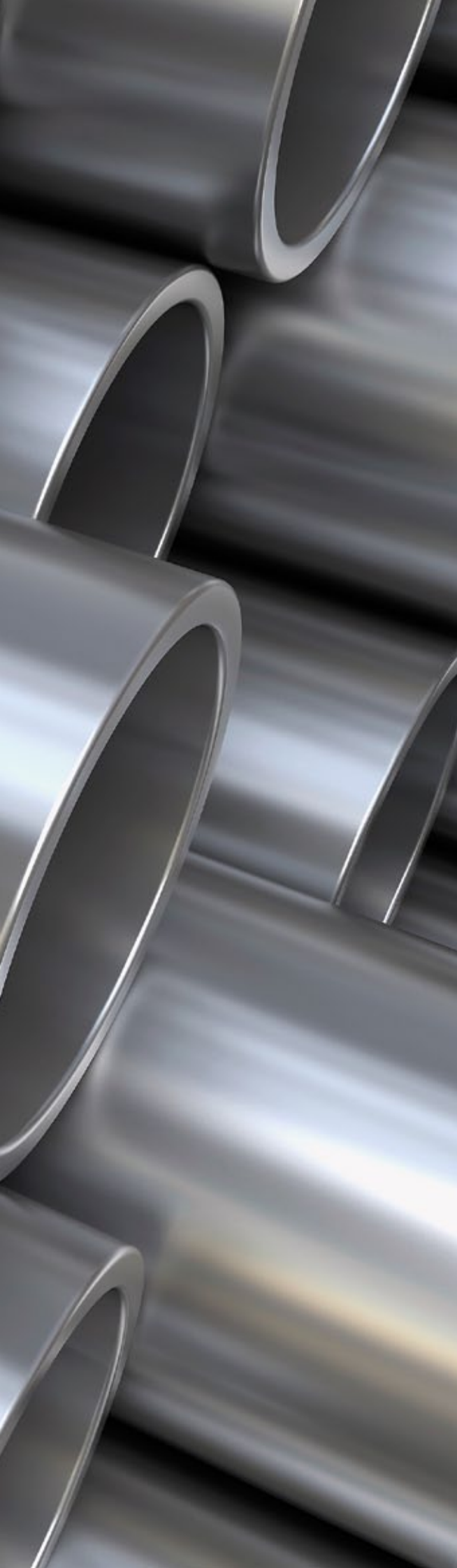

**Border Carbon Adjustments
from a Trade Policy Perspective**

Carolyn Fischer and Henrik Horn



ABOUT THE AUTHORS



Carolyn Fischer is a Senior Fellow at Resources for the Future (RFF). Her research focuses on policy mechanisms and modeling tools that cut across environmental issues, including environmental policy design and technological change, international trade and environmental policies, and resource economics. In the areas of climate change and energy policy, she has investigated the implications of emissions trading program design on cost-effectiveness and emissions leakage, and has conducted research on fuel economy standards, renewable portfolio standards, and energy efficiency programs. In areas of natural resources management, her research addresses issues of wildlife conservation, invasive species, and biotechnology, with particular emphasis on the opportunities and challenges posed by international trade. With RFF since 1997, Fischer has also taught at Johns Hopkins University and was a staff economist for the Council of Economic Advisers to the President. She serves on the Board of Directors of the Association of Environmental and Resource Economists and the Editorial Board of *Resource and Energy Economics*, and is also a Fellow of the CESifo Research Network. She holds a Ph.D. in Economics from the University of Michigan and a B.A. in International Relations from the University of Pennsylvania.

