Centre for Energy and Environmental Markets

UNSW
THE UNIVERSITY OF NEW SOUTH WALES
SYDNEY • AUSTRALIA



Emerging lessons from the financialization of carbon

Paul Twomey

Centre for Energy and Environmental Markets, UNSW

cheatneutral.

Helping you because you can't help yourself

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What is Cheat Offsetting?

When you cheat on your partner you add to the heartbreak, pain and jealousy in the atmosphere.

Cheatneutral offsets your cheating by funding someone else to be faithful and NOT cheat. This neutralises the pain and unhappy emotion and leaves you with a clear conscience.

Can I offset all my cheating?

First you should look at ways of reducing your cheating. Once you've done this you can use Cheatneutral to offset the remaining, unavoidable cheating

are you a cheater?

cheatneutral can help you **offset your indiscretions**.

offset now!

loyal and faithful?

become an offset project and **get paid** for not cheating

find out more!

Projects

Some of the people who are offsetting your cheating:


alex


chris


mim


rich

so far, cheatneutral has offset *65, 768* cheats and has *9002* faithful people ready to neutralise your misdemeanours.


$$$
Marx Commodified

Outline

- Theoretical attractions and limitations of carbon pricing
- Carbon pricing in practice
  - Eight selected lessons
- Future directions

Apparent attractions of carbon pricing

- The price signal **permeates the economy** :
  - induces **substitution** towards lower carbon fuels, products and services by industry and consumers.
  - creates incentives for **investment in low carbon production**
  - stimulates **innovation** and development of lower carbon technologies, products and services.
- Incentivizes management to find the **least cost means of reducing emissions**.
- **Doesn't require the regulator to know** (or direct) individual firm abatement opportunities.
- **Polluter pays**
- **Provides an ongoing incentive some technologies** will always require to install and operate.
  - e.g. coal generation with carbon capture and storage
- Increase in user pricing **avoids 'rebound effect'**
  - Unlike some energy efficiency programs which lower end-user prices
- **Avoids the time-lags and drop-outs** associated with other financial instruments
  E.g. Grattan Institute (2011) on energy grant and loan schemes in Australia

Reasons unlikely to be a universal panacea

- Interactions with **other market failures**
  - Knowledge spillovers from technological innovation; Market power; Imperfect financial markets
- **Administration and compliance costs**
- Complexity of schemes especially **vulnerable to dilution and rent seeking**.
- Carbon as a **'fictitious commodity'**
  - Difficulties in measurement, commensurability, separation from wider social context.
- A weak tool to overcome **social and technological lock-in**
- **Not likely to encourage diversity**
  - Favours 'closest to the market' technologies
- A weak tool to assist emerging technologies across the **'valley of death'** to commercialisation.
- Humans are **not purely self-interested, deliberative, rational beings**.
  - **Habit**
  - **Intrinsic motivations**
  - Endogenous and social construction of **preferences**
- More generally, does not deal with the **growth driven imperative of capitalism**

1. Modest emission reductions so far

- Aggregate level studies (EU ETS)
  - Phase 1 (2005-2007): emissions across all regulated sectors **declined by around 3%** relative to estimated business-as-usual emissions.

    Ellerman and Buchner (2007, 2008), Ellerman, Convery and de Perthuis (2010), Anderson and DiMaria (2011)
  - Phase (1&) 2: **Declined 1-3%**

    Egenhofer, Alessi, Georgiev and Fujiwara (2011), Kettner, Kletzan-Slamanig and Köppl (2011) , Cooper (2010) Clò & Emanuele Vendramin (2011)
- Firm level study (EU ETS)
  - **Emission reductions of 3.6%** between 2005/6 and 2008/9

    Abrell, Ndoye and Zachmann (2011)
- Qualitative studies (EU ETS)
  - Survey evidence indicate **most emission reductions not solely due to goal of emission abatement** but other co-benefits

2. Impact on national/regional economic performance is small

- Thus far, the EU ETS has been able to achieve its targets at costs significantly below those projected; **a small fraction of 1% of EU GDP**.
- Some studies found negative effects on **employment, profits, or productivity**, but these findings were not confirmed in other studies that relied on different statistical models

