



THE FUTURE OF ETS: RE-SCOPING AND ITS EFFECTS

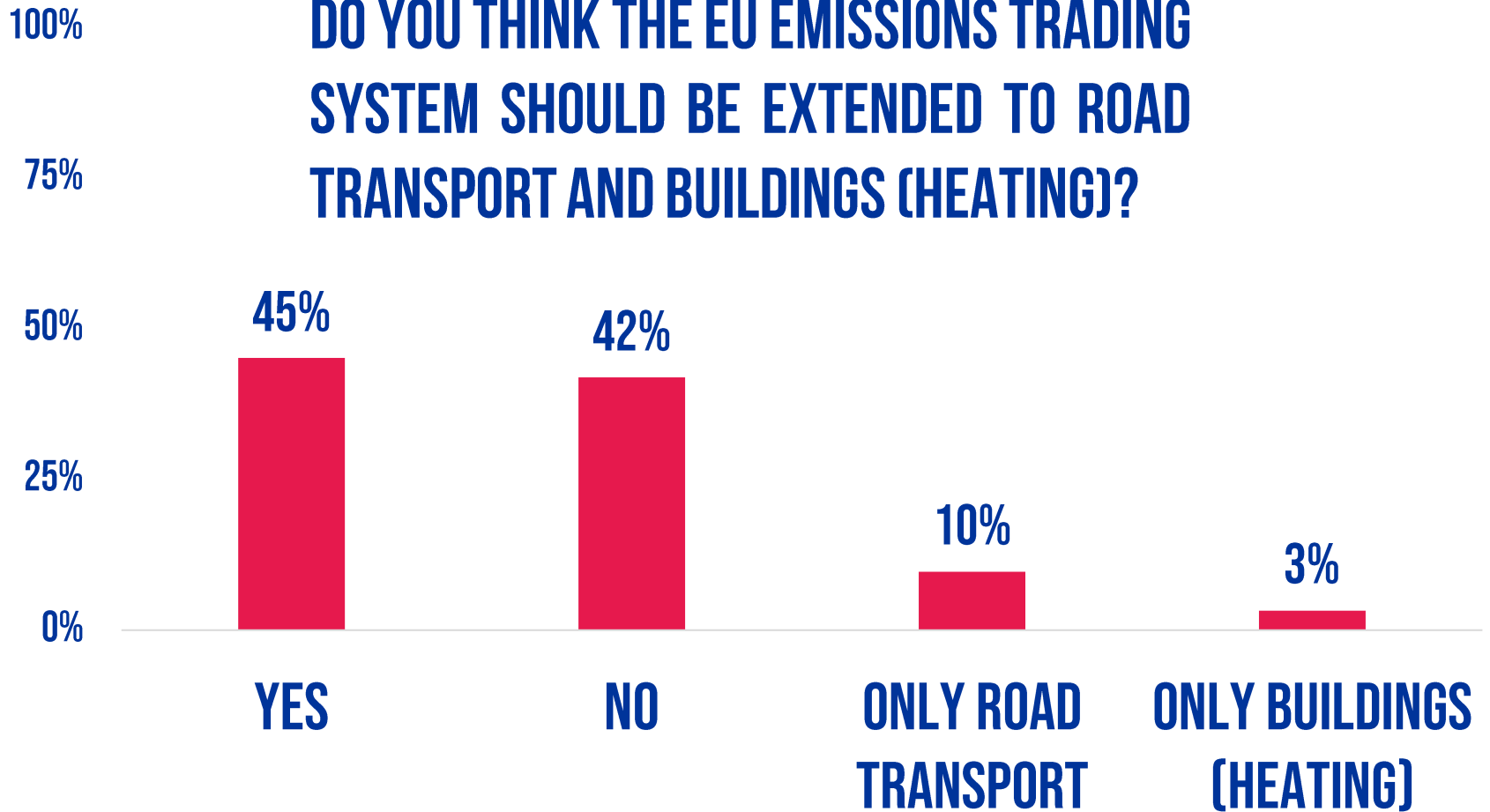
10 FEBRUARY 2021 | 14.00-16.00 CET



FEASIBILITY OF AN ETS EXTENSION TO ROAD TRANSPORT AND HEATING FUELS

SESSION 1

DO YOU THINK THE EU EMISSIONS TRADING SYSTEM SHOULD BE EXTENDED TO ROAD TRANSPORT AND BUILDINGS (HEATING)?