Henrik Horn wrote his dissertation in economics at the Institute for International Economic Studies, Stockholm University, where he stayed until his resignation in 2007, the last 13 years as Professor of International Economics. He is since 2006 Senior Research Fellow at the Research Institute of Industrial Economics (IFN) in Stockholm, Non-Resident Senior Fellow at Bruegel, a Brussels-based think tank, and Chief Reporter (jointly with Petros C. Mavroidis) for the American Law Institute project *Principles of World Trade Law: The World Trade Organization*. Horn is Research Fellow in the International Trade and Industrial Organization Programmes of the Centre for Economic Policy Research, London, Editorial Board member of the *World Trade Review*, and Associate Editor of the *Journal of World Trade*. He has taught at e.g. Stockholm University, Stockholm School of Economics, the University of Michigan, Princeton University, the World Trade Institute (Bern), and the Graduate Institute of International Studies (Geneva), has served as a judge in the Swedish Supreme Court for antitrust cases, and he has worked for four years in the Economic Research and Analysis Division of the WTO.



ISSUE BRIEF

Stockholm 2010/16/09

ENTWINED

Box 210 60
SE-100 31 Stockholm, Sweden
+46 (0)8 598 56 300
info@entwined.se
www.entwined.se

Financed by Mistra

Production: Capito AB
Layout : Anders Jacobsson
Photography: Istockphoto (page 1, 2, 3, 4, 5, 6)
Print: Orion Tryck, 2010

Border Carbon Adjustments from a Trade Policy Perspective

By Carolyn Fischer and Henrik Horn

At the heart of the climate problem lies an international relations problem: when regulating greenhouse gas (GHG) emissions, countries do not take into account the benefits that their efforts create for other countries. Thus, they regulate less than desirable from a global point of view. The idea that countries that nevertheless make sacrifices to reduce emissions should not be hurt by other countries' lack of corresponding efforts is, therefore, intuitively appealing. This notion is used to support the "competitiveness" argument: countries with ambitious climate policies should not suffer from "unfair" commercial losses if their industries are outcompeted by industries in countries with less ambitious regulation. It also lies behind the "carbon leakage" argument – i.e. that efforts to reduce emissions should not be undermined through increased production and associated emissions elsewhere. In response to these concerns, it is often proposed that domestic climate policies be complemented with schemes that offset these problems through compensatory adjustments for imports and exports: border carbon adjustments (BCAs) or, if taking the form of taxation, border tax adjustments (BTAs).

Although this is rarely expressed explicitly by policymakers, such schemes also seem intended to pressure other countries to adopt environmental measures of similar scope and stringency. But while BCAs may appear entirely legitimate from an environmental perspective in light of the externality problem that climate policy faces, they cause trepidation among people in the trade policy community, particularly those with insight into the workings of the multilateral trading system. The fundamental reason for their concern is that BCAs are essentially trade policy measures, since they are conditioned on importation and/or exportation of goods. However, unlike most other trade barriers, they are not negotiated within the multilateral trade system. Why, then, would this cause a problem? This Issue Brief addresses some of the potential problems that can be foreseen from a trade-policy perspective.

PROTECTIONIST ABUSE OF BCAs

An often expressed fear in trade policy circles is that BCAs will be imposed not only to combat environmental externalities, but also to protect national commercial interests; that is, once in place, they will serve as vehicles for protectionism. For instance, the corrective measures that the BCA schemes authorize may be (or in time become) more draconian than is called for from an environ-

mental point of view. Such measures may also be imposed in situations where they are not justified environmentally. Fear that BTA schemes will be abused stems from the numerous examples of the willingness and ingenuity of governments to let protectionist motives influence policymaking.

Experiences in two areas of trade policy seem particularly pertinent. First, there seems to be a close parallel between BCAs and the anti-dumping regime in the World Trade Organization (WTO), under which governments unilaterally impose duties on imported products when these have been priced "too low" by exporting firms. The rules for anti-dumping duties – when they can be imposed, how large the duties can be, etc. – have become increasingly technical and opaque, and the anti-dumping regime is today considered a main instrument for protectionism. The calculations of duties in a BCA scheme, whether implemented as a tax or as an allowance requirement, could easily become at least as complicated. Defining and measuring the amount of GHGs emitted during production processes for any given good are tasks that are sufficiently challenging that the calculation methods are likely to be both highly arbitrary and extremely complex. Furthermore, some of the sectors most frequently proposed for BCAs – notably steel – are already the most active in the anti-dumping arena.



