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Designing Effective Emissions Trading

Lessons from the EU ETS

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TEMPO konferanse ,
Forskningsparken, 18/6 2014

Structure

1) Point of departure: the global spread of emissions trading

   - **Which design lessons can be learnt from the EU – 'the struggling pioneer'?**

2) Brief intro to emissions trading

3) Explore more deeply three key design challenges and how handled by the EU

   - Reporting and verific.// cap setting// coverage

4) Concluding reflections

The global spread of emissions trading

- *'A sort of paradox'*:
- The frontrunner EU ETS is struggling
  - Too many allowances; too low price to induce low-carbon shift
- But actors around the globe turn to and adopt emissions trading
  - China and US dynamics particularly important
  - But also numerous other national and sub-national initiatives – cf. World Bank 2014

The global spread of emissions trading

- Nearly 10 years of EU frontrunning indicates important design lessons
  - Taking into account history and the wider societal context
    - Not least the global context
      - US SO2/NOx; Kyoto; Copenhagen; Paris
  - Impl. theory: you need at least 10 years experience
- But before going more in-depth…

Brief intro to emissions trading

- *Emissions trading is a politically created and governed market instrument*
  - So different types of lenses/knowledge to understand it!
- *Such trading is an **instrument** to) promote emissions reductions; 2) cost-effectively*
  - Not an end in itself!

Brief intro to emissions trading

- 'Cap-and-trade' means politically deciding total level of emissions ahead
  - In theory, more steering than taxes, and more flex./cost.eff than direct regulation
- All participants are given formal permits ('allowances') to emit a certain quantity of CO2/GHG
- Each year report on emissions and surrender the allowed number of permits
- Allowances can be bought and sold, creating a market and a carbon price

Brief intro to emissions trading

- If emissions are higher than permitted, then 1) buy; 2) pay a fine - or 3) 'go greener'
- If lower, sell or bank
- In theory, less allowances handed out than business as usual
- Creates scarcity, and a robust carbon price
- But practice has turned out to be more complicated….

Challenge 1: get the numbers right

- Core: collect and handle information about emissions in a way that 1) fosters trust; and 2) allows transparency
- ETS overview:
  - *Three phases:*
    - Pilot (2005-7); Kyoto (2008-12; Third (2013-20)
  - *Started by necessity as decentralized system*
    - Member states in power, within common framework
    - Also decentralized registries

Challenge 1: get the numbers right

- All installations needed approved monitoring plan and yearly report emissions, checked by accredited verifiers
- Possibility to use also Kyoto credits (e.g. CDM) meant additional complexity
- Initial technical loopholes that were exploited
  - VAT frauds, hacking and cyber-thefts in 2009-2011
- *Response:*
- 1) Centralization
  - A central registry from 2012 on (the EU Transaction Log)

Challenge 1: get the numbers right

- 2) Technical improvement
  - Several technical precautions introduced
- Problems more IT than ETS?
- Transparency still a challenge
  - Sandbag
- **Lesson: the EU has learnt the hard way and this part of the ETS seems to work, also as model for others. But *complex* systems mean general transparency challenges.**

Challenge 2: set a 'reasonable' cap

- Core: to really drive the low-carbon transition and still retain flexibility
- ETS developments:
  - Initial decentralized cap setting was politically essential
  - Decentralized caps meant generous caps
    - Uncertainty, about what others did
    - Spilled over to Kyoto phase

Challenge 2: set a 'reasonable' cap

- First response in 2008: a *single* cap for 2013-20
  - Based on overall 20% target (alt: 30%)
  - Expectation of continued economic growth
  - A 1.74% linear reduction factor *beyond 2020* meant to provide long-term horizon
  - No interest in a European 'carbon bank etc.
- Then the financial crisis set in from 2009..
  - Lowered production, need for allowances and price (from 30 to 4-5)

Challenge 2: set a 'reasonable' cap

- And Copenhagen outcome did not allow move to 30%
- Temporary further response in 2013:
  - 'Backloading' 900 mill.
- Structural reform proposals in 2014:
  - 'Market stability reserve' from 2021
  - Increased reduction factor to 2.2%

Challenge 2: set a 'reasonable' cap

- More about the story:
  - Wettestad, 'Rescuing EU Emissions Trading: Mission Impossible?', *Global Environmental Politics*,'May 2014
- Debate now focused on possible fast-tracking
- **Lesson: the EU's model is basically OK, except for adjustment mechanism (now proposed). The basic problem is too weak targets, which is a global problem**

Challenge 3: extend the sectoral coverage

- Core: including many sectors levels the playing field. But this increases complexity, also as sector characteristics vary
- Main ETS developments:
  - Being frontrunner, started out cautiously and rather narrow
    - Utilities – and several energy-intensive industries
    - Fairly large point sources, regulated earlier (LCP, IPPC)
  - Created 'ETS' and 'non-ETS' sector

Challenge 3: extending the sectoral coverage

- Transport emissions targeted from 1980s on – and CO2 emissions from late 1990s on
  - VAs, car emissions regulation, fuel quality directive
- So ETS inclusion efforts face a relatively dense 'policy space'
- Still, aviation included from 2012 on
  - But international resistance, and so far only EEA coverage

Challenge 3: extending the sectoral coverage

- The option to further include the transport sector is at the corner of the table..
  - Need to clarify relationship to existing policies
- **Lesson: Historical reasons (frontrunning) made the EU starting out rather narrowly, creating path-dependency. Others can possibly start out more broadly, depending upon e.g. existing policies in the various sectors**

Concluding reflections

- *Learning from the EU ETS (and others) must take into account the historical and societal setting*
- Keeping this in mind, there *are* general lessons to be learnt
- Only tentative, probing lessons put forward here – and there are important other dimensions

Concluding reflections

- FNI-led project starting on the global diffusion of emissions trading
  - The EU, China, California, Australia
- **Common challenge to clarify lessons and improve the understanding of fascinating global development!**