THEORETICAL PROPERTIES OF EXTENSION (I)

- 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.**
 - 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 CO₂ 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 CO₂ 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 IMPACT OF EXTENSION

ETS coverage (share of total country GHG emissions) and average CO₂ price, by sector

	Current ETS scope	CO ₂ emissions – sectoral shares of total 2018 GHG emissions			Extended ETS scope – 2018 CO ₂ emissions
		Road transport	Residential Heating	Commercial Heating	
EU-28	45% - 11.73 EUR/tCO ₂ e	21% - 5.61 EUR/tCO ₂ e	9% - 2.35 EUR/tCO ₂ e	4% - 1 EUR/tCO ₂ e	79% - 20.68 EUR/tCO ₂ e
France	26.9% - 7.18 EUR/tCO ₂ e	27.7% - 7.39 EUR/tCO ₂ e	9.4% - 2.5 EUR/tCO ₂ e	6.3% - 1.69 EUR/tCO ₂ e	69% - 18.41 EUR/tCO ₂ e
Germany	55% - 14.59 EUR/tCO ₂ e	18% - 4.84 EUR/tCO ₂ e	9.6% - 2.57 EUR/tCO ₂ e	3.7% - 1 EUR/tCO ₂ e	86% - 23 EUR/tCO ₂ e
Italy	38.8% - 10.35 EUR/tCO ₂ e	22.4% - 5.98 EUR/tCO ₂ e	10.8% - 2.88 EUR/tCO ₂ e	5.8% - 1.55 EUR/tCO ₂ e	77.7% - 20.75 EUR/tCO ₂ e
Poland	51.7% - 13.81 EUR/tCO ₂ e	15.3% - 4.07 EUR/tCO ₂ e	8.5% - 2.27 EUR/tCO ₂ e	1.7% - 0.45 EUR/tCO ₂ e	76% - 20.28 EUR/tCO ₂ e
Romania	40.7% - 10.86 EUR/tCO ₂ e	15% - 4.05 EUR/tCO ₂ e	5.8% - 1.55 EUR/tCO ₂ e	1.9% - 0.51 EUR/tCO ₂ e	63.6 - 16.97 EUR/tCO ₂ e
Spain	42% - 11.18 EUR/tCO ₂ e	24.7% - 6.6 EUR/tCO ₂ e	3.7% - 1 EUR/tCO ₂ e	4.4% - 1.17 EUR/tCO ₂ e	74.7% - 19.94 EUR/tCO ₂ e
Sweden	43.2% - 11.52 EUR/tCO ₂ e	28.6% - 7.64 EUR/tCO ₂ e	0.9% - 0.24 EUR/tCO ₂ e	1.3% - 0.36 EUR/tCO ₂ e	74% - 19.76 EUR/tCO ₂ e
United Kingdom	34.6% - 9.22 EUR/tCO ₂ e	24.1% - 6.44 EUR/tCO ₂ e	14.4% - 3.83 EUR/tCO ₂ e	4.3% - 1.14 EUR/tCO ₂ e	77.3%- 20.63 EUR/tCO ₂ e

RELATED EU POLICIES ARE OF THREE TYPES...

1. Policies which serve as a complement in covered sectors in EU ETS:

- **Renewable Energy Directive** and aspects of the **Large Combustion Plant Directive**.

2. Main instruments of road transport and building emissions reduction in sectors currently under the scope of the Effort Sharing Decision:

- Regulations setting CO₂ **emission performance standards** for new passenger cars and for new light commercial vehicles (EU, 2019).
- **Energy Performance in Buildings Directive** (EPBD) (EU, 2019).
- **Ecodesign Directive** (EU, 2009) which sets the framework for the energy efficient design of 31 product groups.
- **Energy Labelling Directive** which specifies energy consumption labelling requirements for 15 product groups (EU, 2017).

3. Other policies which are related:

- **Energy Taxation Directive** (ETD) (EU, 2003).