A second close parallel can be drawn with the rules-of-origin provisions in developed countries' preferential tariff agreements for importation from developing countries. The rules-of-origin are supposedly meant to prevent exporters in countries other than those receiving preferences from taking advantage of the low tariffs offered through the preference scheme, by exporting through these countries. These rules have become extremely complex, and compliance can be so administratively onerous that exporting firms in preference-receiving developing countries deliberately choose to export to, for example, the European Union under the higher, regular Most Favored Nation tariffs, which require much less documentation. It is often alleged that developed countries deliberately devise these rules to take back with one hand what they gave away with the other.

A similar need to track the production chain arises in the context of BCAs. For instance, if a BCA imposes penalties only on the emissions in an exporter's stages of the production process, the exporter could circumvent a large part of the taxation by using purely trading firms for the exports. Comprehensive and rigorous carbon calculations would then have to somehow adjust for the emissions that stem from the production of the inputs into exported products, and preferably also for the emissions during the whole chain of production of these inputs. Some of these products might in turn have been imported and thus been produced under other taxation schemes than the one in the exporting country. It is therefore likely to be necessary to also keep track of their origins in the context of BCAs: the intermediate products used in the production of an imported product may themselves have been imported. If so, the extent to which the production of these intermediate products has given rise to emissions will depend on where they have been produced and the extent to which those countries price their emissions.

Of course, design options for BCAs could limit such complexities and the scope for abuse, with a trade-off of some environmental incentives. For example, the basis for adjustment could be the average emissions liability for domestic firms, which would adjust for the more easily-calculated carbon costs imposed at home, rather than the carbon damages created abroad. Another alternative is to base adjustments on a best-available-technology metric, which would avoid overcharging any imports by erring on the side of underestimation. BCAs could be limited to a small set of homogeneous commodities that are both emissions-intensive and highly trade-exposed, for which the gains in terms of avoided leakage are likely to outweigh the costs of implementation and the risks of trade disruption. Exemptions for certain types of countries, however, would still engage the rules-of-origin issues.

A third way in which BCAs may help protectionist impulses is through their effect on the level of ambition of the climate measures that form the basis for the adjustments. Most of the discussion of BCAs seems to presume that domestic environmental policies are determined without concern for trade implications. But the presence of a BCA may make an importing country more willing to impose higher environmental standards, since part of the cost is sent abroad through the increase in border measures. Indeed, BCAs are often said to be *sine qua non* in national climate policies. But it should at the same time be recalled that decisions regarding the level of ambition are made unilaterally by the regulating country. From an environmental point of view, the problem is usually



too little regulation, so the fact that the regulating country gets an incentive to pursue a more ambitious climate policy may just seem welcome. But on the trade side, the problem is the opposite: imports tend already to be overburdened relative to what is globally optimal, and these matters are exacerbated when governments have more leeway to impose trade barriers directly or indirectly. There is, hence, an open question of how these two forces balance out.

BCAs AS POLITICAL SPEARHEADS FOR OTHER BORDER ADJUSTMENT SCHEMES

Related to the concern that BCAs may be used for protectionist purposes is the fear that the introduction of border-adjustment schemes in the area of environmental externalities will open the



door for similar arrangements in policy areas where there is no rationale for border adjustments. In particular, BCAs in the climate area may stimulate similar arrangements in areas such as labor and health. For instance, it could be argued that it is unfair for domestic industries to be at a competitive disadvantage because of higher costs for better workplace safety or more generous health systems or even higher wages. To correct for such unfairness and to prevent “social dumping,” the argument goes, it would be necessary to level the playing field through border measures.

