How to Design Border Carbon Adjustments that Work for the Climate

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Climate Strategies
Persistent Challenges to Effective Climate Action

• Paris Agreement achieves **breadth** of participation at the expense of centralisation, normativity and, at least initially, **depth**

• **Domestically driven** – rather than negotiated – definition of climate effort becomes the accepted norm, yet flexibility still cannot prevent **defection**

• **Heterogeneity** of climate effort therefore likely to persist, and possibly increase, as countries progressively raise domestic **climate ambition**

• Meanwhile, **protectionism** is on the rise amid a surge in nationalist sentiment

• Concerns about **competitiveness** and **leakage** are therefore likely to continue

• These concerns have been primarily addressed with measures behind the border, which are regularly criticised for being susceptible to **regulatory capture**, creating **perverse incentives**, and generating **windfall profits**
What Are Border Carbon Adjustments (BCAs)?

• **Border carbon adjustments (BCAs)** seek to alleviate negative impacts of uneven climate policies by including imports or exempting exports.

• They can take different **forms**, e.g.:
  - a tariff or other fiscal measure applied to imported goods
  - extension of other regulatory compliance obligations to imports
  - instance through tax or regulatory relief for exports

• They have three main **objectives**:
  - level the playing field in competitive markets
  - prevent leakage of carbon emissions to jurisdictions with weaker policies
  - incentivise trade partners to strengthen their own climate efforts
Growing Calls for BCAs (1)

Ernst-Ulrich von Weizsäcker, President of the Club of Rome (2 June 2017):
‘it would, symbolically, be a lovely idea’

Rachel S. Williams, Managing Director, Sandbag Climate Campaign (11 October 2017):
‘border carbon adjustments merit reconsideration’

Lakshmi Mittal, Chairman and CEO, ArcelorMittal (13 February 2017): ‘A carbon border tax is the best answer on climate change’
Growing Calls for BCAs (2)

Emmanuel Macron, President of France (26 September 2017):
‘une taxe aux frontières de l’Europe sur le carbone, c’est indispensable.’

Catherine McKenna, Minister of Environment and Climate Change, Canada (11 October 2017):
‘Border carbon adjustments are something we need to look at, ideally through the World Trade Organisation’
Growing Calls for BCAs (3)

Rodolfo Lacy Tamayo, Undersecretary for Environmental Policy and Planning, Ministry of the Environment, Mexico (November 2016): ‘A carbon tariff against the U.S. is an option for us’

Climate Leadership Council (7 February 2017): ‘Border adjustments for the carbon content of both imports and exports would protect American competitiveness and punish free-riding by other nations, encouraging them to adopt carbon pricing of their own.’
Legal Context

• **Non-discrimination principles** in WTO law:
  - Most-Favoured-Nation: equal treatment of trading partners (Art. I GATT)
  - National Treatment: equal treatment of domestic & foreign products (Art. III GATT)

• **Exemptions** are possible under specific circumstances:
  - Art. XX (b) GATT: measures ‘necessary’ to protect human, animal or plant life or health
  - Art. XX (g) GATT: measures ‘relating to’ the conservation of exhaustible natural resources

• Some **consequences for BCAs**:
  - BCAs should avoid differentiating between trade partners
  - BCAs should account for climate efforts of trade partners
  - BCAs should ensure basic fairness and due process during design and implementation
  - Introduction of a BCA should be preceded by serious, across-the-board negotiations
  - BCAs should demonstrate a sufficient environmental nexus
<table>
<thead>
<tr>
<th>Name</th>
<th>Year</th>
<th>Region</th>
<th>Coverage</th>
<th>Calculation Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future Allowance Import Requirement (FAIR)</td>
<td>2007</td>
<td>European Union</td>
<td>Imports and exports of goods at risk of carbon leakage, in relation to countries without comparable action</td>
<td>Average carbon intensity of EU goods, corrected for average free allowance allocation to production (multiplied by the imported weight)</td>
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<tr>
<td>Carbon Inclusion Mechanism (CIM)</td>
<td>2009</td>
<td>European Union</td>
<td>Imported and exported goods at risk of carbon leakage, in relation to countries which do not cooperate under a new international climate agreement on mitigation, or without carbon pricing for the sectors covered by the EU ETS</td>
<td>Average direct emissions of a European producer, minus the free allocation received based on product benchmarks, multiplied by the volume of imported goods</td>
</tr>
<tr>
<td>Border Adjustment Proposal for the Cement Sector</td>
<td>2016</td>
<td>European Union</td>
<td>Imported cement and clinker from countries without adequate mitigation efforts and/or carbon content pricing equivalent to EU</td>
<td>Average emissions from EU production (or less, if lower emissions can be proven) minus European benchmark-based free allocation value, multiplied by the number of goods imported</td>
</tr>
<tr>
<td>American Climate and Energy Security Act (HR 2454)</td>
<td>2009</td>
<td>United States</td>
<td>Goods from eligible industrial sectors and manufactured items for consumption from countries that do not meet specific standards outlined in the bill, and that are not exempted for low emissions or a low level of development</td>
<td>National greenhouse gas intensity rate in covered countries for a category of covered goods; an allowance adjustment factor for the allowances that were allocated free of charge in the United States; and an economic adjustment ratio for foreign countries</td>
</tr>
<tr>
<td>Californian Emissions Trading System</td>
<td>2011</td>
<td>California</td>
<td>Electricity imported into California from neighbouring states, provided these are not linked to the Californian Emissions Trading System</td>
<td>All emissions reported for imported electricity from unspecified sources are considered above the coverage threshold, and subject to a default emissions factor multiplied by a transmission loss correction factor</td>
</tr>
<tr>
<td>Climate Leadership Council (CLC)</td>
<td>2017</td>
<td>United States</td>
<td>Exports from sectors with greater than 5% energy cost in final value should have any carbon taxes rebated, and non-emissive fossil fuel products should be exempt; not further specified</td>
<td>Not further specified</td>
</tr>
</tbody>
</table>
Five Design Steps

