



The Green Agenda to improve economic policy-making

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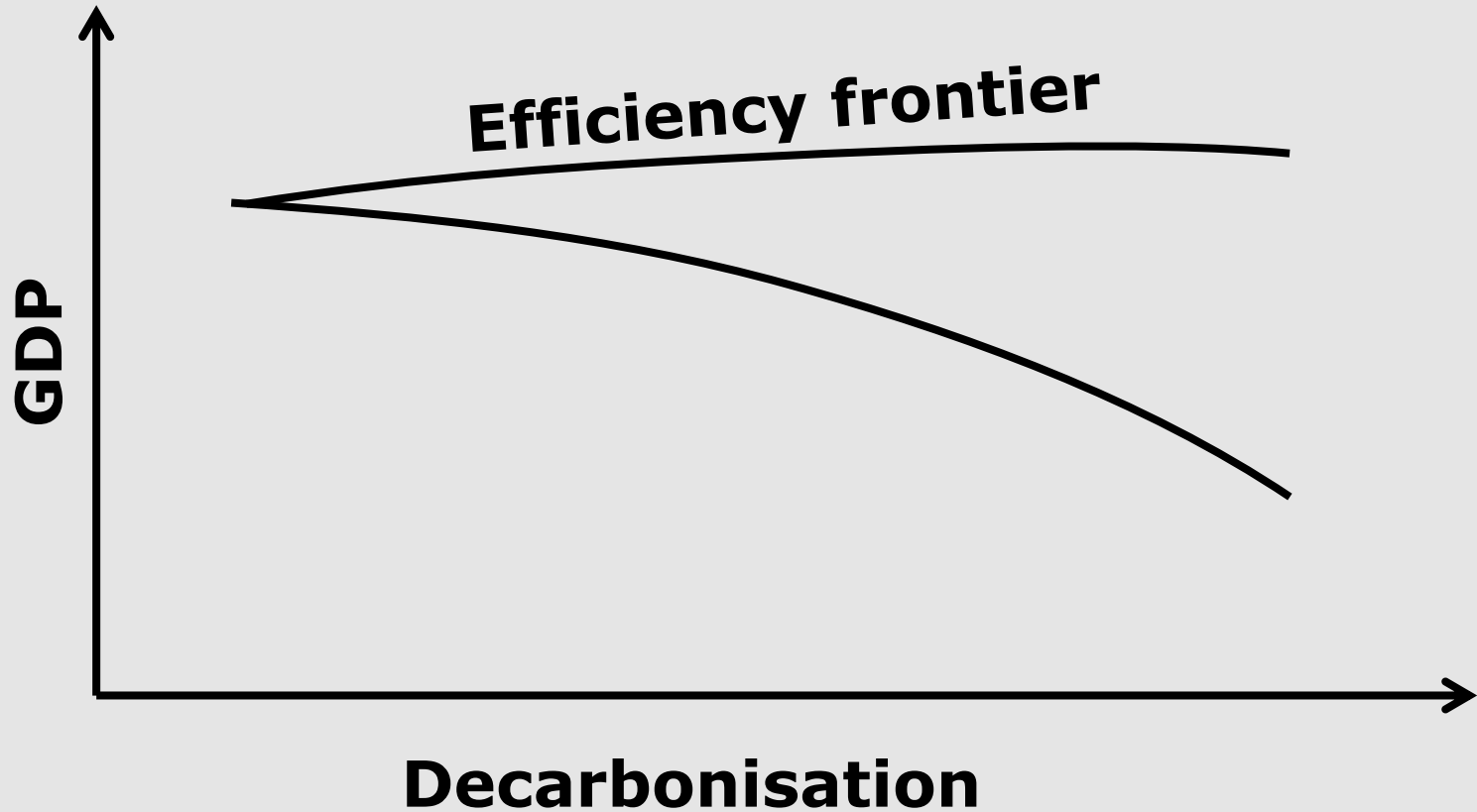


Agenda

- 1) Link between decarbonisation and growth
- 2) Growth impact of current climate policies
- 3) Guidelines for growth friendly climate action



How does this curve looks like?





