Clean Economy Contribution:

bridging the carbon pricing gap to enhance resilience of climate and industry policy to global fragmentation

Professor Karsten Neuhoff

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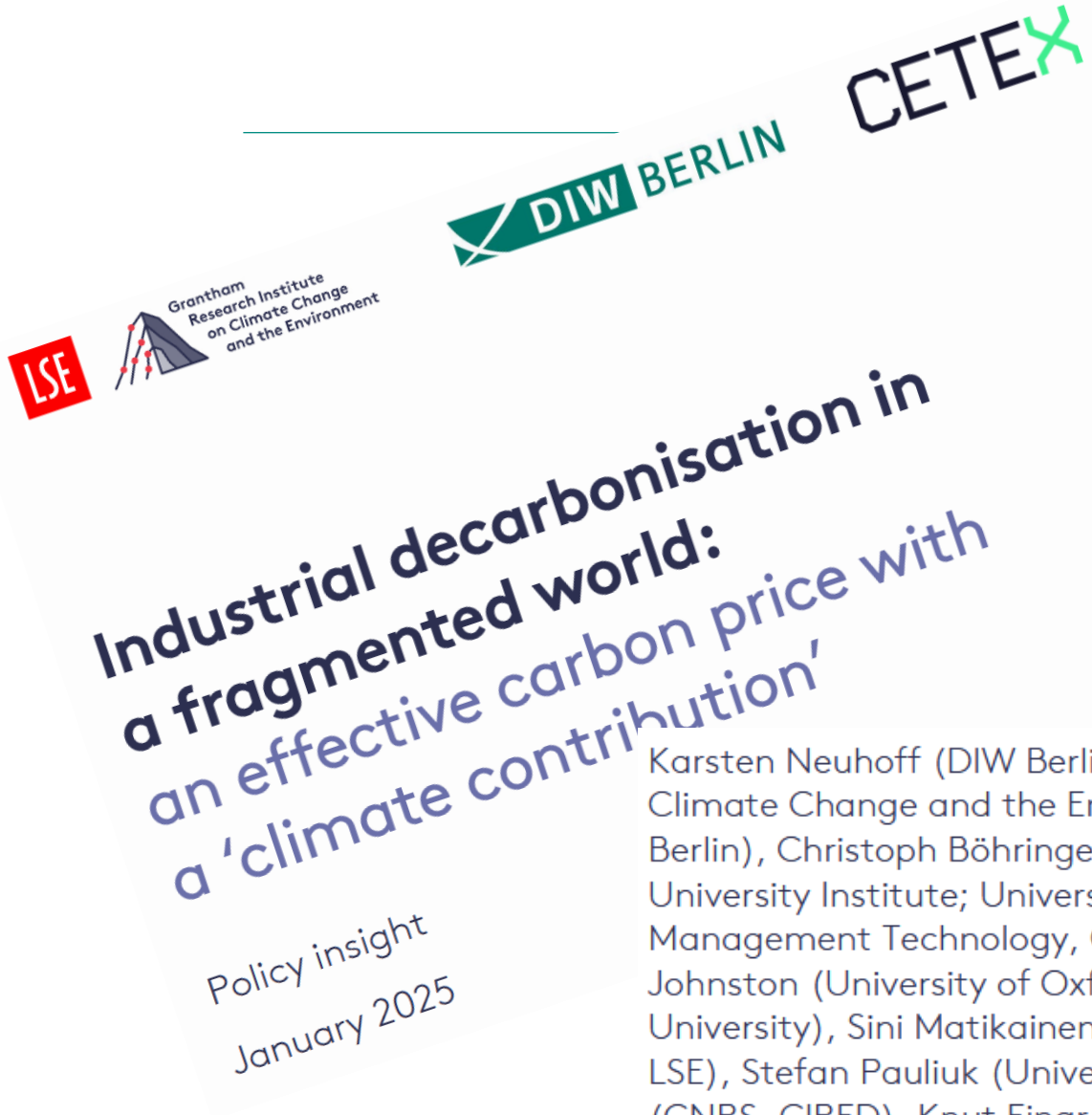

