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BORDER ADJUSTMENTS FOR CARBON: PERSPECTIVES FROM GLOBAL BUSINESS

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1. Summary

Trade competitiveness is a central issue in climate policy and solutions are needed that are economically efficient, environmentally effective, socially fair, and politically sustainable. Border Adjustments for carbon may be considered alongside other options to address the risk of carbon leakage in the face of diverse and uneven international approaches to carbon constraints. However, there are important economic, legal, and practical issues to understand and address in the design and implementation of any Border Adjustments.

Key principles are needed to guide consideration of Border Adjustments. These include

1. **Purpose:** Border Adjustments should only be considered as a complement to domestic emissions reduction policies that create meaningful burdens on domestic emitters. If pursued, their primary purposes should be to:
    a) Support mitigation that is environmentally effective while being economically, politically, and socially sustainable; and
    b) Enhance the credibility of markets for low, zero and negative emissions goods.

2. **Trade commitment compatibility:** Border Adjustments should reflect and respect the commitments that nations have made to each other through bilateral, plurilateral and multilateral trade agreements. Border Adjustments should first and foremost be compatible with the World Trade Organization (WTO) rules. Key implications are that Border Adjustments should be:
    a) Non-discriminatory, offering formal and procedural fairness to all trade partners;
    b) Open and transparent in development, design and administration;
    c) Designed to equalise carbon constraints for trade-exposed industries, not penalise particular nations, sectors, or businesses; and
    d) Designed to facilitate trade, not to discourage it.

3. **Practicality**: Border Adjustment designs must be practical to implement and minimise transaction costs. They should limit coverage to those products where there is a serious potential for carbon leakage, but this consideration should take account of Border Adjustment flow-on impacts across supply chains that may extend leakage risks to additional products.

Collaborative work between governments, business and other stakeholders can help to identify and resolve Border Adjustment issues. This includes work to improve the collection and recognition of emissions data; clarification of legal questions; and development of shared and mutually compatible approaches to policy design.

2. Trade competitiveness and climate policy

Issues of trade competitiveness are central to the successful design and implementation of climate policy.

While multilateral cooperation on climate change has delivered important benefits, national policies remain individually determined, diverse in form and uneven in impacts. Many nations and their business and worker stakeholders have feared that they may lose profitability, investment, and jobs if their own emitters face more burdens than those in other jurisdictions. If emissions-intensive production is incentivised to move locations rather than reduce emissions intensity, trade and emissions are distorted without global benefit. Managing the risk of carbon leakage has been very important to the policy design and political acceptability of climate policies in the major economies.

But competitiveness is not just about the continuity of existing activities. New low-, zero- and negative-emissions technologies are emerging that can help deliver the goods and services that societies require. Many of these technologies currently have higher costs than high-emissions alternatives, though they may become cheaper with scale, learning and innovation. Businesses will not invest in these new technologies if they do not believe they can earn a return.

The challenge for business is that while some customers are willing to pay a premium for better emissions outcomes, many are price sensitive. If the effect of domestic and international policy regimes is that products with higher emissions and/or lower emissions constraints are also cheaper, producers with lower emissions and/or higher emissions constraints will lose profitability and/or market share. The strength of this effect will vary generally, product types with a higher prevailing emissions intensity and lower value-added will be most vulnerable to perverse effects of uneven climate policies. This includes many basic materials that play important roles in industrial supply chains, growth, and development. However, in the longer term, the impact of more expensive basic materials as inputs for downstream industries must also be taken into account.

The trade competitiveness issue needs to be addressed for climate policies to succeed. This is the context for emerging consideration of Border Adjustments.

3. Solutions for trade competitiveness

There are many potential responses to the competitiveness challenge. They can be distinguished in principle, even if they may be combined in actual policy designs. They should be judged according to their practicality; environmental effectiveness; economic efficiency; and social equity.

Two imaginable solutions are unlikely to directly ease the trade competitiveness problem in the medium term.

A **single global carbon price** or comparable emissions constraint would in principle eliminate the risk that uneven climate policy would distort trade and emissions and it is in general a much more effective solution to the problem of carbon leakage While nowadays the necessary strong consensus and the conditions to implement a global carbon price do not exist, countries should work towards a global carbon price in the long-term. If global carbon prices emerge it will be from the bottom up, as nations

and groupings coordinate and connect their respective actions. Forums like the G20 and G7 could help in this regard. Trade competitiveness issues will remain important on the way through such a transition.