Decarbonisation might stimulate growth

Universal effects:

- **Avoided climate change cost**
- **Keynesian demand stimulus**
- **“Double Dividend”** of recycling pollution taxes
- **Increased innovation**

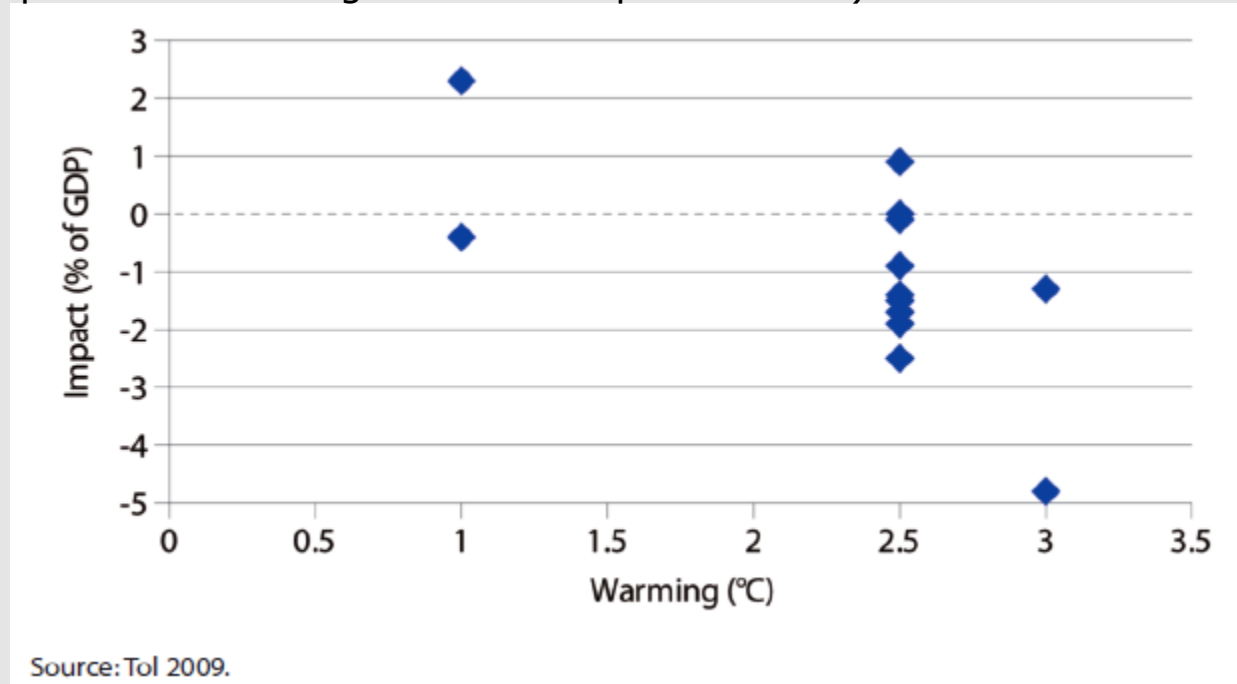
Local effects (int'l “zero sum”):

- Improved trade competitiveness via reduced exposure to **terms-of-trade** pressures from fossil fuel imports
- **Green industrial policy**



Avoided climate change cost

Survey of estimates of the welfare impact of climate change (expressed as an equivalent income gain or loss in percent GDP)