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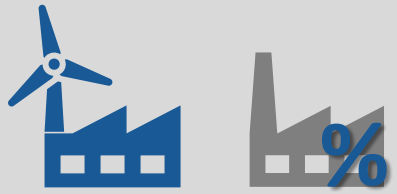
Source: https://www.lse.ac.uk/granthaminstitute/publication/industrial-decarbonisation-in-a-fragmented-world-an-effective-carbon-price-with-a-climate-contribution/

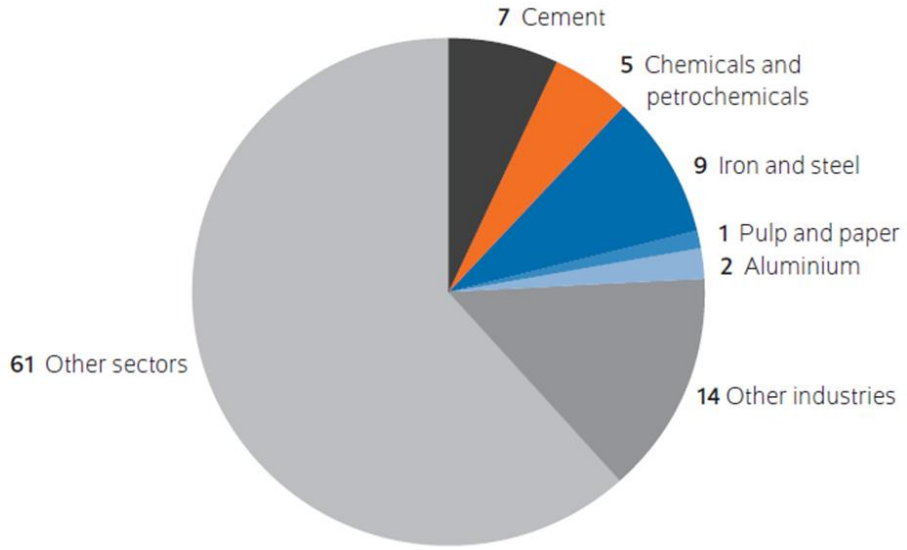
Industry transition to climate neutrality requires portfolio of mitigation options

Material production



Material use

Production of basic materials large part of global CO_2 emissions

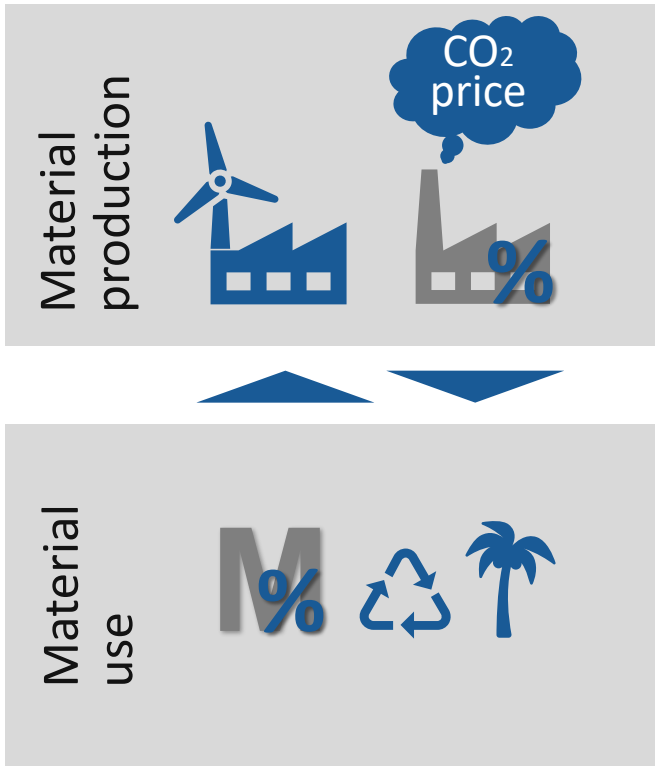


Climate neutrality requires portfolio of mitigation options

- (Carbon) efficiency improvement of existing production
- Efficient material use, circularity and material substitution
- Shift to climate neutral production processes

