The Political Economy of Carbon Pricing Policy Design

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Bonn, Germany
November 14, 2017

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Establishing and Phasing in Policy Targets

- Maximize economic welfare
  - Carbon price = expected marginal benefits (e.g., SCC)
- Cost-effectively implement a quantity goal
- Phase-in C pricing
  - Pilot cap-and-trade: EU, China
  - Ramp up carbon tax over time: British Columbia

Point of Compliance and Scope of Coverage

- Upstream
  - Administratively simple: British Columbia carbon tax
- Downstream
  - Target large emitters: EU ETS
- Hybrid
  - California cap-and-trade

Addressing Uncertainties in Carbon Pricing

- Mitigate adverse impacts of abatement cost shocks
- Banking and borrowing
  - Banking: EU ETS
- Safety valves, price floors, and collars
  - Allowance price containment reserve: California
  - Auction reserve price: California, RGGI
  - Carbon price floor: UK

Updating Carbon Pricing

- "Act-Learn-Act"
  - Regular updating of NDCs under Paris Agreement
- Automatic updating
  - C tax rate increase if emissions above benchmark: Switzerland
- Discretionary updating
  - New legislation and regulation: EU, RGGI, CA
  - Structured discretion: schedule updating to align with NDC updating process

Use of Revenues and Allowance Value

- Reduce existing tax rates on personal, business income
  - Tax swaps: Sweden, British Columbia
- Build political support for climate policy
  - Free allowance allocations: EU ETS, China
- Finance clean energy investment
  - RGGI
  - California

Mitigating Competitiveness Risks

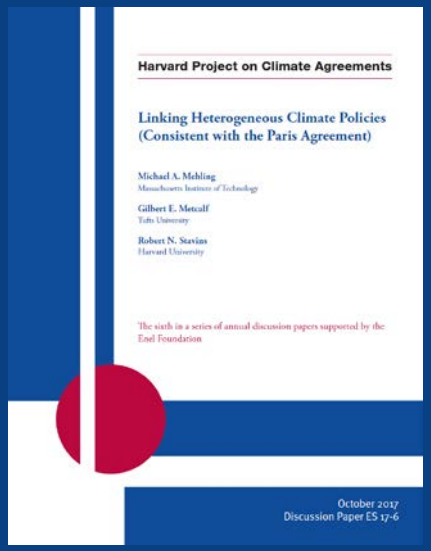
- Risk that energy-intensive manufacturing may relocate activity to low- and zero-C price jurisdictions
- Mitigate risk through policy design
  - Exempt energy-intensive industries: Denmark C tax
  - Output-based allowance allocations: EU ETS, California
  - Border tax adjustment

Accounting for Complex Landscapes and Overlapping Policy Instruments

- "Belt and suspenders" climate policy common
  - EU, California
- Reduces cost-effectiveness
  - Cap-and-trade with supplemental regulations and subsidies increases costs with no incremental environmental benefit
- Suppresses carbon prices in cap-and-trade
  - Weakens incentives for innovation, energy efficiency

Linking Carbon Pricing Policies

- Linking improves global cost-effectiveness
  - Cap-and-trade linking can increase market liquidity and reduce compliance costs
- Various types of linking
  - Direct linkage: California and Quebec
  - Indirect linkage through offsets (CDM)
  - Greater salience for linking cap-and-trade
  - Prospects for linking heterogeneous policies



C Pricing Policy Design and Durability of Climate Policy

Design Element	Role in Political Durability
Phasing in policy targets	Transition to C price demonstrates political viability
Point of compliance	Low administrative complexity; improved cost-effectiveness
Addressing uncertainty	Flexible implementation mitigates cost shocks
Updating carbon pricing	Maintain policy support by adapting to new info
Use of revenues	Secure stakeholder support; broaden political coalition
Mitigating competitiveness risks	Broaden support to business, labor stakeholders; increases environmental benefits of domestic policy
Overlapping policy instruments	Higher climate policy costs may be necessary political cost of securing broad coalition
Linking	Flexibility to buffer program against shocks

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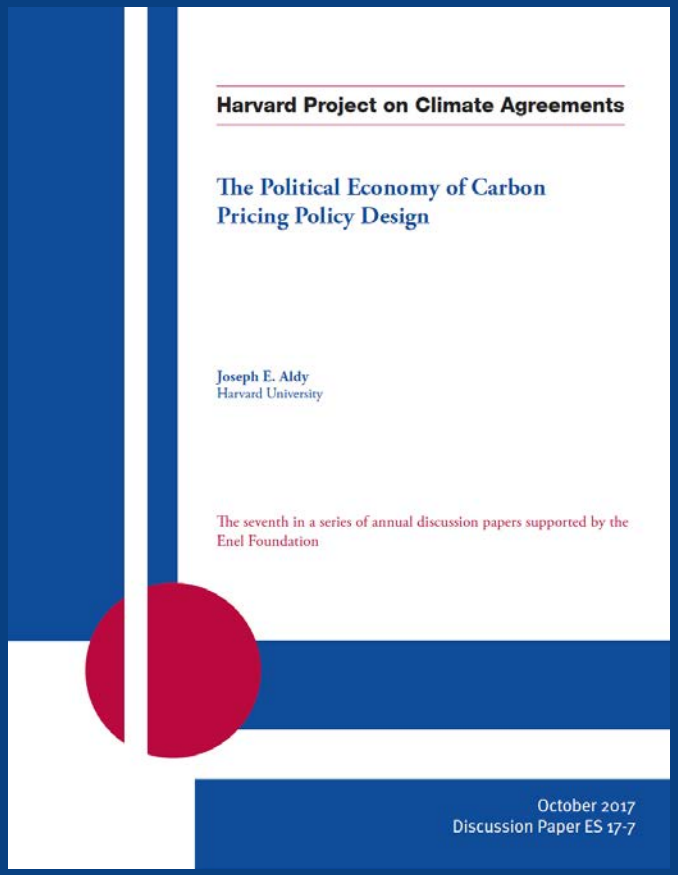
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