

# Political support for carbon taxation with income and urban-rural inequality

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**CHIPS**

Climate Change Impacts and Policies  
in Heterogeneous Societies

# Low support for carbon taxation

Carbon taxation theoretically efficient tool to reduce emissions

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But implementation limited by low political support

- Examples: Yellow vests in France, failure of Swiss carbon tax in referendum



# Why is carbon taxation unpopular ?

## Perceived **personal cost**

- Salience (fuel, energy bills)
- Un-elastic demand in the short run ("subsistence" consumption)

## **Fairness concerns**

- reviewed in Maestre-Andrés et al. (2019)

Related to **distributional effects** of carbon taxation

## Vertical

- Richer households tend to spend more in carbon-intensive goods than poorer households, in absolute value
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## Horizontal

- Households in the same income group face different tax burdens (e.g. Cronin et al. 2019, Douenne, 2020)
- Heterogeneity in "subsistence" expenditures: car commute, heating efficiency...

*Could political support for carbon taxation be limited by its horizontal distributional impacts ?*

Redistribution of tax revenue proposed to make carbon taxes progressive and more acceptable.

*Does this still hold when horizontal distributional effects are important ?*

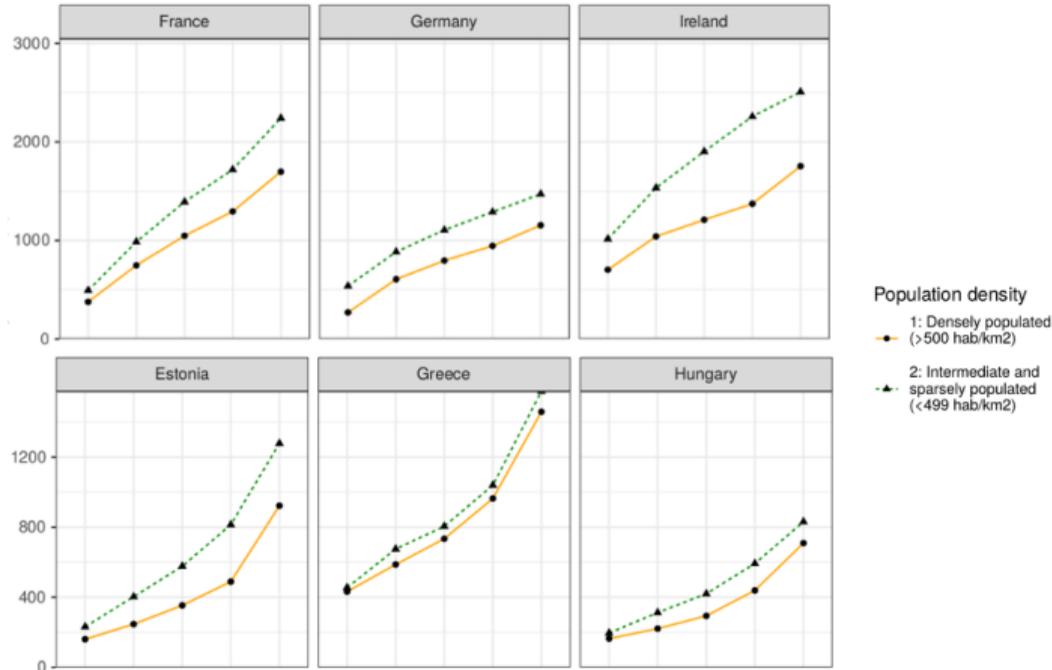
Model of political support for carbon taxation at the national level

- Incidence based on income and rural-urban heterogeneity
- Rural-urban: heterogeneity in subsistence fuel and energy expenditure
- Political support:
  - Carbon tax supported by median voter
  - Heterogeneity in support (concentrated "losers"?)

Applied to European countries (Eurostat data)

# Engel curves for energy and fuel expenditures

Mean per adult energy and fuel expenditure (€), by expenditure quintile and density, 2015



⇒ **Heterogeneity in role of rural-urban inequalities in energy expenditures.**

*Could political support for carbon taxation be limited by its horizontal distributional impacts ?*

- Small effect on median voter support for carbon tax
- But for some countries: important gap in support between urban and rural populations.

*Effect of redistributing the revenues from the carbon tax lump-sum ?*

- Makes the tax progressive
- But rural-urban burden inequality not solved
  - In some countries, rural median voter still net loser while urban net beneficiary
- Positive but small effect on support for the carbon tax

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