Source: DIW calculations based on IEA ETP 2017

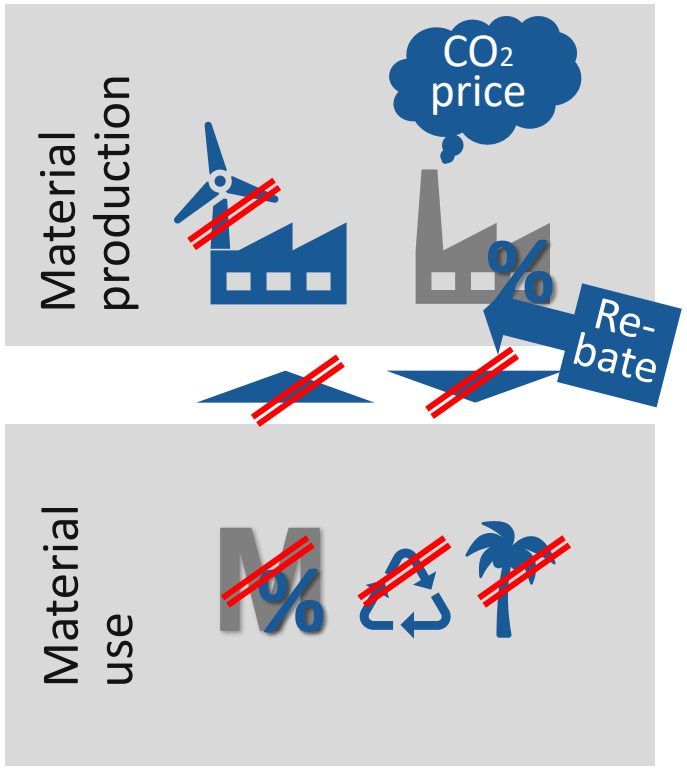
Carbon pricing can – in principle – incentivize climate neutral choices



Global harmonized carbon prices incentivise all mitigation options

- Polluter pays (statutory incidence)
- Price signal propagates to material use (economic incidence)

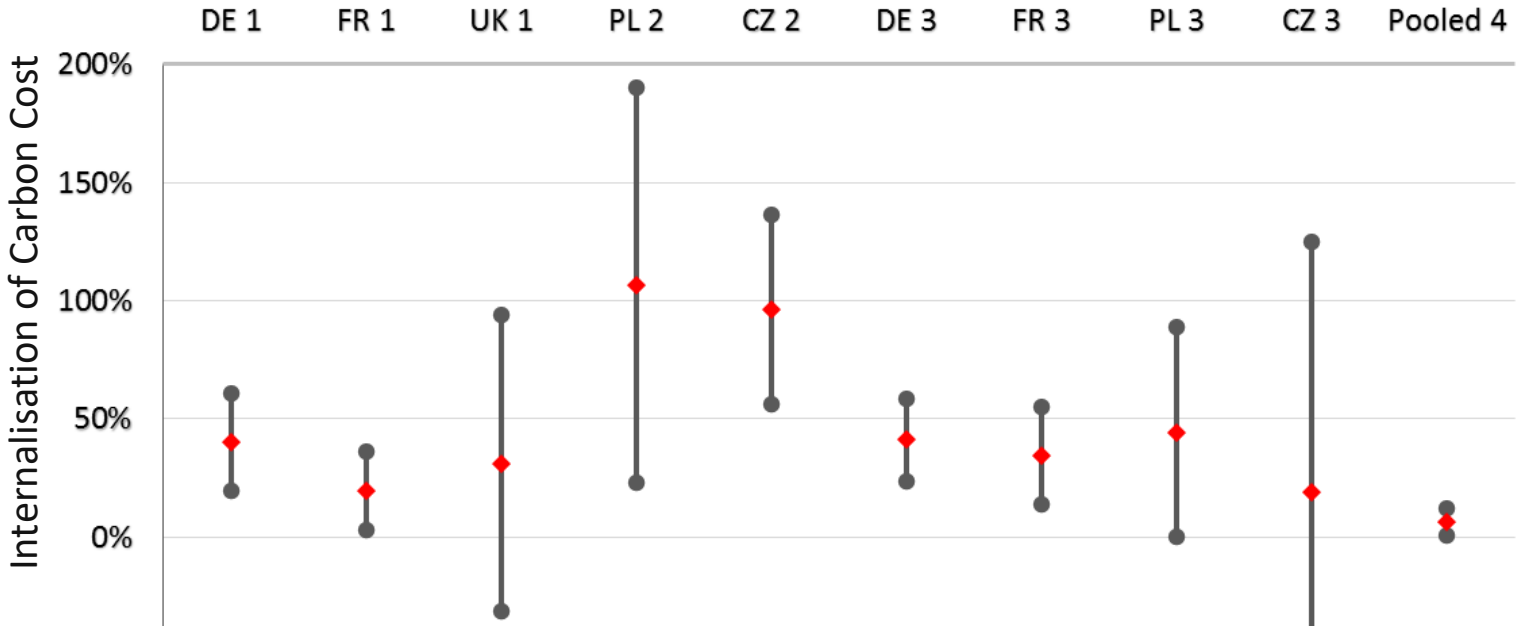
1. To avoid carbon (and job) leakage – free allowances are granted to producers



