

To B(TA) or not to B(TA)? On the Legality and Desirability of Border Tax Adjustments from a Trade Perspective

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ABSTRACT

This paper asks two questions concerning Border Tax Adjustments for climate purposes, when viewed from a trade perspective: first, under what conditions are BTAs possible in the WTO world? To address this issue, the paper provides a detailed discussion of the relevant law and case law. We also apply our main conclusions to what we consider to be paradigmatic cases of measures to address climate change where trade concerns are raised. We conclude that the WTO regime is no major obstacle to those aspiring to use BTAs, although the allocation of the burden of proof could be a concern. The second issue addressed is whether the economic literature on the desirability of BTAs adequately reflects concerns that have been raised in the trade policy community. Here we conclude that it has hardly addressed these concerns at all. We also point to some aspects of BTAs that would need to be taken into account in a more complete analysis.

Keywords: Border Tax Adjustments, GATT Article III, GATT Article XX, WTO.

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1. INTRODUCTION

This paper addresses two fundamental questions concerning environmentally motivated border tax adjustments (BTAs), when viewed from a trade policy perspective. First, under what conditions can WTO Members lawfully impose such measures? This issue is addressed in Section 2. The second main issue, dealt with in Section 3, is whether it is desirable that countries employ BTAs. Section 4 concludes.

2. ON THE LEGALITY OF BTAs

2.1. Semantics: What is a BTA?

The term *border tax adjustment* (BTA) is not self-explanatory. Johnson and Krauss (1970, pp. 596-597) define BTAs in the following manner:

A border tax, properly interpreted, is a tax imposed when goods cross an international border, and as such must be inimical to international trade and therefore to the achievement of the economic benefits of international specialization and division of labour. A border tax *adjustment*, on the other hand, is an adjustment of the taxes imposed on a producer when the goods he produces cross an international border. ...Under the origin principle, a tax is imposed on the domestic production of goods, whether exported or not, and under the destination principle, the same tax is imposed on imported goods as on domestically-produced goods destined for consumption by domestic consumers, while domestically-produced goods destined for consumption by foreigners enjoy a rebate of the tax. The origin principle involves no

tax adjustment, but the destination principle involves a border tax adjustment to the full extent of the tax.¹

The underpinnings of this understanding of the term provide the basis for the working definition in § 4 of the GATT report on *Border Tax Adjustments*:²

... any fiscal measures which put into effect, in whole or in part, the destination principle (i.e. which enable exported products to be relieved of some or all of the tax charged in the exporting country in respect of similar domestic products sold to consumers on the home market and which enable imported products sold to consumers to be charged with some or all of the tax charged in the importing country in respect of similar domestic products.)³

For the purposes of this paper, we will use the term 'BTA' as referring to the following situation:

- (a) A good transcends a frontier;
- (b) Its taxes (paid in the country of origin) are adjusted;
- (c) It is the country where the good will be sold that will decide on the level of adjustment;
- (d) But this country cannot impose a tax higher than that imposed on domestic producers producing a like product;

1. Compare Meade (1974).

2. GATT Doc. BISD 18S/97ff. This was the agreed definition at the time the report was being negotiated. Since, as we have argued in Horn and Mavroidis (2010), this report should be understood as a *decision* by the GATT CONTRACTING PARTIES, it is part of the GATT 1994, that is, an agreed definition.

3. The *destination* principle was taken from bilateral agreements negotiated in the 1930s, such as the agreement of 6 May 1936 between the United States and France, see § 10 of the Annex to the Working Party report on *Border Tax Adjustments*, *op cit.* See also Irwin et al. (2008).

- (e) We will further assume that, at least allegedly, the tax adjustment takes place for climate purposes.

So a BTA is imposed on imported goods only. Its level, however, cannot be at the total discretion of the WTO Member in the market where the good will be sold. BTAs are not negotiated customs duties; they are border tax *adjustments*. They are thus internal measures imposed on foreign goods. As such, they must respect Art. III GATT. We discuss this in detail in what follows.

BTAs for climate change purposes can arguably be described as measures relating to environmental and/or public health protection. Changes in the environment can often have severe repercussions on public health. To cite but one example, think of the rationale behind combating ozone depletion that led to the *Montreal Protocol*. In this vein, measures against climate change are ultimately public health measures since, absent their adoption, life on the planet is threatened. Characterizing policies against climate change as ultimately concerning public health will enable regulators to profit from the deferential standard review adopted in similar cases. Starting with *Korea — Various Measures on Beef*, and culminating in *EC — Asbestos* (§172), the AB has adopted a deferential standard of review when the protection of human life is being sought. We will return to this issue in more detail later when we discuss the standard of review, but we think it is useful to already keep this in mind at this stage.⁴

2.2. Where Do We Stand on BTAs Now?

BTAs, like any other domestic instrument, must respect the conditions reflected in Art. III.2 GATT: this provision requires that WTO Members respect the National Treatment (NT) principle whenever they regulate conditions of competition regarding goods in their national market, and to this effect impose fiscal measures. With the exception of local content requirements, which are deemed illegal under Art. III GATT, WTO Members are free to decide the rationale for taxing goods. Pauwelyn (2007) provoked controversy, arguing that WTO Members aspiring to impose BTAs would find it difficult to overcome the hurdles imposed by Art. II GATT (which deals with tariff concessions). In his view, Art. II GATT would make it impossible to impose BTAs at all since BTAs refer to the process of production, and regulatory distinctions

cannot be based on similar criteria. In Horn and Mavroidis (2010) we expressed our disagreement with this view, arguing that Art. II GATT cannot be construed as an instrument that reduces the scope of regulatory activity under Art. III GATT. Recently, the AB, in its report on *India — Additional Import Duties*,⁵ confirmed our understanding of the ambit of Art. II.2(a) in the following terms (§153):

Article II:1(b) clarifies that the tariff binding in the relevant column of a Member's Schedule of Concessions provides an upper limit on the amount of OCDs and ODCs that may be imposed. Article II:2, in turn, clarifies that nothing in Article II, including Article II:1(b), shall prevent a Member from imposing on the importation of a product: (i) a charge equivalent to an internal tax imposed consistently with Article III:2 in respect of a like domestic product; (ii) an anti-dumping or countervailing duty applied consistently with Article VI; or (iii) fees or other charges commensurate with the cost of services rendered. The chapeau of Article II:2, therefore, connects Articles II:1(b) and II:2(a) and indicates that the two provisions are inter-related. Article II:2(a), subject to the conditions stated therein, exempts a charge from the coverage of Article II:1(b).⁶

It follows that Art. II GATT does not restrict the coverage of Art. III GATT at all. This view is consistent with the preparatory work of the GATT, where it is made clear that the contract condones negative integration, with domestic policies being decided unilaterally by each trading nation, while respecting non-discrimination.⁷

Art. III GATT does not directly mention BTAs. In fact, with very few exceptions, there is no GATT provision dealing directly with domestic instruments that apply to both domestic and imported goods. BTAs aiming to address climate change exhibit two characteristics:

- (a) They are ostensibly adopted in order to address public health/environmental concerns;
- (b) They are imposed on goods that produce either production or consumption externalities, in the sense that they release greenhouse gases to the atmosphere and thus contribute to climate change.