RELATED MEMBER STATE POLICIES

- **Energy duties**

- Most EU Member states subject fossil fuels consumed on their territory to duties
- But energy duties are:
 - **Not harmonized across EU Member States**
 - **Not based on the carbon content of fuels**
 - **Not dynamically efficient**

- **Carbon pricing (mostly taxes, except German ETS)**

Carbon taxes on road transport and heating fuels in EU ETS participating countries (as of 2017), 2015USD/tCO₂e

	Road transport	Residential heating	Commercial heating
Denmark	35	35	33.4
Finland	88	87	87
France	0	40.5	40
Iceland	10.5	10.5	10.5
Ireland	26.5	26.5	26.5
Liechtenstein	96	96	96
Norway	82	75.5	69.5
Portugal	9	9	9
Slovenia	23	23	23
Sweden	191	133.5	133.5

- Would EUA prices spike if the EU ETS was tightened and extended to 2050 in a net zero consistent way, given the slow rate of turnover of vehicles and heating?
- **No, if the extension is to 2050 and banking and borrowing is allowed.** Currently, banking is allowed between periods, borrowing within, but currently there is a big surplus. The market stability reserve (MSR) also provides the opportunity to stabilize prices.
- **It would also be possible to adjust taxes on transport fuels** to reduce impact of introducing EU ETS into this sector.

WILL EXISTING STANDARDS BE UNDERMINED?

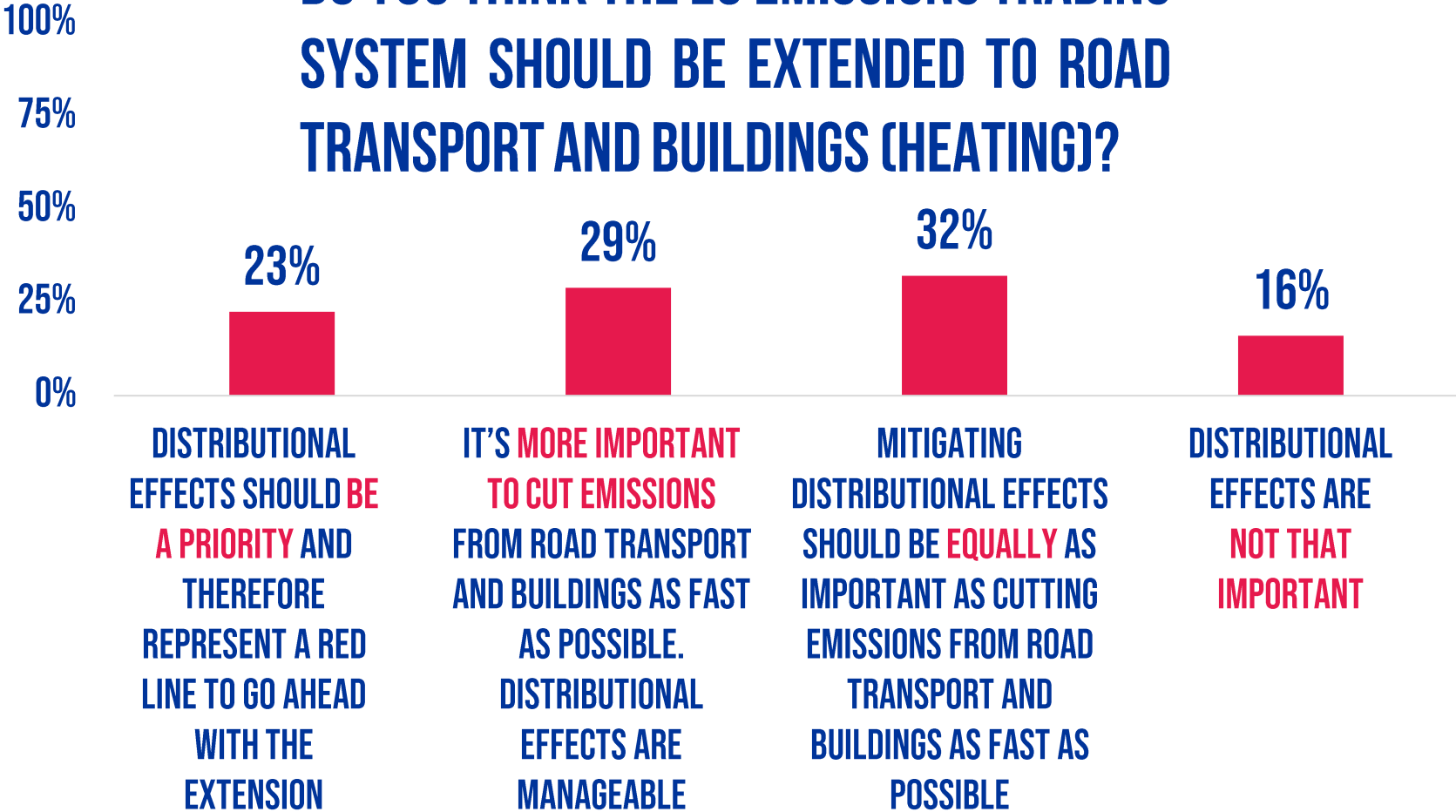
- No, **there seems to be no evidence for this**. Countries with higher carbon prices seem to also have higher standards.
- The **California CaT programme** that came into effect in 2013 now covers most of the State's GHG emissions (85%, as of 2017).
- **This programme came into being well after the implementation of other (targeted) policies** aiming at reducing GHG emissions from the State's power sector (Renewable Portfolio Standards), buildings' sector (Energy Efficiency) or transport sector (Car Average Fuel Efficiency - CAFE).
- The CaT as an economy-wide umbrella policy **serves as a backstop and ensures that emissions reductions in line** with the environmental objective of California Assembly Bill 32 will be achieved.