Free allocation: partial and uncertain carbon cost internalization

→ This undermines almost all incentives for mitigation

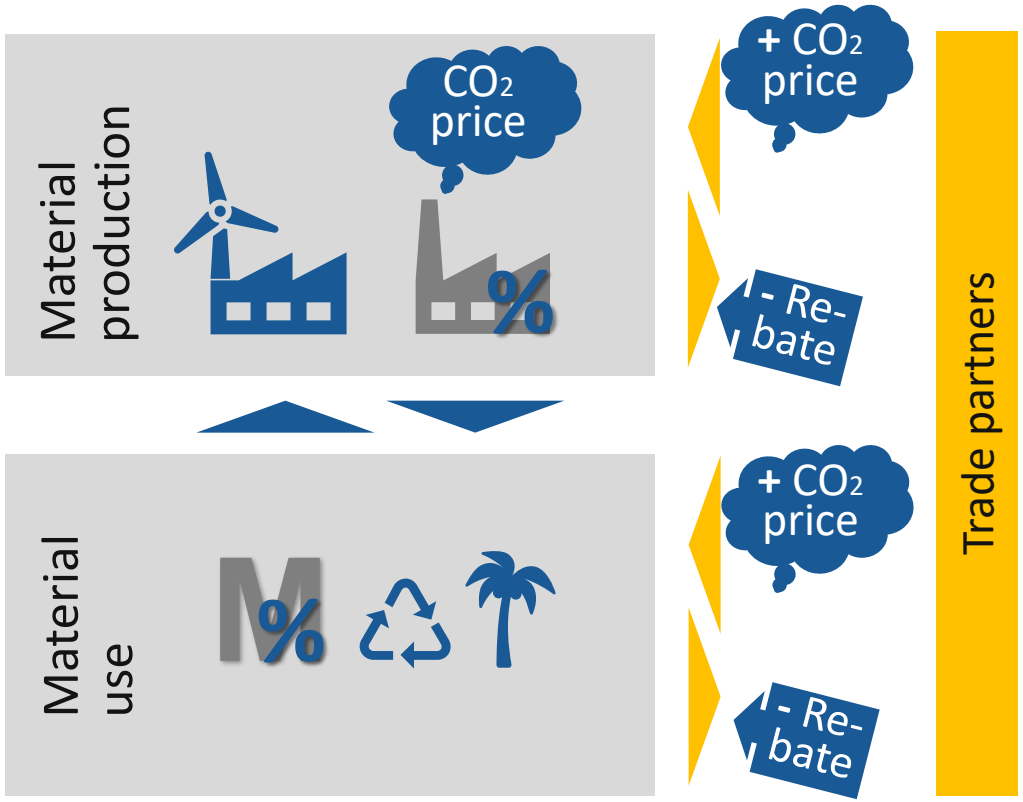
→ **Hence there is no business case for clean inestents**



The graph depicts 95% confidence intervals (DIW calculations). 1 represents total cement, 2 represents Portland Cement, 3 represents Clinker, Pooled 4 represents Portland Cement estimates for FR, UK, and DE

Source: K. Neuhoff and R. A. Ritz (2019) Carbon cost pass-through in industrial sectors, Cambridge Working Paper in Economics Nr. 1988.