Such arguments are viewed with great skepticism in the trade-policy community. They are largely seen as attempts by special interest groups to dress up standard protectionist arguments, or at least that they would have this effect. Differences in the level of de-

velopment across countries are bound to be reflected in differences in production costs. To impose border adjustments to make up for the difference in the costs associated with social security or higher wages in richer countries is to punish the poorer countries for being poor. In trade terms, border adjustments would undermine the basis for countries to gain from specialization according to their comparative advantage. A similar argument can also be advanced against BCAs in trade with poorer countries, to the extent that it can be maintained that these countries cannot afford to implement more stringent climate policies. A subtle but important distinction lies between the two types of issues, however: physical transboundary externalities are at play in the case of climate policy, while there are no corresponding physical effects in the case of, say, differences



in labor standards or wages. Whether this difference will suffice legally or politically to keep the lid on border adjustments for social costs is unclear.

Sensitive and conceptually-difficult issues concerning international jurisdiction and the sovereignty of nations lie at the heart of these considerations. Can a country condition its trade policies on other types of policies pursued in other countries, as border adjustments effectively do? For instance, is it legitimate for U.S. trading partners to condition their trade policies on the outcome of a presidential election in the United States in an attempt to affect the outcome? The WTO, building on its predecessor the General Agreement on Tariffs and Trade (GATT), is based on the idea that trade policies should not be employed for such purposes. Hence the general skepticism toward border adjustments, and the fear that BCAs will open the door for similar less-warranted arrangements in other policy areas. It is therefore imperative from a trade-policy perspective that any BCAs be introduced legally and politically in a manner that will prevent other types of border adjustments from being implemented.

THE INTERACTION WITH TRADE NEGOTIATIONS

BCAs may affect not only climate policies in countries imposing such schemes, but also climate policies pursued by other countries. Being trade measures, they may also affect other types of policies, and in particular trade policies. The extent of such interaction will depend on the magnitude of the BCA schemes.

The basic problem is that the outcome of trade negotiations balances countries' (perceived) sacrifices in term of access to their domestic markets against access to the partners' markets. A country faced with a BCA after the trade agreement is formed thus loses some of the benefits it hoped to achieve for allowing the regulating trading partner better access to its markets. Of course, once countries expect to be hit in this fashion at a more significant scale, they will be less willing to make concessions, and the incentive for the parties to liberalize trade – and thus to improve the efficiency of their use of their productive resources – is reduced.

Matters are further complicated by the large number of countries that are party to the WTO agreement, such that the imposition of a BCA does not affect just the bilateral relationship between

the regulating and the exporting country. For example, the ability of the country being targeted by a BCA to adjust its concessions to the country imposing the BCA is constrained by the Most Favored Nation provision. Consequently, to counter the effect of a BCA imposed on its exporters, the exporting country would have to increase its tariffs against all WTO members. Another such multilateral effect is that BCAs will give rise to trade diversion, in that they will deflect exports to third countries that will face increased import penetration as a result.

Bringing trade negotiations into the picture also raises the fundamental question of why the reductions of trade flows that the BTAs seek to achieve are not handled in the organizational context where trade barriers are determined – that is, in trade negotiations. One possible reason, of course, is fear that since the point is to treat products that from the buyer's point of view appear identical but that have been produced in different ways from a GHG point of view, BCA schemes are alien to the core Most Favored Nation and National Treatment provisions of the WTO. A way out of this problem would be to refine the Harmonized System (the product classification system that is being used in trade negotiation), to include distinctions based on the environmental properties of the production processes of imports. This would make these trade barriers subject to negotiation, and thus their levels would more likely be globally optimal than if they were unilaterally determined.

Finally, it seems likely that the effect on trade negotiations will depend on the reason why the countries that are being targeted by BCA measures do not pursue policies that are adequate from the regulating countries' point of view. For instance, it should make a significant difference to the generally perceived acceptability of such measures if they target countries that pursue inadequate climate policies in attempts to free-ride, rather than countries that maintain low standards because they are poor.