5. See Conconi and Wauters (2010) for an economic/legal discussion of the *India — Additional Import Duties* dispute.

6. OCDs are ordinary customs duties, ODCs are other (than customs) duties and charges, and they are both imposed on imported goods only at the border.

7. Irwin et al. (2008).

4. Sykes (2003), Mavroidis et al. (2010).

There is WTO case law regarding production and consumption externalities in the field of public health and environmental protection, but also in other fields coming under the purview of Art. III GATT. A taxonomy of the leading cases would look like this:

	Complainant Prevails	Respondent Prevails
Production Externalities		US — Shrimp US — Gasoline
Consumption Externalities	EC — Biotech	EC — Asbestos

This picture appears rather counter-intuitive and, contrary to popular perception, to suggest deference on the part of WTO adjudicating bodies towards unilateral environmental policies, their (negative) impact on trade notwithstanding. What can we learn from the picture above in order to form an opinion on the legality of BTAs? To respond to these questions, a detour to the interpretation of the NT principle is warranted.

2.3. The Underpinnings of the Legal Test⁸

Since we are dealing with fiscal instruments (border tax adjustments), the relevant discipline is Art. III.2 GATT. According to this provision, if two goods are *like*, the imported good should not be taxed *in excess* of the taxation imposed on the domestic good; if they are *directly competitive or substitutable* (DCS), the taxation on the imported good should not be *applied so as to afford protection* (ASATAP) to the domestic good. The AB, in its report on *Japan — Alcoholic Beverages II*, confirmed this understanding of NT in the following terms (p. 16):

The broad and fundamental purpose of Article III is to avoid protectionism in the application of internal tax and regulatory measures. More specifically, the purpose of Article III 'is to ensure that internal measures not be applied to imported or domestic products so as to afford protection to domestic production.' Toward this end, Article III obliges Members of the WTO to provide equality of competitive conditions for imported products in relation to domestic products.

2.3.1. The essence of the GATT NT Promise

The GATT is a negative integration contract: there are no common policies contracted under

the GATT. In fact, the first and only (so far) positive integration element in the WTO edifice has been the TRIPs Agreement. Domestic policies are decided *unilaterally* by WTO Members, and the "only" constraint imposed on them is by virtue of the NT obligation with respect to like and DCS products only (and consequently, not with respect to goods that are not DCS). Since the hands of the regulating state are free, it can express, as a matter of WTO law, its regulatory objective as it pleases, and can even decide whether or not to have an environmental policy at all. "All" it has to ensure is that if imposing domestic taxation, it respects the NT principle. Negative integration also extends to rules of origin: Home is free to decide on the rules of origin of any specific product and then to apply these on a non-discriminatory basis.

Art. III.2 GATT distinguishes between like and DCS products. For two products to be like, existing case law requires that they must be DCS and also share tariff classification. DCS in turn, can be demonstrated in either of two ways:

- (a) by using econometric indicators (cross-price elasticity of domestic and imported steel products); or
- (b) by demonstrating that the two products share the same physical characteristics and end-uses, and correspond to identical/comparable consumer preferences. Tariff classification could be an indication of a DCS relationship.⁹

The AB report on *EC — Asbestos* discussed the same issue and, although it finally upheld the marketplace test (where consumers define likeness), it did so in different terms. This case involved the challenge of a measure under Art. III.4 GATT, but it is still important to the current issue, for several reasons:

- (a) the precedential value of this report; each and every subsequent report discussing likeness has referred to it;
- (b) the fact that the AB, as will be explained in more detail below, strives to adopt a unitary test when discussing Art. III GATT cases in light of the fact that the overarching purpose of this provision is identical and is relevant in the same manner to both fiscal and non-fiscal instruments; and
- (c) the commonality in the subject matter addressed here and that treated by the AB in *EC — Asbestos*: the protection of health, in a wide sense of the term, since measures to address climate change can be viewed as measures to

8. Compare the analysis in Howse and Eliason (2009), whose findings are similar to ours.

9. According to the AB report on *Korea — Alcoholic Beverages*, the two methods are of equal value, see Horn and Mavroidis (2004).

protect environment and, ultimately, public health. It can be noted here that so far, the disputes discussed under Art. III.2 GATT in the WTO era have not involved any discussion on public health or environmental protection, since no party raised these issues.¹⁰ *EC — Asbestos* is the leading case where such a defence was discussed.

In *EC-Asbestos*, the AB dealt with a French ban on the sale of asbestos and asbestos-containing construction material. The sales ban was *de jure* non-discriminatory, in that it was origin-neutral. One of the questions before the AB was whether construction materials that only differed in whether or not they contained asbestos were ‘like products’.¹¹ The imported construction material contained chrysotile fibres, which are a form of asbestos, while the competing local product contained asbestos-free PCG fibres. Canada did not call into question the carcinogenic properties of chrysotile fibres as such, but maintained that there was no difference between construction materials containing the two types of fibres, claiming that they would not be released into the air if handled correctly. Canada thus held that by virtue of the French sales ban on material containing chrysotile but not PCG fibres, less favourable treatment was afforded to a like product. Before the case was taken to the AB, the Panel had concluded that the two products were like and that Art. III.4 GATT had consequently been violated. On appeal, the AB reversed the Panel’s findings with respect to likeness. In its view, the Panel should have examined all criteria mentioned in *Border Tax Adjustments*, and not just one of them (end uses). Had it done so, the Panel would, in the AB’s view, have observed the differences in *physical characteristics* between the two products. The chrysotile fibre is carcinogenic, in contrast to the PCG fibre. This, in the AB’s view, would most likely have led consumers to not purchase material containing chrysotile fibres, had it been sold. The likelihood that the different composition might affect consumers’ choices in this respect was sufficient reason to raise a presumption that the two products were unlike. The AB found support for its overall finding in the fact that the two types of fibres did not share the same tariff classification, and also in the fact that scientific evidence was cited in

support of the carcinogenic nature of chrysotile fibres (§§101–54).¹²

It can be noted that the AB did not possess any empirical evidence concerning consumer preferences, such as consumer surveys indicating that the two products would have been treated as unlike had they both been sold. It presumed that this would have been the case had consumers known about the health risk associated with the consumption of asbestos-containing construction material (§122). It follows that, in *EC — Asbestos* as well, the test for likeness remains in the marketplace, the absence of empirical evidence regarding consumers’ preferences notwithstanding. *EC — Asbestos* thus suggests that in (assumed) knowledge of health risks, consumers will treat the hazardous and non-hazardous products as unlike even if they have identical end uses.

