Comments on : Adverse Selection as a Policy Instrument: Unraveling Climate Change

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**Adverse Selection as a Policy Instrument: Unraveling Climate Change**

- Great paper on a very topical subject
- Use adverse selection to incintivize disclosure of emissions of clean firms
- Dirtiest firms have to pay an output tax based on the average rate of emissions among the undisclosed firms.
- Clean firms certify, it raises the output-based tax.
- Domestic and international settings
- Two empirical analysis: methane emissions from oil and gas fields, and carbon emissions from imported steel.

Mechanism all the more welfare enhancing that there is a a lot of heterogeneity within an industry

The US case (Lyubich, et al. (2018))

Figure 1: Dispersion of Within-Industry 90-10 Productivity Measures
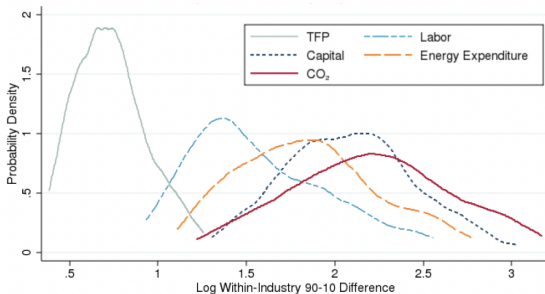
NOTES: Each kernel density plot was created using the approximately 375 6-digit NAICS dispersion measures for the corresponding productivity measure. Kernel densities have been censored at the 5th and 95th percentiles in accordance with U.S. Census Bureau disclosure avoidance.

A lot of heterogeneity within industry

The french case :

t. CO2 / t. oil equivalent (2019)
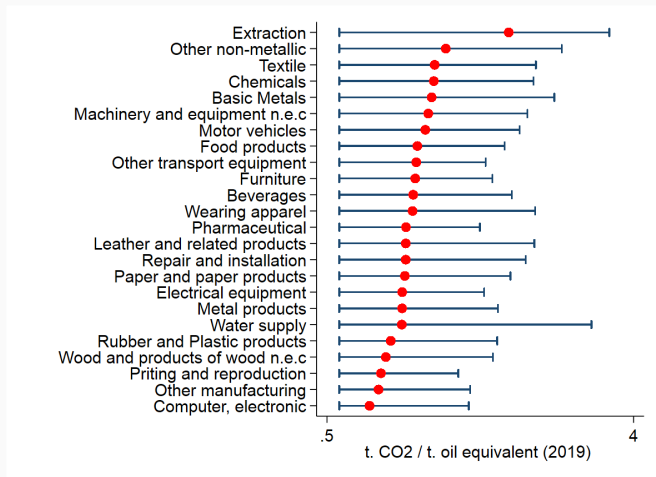
Fontaine et al. (2023)

Focus on the international case

- A country without jurisdiction abroad would need the cooperation of the foreign exporter to tax the actual carbon content of the imported goods. Complicated.
- Given an output tariff, clean foreign firms have an incentive to demonstrate they are clean.
- International case very topical at the moment
    - CBAM in Europe : European commission proposition Fit for 55 in 2022 :domestic producers; importers pay tax (default value of EU average, with option to demonstrate actual carbon emissions)
    - proposed regulation 2023 : amount of the border adjustment charge is based on the local carbon price, adjustment for any carbon price paid in the country of origin. Higher price if unreported emissions.
    - Recent proposition (Clausing et al. 2023) to implement a a methane border adgustment agreement on oil and gas.

The consumption Leakage Effect problem

- Consumption leakage effect : foreign price goes down which encourages Foreign consumption which is not taxed. Maybe worst with same good with heterogenous carbon intensity.
- In your setting : same cost function for all firms
- Imagine a (extreme) world in which dirty firms production is inelastic, clean production is elastic, foreign demand elastic, domestic demand inelastic, no abatement technology : introducing your CBAM actually increases emissions (compared to no tax at all) (see Daubanes et al. 2020). Not the case with an output tax.
- How important is the assumption of same cost function for clean and dirty firms ? Any empirical evidence on the relationship between marginal cost and emission intensity ?

The reshuffling problem (Backfilling Effect ?)

- Fowlie, et al. (2021) study California's greenhouse gas pricing programme and show that differentiated BCAs to electricity imports will be ineffective in curbing carbon leakage because carbon-free resources from other states may be preferentially dispatched to California

- Barrows et al. (2023) show that, under ETS, regulation increased emissions at unregulated plants owned by regulated firms.

What would be second best instrument maximizing domestic welfare but valuing all emissions worlwide ?

The regressivity problem

- Potential regressivity of BCA.
- International negociations China responded to the EU's proposal for import adjustments : such a policy would seriously undermine international efforts to fight global warming; ; same for India, Indonesia and Thailand.
- All the more important if production in poorer countries is more polluting.

- WTO compliance ? In particular with a certification fee ?
- Market power ?

Thank you !