MANAGING THE DISTRIBUTIONAL IMPACTS

SESSION 2

DO YOU THINK THE EU EMISSIONS TRADING SYSTEM SHOULD BE EXTENDED TO ROAD TRANSPORT AND BUILDINGS (HEATING)?



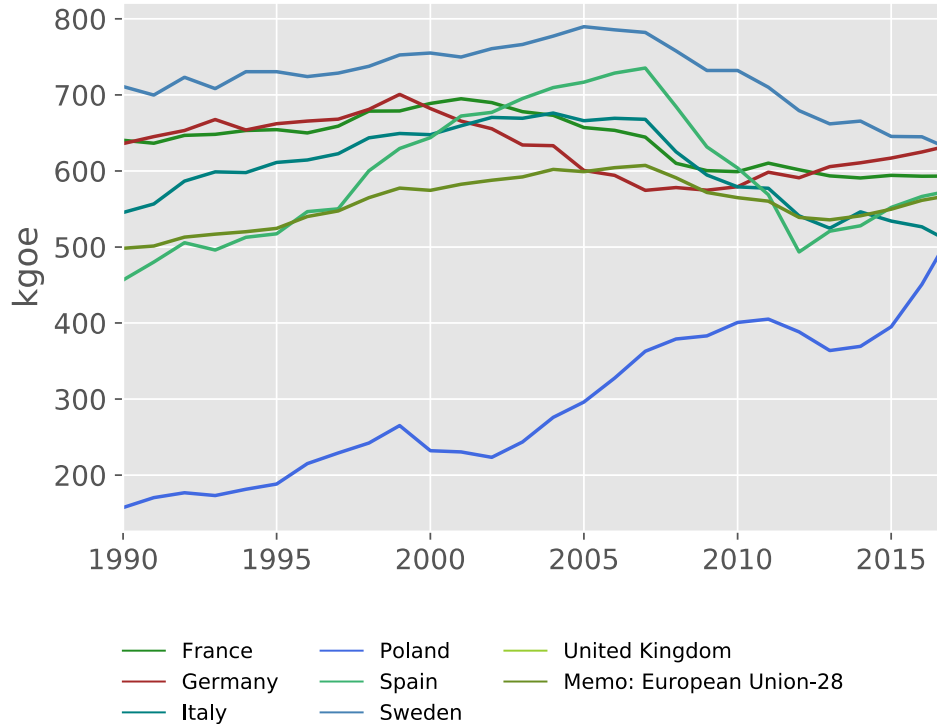
THE ELEPHANT IN THE ROOM...REGRESSIVITY

- 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.**

REGRESSIVITY ACROSS COUNTRIES IN THE EU... (I)

