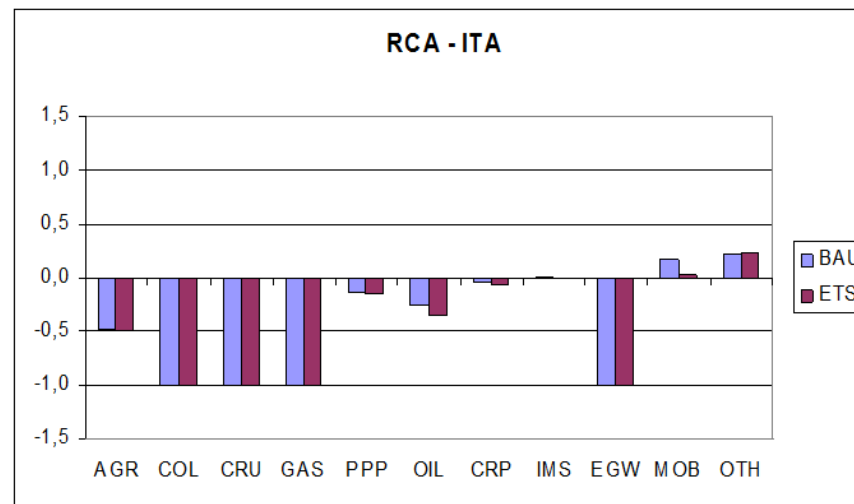
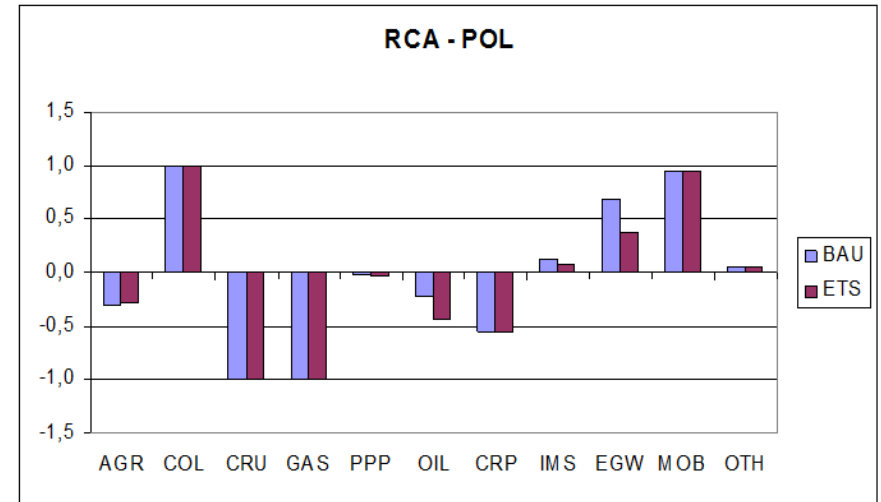
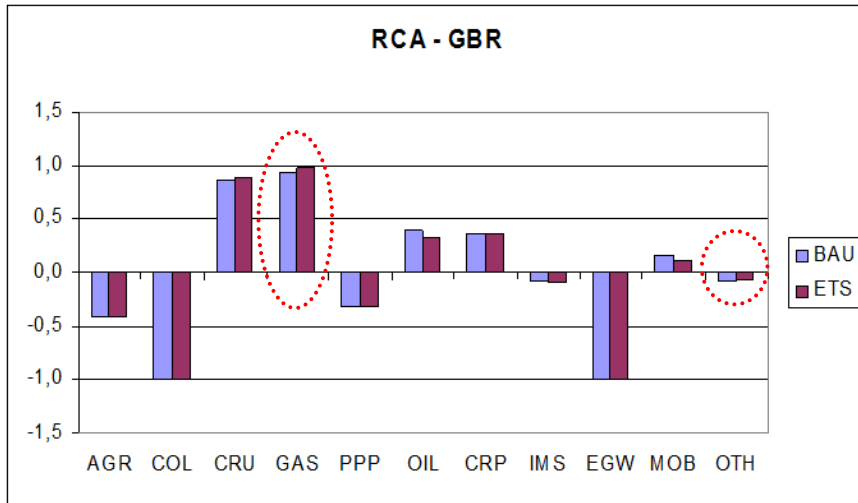
Welfare Effects of Different ETS Systems (2020)



