European University Institute
Robert Schuman Centre for Advanced Studies
Climate Policy Research Unit

The EU ETS: Lessons and Challenges

Denny Ellerman

EDF Applied Environmental Economics Seminar

New York, NY
October 23, 2012

Two Ways to View EU ETS

- **As a multi-national cap-and-trade system**
  - EU member-states are sovereign states despite rhetoric
  - Directives are effectively multi-national agreements
  - Substantial differences in economic circumstance, market orientation, and national priorities
  - 100 % +(EEA) participation in system
  - A global model?
- **Cap-and-trade in a unitary state**
  - Much of criticism based on premise of a unitary state
  - Still, remarkable degree of uniformity & harmonization
  - Most of lessons and challenges apply to unitary context as well as to the multi-national construct

Lesson: Free allocation vs Auctioning

- **EU ETS would not exist without *initial* free allocation**
  - Condition for avoiding UK and German opt-out in trial period
  - Electric utility support premised on free allocation
  - More generally, avoids disturbing existing implicit rights whether at national or sub-national level
  - Assignment of assets roughly proportional to liabilities
- **However, auctioning emerged with remarkable rapidity**
  - Significant shift to auctioning in 2013 (40+%) with 100% by 2027
  - Agreed in fourth year after start (2009 amended Directive)
  - Windfall profits controversy helped, but more importantly…
  - NAP fatigue: EU-wide cap and auction rights (more later) provided a way out
  - Also, did not have to address revenue allocation (as in W-M)

Lesson: Leakage/trade and macro effects are minimal

- **Leakage rhetoric does not match observed effects**
  - A politically potent argument used equally by anti-greens and greens (with perhaps unequal success)
  - Modeling always shows trade effects but ex post analysis and surveys reveal little real effect (so far)
- **Other prices matter!**
  - Pre-policy industrial structure reflects other prices/factors that continue to be (more) important, including energy prices
  - Perhaps carbon price would have an effect at $100/ton but not $20
- **Same arguments apply for macro-economic effects**
  - EU macro-economic performance more affected by sub-prime mortgages in America than the carbon price in Europe
  - The economy is not “wrecked,” “de-industrialized,” etc.

Lesson: Offsets are working

- **The only cap-and-trade system with significant offsets**
  - Achieved by delegation of certification authority
  - CDM Exec Board has done an acceptable job
  - Succeeded by EU “graduation policy”
- **Costs have been reduced**
  - Due to lower carbon price as expected
  - An extra fillip from the offset limit and associated CER discount
- **More important strategic objectives are bearing fruit**
  - CER would be a pale shadow of itself without the EU ETS
  - Extended EU carbon price throughout the world
  - China is main beneficiary of CDM and now “graduating”
  - Do offsets propagate trading and lead to linkage?

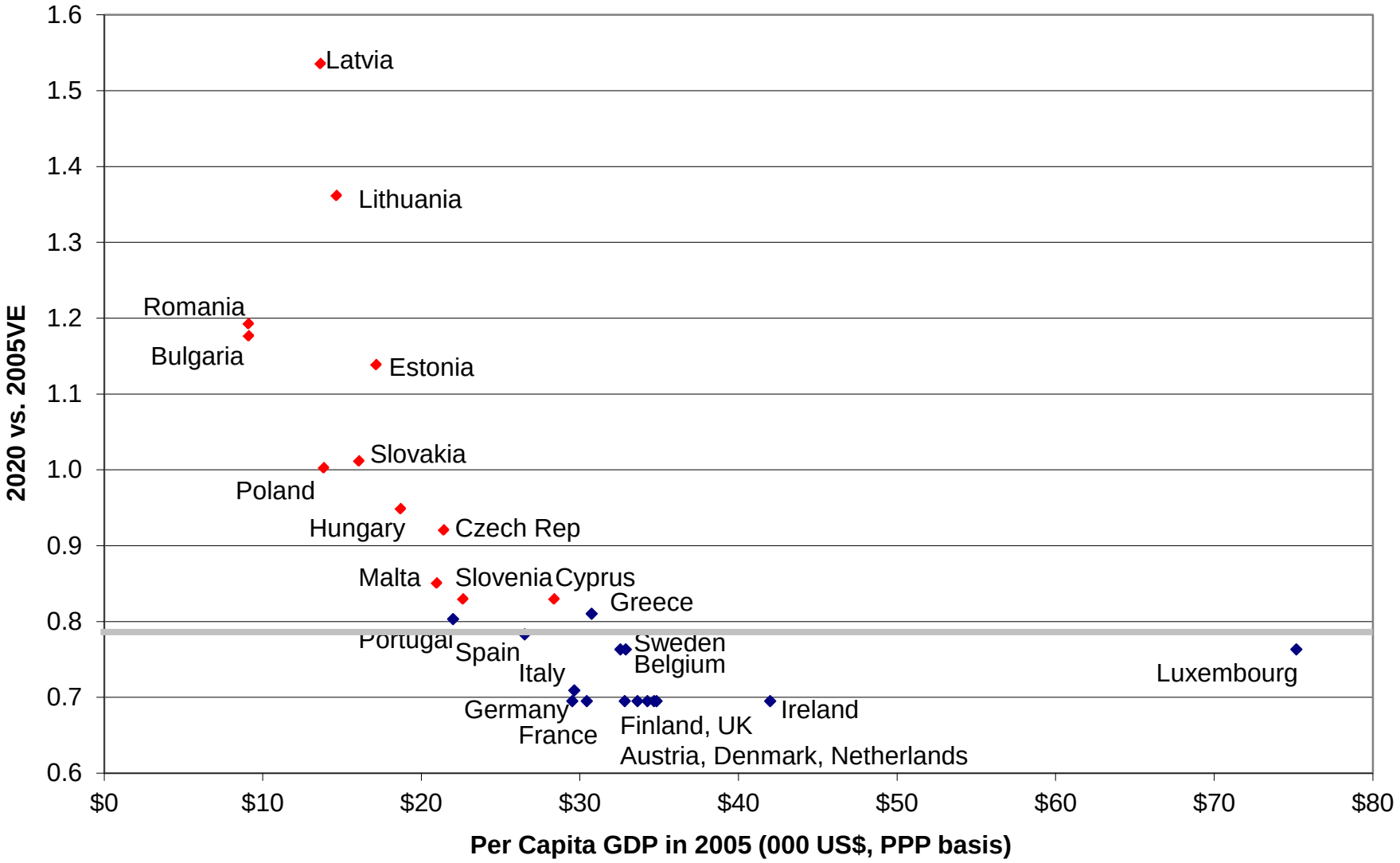
Lesson: What Made the EU ETS Possible?

