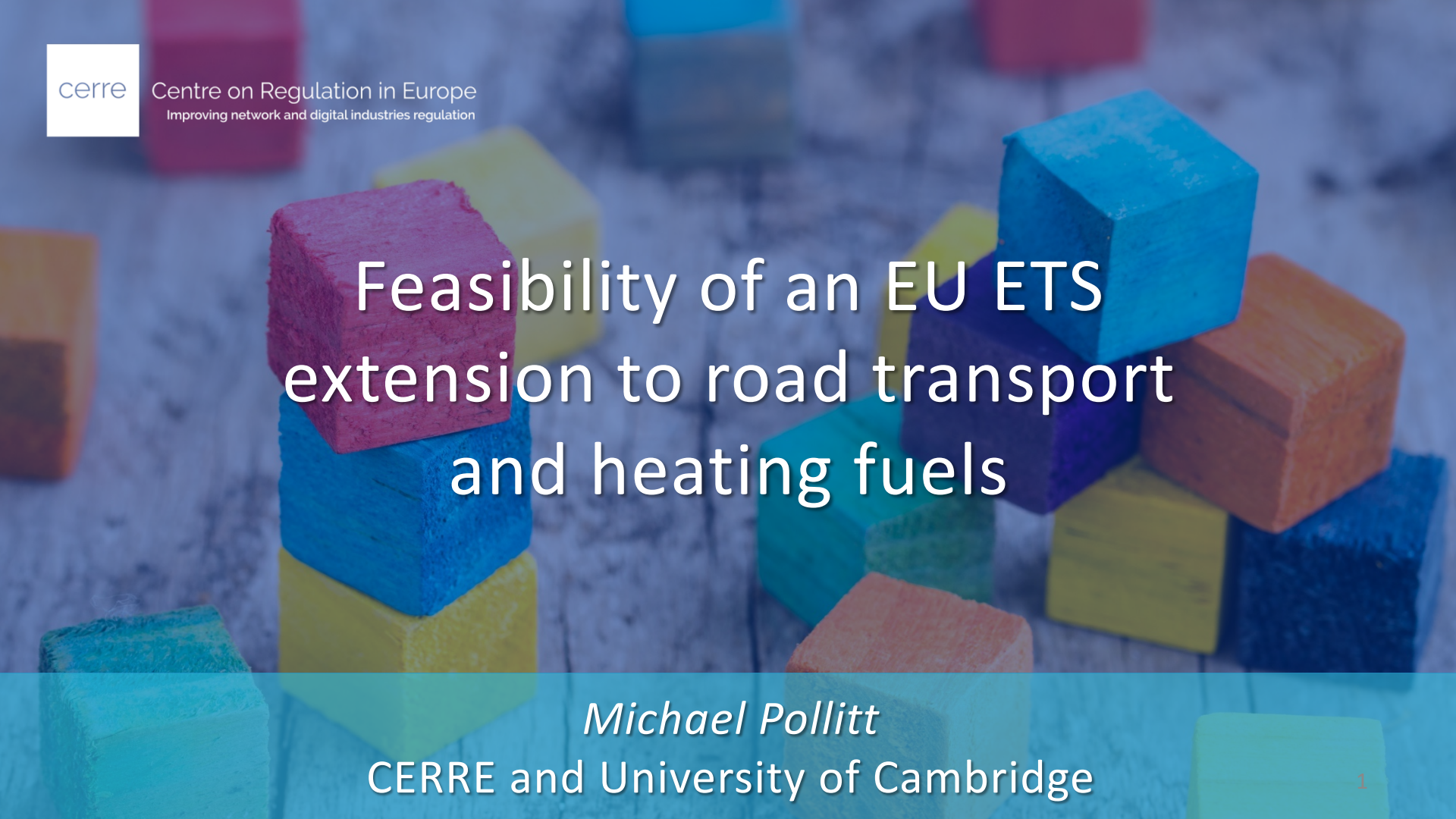

cerre Centre on Regulation in Europe
Improving network and digital industries regulation

Feasibility of an EU ETS extension to road transport and heating fuels

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THEORETICAL PROPERTIES OF EXTENSION (I)

- *With thanks to Geoffroy Dolphin and CERRE*

- Tradeable permit systems (or equivalent emissions tax or abatement subsidy) **can achieve any given emissions target at least cost.**
- The price signal arising from the creation of a cap-and-trade system can be expected to have certain *desirable* properties.
  - First, it is **expected to rise at the rate of interest on equivalent financial assets.**
  - Second, **it is expected to go down when new information emerges** suggesting demand is lower than expected or the cost of compliance is lower, and vice versa.
  - Third, **prices will rise/fall on expectations of increased policy/reduced commitment to targets.** A price of 40 Euros per tonne today implies a real price of 216 Euros per tonne in 2050 (at a 6% real interest rate).
  - Fourth, **it is common to all participants and all covered countries**, and all are faced with the same changes in price.