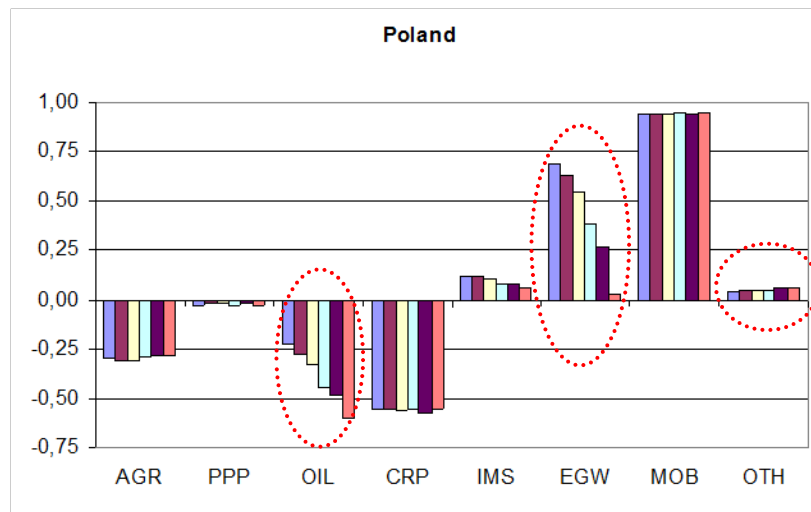
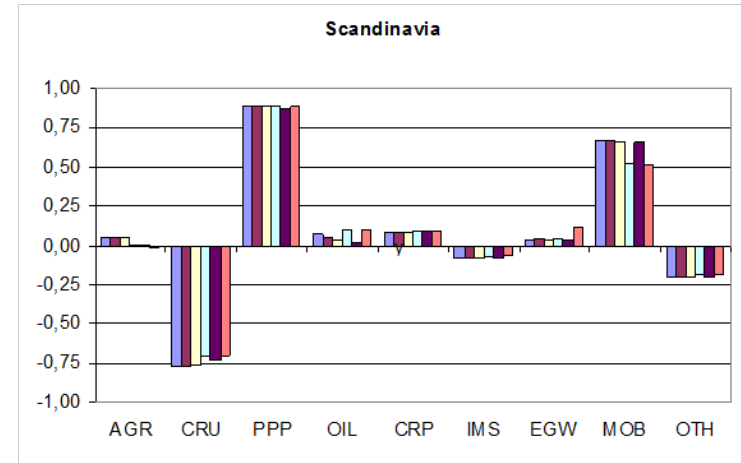
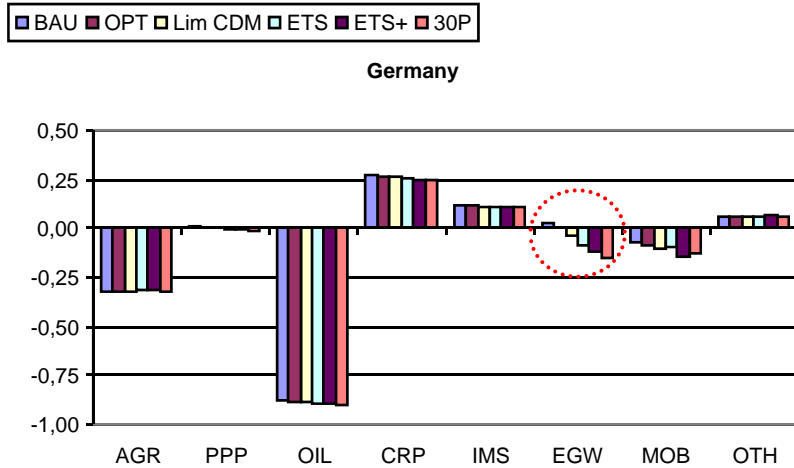
Success on World Markets



Sectoral Competitiveness



Alternative Scenarios



Robustness

- Further disaggregation
- Assumptions about import elasticities
- Absolute shares in scenario analysis is less reliable than changes in relative terms, i.e. in structural effects.

Summary

- The competitiveness effects in terms of national welfare as well as in terms of sectoral competitiveness depend on the efficiency of the European climate policies.
- Most effects seem to occur in internal market trade. Extra-EU trade effects are small.
- Non-energy intensive sectors gain while some energy-intensive ones lose competitiveness.

Summary

- The concerns over a loss of competitiveness of certain European industries is exaggerated. Only very few energy intensive firms that are exposed to international competition and that have no opportunities for substituting away from fossil energy sources are facing difficulties in a more stringent climate policy environment.
- However, they represent a small share of the economic activities in the member states of the EU!

Thank you for your Attention!