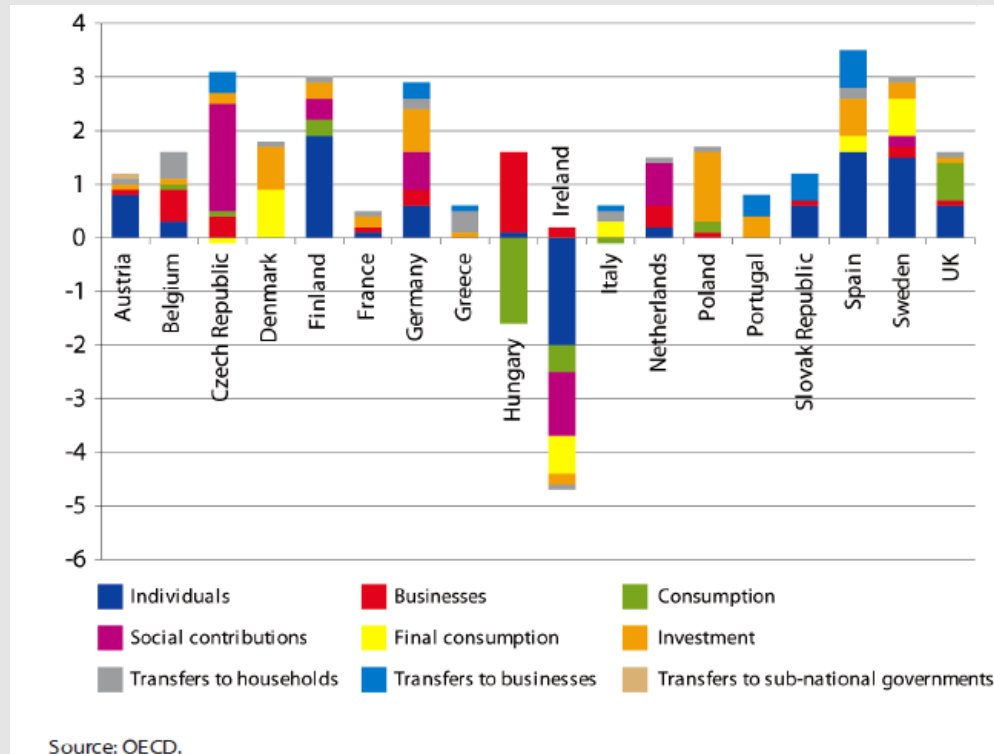


- **Modest impact, but models not good at monetizing tail risk => it's an insurance problem**



Keynesian demand stimulus

Size of stimuli 2008-2010 in% of GDP



- **Most EU countries use discretionary spending to stabilise business cycles**
- **Debate about the multipliers of „green“ investments**



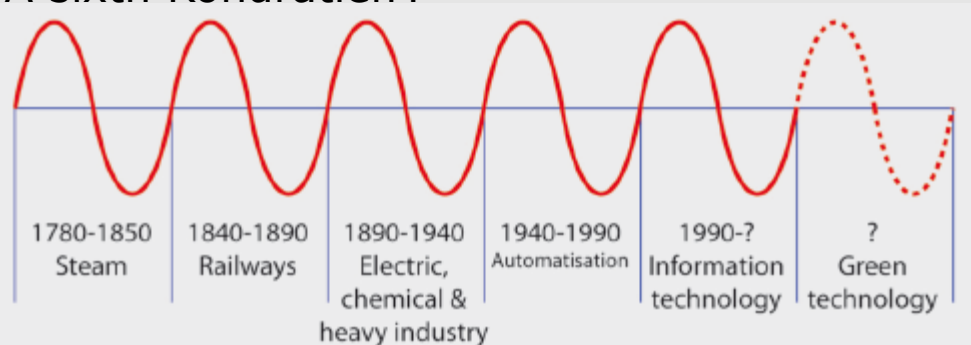
“Double Dividend” of recycling pollution taxes

- **EU emission allowances will generate some € 14-30 bn in 2013**
- **Will replacing taxes on labour and capital with green taxes generate growth?**
- **possibly, if you start with a very distorted system**



Increased innovation

A sixth Kondratieff?