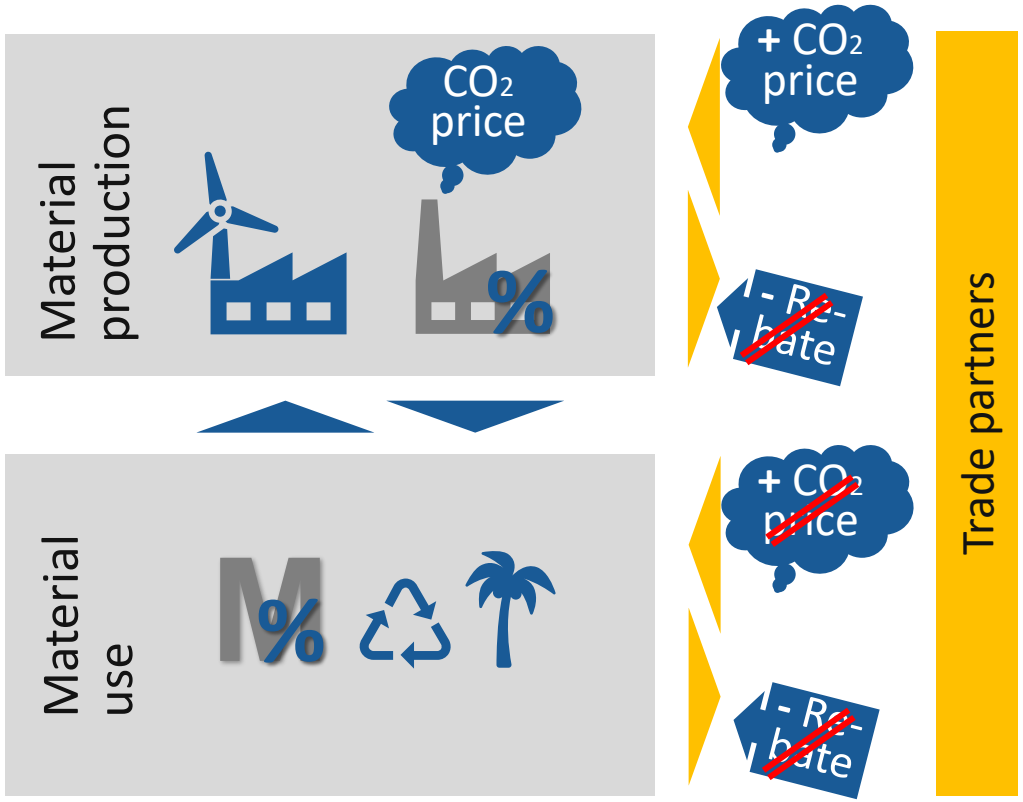
2. Ideal carbon border adjustment avoids carbon leakage and maintains incentives



- Address carbon leakage at border (no free allocation)
- Levy carbon costs on imports
- Rebate carbon costs on exports