What inference can be drawn from the above with regard to BTAs for climate purposes? In our view, none. There is a fundamental difference between products that affect the personal health of the ultimate buyers, and products that affect the climate. If an individual buyer’s health (or being a construction company, the ultimate buyer’s health) is affected by the decision to buy the dangerous product or not, the buyer may (at least under an optimistic view concerning the functioning of markets) find the health effects too unpleasant to purchase the product – this is the logic of the AB’s reasoning in *EC — Asbestos*. In the context of the climate problem, however, the purchasing decision of an individual consumer has negligible impact on the environment. Consequently, even though the buyer’s health may be seriously affected by the general climate problem, this is no reason for a consumer to treat climate-friendly, and climate-unfriendly products very differently. This is indeed exactly why there are *negative externalities* from consumption and production decisions in this case, and why government regulation may be called for. Following such reasoning, a WTO judge should find the products to stand in a DCS relationship, and, depending on tariff classification, possibly also to be like, despite the difference between the products from a regulatory perspective.

A DCS/like relationship between the products does not suffice for Art. III.2 GATT to be violated. The taxes must also be “applied so as to afford protection”: this is the ASATAP-requirement.¹³ To establish whether a measure is ASATAP, the AB held

10. In GATT, there are two cases where the argument was made that the purpose of the regulatory distinction was decisive in deciding whether two goods were like, Horn and Mavroidis (2004).

11. Horn and Weiler (2007).

12. In a separate but concurring opinion, an unnamed member of the AB held the view that the scientific proof cited in this case was *sufficient* to conclude that the two products were unlike.

13. National Board of Trade (2008).

in *Japan — Alcoholic Beverages II* that it would look into the objective intent of the challenged measure as revealed through its structure, design and overall architecture (pp. 29–32).¹⁴

In *Dominican Republic — Import and Sale of Cigarettes*, at stake was the consistency of a Dominican *bond requirement*, under which cigarette importers had to post a bond to ensure payment of taxes on a given imported product, and the level of the bond paid was dependent on the market share of the producer. This case concerned an Art. III.4 GATT measure, and might as such seem to be of limited relevance to the fiscal measure in question here. We do not think that this is correct, however. While it is true that Art. III.4 GATT punishes less favourable treatment (LFT), whereas Art. III.2 GATT outlaws measures that meet the ASATAP-test, the AB report on *EC — Asbestos* held that the term LFT appearing in Art. III.4 GATT echoes the principle set forth in Art. III.1 GATT: WTO Members should not use domestic measures so as to afford protection to domestic production (§100):

The term ‘less favourable treatment’ expresses the general principle, in Article III:1, that internal regulations ‘should not be applied ... so as to afford protection to domestic production.’ If there is ‘less favourable treatment’ of the group of ‘like’ imported products, there is, conversely, ‘protection’ of the group of ‘like’ domestic products. However, a Member may draw distinctions between products which have been found to be ‘like,’ without, for this reason alone, according to the group of ‘like’ imported products ‘less favourable treatment’ than that accorded to the group of ‘like’ domestic products. (emphasis in the original).

Art. III.2 GATT does exactly that, and in fact uses the same words. Consequently, any finding concerning the interpretation of LFT is also valid for the interpretation of ASATAP under Art. III.1 GATT. The novel ground that is broken by the AB in *Dominican Republic — Import and Sale of Cigarettes* is therefore of direct relevance to BTAs: in this report, the AB addressed the issue of whether different regulatory requirements imposed on (some) imported and (some) domestic goods could be justified under Art. III.4 GATT, even if their trade impact was disparate on domestic and foreign goods. The AB responded in the affirmative and held

that the defendant’s measure linking the level of a bond to be paid to the market share of the paying operator was not tantamount to according LFT to imported goods, even though in the case at hand the imported goods had a heavier burden (§96).

What is the relevance of all this for BTAs? The burden for Foreign when challenging a measure is thus quite substantial: it will have to show that the treatment that affords protection to Home’s products (because of the disparate effects the measure has on imports) is not justified by anything other than the origin of the goods. Although the specifics of the legal test have yet to be defined (the AB report on *Dominican Republic — Import and Sale of Cigarettes* did not go any further than the cited passage), undeniably the defendant (Home) will enjoy an advantage. A lot of course will depend on the allocation of the burden of proof, an issue that we discuss below. Whereas, a *narrow* reading of the case law can hardly help Home argue that a public health-friendly and a public health-unfriendly good are unlike goods (although, at this stage we cannot exclude the opposite construction outright), Foreign will have a hard time showing that a measure ostensibly adopted to address climate change still violates Art. III GATT, simply because the tax burden is heavier on imported goods. The WTO adjudicators will look into the design, structure and architecture of the measure to decide whether this has indeed been the case. They will need a lot of evidence to refute the fact that the measure is not linked to origin. How much evidence is required to this effect has not been specified in case law, but we delve into this question below.

2.3.2. What does Art. III GATT not do

The NT-obligation concerns the *relative* treatment of imported and domestically produced goods. The GATT does not oblige its Members to ensure that their regulation is tailor-made to the size of the distortion it purports to address. It is irrelevant whether Home over- or undershoots when regulating, since what matters is whether or not it has applied in a non-discriminatory manner. Assuming, for instance, that 5 percent taxation suffices to take care of a particular environmental problem, and that goods (domestic and foreign) pollute equally, and assuming that Home imposes a 25 percent tax on both domestic and imported goods, Home will be violating absolutely nothing, since nothing in the body of Art. III GATT requires it to adopt a particular policy other than a non-discriminatory policy.

Furthermore, non-discrimination does not entail the obligation to provide credit for the effort made to reach a particular objective. Take the case

14. In *Chile — Alcoholic Beverages*, the AB repeated *verbatim* this test. This case is, however, irrelevant for the present paper since Chile only *ex post facto* offered a regulatory defence for its tax differentials and for this reason (*ex post facto*) its defence was rejected by the AB (§71).

where Home requests that all steel products sold in its market are produced in entities that do not release more than a specified quantity of greenhouse gases into the atmosphere. Home factories are very close to the set target, while Foreign factories are quite far and need to invest more than Home factories to reach Home's objective. Foreign will be required to make more of an effort than Home to meet Home's standards. Does this matter under WTO law? No, is the short answer. Art. III GATT does not require WTO Members to compensate the relative effort to reach a standard.

Non-discrimination does not necessarily encompass the obligation for Home to behave consistently, although consistency could be a useful proxy to show that a measure is not applied so as to afford protection to domestic production. Take for example the case where Home requests that steel product A is sold in the market in production units that do not release more than a certain quantity of greenhouse gases into the atmosphere. Product B (produced in Home) pollutes the atmosphere even more, yet Home takes no action. Foreign produces both products. Even if Foreign has taken measures to address pollution by B first (since it pollutes more) but no measures with respect to A, it will be difficult to find fault with Home, although this scenario intuitively would not pass the 'smell test'. The reason for this is that there is no explicit *consistency* requirement similar to the SPS in the GATT. The only saving factor for Foreign would be to show that B and A are DCS goods and then to make the argument that foreign B is being treated worse than A. If B and A are not in a DCS relationship, the intellectual appeal of the contrary argument notwithstanding, Foreign cannot achieve much by bringing its case before the WTO.