3. Impacts on international competitiveness and carbon leakage have been minimal

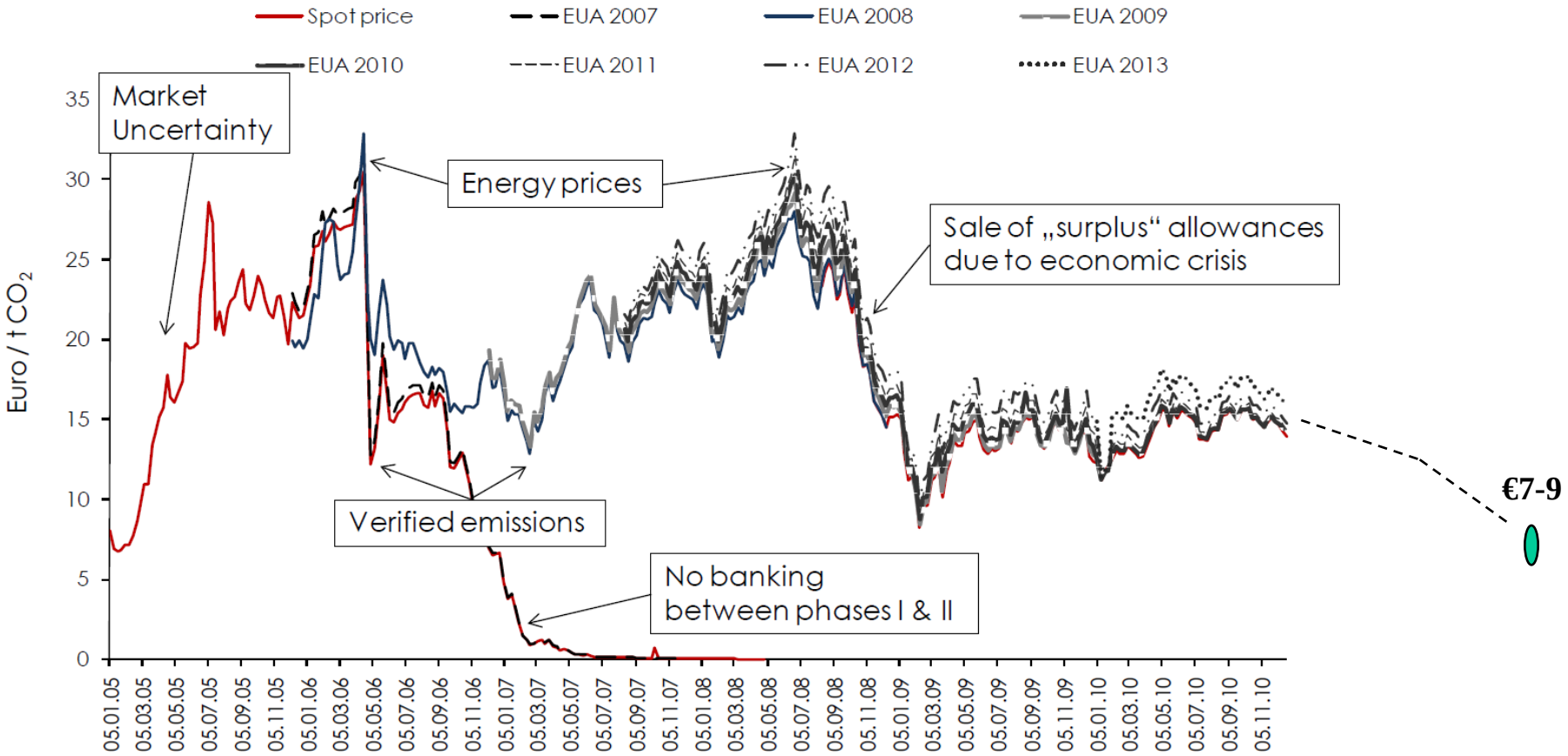
- International competitiveness impacts are **limited to a small number of industry sectors**.
  - For most sectors, cost differentials due to labor and other input costs far outweigh those induced by international differences in the cost of carbon.
- A handful of carbon intensive industrial activities face genuine competitiveness concerns but **with free permit allocation have not been adversely impacted**
  - Indeed some studies find that many energy-intensive trade-exposed industries (iron, steel, refineries) were able to pass through a large fraction of the EUA price to the respective product markets.

de Jong and Bles (2008) Alexeeva-Talebi (2011)

4. Impact on investment is unclear (but probably low)

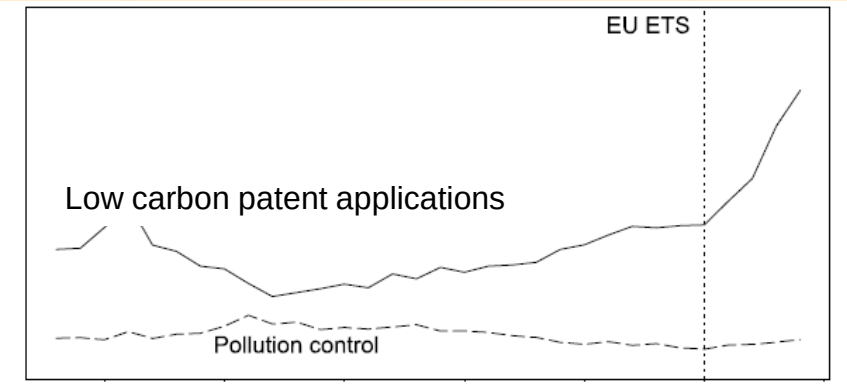
- **Carbon price generally seen as too low and volatile**.
- There have been **significant investment in renewable energy** technologies but **driven by other policies**.
- Of the allowances that were reserved in 2006/2007 for new or expanded carbon-intensive installations, only 16 percent had actually been requested by 2009
  - however difficult to assess to what extent this result should not also be attributed to the more attractive investment opportunities in renewable energy sources, and the economic constraints imposed with the financial crisis
- From surveys, about **40% of companies** report that the stringency of the EU ETS in phase II allowed them to **continue business as usual**. For phase III this share declined to 10%.