THEORETICAL PROPERTIES OF EXTENSION (II)

- It will provide **further clarity as to the commitment to EU climate policy regime** by specifying in what timeframe CO_2 emissions reduction in these sectors will be achieved.
- It would have distributional impacts and **must adequately address distributional issues by design**.
- There is a risk that a significant extension **will cause individual countries to leave the EU ETS**, however this is not likely given need to leave EU!
- This extension would shift pricing of the externality from inputs (excise taxes on fuels) to environmental outputs (EUA price on implied and calculated CO_2 emissions) **improving whole supply chain efficiency.**
- **Any extension must be consistent with net zero targets and should involve a linear reduction factor to 2050.**

THE ROLE OF AN EU ETS EXTENSION

- **Incentives to stick to long-term commitments.** An ETS whose lifetime credibly extends to 2050 would create a commitment device incentivising the EU and MSs to stick to long term targets.
- **Driving of additional emissions reduction (if required).** Additional efficient policies are necessary, existing standards based policies have merely kept total emissions down.
- **Both standards and emissions trading have desirable properties:**
  - Standards can represent stable long-term price/cost commitments, address myopia and local pollution.
  - Emissions trading can guarantee the achievement of the overall quantity target.
- **A combination of both** guarantees the achievement of overall emissions targets and the reduction of total realised carbon price volatility.

THE ELEPHANT IN THE ROOM…REGRESSIVITY

- Elasticities of fuel prices and carbon prices are low, thus a rise in carbon prices impacts residual income.
- The main reasons for regressivity are (Burke, et al., 2020a,b):
  - **Carbon-intensive spending as a share of income** is higher for poorer households;
  - Cost pass **through and lower own price elasticity of demand for poorer households**;
  - **The extent of fuel poverty**.
- Burke, et al. (2020a,b) also note that there can be **differences in impact between households of similar income**, thus intra-decile unfairness.
- However:
  - **Alternative policies may not be better**: fuel efficiency standards are not progressive in all circumstances given that they do raise overall compliance costs and effect second-hand prices.
  - Cap-and-trade programs can be designed to alleviate their regressive effects **through use of income raised.**
  - **Carbon pricing progressive for transport**, though not heating.
  - The costs of climate change **fall disproportionately on the poorest.**

ADDRESSING DISTRIBUTIONAL IMPACTS

- **Direct financial compensation**
  - Currently, 10% of the auctioned EUETS permits 'are divided between Member States with low per capita income receiving a larger share compared to those with high per capita income'
  - Alternatively, direct financial compensation of MSs could be organised via other mechanisms (e.g. the Just Transition Fund).

- **Counterbalancing policies**
  - Existing countervailing mechanisms e.g. low income tariffs
  - Energy efficiency investments, targeted on fuel poor
  - Final price sterilisation, by adjustment of energy taxes
    - More scope for such sterilisation on road transport fuels than on heating fuels

- **Timing is important**
  - E.g. when commodity prices benign

REDISTRIBUTION IN CALIFORNIA…

- In California, **redistribution of this revenue happens in two distinct ways.**
- First, allowance revenue is invested in a number of state-wide initiatives aiming at improving environmental outcomes. **57% of the cumulative proceeds since the start of the program have been invested in initiatives benefitting "priority populations".** In fiscal year 2019-2020, these proceeds totalled $2.1 billion.
- Second, the **proceeds of the sale of allowances that are allocated to utilities are returned to households and small businesses ratepayers in the form of 'carbon credits'.** Germany is lowering electricity bills to offset rise in price of gas for heating arising from its 2021 heating and transport carbon tax.
- It would be possible to think of doing something along these lines especially for households negatively affected by an extension of the EU ETS to heating.

SUMMARY

- Net Zero, and a 55% GHG emissions reduction (compared to 1990) in 2030 **requires strengthening the climate policy regime.**
- **Standards based policies have had some effect**, but in the road transport sector, EU emissions 23% more in 2018 than 1990.
- Extension must be done in a way that meets 2030 and 2050 targets, **does not undermine existing standards based policies *and* adequately mitigates potentially severe distributional effects.**
- Extension of the EU ETS **could be an effective dynamic commitment device** that sets a long-term signal about the stringency and credibility of EU climate policy.
- It **remains the only policy which could actually ensure delivery** of the EU's overall carbon budget over the set time horizon.