In short, in a climate change-related dispute: Foreign cannot claim that a less burdensome tax measure that could have addressed the distortion should have been favoured by Home; it cannot claim that Home should have accounted for the relative effort that Home and Foreign producers must make in order to reach Home's standard; and it cannot request Home to adopt consistently demanding public health policies across all sectors.

2.3.3. Art. XX GATT exceptions to NT

Assuming, nevertheless, that Foreign manages to prove its case, and that a violation of Art. III.2 GATT has been established, Home can still seek refuge in Art. XX GATT. There the key issue would be whether it would have to justify its measures under the stricter test of Art. XX(b) GATT, or under the more relaxed Art. XX(g) GATT. The former requires that the policy (instrument) chosen is the least restrictive means to address the stated

objective, whereas the latter that it relates only to the objective sought (even if it is not the least restrictive option). The AB, in its report on *US — Gasoline*, held that the choice of words should imply that the legal test chosen should not be identical across sub-paragraphs without however, explaining in what exactly the difference consists (pp. 17–18).

Under Art. XX(b), the WTO judge cannot question why a WTO Member aims at a particular policy goal. It can only ask whether the means employed to reach the stated ends are necessary, that is, the least restrictive option (reasonably available to the regulating state). The former and the latter are closely linked, in the sense that the more demanding the latter, the fewer the options under the former. If for example, Home states that it wants to adopt a zero-risk tolerance policy with respect to goods releasing greenhouse gases when produced, it will in all likelihood adopt a strict embargo against imports of similar goods, since only an embargo can guarantee that its objective will be achieved. The AB, since it will not be in a position to question the legitimacy of its objective, will have to accept the necessity of an embargo since, in principle, no other measure can ensure the achievement of the objective sought by Home. If, on the other hand, Home simply wants to reduce consumption of similar goods while not pursuing a zero-risk policy, it could impose a progressive tax (the rate of progression could be linked to the amount of CO₂ emissions per good, in the sense that the higher the emissions, the higher the charge). A similar tax could restrict (but would not exclude) sales of similar goods in its market. In this example, the AB will ask whether the tax rate is necessary in order to achieve the objective sought by Home which, as already noted, the AB cannot call into question. In this scenario, it could be the case that a different rate might be favoured by the AB. In short, the AB will have more discretion when deciding on the necessary measure if Home pursues a policy of reducing rather than completely preventing emissions.

Environmental concerns can come under both (b) and (g) of Art. XX GATT, since Panels have adopted a very plastic understanding of the term 'exhaustible natural resources' featured in Art. XX(g) GATT.¹⁵ In *US — Gasoline*, the Panel held that clean air was an 'exhaustible natural resource' (§ 6.37). The AB did not rule on this issue (pp. 10ff.). The non-ruling by the AB notwithstanding, there are indications that Panels will treat clean air (protected through many climate change

15. The wording of Art. XX(b) GATT leaves no doubt that environmental concerns come under its ambit.

programmes) as an exhaustible natural resource. If so, all the regulating country will have to prove is that its measures are relating to its protection.

Now what does ‘relating to’ mean? In its report on *US — Shrimp*, the AB had the opportunity to express its views on this issue. Taking distance from prior practice, it held that ‘relating to’ implied a *rational connection* between a measure and the conservation of exhaustible natural resources, and nothing beyond that (§141): it is enough that Home shows that the (challenged) measure can address climate change concerns. It is thus an appropriateness-test where the question that the AB asks could be phrased as follows: is the measure appropriate to address a specific concern?

Satisfying the test established in this provision is half the game: the other half requires Home to demonstrate that its measures are also consistent with the chapeau of Art. XX GATT. This chapeau punishes discrimination across situations ‘where the same conditions prevail’. Note the absence of reference to specific goods. The AB report on *US — Shrimp (Art 21.5 — Malaysia)* held that for a measure to be *chapeau-consistent*, it should not amount to an *arbitrary discrimination* between countries where the same conditions prevail, or to *unjustifiable discrimination*; or to a *disguised restriction* to trade (§118). Before we tackle the interpretation of the terms appearing in italics, it is important to underscore that the AB held in its report on *US — Gasoline* that a WTO adjudicating body cannot review the substantive consistency of a national measure with Art. XX GATT under the *chapeau* of Art. XX GATT. When moving to the *chapeau*, the only remaining question is to what extent the measure at hand is *applied* in a GATT-consistent manner (p. 22): that is, at this stage of judicial evaluation, the substantive part of the challenged measure has already been considered GATT-consistent, and the only remaining question is whether it is also applied in an even-handed manner as per the chapeau requirement. In its report on *Brazil — Retreaded Tyres*, the AB found that there is no trade effects test in the *chapeau* (§§ 228-229).

In *US — Shrimp*, the AB provided its understanding of *arbitrary or unjustifiable discrimination* (§150):

In order for a measure to be applied in a manner which would constitute “arbitrary or unjustifiable discrimination between countries where the same conditions prevail”, three elements must exist. First, the application of the measure must result in *discrimination*. As we stated in *United States — Gasoline*, the nature and quality of this discrimination is different from the discrimination in the treatment of products

which was already found to be inconsistent with one of the substantive obligations of the GATT 1994, such as Articles I, III or XI. Second, the discrimination must be *arbitrary* or *unjustifiable* in character. We will examine this element of *arbitrariness* or *unjustifiability* in detail below. Third, this discrimination must occur *between countries where the same conditions prevail*. In *United States — Gasoline*, we accepted the assumption of the participants in that appeal that such discrimination could occur not only between different exporting Members, but also between exporting Members and the importing Member concerned. Thus, the standards embodied in the language of the chapeau are not only different from the requirements of Article XX(g); they are also different from the standard used in determining that Section 609 is violative of the substantive rules of Article XI:1 of the GATT 1994. (italics and emphasis in the original).

The AB, in its report on *US — Shrimp*, specified that the chapeau required WTO Members to be flexible and to accept different (from the national) regulatory processes as equivalent to their own to the extent that they could be equally effective. In this case, it outlawed a US requirement to use TEDs (turtle excluder devices, a US mechanism) when fishing shrimp, and imposed on the US the obligation to accept shrimp fished using other devices, if these were as effective as TEDs (§§164–5 and 177).

What is the relevance of all this for BTAs? If pushed to Art. XX GATT, Home will have to show a rational connection between its measures and protection against climate change and to ensure that its measures have been applied in an even-handed manner.

2.3.4. Jurisdictional issues

It is a fundamental principle of international law that WTO Members, like any entities assuming international obligations, should act within their jurisdiction. The WTO Agreement is completely silent on jurisdictional aspects. But as discussed in more detail in Horn and Mavroidis (2008), absent an understanding of the ambit of national jurisdiction, the GATT could be interpreted in an absurd manner.

In Horn and Mavroidis (2008) we argued that, although not explicitly reflected in the GATT contract, the GATT relies heavily on the *default rules* regarding the allocation of jurisdiction in public international law. We noted that while jurisdictional issues are more or less settled in the case

of physical effects arising from activities in one country that affect other countries – i.e., physical transboundary externalities – we are still struggling with the allocation of jurisdiction in the case of “moral externalities”: we asked, for example, whether a WTO Member can legitimately stop trading with another WTO Member that practices the death penalty?