  ➔ Idea: Carbon price propagates along value chain

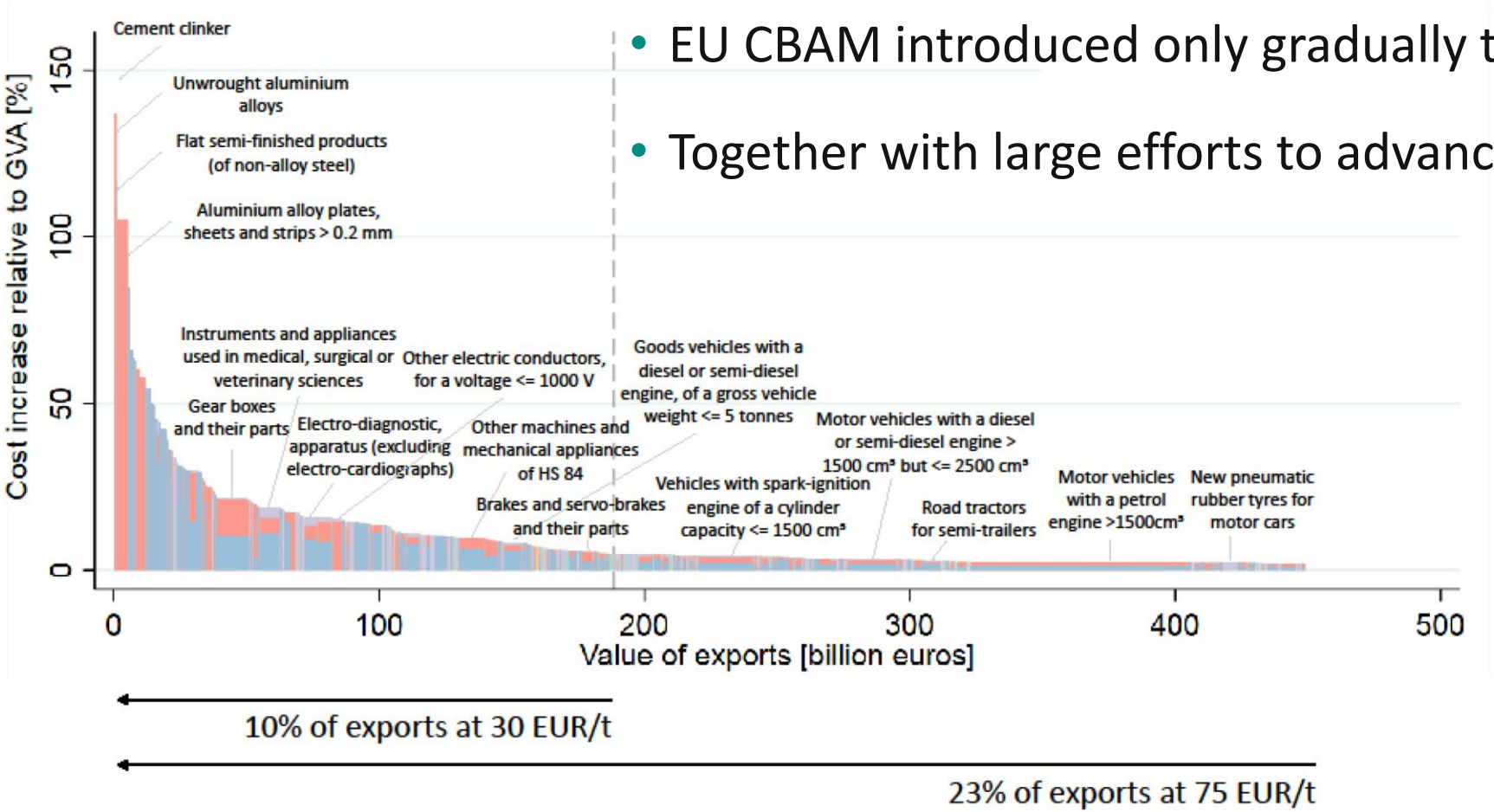
2. However, the devil is in the detail: The disconcerting reality about CBAM



- Legal (WTO) constraints: No refunds of carbon costs
- Administrative complexity: No coverage of value chain
- Resource shuffling: Limits environmental incentives and leakage protection (imports and exports)

2. Example: If exports not covered in CBAM, value chain at risk of carbon leakage

- At 75 Euro/€ CO_2 up to 23% exports at risk of carbon leakage
- EU CBAM introduced only gradually till 2034 + review stages
- Together with large efforts to advance global carbon pricing



Jan Stede et al., "Carbon pricing of basic materials: Incentives and risks for the value chain and consumers," Ecological Economics (2021) (link)

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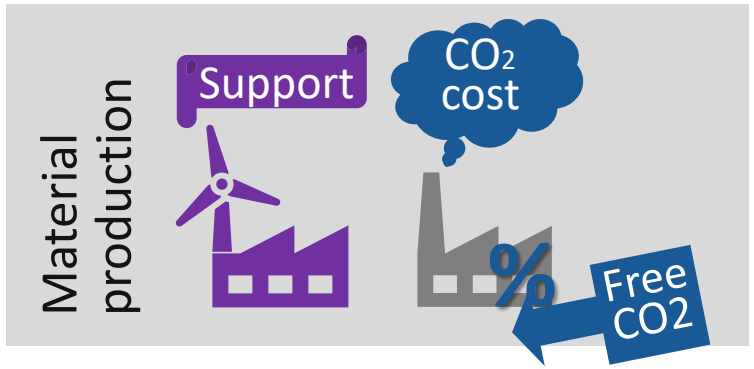
3. Dedicated policies for production and use: Effective incentives without leakage



- Improved production: ETS with free allocation to industry (EU), PAT energy efficiency scheme (India), standards
- Clean material production: Tax incentives (IRA - USA), soft loans (China), carbon contracts for difference (EU), grants
- Material use: Clean economy contribution at benchmark level on basic material production and import, waved on exports