Broader trade reforms have been proposed that may have benefits for both climate and trade-exposed industries. These may include agreed upon reductions in barriers to trade in environmentally beneficial goods and services; or bilateral, plurilateral or multilateral agreements that reduce barriers to trade in general. Broader trade reforms should be considered on their broader merits. But they are unlikely to ease concerns about the trade competitiveness impacts of uneven climate policies; that will take more specific measures.

Four solutions offer greater potential and are being used or seriously considered by nations today.

Free allocation of emissions allowances is widely practiced by economies using emissions trading schemes. Allocation processes can be designed to maintain emissions reduction incentives while limiting out-of-pocket burdens on trade exposed industries. After significant work to establish them, free allocation approaches in some major economies are well understood and effective in moderating trade competitiveness risks. However, they do involve trade-offs:

- All other things being equal, free allocation can require a growing share of the carbon budget as annual caps decline; and
- the level of free allocation needs to keep up with shifts in technology and markets through regular review, while preserving sufficient stability to promote investment, and being consistent with WTO rules.

Policies without overt costs to emitters may be pursued to limit trade impacts. These may include financial support, information provision or regulation to encourage innovation or investment in cleaner technologies and practices. These approaches can be useful parts of a policy portfolio. They do have some limitations as a competitiveness solution, however:

- Policy costs may be significant without being overt and observable. For instance, regulatory policies may have a substantial compliance cost despite the lack of an obvious price signal. Subsidies to one part of the economy are paid for by another part. Hidden costs and transfers may have a competitive impact, in addition to other effects; and
- Public budgets may not be sufficiently large and predictable to carry the entire burden of emissions reduction without creating private incentives for action.

Leaving emissions from trade exposed sectors unconstrained avoids near-term competitive impacts, but at a serious cost. It fails to advance a transition to low-, zero- and negative-emissions that is important for longer-term competitiveness. And it increases the competitiveness fears of other economies, contributing to trade frictions.

Border Adjustments are emerging as another tool to fight carbon leakage and broaden incentives for investment in low, zero and negative emissions production. This most common concept involves an economy that imposes a cost on domestic emissions also imposing an equivalent carbon cost on relevant imports to that economy. However, while border adjustments are widely practiced with respect to Value Added Taxes there is little experience with them in the climate policy context. Questions need to be answered concerning practical implementability; trade law; economic flow-on effects; and more. The issues involved in Border Adjustments, principles for their design and implementation, and areas for further work are considered in the remainder of this paper.

4. Issues in Border Adjustment design

Designing an effective, efficient, and equitable Border Adjustment involves multiple issues that must be solved together. An approach that provides efficient emissions reduction signals but violates trade commitments would not be acceptable; nor would be an approach that upholds trade law but imposes impractical administrative requirements.

Policy objectives

The goals of a Border Adjustment and their relative priority need to be clearly articulated. These could include:

- Preventing uneven climate policies between economies from causing carbon leakage, which undermines the global effort to reduce emissions. This is a critical problem to solve and arguably should be the main goal.
- Influencing policy decisions in other economies. Border Adjustments are often discussed as if they are a punishment for perceived climate laggards. However, a punitive approach would be hard to reconcile with commitments to trade non-discrimination. It may also be ineffective: if we consider Border Adjustment costs, home policy costs and selling prices together, imposition of a Border Adjustment may not directly 'punish' anyone, and alteration of an exporter's climate policy regime may not directly affect their competitiveness in an economy imposing a Border Adjustment. By contrast, a carefully designed and implemented Border Adjustmentthat manages competitiveness fears could be a powerful positive example for other economies' policy makers.
- Influencing production decisions in other economies. A Border Adjustment that is open to acceptance of individual emissions data from importers may extend the price signal for cleaner production to international producers. However, the power of this effect will depend on the size of the markets imposing Border Adjustments and their importance to suppliers' activities.
- Influencing consumption decisions. Just as trade exposure limits the ability of producers to recover carbon costs from customers, imposition of a Border Adjustment can allow carbon costs to flow further down supply chains, potentially all the way to end users. This may create incentives for carbon efficiency in intermediate production and final consumption decisions. However, limitations in Border Adjustment coverage may limit this effect, or even create distortions (such as coverage of emissions for one material but not for a substitutable alternative; or leakage in uncovered composite goods with major input materials that are covered).

Trade law and relationships

While recent years have seen some increased tensions within and between major economies over trade, the global trade regime and other trade commitments continue to play an important role in business activity, nations' prosperity and development, and amicable international relations. Any Border Adjustment will need to respect and fulfil trade commitments. Similarly, the trade regime will be stronger if it offers a practical pathway to help nations to meet their climate commitments.

The legal issues in Border Adjustment design can be partly distinguished from the diplomatic and trade relationship issues.