Similar issues are quite prevalent in environmental litigation. If an activity, such as production, in one country affects the climate of another country, the affected country can legitimately exercise jurisdiction due to the presence of physical effects in its territory. We also took the view that under the current construction of WTO case law, Home’s right to exercise jurisdiction cannot be called into question even in the presence of moral externalities where, for instance, Home does not wish to trade with a WTO Member that behaves in an environmentally-unfriendly manner, even though it is not itself physically affected by this behaviour.

One might legitimately ask why this jurisdictional issue has not come up in litigation so far if it deserves the importance we attach to it? First, the issue *has* come up, albeit in a rather oblique manner, in *US — Shrimp* where, as argued in Horn and Mavroidis (2008), the AB underscored the nexus behind US interest in exercising prescriptive jurisdiction and the transaction at hand. Second, there is undeniably some self-selection of cases, which has so far led WTO Members to choose cases where the jurisdictional angle was beyond doubt. In *EC — Asbestos*, for example, the prescribed input is produced in Canada, but it is exposure to it in France (the regulating state) that might lead to a health hazard. While France has no jurisdiction over the Canadian production of the asbestos-containing good, there is no doubt that it does have jurisdiction over the consumption of the imported product, from the fact that the effect occurs in its territory (the *territoriality principle*), and the affected parties are typically French nationals (the *nationality principle*). The only time (besides *US — Shrimp*) that the subject could have come up was probably in *US — Taxes on Petroleum (Superfund)*. But even then, the structure of the US law was such that, although the tax was also imposed on imported petroleum substances, it was meant to be used in order to clean up hazardous waste sites within the US territory. Hence, no extraterritorial application of laws was at stake.¹⁶ But history, we believe, should not be over-emphasized in this respect. Environmental disputes include a

¹⁶ Brazell and Gerardi (1994).

jurisdictional angle as long as most environmental hazards are transboundary. In this vein, it is more likely that this issue will be raised in the context of an environmental dispute rather than in a dispute about taxation (the issue *par excellence* in Art. III litigation) where the right of a state to tax imported goods can hardly be called into question.

2.3.5. The burden of proof

The allocation of the burden of proof is not regulated in WTO law. Under the term ‘burden of proof’ we distinguish between:

- (a) The burden of production of proof;
- (b) The burden of persuasion

Under (a) we are looking for a response to the question *who* (the complainant or the defendant) should bring forward the evidence? Under (b) we are looking for a response to the question *how much evidence* should one of the parties bring forward for the burden to shift to the other party?¹⁷ The latter question is closely linked, although not perfectly overlapping, with the question of the standard of review that we discuss in what follows.

Regulatory interventions are often based on private information. WTO Members must of course respect the transparency obligation (Art. X GATT): this provision requires WTO Members to publish all laws of general application. The publication of laws does not usually include information on their preparatory work, which might be useful, and indeed sometimes even crucial, for the party carrying the burden of proof.¹⁸ Problems regarding what the regulatory intent of a particular intervention was are exacerbated when second- or third-best instruments are used to address a (sometimes only perceived) distortion. And recall from our discussion above, there is no obligation to use the first-best instrument. BTAs can be motivated by genuine environmental concerns or, at the other end of the spectrum, by protectionist requests, or even by a combination of both. The true motives

¹⁷ Compare Messerlin (2010).

¹⁸ It is not important for this point to discuss what the allocation of the burden of proof should be. It is difficult to speculate how the burden of proof should be allocated, since the AB has dealt inconsistently with this issue when private information is at stake: in Art. XX GATT cases, it is clear, following *US — Gambling*, that it is the regulating state that needs to show what the purpose of a challenged measure was. In TBT/SPS cases, on the other hand, the AB has held that, because similar measures have to observe transparency, it is for the complainant to demonstrate why the defendant deviated from an international standard. Nevertheless, in *US — Gambling*, transparency was also observed since, by virtue of Art. III GATS, the US has to publish all measures of general application. We discuss the burden of proof in more detail below.

are hardly ever known, however, and decision makers often have strong incentives to disguise protectionist motives as concerns for the environment. Consequently, adjudicators have to rely on indirect indicators in order to separate the wheat from the chaff.

Ever since the AB report on *India — Shirts and Blouses*, it is the party making a claim that carries the associated burden of proof. This is an important observation in that, if the quantum of proof (the burden of persuasion) required is high, then it will work against the party carrying the burden of proof. Since, by virtue of the *in dubio mitius* principle, one cannot presume that a regulation is WTO-inconsistent, it will be the party feeling the trade effects of a BTA that will be asked to demonstrate the inconsistency of the measure with the WTO.

To the extent that a dispute is being discussed in the context of Art. III GATT, it is the complainant (Foreign) that will carry the bulk of the burden of proof; to the extent that the discussion moves to Art. XX GATT, it will be Foreign: WTO adjudication does not resemble a tennis game where the burden of production of proof will be allocated to the other party only if the one carrying it manages ‘to get the ball over the net’. This is why we used the term ‘the bulk’ of the burden of proof. The GATT Panel on *US — Superfund* is still considered the leading case in this respect: it stands for the proposition that Art. III GATT (just like Art. XI GATT) protects *expectations* as to a particular behaviour that WTO Members are required to comply with. In this particular case, the complainants argued that a US internal tax that granted domestic products (petroleum products) slightly better treatment than the imported like products was inconsistent with Art. III GATT. The complainants maintained that there was no requirement to demonstrate trade effects since the law required all imported goods to pay a higher tax than the one imposed on the corresponding domestic goods. The US disagreed, and argued that effects mattered: in this view, in light of the minimal difference in tax treatment across the two categories of goods, no trade effects could be shown and, consequently, no violation of the GATT could be established. The Panel disagreed with the US argument and held that demonstration of negative trade effects was not necessary in order to establish a violation of Art. III GATT (§5.2.2). A careful look at the facts of the case might lead to a rather narrow reading regarding what the Panel actually held: here the Panel was dealing with a tax that had to be paid any time an import occurred. The tax as such might provide a disincentive to export to the US market (depending of course, on how the competitive relationship between the imported and the domestic good is

affected by the amount of the tax differential). Art. III GATT provides insurance against this risk by requiring that imported goods are not taxed in excess of like domestic goods. This was a case of *de jure* violation of Art. III GATT, since the level of tax imposition was exclusively dependent on the origin of the good: domestic goods pay low tax, imported goods pay higher taxes. The example provided in the quoted passage is quite similar: there is a quota in place, limiting the volume of goods imported.

