

# Vertical and horizontal distributional effects of carbon pricing in Eastern Europe

## A comparative study of Romania and Bulgaria

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### Topic

(Provide some context.)

Eastern Europe is the least climate conscious region in the European Union. Accordingly, climate action has had limited popular support in countries like Romania and Bulgaria. However, the EU climate objectives will require both states to pursue an expansive climate strategy, with carbon pricing as a cornerstone policy. Hence, we ought to better understand the distributional effects of carbon pricing in Eastern Europe.

### Research question

(Needs to be specific and must end with a question mark.)

What are the vertical and horizontal distributional effects of carbon pricing in Romania and Bulgaria?

### Motivation

(Why is your research question relevant?)

Combating climate change calls for carbon price increases in both EU ETS and non-ETS sectors. However, in the absence of revenue recycling schemes, carbon pricing affects lower-income households disproportionately. The effects will probably be more pronounced in less affluent Eastern Europe, diminishing the already weak support for climate action. My research question would lead to a better understanding of the distributional effects of carbon pricing in the region, as well as informing policymakers on how to address popular concerns and pressure coming from the fossil fuel industry.

### Main argument

(Hypothesis or causal mechanism)

I hypothesize that, in the absence of targeted revenue-recycling schemes, carbon pricing is regressive in Romania and Bulgaria, with households in lower income-deciles being more affected than households in higher income-deciles by a carbon price increase.

### Methodology

(Research design)

I propose a theory-testing and policy-prescriptive thesis. Theory-testing will rely on quantitative methods: micro-simulations using household panel and input-output data. Policy-prescription will use qualitative methods, mainly structured interviews.

### Data availability & limitations

(In case of quantitative thesis)

Data comes from Eurostat's Household Budget Surveys. While the datasets are suitable for the study of vertical distributional impacts across households, it might be more challenging to study horizontal impacts due to the potential lack of variables in the dataset (we would need variables on sub-region, rural/urban distinction, etc.)

### Findings from previous research

("What do we know?" Name the 3-5 most important previous studies and explain how they relate to your work. Use "Author (Year)" citation.)

- Douenne (2020) shows the importance of considering horizontal distributional effects; it also offers a solid research design for this endeavor.
- Pizer and Sexton (2019) shows why the regressivity of carbon pricing depends much more on within group variation, making the case for studying horizontal effects.
- Dorband et al. (2019) displays clear methodological approaches, especially how to operate with I/O data.

### Knowledge gap and contribution

(What is the knowledge gap that you would like to address? What does your work add to the literature? May be bullet points.)

- While there is extensive literature studying distributional effects of carbon pricing, almost no paper focuses on Eastern Europe. This thesis discusses Romania and Bulgaria in a comparative study, filling this gap.
- Few papers address horizontal distributional effects. This thesis performs an econometric analysis incorporating horizontal considerations and analyzes potential policy responses.