- **A sixth Kondratieff:** unlikely
- **Porter Hypothesis:** regulation -> innovation? More „green“ innovation but unclear impact on GDP
- **Avoiding a dead-end:** endogenous technology growth in „brown“ sectors might be limited



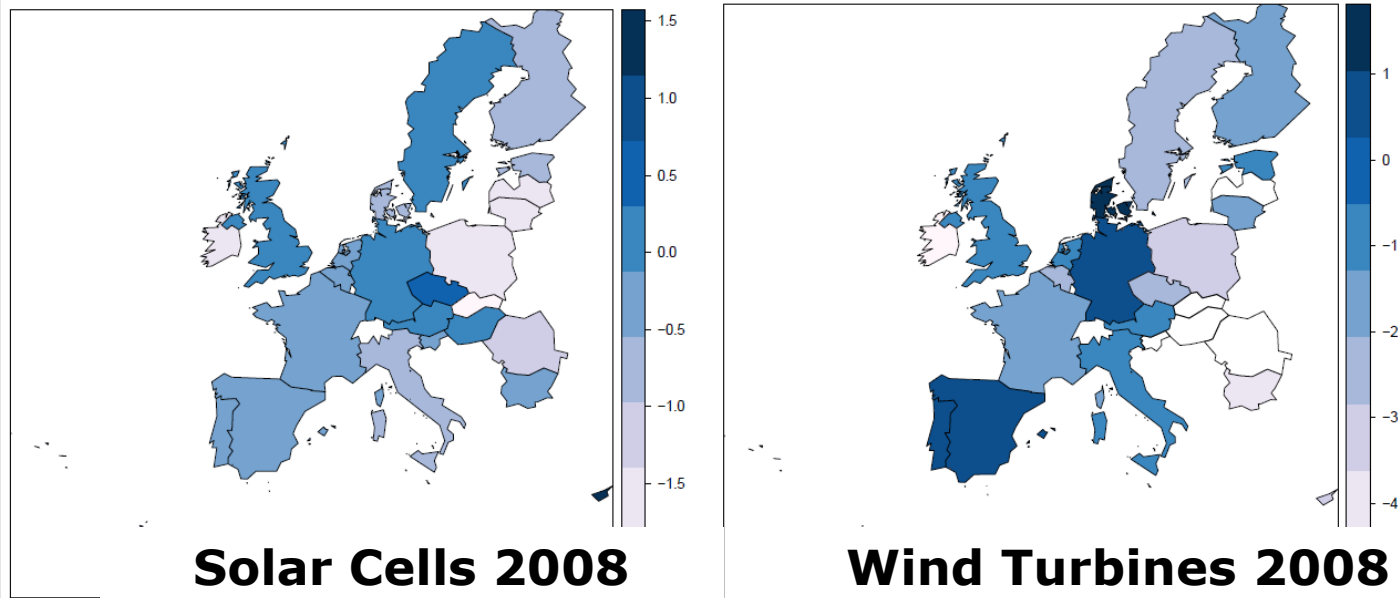
Improved terms-of-trade

- **Replacing cheap imports with expensive domestic production is not growth-friendly**
- **Lower demand -> lower fossil fuel prices**
- **Reduced effect of fuel imports on the macro-economy**
 - But, size of the effect arguably shrinks
 - Less volatility



Green Industrial Policy

Revealed Comparative Advantage (RCA):



Data: UN UN COMTRADE data 1996-2008

- **Deployment -> export competitiveness**
- **Continent on initial strength, spill-overs, competitors, ...**
- **Cost-Benefit unclear even for "success cases"**



Side Benefits

- **Development policy**
- **Public health**
- ...



Decarbonisation might restrain growth

- **Avoiding carbon is costly.** Thus, green regulations and taxes *ceteris paribus* reduce production and consumption and thus GDP.
- **Accounting effect:** Energy efficiency measures might under some assumptions (negative abatement cost, ...) be welfare enhancing but GDP reducing.
- Decarbonisation requires significant policy intervention. Correspondingly **government failures** are far more likely and severe than they are in a “no-decarbonisation” scenario. (National decarbonisation policies might reduce international trade, pick wrong technologies, waste public money, ...)