What if we are dealing with an alleged *de facto* violation, in other words with a case where a tax regime does not tax products by origin, but is designed such that an imported product is burdened with a higher tax than a like or DCS domestic product? Some discussion on this has taken place in the context of case law under Art. XI GATT, which, as the Panel on *US — Superfund* explicitly accepted, has the same standard of review as Art. III GATT, since both provisions are intended to protect equality of competitive conditions. The GATT Panel on *Japan — Semiconductors* responded that the ambit of Art. XI GATT must extend to cover similar cases as well, otherwise the obligation embedded in this provision would be easily circumvented. It rushed to apply the same standard of review in *de facto* cases as well, without considering whether a more nuanced approach was appropriate here. A subsequent Panel, the one on *Argentina — Hides and Leather*, distanced itself from this approach by distinguishing between *de jure* and *de facto* QRs. In this case, the EU allegation was that the presence of Argentine downstream industry at customs dissuaded Argentine exporters of hides (raw materials) from exporting, for fear that they might be blacklisted in their home market. With respect to the latter, the Panel was of the view that for a successful legal challenge to be mounted, the complainant must demonstrate a *causal link* between the challenged measure and the reduction in the volume of imports or exports, whatever the case may be. Without elaborating further on the instance of a *de jure* QR, the Panel implicitly articulated that the evidentiary standard should be lower in *de jure* cases (§§11.21 and 11.22). Importantly, in a footnote to § 11.22, the Panel noted:

The Appellate Body in *European Communities—Measures Affecting the Importation of Certain Poultry Products* similarly required of the complaining party in that case a demonstration of a causal relationship between the imposition of an EC licensing procedure and the alleged trade distortion. See the Appellate Body Report on *European Communities—Measures Affecting the Importation of Certain Poultry Products* (hereafter “*European Communities—Poultry*”), adopted on 23 July 1999, WT/

DS69/AB/R, at paras. 126–127. While this interpretation related to a claim under the Agreement on Import Licensing Procedures, it is not apparent why the logic should be any different in the case of a claim under Article XI:1 of the GATT 1994. (original emphasis)

The Panel thus rejected the EU claim and found that the presence of representatives of the domestic industry was insufficient (or rather, the *causal link* too remote) for establishing a violation of Art XI. of the GATT (§7.35). This report requests from a complainant arguing that it is facing a *de facto* QR more explanation regarding the nexus between the measure challenged and the reason it violates Art. XI GATT. This analysis would entail a more demanding test to show violation of Art. III GATT in cases where the measure challenged is not *de jure* but *de facto* discriminatory.

2.4. Main conclusions from the legal analysis

The main conclusions we draw from the discussion above of relevance to BTAs are:

- (a) Foreign challenging Home’s measures will first have to show that a product that conforms to Home’s climate change policy (Home’s product) and a product that does not are DCS/like goods. Our narrow reading of *EC — Asbestos* would favour Foreign here although, as we explained, there has been no case that has addressed this issue head on so far;
- (b) If Foreign prevails, Foreign will have to also show that the challenged measure is ASATAP. In this case, the WTO adjudicating bodies will enquire into the objective intent of the measure:
 - a. Recall that in this case, Foreign cannot point to inconsistencies in Home’s policies across sectors to show that the measure is indeed ASATAP;
 - b. For the same purpose, it cannot point to excessively demanding legislation (assuming it can overcome measurement difficulties)¹⁹ either, since all that matters is that the measure is applied in an even-handed manner across domestic and imported goods;
 - c. For the same purpose, it cannot point to the relative effort made by domestic and foreign producers to reach the statutory objective;
 - d. Finally, for the same purpose, it cannot point to more severe trade effects on imported goods. Home would find refuge and (probably) comfort invoking the AB report on *Dominican Republic — Import and Sale of Cigarettes*.

¹⁹ Messerlin (2010).

- (c) In the unlikely event that Foreign will manage to persuade the Panel that Home has violated Art. III GATT by overcoming all the hurdles mentioned above, Home can always invoke Art. XX(g) GATT, where it will have to show a rational connection between its adopted measure and the objective pursued, a test that is clearly less demanding than what was being applied before *US — Shrimp* in similar cases;
- (d) Finally, note that for the last 10 years or so, the AB has explicitly stated that its standard of review is more deferential when public health is an issue than when the consistency of measures aiming to promote any other social preference with the multilateral rules is at stake.

For these reasons, we believe that there has never been a better time in the GATT/WTO history for regulators to defend similar measures. Foreign will have an Everest to climb when challenging BTAs aimed at addressing climate change by Home. Legality is one thing; desirability is another, totally different issue. We turn to this discussion in what follows.

3. DESIRABILITY OF BTAs

We argued in the previous section that WTO Members *can* most likely lawfully implement BTAs. But *should* they? To answer this, it is natural to consult the very large literature on environmental economics that seeks to analyse the implications of BTAs. In general terms, this literature suggests on principle grounds that the environmental impact of BTAs is likely to be positive, although the magnitude of such effects is a matter of debate. In this Section we will explain why we believe that this literature does not adequately address some crucial aspects concerning the desirability of BTAs, and that the support for BTAs in the academic literature is therefore very weak. Here we draw on the more elaborate analysis of the literature in Horn and Sapir (2011).

3.1. Main Findings in the Literature

Studies in the literature on BTAs in environmental economics typically consider settings where the production of an exported good gives rise to an international negative (environmental) externality. The importing country may pursue an environmental policy – typically an exogenously set tax on domestic production. This policy increases variable costs for domestic firms, and as a result reduces their “competitiveness” relative to exporters to

the market. Moreover, since exporting firms will increase production as a result of the reduced supply from domestic firms, the reduction of emissions from import-competing firms will be offset (possibly more than one-for-one) by increased emissions in exporting countries – “leakage”. The interest focuses on the consequences this would have if the importing country imposed a tax/tariff on imports – a “BTA”. The typical finding is that this will improve the competitiveness of the domestic industry, and that it would also reduce leakage. Furthermore, some studies consider the social welfare impact of BTAs.

These findings in the literature are rather obvious from a theoretical point of view: it is clear that import restrictions improve import-competing firms’ competitive position against exporters. And to the extent that the externality is directly linked to foreign production for exports, it seems plausible that an import restriction will reduce domestic leakage. However, some studies go a step further and try to assess the quantitative magnitude of the above-mentioned effects. The results vary (of course), but it is often suggested that the magnitudes are not very large.²⁰

Given the basic setting, including several restrictive assumptions to be discussed below, it also seems highly plausible that the BTA may increase welfare by reducing emissions. As is often pointed out, countries do not have strong enough incentives to limit emissions, when evaluated from an international efficiency perspective: each country has to bear the whole cost for its abatement efforts, while only experiencing part of the benefits that are thus created. In other words, there is a collective action problem. Indeed, the basic purpose of a multilateral climate agreement would be to solve this international externality problem. But in the absence of an effective agreement, countries expose each other to externalities, and unilateral actions that reduce imports of products that emit carbon in their production, – such as through BTAs – may well consequently be welfare-increasing from a global perspective.

Does the literature not therefore readily support the use of BTAs? In our view it does not, due to a number of shortcomings. We discuss some of these in what follows.