- **Pre-existing club benefits**
  - Not all member states are equally enthusiastic but other benefits from belonging to the EU club
- **Commission and "comitology" procedures provided pre-existing coordinating mechanisms**
  - Not created for this purpose but readily adapted
  - Very active educational effort by the Commission
- **A favorable historical moment**
  - Increasing confidence in European construction
  - Climate provided appealing and feasible "soft-power" role for Europe, especially after Bush's Kyoto rejection
  - Would it be adopted today?

Lesson: Auction rights

- **An idea emerging from practice**
  - Auctioning in a multi-national system raises question of how revenues are to be distributed among participating states
  - Especially with common cap and when sovereignty concerns forbid funding a central institution
  - EU answer is: Right to auction shares of the common cap and receive the resulting revenues (less some agreed set-asides)
  - Equivalent to national caps but without being seen as such
- **A little understood (better?) form of differentiation**
  - Resulting allocation closely follows GDP/capita of member states
  - Least well off receive as many as 50% more than 2005 emissions, while better off generally receive 30% less
- **A logical evolution for linked national systems?**

Phase III Differentiation



Challenge: NOT low price and "over-allocation"

- **Common perception that EU ETS has "failed" because prices are "too low"**
  - Not providing "proper" long-term investment incentives for "required" transformation of technology; "locking-in" wrong plant
  - Yet, lower expectations for economic growth mean less needs to be done
- **Compounded by "over-allocation" mantra and failure to recognize banking behavior**
  - Modeling and logic clearly show declining caps trigger banking
  - Credible future scarcity will create a positive price even in the presence of initial "over-allocation"
  - Price behavior clearly reflects continuing future scarcity and reduced expectations of growth
  - Consider a W-M price (if enacted) with EIA's latest CO_2 forecast

European Union Allowance Prices 2005-Present

Challenge: Overlapping/combined instruments

- **Wind generation is very effective at reducing demand for EUAs**
  - 50 Mt-CO_2/yr in Germany (15% of electricity emissions)
  - At a reasonable premium: average 43€/t-CO_2 for 2006-10
  - But about 400 Mt/yr EU-wide from fuel switching for this price of which 140 Mt/yr in Germany
- **Why are RE incentives viewed as a success and the EU ETS as a failure?**
  - The political allure of targeted subsidies with built-in support plus
  - Carbon price benefits no particular political entity
  - Industrial opponents of EU ETS benefit triply: don't pay for it, lower EUA price, and lower electricity prices (merit-order effect)
- **Could this get out of hand, especially with sluggish economic growth?**

Challenge: Confusion over the objective

- **EU ETS is limiting emissions to the agreed objective**
  - Little doubt about 2020 limit being met
  - 1.74% annual decrement is too little for -80% by 2050
  - But what is agreed can be changed
- **But EUA price also sold as being "transformative"**
  - It may or may not be. And more so, with robust growth.
  - But if (pre-conceived) transformation is the goal, a poor instrument
- **Much of current debate reflects disagreement about the objective of EU climate policy**
  - As usual, political consensus that allowed initial enactment promised a little bit to everybody
- **Is the EU ETS the flagship or a backstop?**
  - Very different outlook for building global system