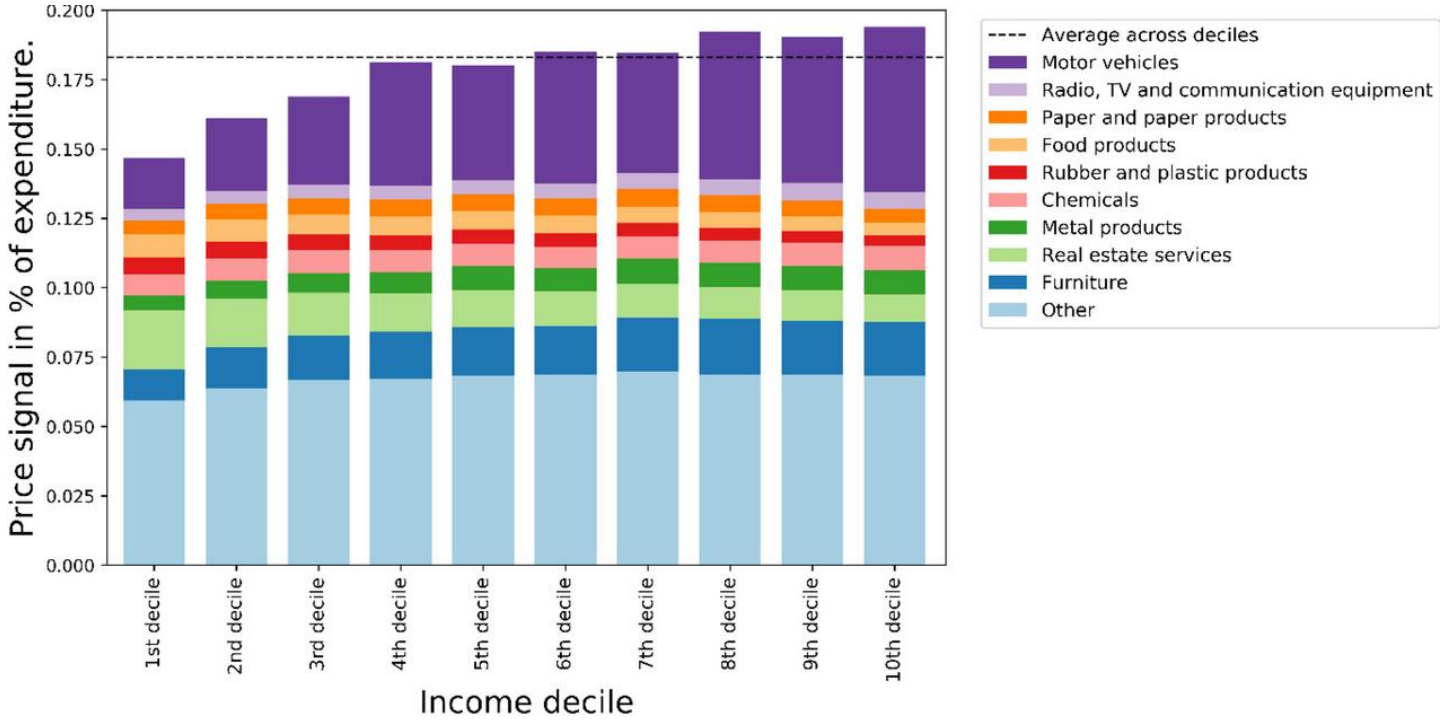
https://climatestrategies.org/projects/inclusion-of-consumption-in-emissions-trading/

Ismer e.a. (2021) Climate neutral production, free allocation and the WTO: How to secure compatibility with the ASCM, DIW Discussion Paper.

3. Clean economy contribution – the mechanism

- Level set at an emission benchmark for emissions from conventional process * carbon price (e.g. of previous year)
- Liability created with domestic production and imports
  - Liability can be passed along the value chain
  - Liability due if sold to domestic consumers
  - Liability waved if material (also as part of products) is exported
- Simple administration (weight based reference value)
  - No international monitoring, reporting, verification required
  - Simple information requirements domestic
  - Low fraud risk (no refund)
  - Low administrative effort (public&private) compared to other tax

3. Clean economy contribution – building on established excise charges



- Same increases in product prices as in the case of the global CO2 price
- Clear motivation strengthens acceptance - incentives & financing for modernization
- *Relatively low* and progressive price increases for end products

Jan Stede et al., “Carbon pricing of basic materials: Incentives and risks for the value chain and consumers,” Ecological Economics (2021 (link)