3.2. The Assumed Objectives for BTAs are Not Legitimate

The desirability of BTAs is of course likely to depend considerably on the yardstick being used. Since

20. De Melo and Mathys (2010) review the evidence on leakage.

the question we would like to highlight is whether it is in the common interest of countries that BTAs are implemented, as opposed to whether it is in the interest of one country to unilaterally implement a BTA, we need to weigh the effects in the policy-active countries against those in countries that are exposed to BTA measures. Furthermore, we need to take into account not only the environmental impact, or the consequences for the profits of certain firms, but all welfare-related aspects.

3.2.1. Promotion of competitiveness is not a legitimate policy objective

A very commonly suggested motive for BTAs is to enhance the competitiveness of the domestic import-competing industry. This is not a valid rationale in our view, however.

First, competitiveness is not only an extremely vague concept. Whatever its precise definition, *the promotion of competitiveness is inherently bound to be a beggar-thy-neighbour policy*: the competitiveness of one country is by definition the lack of competitiveness of a trading partner. Pursuit of competitiveness thus stands in intrinsic contradiction to a concern for an internationally efficient pattern of production and climate protection.

Second, even disregarding international aspects, something more is needed than just the observation that climate policies may lead to loss of competitiveness for certain firms: almost any time an exporting country refrains from matching a policy that is being pursued by an importing country, there will be some form of externality, at least for certain groups, including in the form of reduced competitiveness of some domestic firms (and often also leakage). To take just one example, a government policy of subsidizing hospitals will drive up the demand for medical personnel, which in turn will increase the costs for say the pharmaceutical industry that hires a similar type of personnel. As a result, the pharmaceutical industry will lose market share to foreign competitors, which will take advantage of the domestic industry’s higher costs. As can be seen, for almost *any* policy intervention, it will be possible to identify some industry or firm that faces higher costs as a result of the intervention, and thus loses market share. And why just compensate firms? Why not all individuals who lose from any policy intervention? Economic policy would be completely stifled if any policy intervention had to constitute a Pareto improvement. It is thus clear that loss of “competitiveness” does not by itself suffice to motivate unilateral government interventions, even disregarding the international (systemic) aspects.

Furthermore, *if* one were to adopt competitiveness as a valid criterion for choosing policies, *why*

constrain the choice to climate-motivated BTAs? In addition, if for some (yet to be identified) reason these heavily polluting industries were to be compensated for policies that seek to reduce their emissions, there are a number of *other means* of doing so rather than imposing taxes on foreign producers.

To conclude, competitiveness arguments are simply arguments in favour of the interests of a small group of firms and their stakeholders, and they neglect the interests of the rest of society domestically and internationally. Instead, BTAs should be evaluated based on whether they are likely to have beneficial consequences in the aggregate, because of their effects on the climate, but also taking into consideration their other welfare-related effects.

3.2.2. Reduction of leakage is not a legitimate policy objective

A second common defence of BTAs is that they help prevent carbon “leakage”. We are sceptical about reduced leakage as a valid rationale, albeit for a more subtle reason than in the case of the competitiveness argument. Leakage is essentially defined as the increase in emissions in exporting countries due to the increase in costs for domestic firms from the domestic climate policy. Hence, leakage is what is *not* achieved by the domestic climate policy, relative to a scenario that assumes no reaction by foreign firms to changes in domestic cost conditions. It is what is *foregone* relative to this hypothetical situation. But why should domestic climate policy seek to reduce what is not achieved, rather than to maximize what *is* achieved? In other words, climate policy should be designed to enhance the climate, also taking into account the consequences for other components of welfare.

3.3. No Policy Reactions are Taken into Consideration

To assess the effect of BTAs, the literature almost invariably studies the implications of the imposition of a tax/tariff on imports, the implicit assumption being that no foreign policies are affected. However, BTAs are typically policy schemes that *threaten* to impose such a tax/tariff, should certain conditions be met. This means that the BTA regimes may affect other countries’ policies. This is indeed the idea when they are being imposed in order to induce other countries to pursue more cooperative climate policies. Only a very small part of the BTA literature takes into account these more systemic implications. Indeed, most of the literature analyses the implications of BTAs in settings where there are no trade agreements, and hence counterpart to the WTO.

There are here two obvious possibilities: that the BTA regimes will affect the incentives for exporting countries to impose export taxes, and that they will affect trade negotiations.

3.3.1. Export taxes

To the extent that BTA regimes will be sensitive to whether or not exporting countries pursue climate policies of their own, they may create incentives for exporting countries to tax exports, allegedly for climate purposes, in order to extract tax revenue that would otherwise go to the importing country. This would as such have a mainly distributional impact. Interestingly, it would remove the incentives for the importing country to use a BTA as a disguised means of exploiting market power vis-à-vis exporting countries, since the gain from such a policy comes in the form of government revenue.

There is a potential problem with the introduction of this export taxation, however, which is again that it may inspire exporting countries to use export taxation more generally. The economic effects of export taxes are very similar to those of tariffs – indeed, the well-known Lerner Symmetry proposition states that the effects are identical under certain circumstances. The reason is, intuitively speaking, that both instruments induce a shift of productive resources into the import-competing industry. An import tariff does this by increasing profitability in this sector by pushing up prices facing producers in the sector, and an export tax does it by reducing profitability in the export sector, thus pushing resources in this sector into the import-competing sector.

The problem with export taxes from a trade policy point of view is that they can thus be used with the same effect as import tariffs, but are still legal under the WTO Agreement (although nothing prevents WTO Members from negotiating bindings of export taxes). However, they have not been widely used so far, although one exception is China. As de Melo and Mathys (2010) report, China has occasionally used them on carbon-intensive products including iron, steel, coke and cement [de Melo and Mathys (2010) also refer to Hu Tao in Brainard and Sorkin (2009)].

One reason export taxes have not been widely used is probably that politicians would not be politically credited for effects working through Lerner symmetry mechanisms, if they were to exploit such effects to protect importers. Another probable (and related) reason is that it would normally be difficult to target specific import interests through export taxation. However, if export taxes were used more frequently, and governments and private interests better understood their effects, they could be used more extensively, thus tending

to undermine the tariff liberalization that has been achieved through most international agreements, the WTO Agreement included. It is hard to judge how likely this would be, however.

3.3.2. Trade negotiations

BTAs are import tariffs by another name. As such, one would expect the unilateral imposition of BTAs to affect the incentives for exporting countries to offer concessions on other products, and it might also affect the regular negotiated tariffs on the products that are burdened with the BTAs. It is not clear how strong such effects would be, but they cannot be dismissed out of hand.

Bringing trade negotiations into the picture raises the rather fundamental question of why the reductions in trade flows that the BTAs seek to achieve are not handled in the organizational context where trade barriers are determined – through trade negotiations? One possible reason is of course that the product classification system that is being used in trade negotiations – the Harmonized System (HS) – does not allow for distinctions according to the environmental properties of the production processes of imports. However, it would be possible for members of the WTO to propose amendments to the HS that, if implemented, would enable importing countries to make such distinctions in their tariff schedules. This would mean that these barriers become objects of negotiations, and thus that their levels are more likely to be globally optimal compared to when they are unilaterally determined. To our knowledge, no such discussion has taken place so far in the context of the HS Committee.

