Environmental and economic effects of the ETS

Some considerations and linkage with other research

CE Delft

Committed to the Environment

Reflections

- Important paper
- Two topics that have been heavily debated: Effectiveness of ETS and Carbon Leakage.

Main messages

- The EU ETS is delivering reductions. Size of reductions is debatable
- Effectiveness of ETS is related to allocation: less free allocation increases effectiveness
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Effectiveness of the ETS

- Studies often fuelled by the low prices of EUAs (till recently)
- Three study approaches

1) Comparison against historic baseline (Liang *et al.*, 2013)
2) Questionnaires (Martin *et al.*, 2016)
3) Comparison ETS/non-ETS (Wagner, 2013; Petrick and Wagner, 2014)

Third seems to be the best, but can we control enough for size?

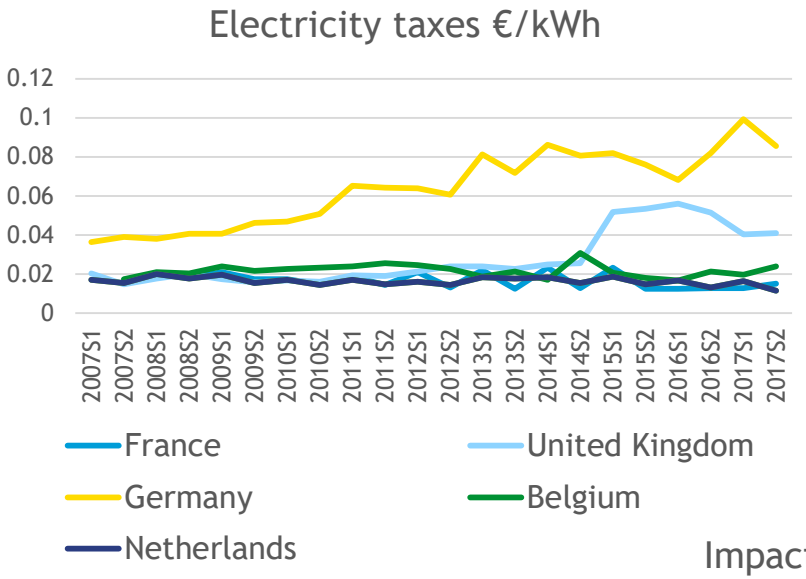
Do non-ETS firms not have similar costs but other instruments?

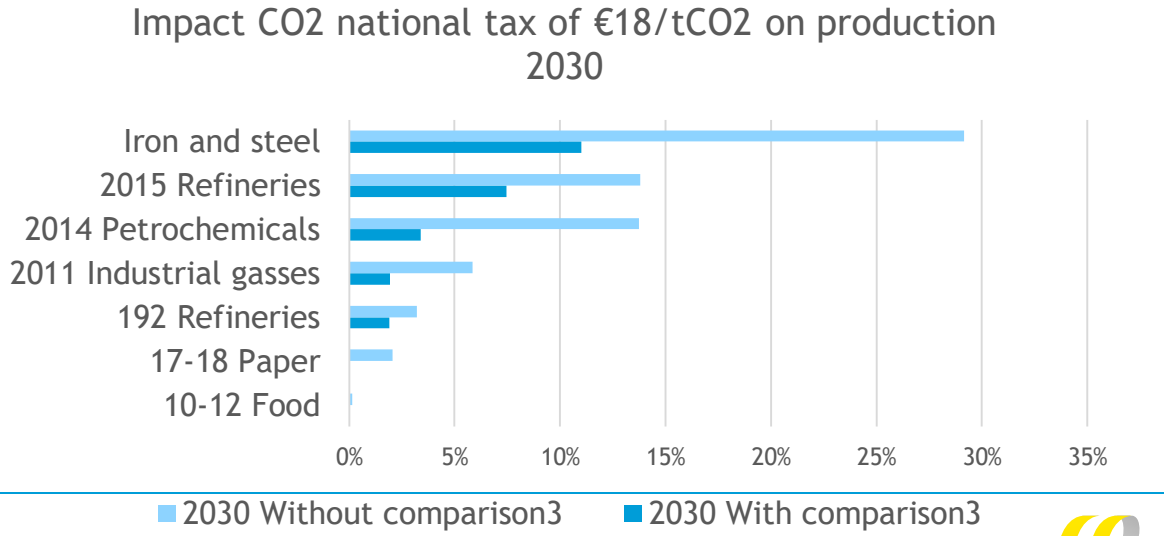
Langeler (2017) for NL: ETS did decrease emission intensity but only in Phase 2, not in Phase 1. Turnover very decisive variable. CDM/CERs did have a negative impact!

Economic performance

- Concern about economic conditions (carbon leakage) the most debated topic in the EU ETS for over a decade
- Normally this would have been investigated using economic models: they show that energy intensive industries have a competitive disadvantage (loss in production) of 1-5% of €30/tCo2. .
- This study shows that turnover and assets have been increasing in ETS firm in all model formulations, while profits, employees, ROA and closures remain often insignificant.
- Free allocation of allowances + cost pass through would imply increase in profits. This study does not find evidence
- Increase in turnover can only be explained by reference to increase in production: opportunity benefits from enlarging production (Ponsard)?
- Explanation of this study that firms have largely invested in fixed assets as emission control is not evidenced by research based on questionnaires (Martin *et al.*, 2016; ICF, CE Delft, ZEW, SQ (2016). .

But economic models cannot model reality well enough…





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