Tentative conclusion

- **Quite complex menu of drivers** contingent on implementation and initial conditions
- **The insurance case is quite compelling**
- **Good „green“ policies that replace less good existing policies might be growth enhancing**

- **Side-note: For military spending, we still do not know their growth effects after decades.**

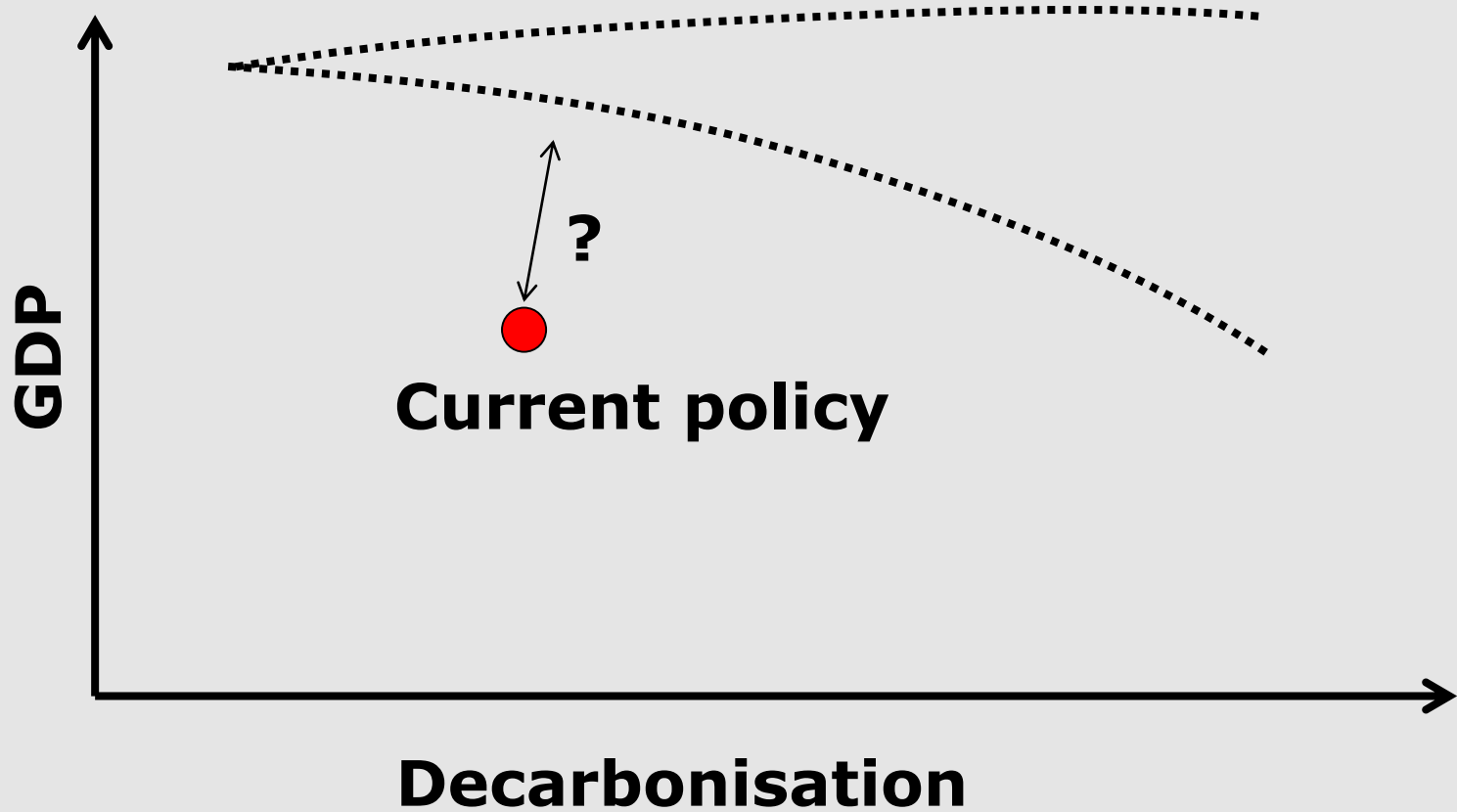


2) Growth impact of current climate policies

- 1) Link between decarbonisation and growth
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- 3) Guidelines for growth friendly climate action



Growth impact of current climate policy - Where are we?