While trade law is complex, nuanced and includes some important remaining unsettled issues, there appear to be two pathways for a Border Adjustment to comply with World Trade Organisation rules:

- **Compliance** with the core obligations of the General Agreement on Tariffs and Trade which underpins the WTO. These include the principles of National Treatment (treating imports no less favourably than domestic supply) and Most Favoured Nation (treating imports from all sources as well as the best-treated source). The issues involved include:
    - ensuring that a charge on imports is genuinely equivalent to a domestic impost
    - ensuring that distinctions can be made between the emissions embodied in imports without discriminating purely on the basis of national origin; and
    - in the case of an export adjustment, ensuring that the level of adjustment is not such as to violate the Agreement on Subsidies and Countervailing Measures.
- **Exception** from one or more of the core obligations of the GATT through invocation of one of the environmental provisions in GATT Article XX. This requires that the Border Adjustment be directed at the relevant environmental purpose and not operate as a disguised means of trade protection.

It appears possible for a Border Adjustment design to be genuinely compatible with WTO rules, but this important goal can only be achieved if it is fully reflected in the detail of design and implementation.

Beyond trade law, trade relations and diplomacy are often delicate and could be injured by a Border Adjustment unless great care is taken to bring trade partners along. The perception of a rushed, ill-defined, or punitive Border Adjustment could inspire disputes and retaliation. By contrast, strong transparency, dialogue, and a commitment to fairness in design and implementation of a non-discriminatory Border Adjustment could allay many concerns. Deeper economic analysis of the flow-on effects of a Border Adjustment may also help calm diplomatic nerves.

Economic flow-ons

The imposition of a Border Adjustment on imports obviously increases the cost of supply for covered importers. However, depending on design it may have other important effects on suppliers, supply chains and end users of covered products.

The most important of these flow-ons is to **selling prices** of covered products. If a Border Adjustment is applied to all imports of a given product, and genuinely reflects the carbon costs facing domestic producers, selling prices for that product can be expected to rise within the economy applying the Border Adjustment. This reflects that all potential suppliers will face either the Border Adjustment, the domestic carbon cost, or the production costs associated with a zero-emissions process that avoids carbon costs. The extent of price increases will depend on many factors and will change over time as technology improves and markets respond.

An increase in selling prices means that the impact of a Border Adjustment on profitability will be different to the impact on supply costs. Some suppliers will recover only part of their costs, eroding profitability, while others will be neutral or experience increased profitability. All other factors being equal, a lower-emissions supplier would be advantaged over a higher emissions supplier.

Other important flow-ons include:

- **Input costs** will increase for other domestically produced goods that use covered products as inputs. While more complex goods may involve a breadth of inputs and value-added that dilutes

the impact of carbon costs, in some cases this flow-through may involve carbon costs large enough to create a carbon leakage risk. Such a risk would not exist in the absence of a Border Adjustment because otherwise trade exposure limits the ability of upstream suppliers to pass carbon costs to their customers. This might require the scope of a Border Adjustment to be adjusted to capture such products, perhaps informed by determinations of the actual effects of initial adjustments of more limited scope. However, a trade-off emerges, as expanded scope is necessarily accompanied by increased administrative complexity.

- **Demand** for covered goods may change in response to price changes, including shifts to substitute products or to different forms of consumption. Shifts in the composition of demand can be part of an efficient response to climate change. But substitution could be problematic if the alternatives do not represent genuine emissions reductions. This could arise in at least two ways relating to limitations in Border Adjustment scope:
    - If substitute products are not covered by Border Adjustments and their emissions are unpriced; or
    - If Border Adjustments only incentivises short term shuffling of recycled materials (see below).
- **Shuffling of recycled materials**. Recycling of aluminum, steel and other materials can involve much lower emissions than currently prevalent primary production techniques, and Border Adjustments may make recycled supply more profitable as intended by the advocates of this approach. However, metals recycling is already growing globally, and it could be initially easy for some producers to satisfy carbon-sensitive demand by partially reshuffling existing supply, with lower impact on climate than anticipated by policy makers. The impact of such shuffling will likely be small since carbon-sensitive demand is expected to grow, driven both by Border Adjustments and market considerations.

Practicality

Legally defensible and environmentally effective Border Adjustments require data about emissions that can be difficult to gather and involve compliance systems that can be complex to administer and navigate. These challenges increase as a Border Adjustment covers more products and more forms of embodied emissions. They can be reduced by making use of established and familiar systems, developing fair and easily applicable defaults, and focussing scope on those products, suppliers and emissions that are most relevant.