3. Legal and political anchoring

European

- Can be implemented as an environmental regulation with a qualified majority
- Also requires clear commitment of funds - industrial transformation

International

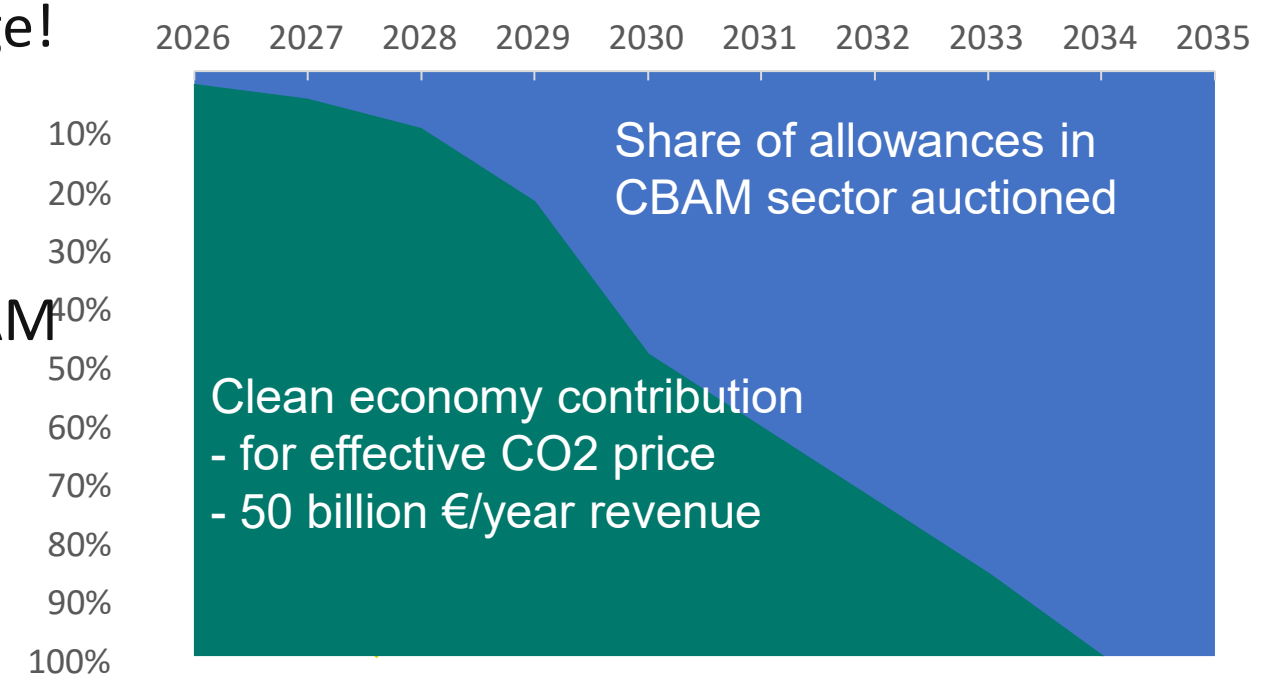
- Robustly anchored within the framework of WTO rules
- Consistent CO_2 prices (full ETS price reflected in product prices)
- Using part of the climate contribution revenue for international climate action

Sources: The legal basis under European Union Law: RECIEL, https://doi.org/10.1111/reel.12131
Ismer e.a. (2021) Climate neutral production, free allocation of allowances under emissions trading systems, and the WTO: How to secure compatibility with the ASCM, DIW Discussion Paper. Forthcoming in Journal of International Economic Law

Clean Economy Contribution: bridging the carbon pricing gap to enhance resilience of climate and industry policy to global fragmentation

- A carbon price high enough for transition triggers carbon leakage risks
- Free allocation: addresses leakage risks – but mutes mitigation incentives
- Carbon border adjustments: global reach – but economic and WTO limitations
- Dedicated polices for production and use: work – but have limited global reach
- Consider carbon pricing in policy package!

- Pragmatic EU perspective:
  - Clean economy contribution AND CBAM
  - At level of remaining free allocation
  - Fills incentive and funding gap
  - Is insurance, if CBAM delayed



Building blocks for a climate-neutral European industrial sector (link)
https://climatestrategies.org/publication/closing-the-green-deal-for-industry/

Thanks for your attention.

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