Status quo in a nutshell

1

- **Some unprecedented tools** (ETS induces reductions with lowest economic cost, RES support did promote certain industries, R&D spending)
- **Lack of a global approach** (ZEW: 1.5 % decrease in consumption as opposed to 0.5 % under a global scheme)
- **Short-termism of EU policies** (2020 vs. 2050)
- **Different carbon prices in different sectors** (Böhringer: costs that are 100-125 percent higher than necessary)



Status quo in a nutshell

2

- **Different carbon prices in different countries** (France: 2,511 kWh, Germany 1,732 kWh)
- **Overlapping tools** (“Green serves the dirtiest”)
- **National industrial policy** is fragmenting the market
- **Lack of a single energy market** (25 GW German PV in Greece = + €1.3 billion in 2011)

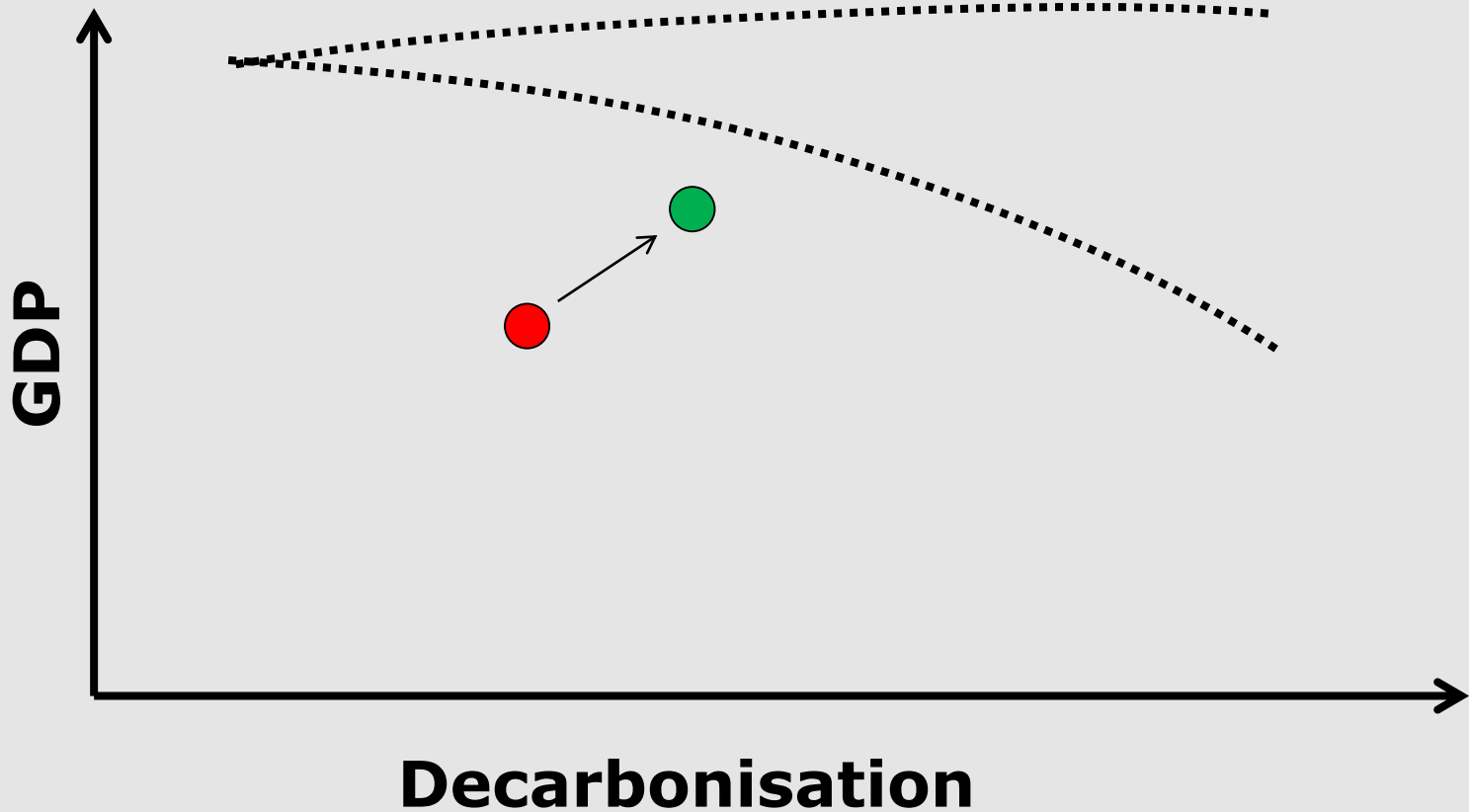


3) Guidelines for growth friendly climate action

- 1) Link between decarbonisation and growth
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Some Guidelines for growth-friendly climate action - How do we get closer to the frontier?





