
Trade effects of environmental technical measures

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Motivation

- Translate climate commitments into effective policies (UNFCCC)
 - ETS or CBAM (market-based) crucial (Ferrari and Borghesi, 2024)
 - Env-TBTs (non-market-based) synergic and complementary
 - energy efficiency (US EPCA)
 - chemicals management (EU REACH)
- Env-TBTs affect market access
 - non-conforming goods (de Melo and Solleder, 2020; Santeramo et al., 2023)
 - chemicals non-compliant with REACH (Cha and Koo, 2021)

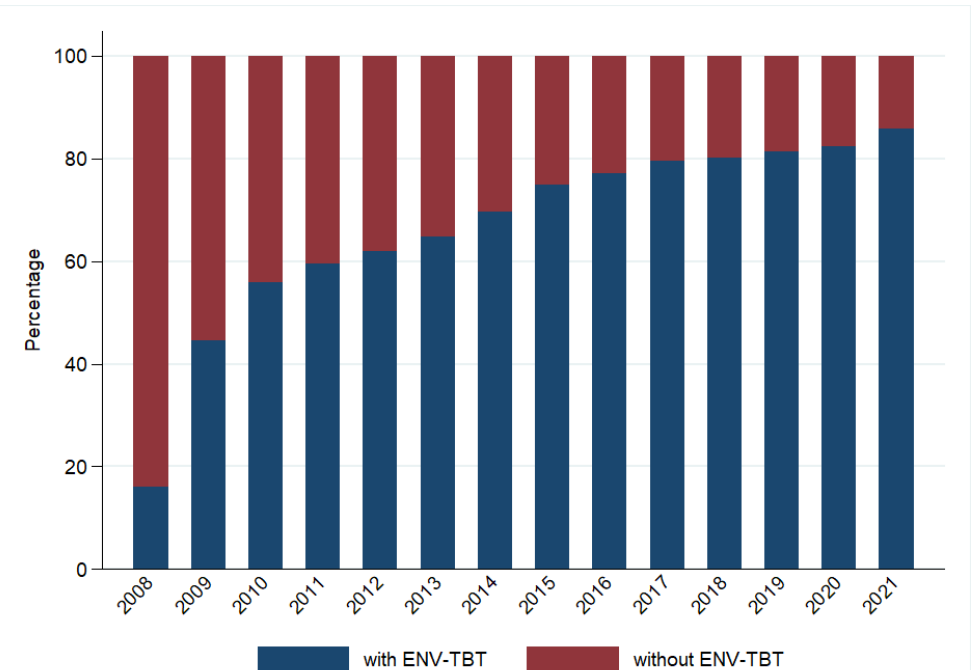
This paper

- Examines trade effects of env-TBTs
 - Uses an integrated dataset on env-notifications
 - Applies advancements in gravity models
- Finds a trade barrier effect of env-TBTs

Data

- Env-TBTs (ePing) & trade (BTDIxE) data
 - product mapping for 66% of measures
 - 66 partners, 21 industries, 2008-2021
- Growing trends
 - now over 5,000 env-TBTs
 - regulated imports: from <20% to >80% (2008-2021)
- Env-TBTs concentrated in large emitters
 - US, EU, China (one-third env-TBTs; 60% emissions)
 - manufacturing, chemicals (two-thirds env-TBTs; 30% emissions)

Figure: Trends in env-TBTs and trade



Specification

$$X_{ijst} = \pi_{ist} + \chi_{jst} + \gamma_{ijt} + \beta TBT_{jst} \times B_{ij} + \varepsilon_{ijst}$$

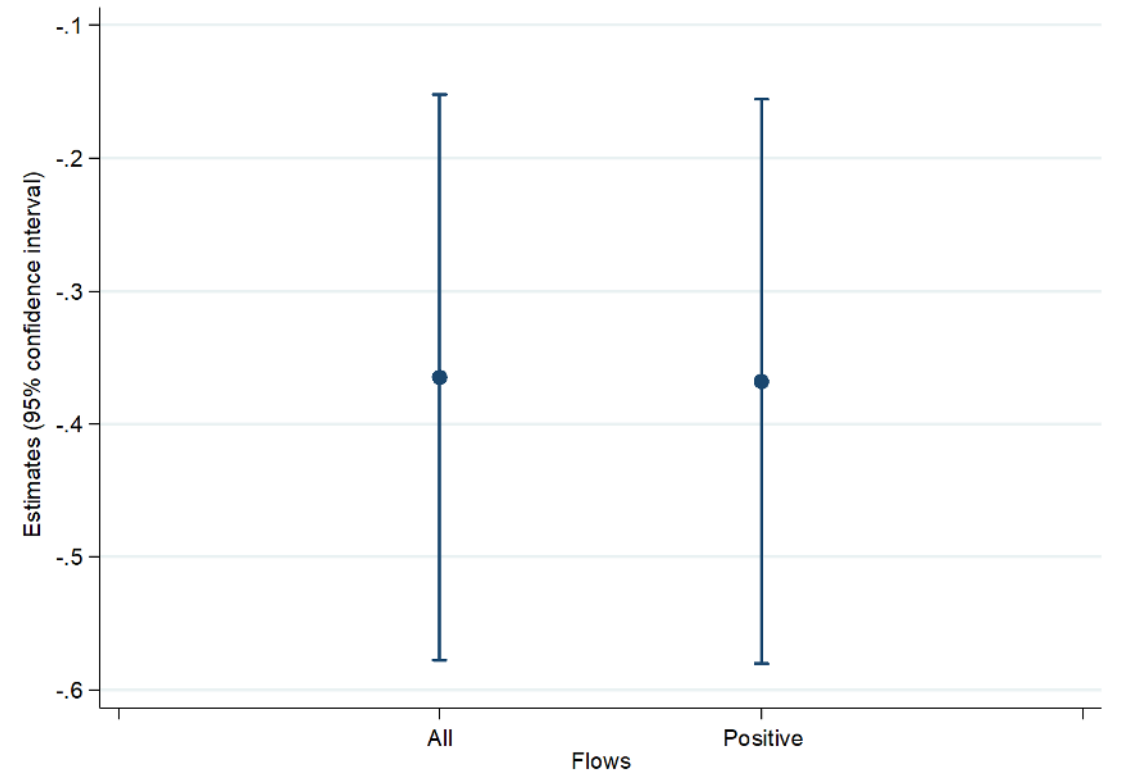
- Include domestic trade flows (Beverelli et al., 2024)
- Use full set of FEs (Larch and Yotov, 2024)
- Use panel data (Borchert et al., 2021) and consecutive years (Egger et al., 2022)

β : avg. changes in imports due to env-TBTs applied to specific sectors

Evidence

- Trade barrier effect of env-TBTs
- Compliance costs for partners
 - all flows (total costs ↑)
 - positive flows (variable costs ↑)
 - negligible fixed costs

Figure: Trade effects of env-TBTs



Takeaway

- Increasing env-TBTs in a sector reduce imports
 - market access (↓) (Santeramo et al., 2023)
 - domestic competitiveness (↑) (Hoekman et al., 2023)
- Env-TBTs can connect climate ambitions and concrete actions
 - good environmental practices in other countries (imitation effect)
 - international cooperation (coordination effect)

Thanks

Comments are welcome

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