1. Determine Scope and Coverage
   - Products and trade flows, affected countries, and climate policies

2. Calculate the Embedded Carbon
   - Scope of covered emissions and methodology used for their calculation

3. Determine Adjustment Level
   - Differential between domestic and foreign carbon constraints

4. Determine Revenue Use
   - Allocation of revenue to specified countries and purposes

5. Decide Expiration
   - Periodic review and expiration once leakage rate falls below a certain level
1. Scope and Coverage

• Apply only to imports
• Cover only primary goods from sectors with high carbon cost and trade exposure
• Focus on sectors, not countries
• Exempt least-developed countries
• Determine policies to be adjusted
  - Start with explicit carbon pricing
  - Consider additional carbon constraints
2. Calculate the Embedded Carbon

• **Direct emissions** from the production process
  - Global sectoral benchmarks (weak/average/ambitious?)
  - Multiple benchmarks may be needed in some sectors

• **Indirect emissions** from electricity and heat inputs
  - If covered in the importing country
  - Based on regional or local emission factors

• Allow foreign producers to document **actual emissions**
  using third-party-verified data
3. Determine Adjustment Level

• Default methodology:

\[ A = BM \times (P_i - P_e) \times (Q \times Ex) + EF_e \times EI \times Q \]

A = Adjustment
BM = Global sectoral average benchmark
\( P_i = (\text{explicit/effective}) \) carbon price in importing country
\( P_e = (\text{explicit/effective}) \) carbon price in exporting country (or: global sectoral average)
Q = quantity of imported product
Ex = Adjustment for exemptions or free allocation in importing country
\( EF_e = \) Indirect emission factor in exporting country
EI = Energy intensity of imported product
3. Determine Adjustment Level

- Determine **effective carbon prices**:  
  - Explicit carbon price when only carbon tax/ETS adjusted  
  - Different methodologies can be used to estimate the implicit carbon price of policies that generate no explicit price, e.g.:
    - *Fuel tax relative to carbon content of fuels*
    - *Average sectoral abatement cost multiplied by mandated emission reductions*
    - *Carbon price equivalent to achieve mandated emission reductions*

- Reflect **net differential** in the adjustment:
  - Any exemptions, rebates or free allocation in importing country  
  - Any carbon constraints applied to product in exporting country  
    -> *Or global sectoral average effective carbon price?*
4. Determine Revenue Use

- Avoid accrual to **general budget**, and instead allocate to **environmentally beneficial** purposes
- Transfer revenue to **affected developing countries** e.g. for mitigation measures or enhanced MRV capacity

5. Decide Expiration

- Avoid BCA becoming entrenched by including **sunset clause**
- Mandate **periodic review** and **expiration** of the BCA once leakage rate (or policy differential) falls below a certain level
Design Steps and Related Process

- **Decide on Introduction of BCA**: Notify intent to introduce BCA and open dialogue with potentially affected countries. Notify intended coverage of goods and sectors. Engage affected countries in bi- or multilateral negotiations on leakage reduction.

- **Determine Scope & Coverage**: Launch participatory process to calculate sectoral average benchmarks for direct emissions and regional emission factors for indirect emissions. Allow procedure to document performance that exceeds benchmark.

- **Calculate Embedded Carbon**: Create process to document performance that exceeds benchmark. Consider independent process for determination of implicit carbon price.

- **Determine Adjustment Level**: Engage with developing countries on possible use of revenue.

- **Determine Revenue Use**: Periodic review and expiration once leakage rate falls below a certain level.

- **Review and Expiration**:
Thank you!