Some guidelines for growth friendly climate action

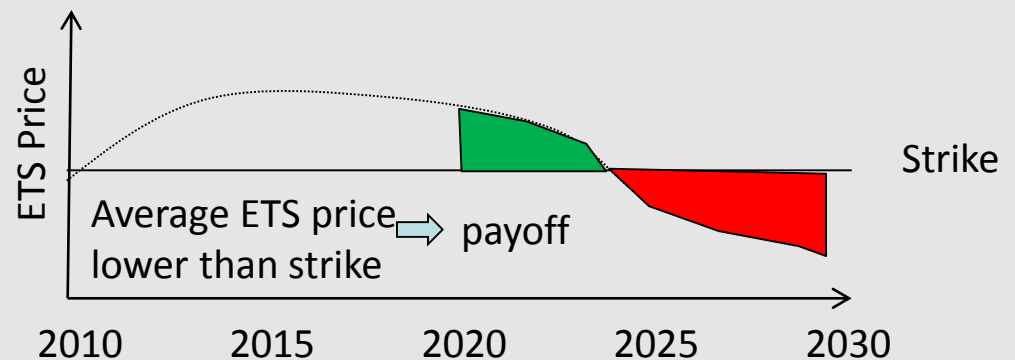
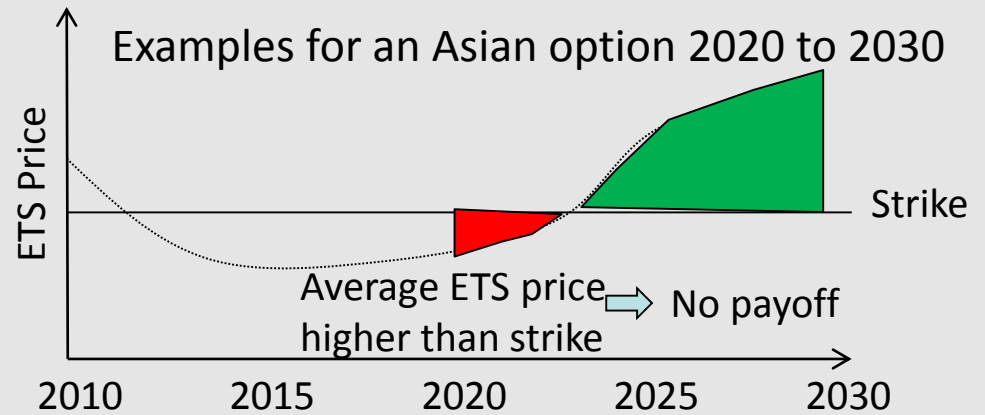
- **Horizontal interventions** for resolving externalities
- **Enabling long-term investment** (commit on regulatory framework instead of guaranteeing revenues)
- **Stepping up the role of the EU ETS** as a long-term inter-sectoral coordination tool for decarbonisation (wider, broader, deeper)



Example: De-risking low-carbon investments

- Public bank auctions put options to investors
- Investor will choose a hedging strategy
- Investor get's payoff if carbon price is too low

- ETS exposure on the balance sheet of public banks increases credibility of the ETS for all mkt participants





Some Guidelines for growth friendly climate action

- **A framework for supporting green R&D** (avoid unproductive boom-and-bust)
- **Completing the internal market**
- **Considering the macro-dimension of investment in decarbonisation** (e.g., networks, RES)