3.4. The Potential for Protectionism is Disregarded

Virtually all of the formal literature, whether theoretical or quantitative, implicitly assumes that BTAs will be neither designed nor implemented to serve protectionist purposes. This assumption would seem rather naïve to people in the trade policy community, whose *raison d'être* is precisely protectionism. The possibility for protectionism is in our view and, we believe, the more general opinion, the main drawback of BTAs. It is therefore vital that any future BTA regimes are built with these concerns in mind. This in turn requires an understanding of the more precise form that the protectionism may take. In this section we will point to some of these risks, as we see them.

3.4.1. Protectionist application within designated sectors

The literature does touch upon one possible form

of protectionism – that BTAs are applied in protectionist fashion in those few sectors in which they are typically proposed to be implemented, such as cement, steel, glass, etc. There are indeed good reasons to believe that such protectionism will materialize.

First, there are very close parallels between BTAs and, in particular, the anti-dumping regimes and the rules-of-origin that developed countries apply for developing countries to obtain preferential access to their markets. The anti-dumping regime allows governments to unilaterally impose duties on imported products when they have been priced “too low” by exporting firms. The alleged rationale for this regime is typically “fairness”: the WTO Agreement calls “unfair” the practice of an exporting firm selling a product at a lower price in its export market than in its home market. The logic of this reasoning is odd as such. But what makes things worse is that the application of this economically nonsensical law allows for its scope to go far beyond what “fairness”, however interpreted, may reasonably allow. It is legally a highly technical legislation, with rather complex calculations of, for instance, dumping margins. The combination of unilateral decision making and complex rules have led to an increasingly opaque application of the rules and the anti-dumping regime is consequently considered today as one of the main instruments for protectionism. It is highly likely that the calculations of duties in a BTA scheme will be equally complex. As often pointed out in the above-reviewed literature, there are serious problems involved in just calculating the amount of GHGs emitted during the production process itself.

A perhaps even closer parallel can be drawn with the “rules-of-origin” in developed country preferential tariff agreements for importation from developing countries. The rules-of-origin are 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 the countries that are the intended recipients of the preferential rates. These rules have become extremely complex, and are occasionally so administratively onerous to comply with that exporting firms in preference-receiving developing countries deliberately choose, for example, to enter the EU under higher MFN tariffs, this requiring much less documentation. While some rules-of-origin are necessary, it is often suggested that developed countries deliberately devise these rules in such a way so as to take back with one hand what they have given with the other. For much the same reason as for preferences for developing countries, it will also be necessary to

keep track of the origin of products in the context of BTAs, to the extent that exporters are meant to be taxed on the carbon emissions added during the production in the exporting country, but on the basis of the emissions during production of intermediate products in other countries. 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, if countries pursue different environmental policies. Again, the complexity of these rules is likely to leave ample scope for protectionism.

A second broad reason to believe that protectionism will arise in the few sectors normally mentioned stems from the distribution of the burden of proof in WTO disputes, as discussed above: importing countries will have incentives to make the BTA regimes non-transparent, since if the regime is legally challenged in the WTO, the burden of proof will, as argued in the previous analysis, lie on the exporting country.

Third, several of these industries, such as steel, cement, aluminium production and pulp are characterized by high industrial concentration and strong union influence, and they are technologically fairly stagnant. These features tend to create a breeding ground for political pressure for protectionism.

We thus believe that protectionist application of BTAs in these few designated sectors is a very plausible scenario. How costly would this protectionism be? Our guess is that the social costs would not be that high: it seems likely on *a priori* grounds to believe that non-protectionist carbon taxation would be too low from an international efficiency perspective, due to the existence of positive externalities from national carbon taxation. Thus, to the extent that the BTAs only “adjust,” and do not go beyond the level of the domestic measures, the general carbon taxation is likely to be too low. Thus, a somewhat higher import tax, even if motivated by a desire to protect, could have beneficial consequences from an efficiency point of view.

3.4.2. Protectionist application in non-designated sectors

Second, it seems likely that once systems for calculating and taxing carbon content in imported products are up and running in the few sectors normally mentioned, there will be very strong political pressure for similar measures in other sectors. It could then be very hard for governments to resist the claim that *all* industries should be part of the efforts to mitigate climate change, in particular since the fixed costs of developing the administrative systems for handling BTAs have already been borne. This would not be a problem

if the measures were to be implemented in these remaining sectors only in proportion to the carbon content of these sectors. But if protectionism creeps into the application of the BTAs in large swathes of import-competing industries, it would become seriously damaging.

The possibility that BTAs will be applied in protectionist fashion in sectors with low carbon emissions is not taken into account in the BTA literature in environmental economics.

3.4.3. BTAs as political blueprints for “adjustments” in other policy areas

The popular reasoning in support of climate-motivated BTAs – the competitiveness and leakage arguments – superficially applies with equal force to a large number of other policy areas. The potentially most serious problem with BTAs as vehicles for protectionism is in our view therefore the possibility that once climate-motivated BTAs are administratively in place, they will *serve as political blueprints for import restrictions in other policy areas*.

For instance, consider a situation where a country contemplates whether to impose stricter workplace safety rules. This will clearly put domestic import-competing firms at a disadvantage relative to firms that produce in places with laxer standards. The lack of workplace safety rules in a country thus exposes trading partners to a negative externality. Applying the logic used to motivate BTAs, it could then be argued that it is necessary to complement the domestic workplace regulation with a “Border Workplace Safety Tax” to prevent this from occurring.

Or, to take an extreme example, when firms in an importing country give workers a pay increase, this will put the firms at a disadvantage. The lack of corresponding wage hikes in other countries effectively creates an externality. Since high wages are clearly desirable, governments should therefore help firms make pay rises by complementing these with import restrictions – a “Border Labour Tax.”

We believe that it may become very hard to defeat these types of arguments in the popular debate once climate-motivated BTAs are in place.

3.5. The Reasons for Other Countries’ Less Stringent Climate Policies are Disregarded

Both efficiency and fairness reasons strongly suggest that *the appropriateness of BTAs must be evaluated in light of the reasons some countries pursue less stringent climate policies*. For instance, it would seem to make a difference whether this is

because these countries are poorer, have access to less efficient technologies, are less affected, have less historical responsibility for the problem, or are more eager to free-ride on other countries' efforts. To the best of our knowledge, almost all of the BTA literature in environmental economics is silent on this score. It is just assumed that some countries pursue less stringent policies, without any explanation or any confirmation that other assumptions in the model are compatible with the implicit assumption concerning the rationale for the less stringent policies.

4. SUMMARY

The purpose of this paper is to highlight some core features of BTAs, as perceived from a trade perspective. In our view, it will be possible to design such schemes so that they are legally compatible with the WTO Agreement – WTO Members *can* lawfully adopt such measures. They may also contribute to addressing environmental externalities. However, a number of questions surround their desirability, due to certain limitations in the literature in environmental economics on BTAs. Simply put, even if BTAs are most likely legal if correctly designed and implemented, the economic literature *cannot* in our view be said to support their desirability. ■

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