Fossil fuel energy consumption per capita, 1990-2017

Road

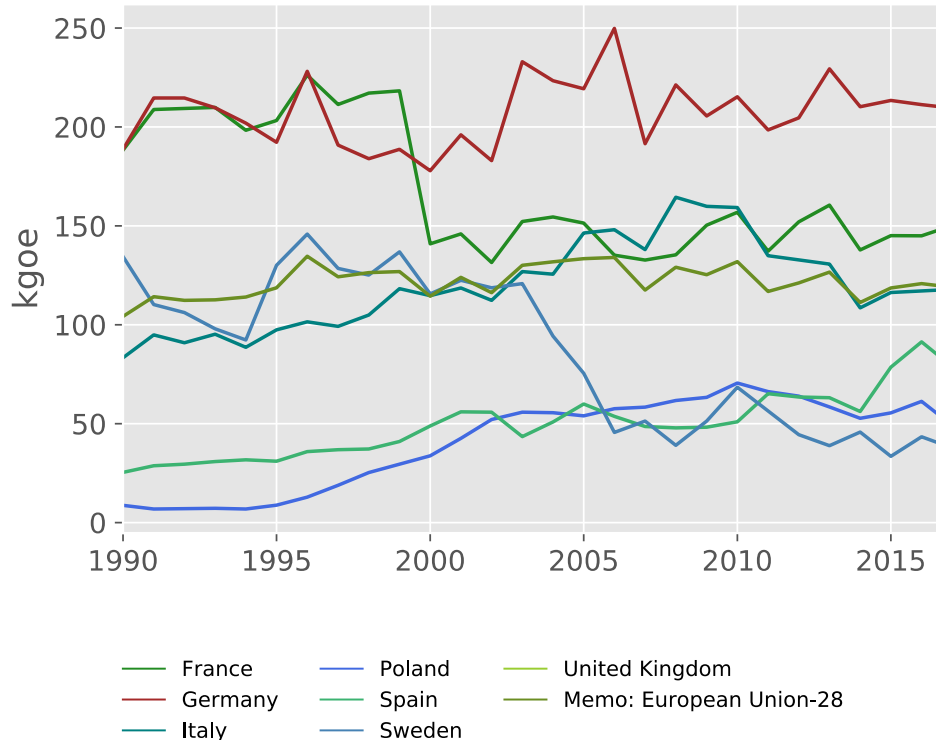


Source: Pollitt and Dolphin, 2020.

REGRESSIVITY ACROSS COUNTRIES IN THE EU... (II)

Fossil fuel energy consumption per capita, 1990-2017

Commercial and public services

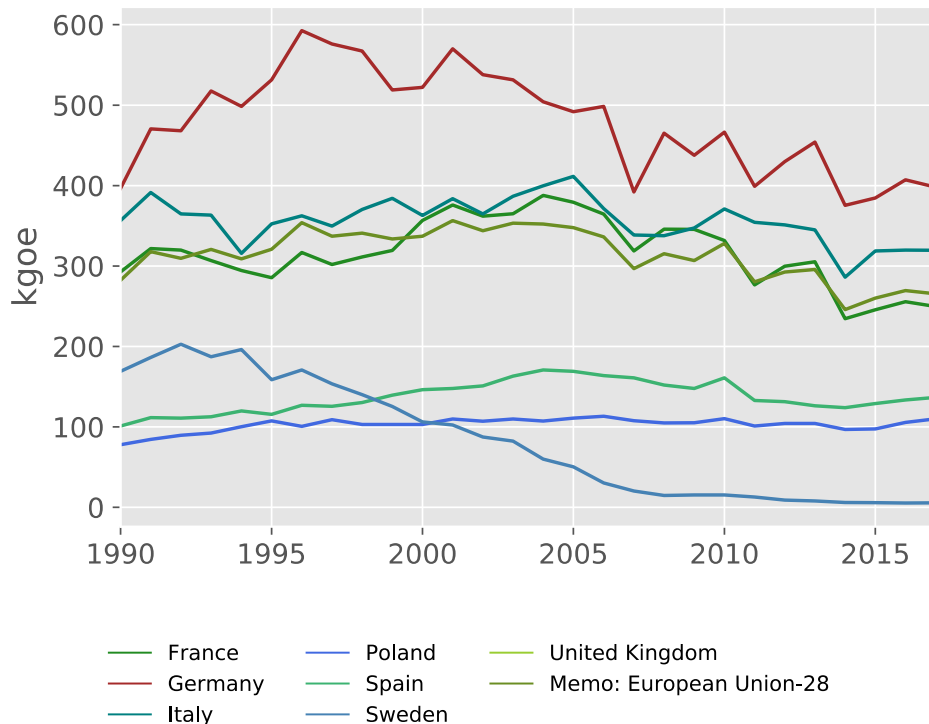


Source: Pollitt and Dolphin, 2020.

REGRESSIVITY ACROSS COUNTRIES IN THE EU... (III)

Fossil fuel energy consumption per capita, 1990-2017

Residential



Source: Pollitt and Dolphin, 2020.

- **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’.**
- 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.

CONCLUSION

- 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.