Measurement, reporting and verification of emissions data is a familiar challenge in climate policy. Jurisdictions vary in the capacity and detail of their reporting systems and continue to improve them. Individual businesses within each jurisdiction also vary widely in their familiarity with carbon accounting. While some businesses will be in a position to provide high-quality emissions data for Border Adjustment purposes, for the foreseeable future many businesses will either not have relevant data, or the data will not necessarily be accepted.

Existing Customs systems are familiar to trading businesses and the data and systems involved may be able to be adapted to support Border Adjustments at lower cost than entirely new systems and reporting requirements. However, where there are integrity and compliance problems with Customs today – such as the reclassification or rebadging of goods to attract favorable treatment – these can be expected to impact Border Adjustments as well and will need reasonable anti-avoidance measures.

Default emissions intensities can greatly simplify compliance with Border Adjustments where validated individual data is not cheap and easy to obtain. Economies considering Border Adjustments may already have trusted data on the emissions intensity of domestic production of the goods of concern. Deriving defaults from this domestic data can be part of an approach to legal non-discrimination, if done carefully and with an eye to National Treatment.

The **scope of covered emissions** matters. Data on Scope 1 emissions (direct emissions from a given facility) are the most straightforward. Data on Scope 2 emissions (emissions relating to offsite electricity consumed by a facility) can be more complex, involving system-wide outputs as well as individual consumption profiles and contractual arrangements. Scope 3 emissions (emissions embodied in other inputs or produced by the use of a facility's outputs) are more challenging again.

The **scope of covered products** is critical to manage. Most products are not currently emissions intensive. Carbon leakage fears apply to materials and products that account for a modest share of total trade. Existing emissions reporting and policies tend to focus on these sectors, meaning they may have easier access to emissions data than others. As noted above, use of Border Adjustments will impact input costs and may create leakage fears for some additional more complex products. To avoid distortions, it will also be important to cover products that are direct substitutes for other covered products. Some kind of significance threshold would help to moderate overall administration and compliance costs, which could otherwise be very high with full coverage of all products.

Interaction of Border Adjustments and other climate policies

With several major economies considering Border Adjustments the interaction between Border Adjustments, and between Border Adjustments and other climate policies, may become very important. It may seem inefficient and unfair to apply a Border Adjustment to a product that has paid a carbon price at home. On the other hand, establishing the nature and impact of policy regimes in the country of origin can be costly and complex in itself, and may complicate legal non-discrimination.

Taking account of importers' home-economy climate policies will be easiest where they are transparently administered and involve an explicit observable cost.

Minimising transaction costs between jurisdictions with Border Adjustments is just part of the broader challenge of minimising transaction costs for all trade. If Border Adjustment elements are integrated with existing Customs processes and have streamlined and highly automated processes for submitting and accepting data or default values, this will benefit all participants.

Export adjustments

Exports from jurisdictions with significant carbon constraints are as important to trade competitiveness concerns as imports to those economies. Export rebates are a potential part of Border Adjustments in addition to import charges. In principle they help achieve the objective of trade neutrality. However, rebates may inspire concerns:

- Are rebates legal? Like free allocation they would need to be applied consistent with the WTO Agreement on Subsidies and Countervailing Measures. If they undermine environmental protection they would complicate reliance on GATT Art XX as a basis for WTO compatibility. It should be noted that export rebates for Value Added Taxes are widely practiced and typically

uncontroversial; the legal context is similar, though the practical differences to Border Adjustments are important.

- Do rebates preserve abatement incentives? Depending on design a rebate may either remove the price signal provided by domestic policy or preserve it. Key issues include the rate of rebate; whether it is applied on a facility-specific or industry-wide basis; and how frequently the rate is updated. Rebates with less frequent updates and using industry-wide intensities will provide stronger abatement incentives but may rebate some exporters more than their actual individual costs.
- How are export adjustments treated by trade partners? If they are interpreted as subsidies they may inspire countervailing measures. For trade between economies with Border Adjustments, an export rebate at one end may be followed by an import charge at the other end; this could add transaction costs, but also resolve concerns about abatement incentives and National Treatment.

Other options to address export trade neutrality include free allocation and transition support. These also need to comply with trade law. Without some measures to address trade competitiveness fears relating to exports, emissions policies may not be economically or politically sustainable.

5. Principles for Border Adjustment design

Considering the above, the following principles should guide governments, businesses, and other stakeholders in evaluating, designing and implementing Border Adjustments.

1. **Purpose:** Border Adjustments should only be considered as a complement to domestic emissions reduction policies that create meaningful burdens on domestic emitters. If pursued, their primary purposes should be to:
    a) Support mitigation that is environmentally effective while being economically, politically, and socially sustainable; and
    b) Enhance the credibility of markets for low, zero and negative emissions goods.