Historic prices of EU ETS 2005-2012



5. Impact on innovation is also unclear

- **Low carbon patent applications increased** rapidly from 2005 onwards
  - However, the evidence so far cannot rule out that this was due to confounding factors such as concurrent increases in the oil price or the implementation of other climate change policies.



- Calel and Dechezleprêtre (2012) and Martin et al. (2011) found **no significant difference in innovativeness between EU ETS and non-EU ETS firms**.
- Other survey evidence based on the impact of the post 2012 allocation rules suggest that **the less generous allocation rules in Phase III might drive clean innovation**

6. The manner of allocation of permits has significant equity and efficiency implications

- Equity
  - many **$billions in windfall profits** to regulated industry paid for by EU consumers.
- Efficiency
  - Contrary to theory, **firms with less permit allocations decreased emissions more** than those that had more generous allocations (Abrell et al. (2011)
  - The LSE survey revealed that within the EU ETS, **companies that fall just short of the thresholds established for free allowances**, i.e., those who need to pay for their allowances after 2012, **are more engaged in climate-change related product innovation**, than companies that will continue to receive free allowances.

7. Estimating BAU baselines and additionality is very problematic

- NSW Greenhouse Gas Reduction Scheme (GGAS)
  - Passey et al 2007 suggest that the additional abatement likely to be driven by GGAS in 2010 was **around one quarter of the 20 million NGACs claimed** in IPART's Compliance and Operation Report.
- CDM
  - Questions of the additionality of CDM offset projects has been a well known source of concern

    Gillenwater, Broekhoff et al. 2007; Schneider 2007; Wara 2007; OQI 2008; Wara and Victor 2008; Haya 2009; OQI 2009a; Hayashi, Müller et al. 2010; Bushnell 2011

8. Policy interactions matters

- Emission **caps** of cap-and-trade scheme **negate other emissions reduction policy actions** for covered parties
  - e.g. implementing a new energy efficiency scheme increases energy efficiency but releases permits to be used elsewhere -> with no net reductions in aggregate emissions.
- **Crowding-out** of climate-friendly **(intrinsic) motivations**?
  - Experimental lab research: Goeschl & Perino (2009) found evidence that **carbon taxes crowd out intrinsic motivation while emission standards are neutral**.
  - Field experiment: Perino, Panzone & Swanson (2011) in a study of shopping behaviour on low carbon food purchasing find evidence that **carbon footprint labels and bans activate intrinsic motivation** of shoppers. **A subsidy framed as an explicit intervention activates intrinsic de-motivation** (ie. is less effective than both a label and an equivalent but neutrally framed price change.)

Conclusions (I)

- So even on its own terms, the **performance of carbon markets has so far has been pretty ordinary**.
- So are the critics right? Is carbon trading really:
  - a **'capitalist shell game'** (Kovel) that **rewards polluters** and disproportionately **impacts on the least well-off?**
  - a form of **colonialism**, where rich countries maintain their levels of consumption while getting **credit for non-exist carbon savings** in developing countries that offers **little to help development** and **overrides non-market values and norms?**
  - an **efficiency-obsessed, myopic fix** that risks **lock-in** to an inadequate carbon trajectory (e.g. gas) and **exposes our climate response to the fraud, speculative bubbles**, **and the lack of oversight of modern financial markets**?
  - a **distraction from the wider, systemic changes** and collective political action that needs to be taken to tackle climate change?

Conclusions (II)

- But is **reformist agenda possible?** One which recognizes that:
  - targets need to be more **stringent** and which consider mechanisms to induce greater **price stability** for investment and innovation.
  - ongoing **monitoring and learning** are central to the scheme operation and can **respond quickly** to emerging problems (such as windfall profits).
  - **not all carbon is equal** - some resist division, measurement and are highly embedded in a multiplicity of political, economic and cultural contexts - and thus commodification should be limited.
  - **efficiency should not override other social goals**
  - carbon pricing is but **one instrument in a portfolio of strategies**
    - including public investment, traditional regulation, information and education campaigns, in a polycentric governance framework (Ostrom)
    - And scheme design should not undermine this portfolio of approaches.

Thank you!