CONCLUSION

In theory, BCAs can be attractive measures for addressing the problem of carbon leakage. This Issue Brief argues that BCAs cannot be evaluated solely from an environmental perspective, however. BCAs constitute trade measures and must be evaluated from this perspective as well. We do not contend that all of the potential problems pointed at here will necessarily become serious; rather, we highlight some of the intricacies of such measures from a trade perspective.

The possibility that BCAs may be implemented in a protectionist fashion is one of the main concerns with such schemes from a trade-policy point of view, and among the most plausible to arise should such measures be implemented. A second concern involves the “slippery slope”; that the use of border adjustments for carbon will entice countries to use them for a variety of social-justice purposes that involve less tangible global externalities but have at least as much potential for protectionist abuse. Although the proposals thus far limit BCA schemes to a few energy-intensive sectors, the BCA measures that are being considered or proposed are still unilaterally defined, and there is nothing in principle that would prevent the introduction of similar measures in other sectors, purportedly for climate change mitigation but in reality for commercial benefit. It is therefore imperative that any BCA scheme be designed to minimize the possibility – or perception – of abuse. Internationally

sanctioned guidelines could help foster confidence in the environmental efficacy of BCAs and refine their legitimate scope. Furthermore, it is important that the WTO dispute-settlement mechanism has the jurisdiction and legal capacity to handle disputes concerning the implementation of BCA schemes.

The effect of BCAs on international negotiations is the most difficult to decipher. BCAs are controversial, not just in trade circles but also in multilateral climate negotiations, where one of the core principles enunciated in the Framework Convention and emphasized in the Bali Action Plan is “common but differentiated responsibilities.” The gulf of perceptions can be wide between those who view policies to address leakage as a necessary component of unilateral emissions-reduction commitments, in which BCAs punish consumers of imported carbon, and those who view BCAs as a way to punish exporters in developing countries that lack formal obligations under the Kyoto Protocol – and that recently acceded to the WTO after making substantial concessions. The irony is that while the reaction to BCAs could hamper progress in international negotiations, it is the lack of progress in those negotiations that creates the demand for them.

These potential problems do not necessarily mean that BCAs should not be used; this Issue Brief does not take a stand on this issue. But, if BCAs are to be implemented, the policy design should ensure that the problems identified herein do not arise. ■

Eggert, Håkan, and Mads Greaker. 2010. On Blending Mandates, Border Tax Adjustment and Import Standards for Biofuels. ENTWINED Discussion Paper.

Fischer, Carolyn, and Alan Fox. 2009. Combining Rebates with Carbon Taxes: Optimal Strategies for Coping with Emissions Leakage and Tax Interactions. RFF Discussion Paper 09-12.

Fischer, Carolyn. 2009. Climate Policy and Emissions Leakage: Comparing the Options. ENTWINED Brief.

Horn, Henrik, and Petros Mavroidis. 2009. Border Carbon Adjustments and the WTO. ENTWINED Discussion Paper.

- For a broader review of the environmental policy literature and some assessment of the relative effectiveness of different adjustment policies, see the ENTWINED paper by *Fischer and Fox* (2009). *Eggert and Greaker* (2010) discuss the use of BCA for biofuels.
- For more detailed analysis of the legal provisions in WTO law relevant for national climate policies, see *Horn and Mavroidis* (2008).
- Indeed, if implemented in ideal fashion, BCAs are more efficient than alternatives like preferential free allocation, which can distort incentives for reducing emissions (*Fischer and Fox* 2009).

The research programme ENTWINED – Environment and Trade in a World of Interdependence – examines the interplay between the global trade regime and environmental policies promulgated by governments and private entities with a particular focus on the treatment of transboundary problems. ENTWINED is actively engaged with policy makers and other stakeholders to the Trade and Environment Debate. The team

includes researchers specializing in environmental and natural resource economics, international economics and trade law. The programme has its focus in Sweden, but engages leading experts in other locations, including Geneva, New York, Washington and Montreal. The ENTWINED programme is funded by the Swedish Foundation for Strategic Environmental Research, Mistra, see www.entwined.se