2. **Trade commitment compatibility:** Border Adjustments should reflect and respect the commitments that nations have made to each other through bilateral, plurilateral and
3. multilateral trade agreements. Border Adjustments should first and foremost be compatible with the World Trade Organization (WTO) rules. Key implications are that Border Adjustments should be:
    a) Non-discriminatory, offering formal and procedural fairness to all trade partners;
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    c) Designed to equalise carbon constraints for trade-exposed industries, not penalise particular nations, sectors, or businesses; and
    d) Designed to facilitate trade, not to discourage it.

4. **Practicality**: Border Adjustment designs must be practical to implement and minimise transaction costs. They should limit coverage to those products where there is a serious potential for carbon leakage, but this consideration should take account of Border Adjustment flow-on impacts across supply chains that may extend leakage risks to additional products.

6. Options for cooperative work

In light of the issues and principles identified in this paper and the consideration of Border Adjustments by several major economies there are opportunities for further work by governments, business, and other stakeholders. Joint collaborative work could improve understanding of Border Adjustments, enhance trust and confidence, and make it easier for Border Adjustment designs to adhere to the principles articulated above.

Data

Stakeholders could do a lot to improve the data that Border Adjustments require and reduce the cost and difficulty of measurement, reporting and verification (MRV). Options include:

- Bilateral or plurilateral agreements on mutual recognition of systems for emissions reporting;
- Capacity-building assistance for economies or industries that are potentially affected and lack recognised facility-level MRV systems. This is related to, but distinct from, the national-level MRV issues that are part of the Paris Agreement and subsequent negotiations.
- Common approaches to complex issues in emissions data, such as the attribution of Scope 2 emissions from consumption of electricity generated off-site. Approaches to the downscaling of system-wide emissions outcomes to individual energy users, the treatment of individual usage profiles, and the recognition of clean power purchase agreements and other individual arrangements, require significant development work and will be more useful if widely shared.
- Development of shared, high-quality, and international data sets on emissions, such as global performance averages in individual industrial sectors of concern, could enhance Border Adjustments. For instance, globally derived default benchmarks could replace domestic benchmarks as a basis for any export rebates, or where facility-specific data is not available to determine importer charges.

Law

Several legal issues relevant to the design and implementation of valid Border Adjustments could be clarified, and potentially make it easier for Border Adjustments to be simultaneously practical, effective, and legal. Relevant processes include the discussions of the Parties at the WTO; the WTO's advisory and dispute resolution processes; bilateral and plurilateral discussions outside the WTO; and the policy statements of individual nations. The issues that would benefit from clarification include:

- The extent to which adjustments may take account of processes in their treatment of products;
- Whether practical considerations validly limit the extent of products, emissions and policies that must be considered if a Border Adjustment is to be supported by GATT Art XX;
- What obligations exist regarding the treatment of Least Developed Countries by any Border Adjustment; and
- More detail on the practical application to Border Adjustment export rebates of the requirements of trade law, including the Agreement on Subsidies and Countervailing Measures and GATT Art XX.

Policy

Border Adjustment design involves complex policy and economic issues that could benefit from collaboration that shares resources and perspectives. Options include:

- Joint study of the flow-through impacts of actual and proposed Border Adjustments across global supply chains. The impact on markets for recycled materials is particularly important to understand to avoid perverse consequences.
- Common approaches to Border Adjustment design and implementation could be discussed by economies considering them. This could include:
    - how designs may incorporate future expansion or linkage;
    - the potential for shared systems, protocols and methodologies;
    - transparent and rigorous approaches to any export rebates;
    - the interaction of Border Adjustments, including options to minimise transaction costs

7. Further reading

Several participants in BizMEF have stated positions on CBAMs. At the time of writing these included:

- Australian Industry Group: https://cdn.aigroup.com.au/Reports/2021/Carbon_Border_Adjustments_Policy_Paper.pdf
- BusinessEurope:
    - https://www.businesseurope.eu/sites/buseur/files/media/position_papers/rex/2020-06-22_what_can_trade_can_do_for_climate.pdf
    - https://www.businesseurope.eu/sites/buseur/files/media/position_papers/iaco/2020-10-28_carbon_border_adjustments_-_input_to_public_consultation.pdf
- Keidanren: https://www.keidanren.or.jp/en/policy/2021/057_proposal.html#s7
- US Chamber: https://www.globalenergyinstitute.org/sites/default/files/2021-09/CBAM-principles.pdf