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WTO law issues of emissions trading

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Abstract

Based on existing research in the interface of emissions trading schemes (ETSs) and WTO law, the paper looks more closely at the design elements of an ETS that are most vulnerable to a WTO challenge, including border adjustment on importation and exportation, recycling of revenues and cross-border linking. The analysis of WTO consistency of various ETS regulatory components reveals significant legal uncertainty. One explanation is that an ETS is not yet fully established as a regulatory tool. It does not have a fixed design and its design elements vary significantly with a scheme. Moreover, ETS-related issues have never been raised in WTO disputes. This makes it hard to predict with confidence the outcome of scrutiny of an ETS by a WTO adjudicative body. In this respect, the availability of environmental and/or health exceptions for justification of ETS-related measures is of great importance.

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1. Introduction

An emission trading scheme (ETS) is a climate policy instrument, which sets a limit on the amount of emissions permissible for a company, thereby putting a price on emissions and stimulating emissions reductions. Because the number of distributed emissions allowances is lower than the one demanded by companies covered by an ETS, emissions allowances constitute a scarce resource, which increases the total costs of production. Consequently, companies participating in an ETS have a less advantageous position vis-a-vis competitors that are not participating in an ETS.

The interaction of emissions trading with the rules of the World Trade Organization (WTO) begins with an introduction of regulatory measures or design features of an ETS that are aimed at mitigating the competitive disadvantages of participating companies. Such measures have also a clear environmental objective of preventing carbon leakage, the situation where the total amount of global emissions increases due to the expansion of emissions-intensive production elsewhere.[2] There are a variety of measures that can be taken for these purposes. They include free allocation of emissions allowances, income-supporting recycling of ETS revenues, use of border adjustment measures etc. As a result, an ETS does not represent a single measure but a complex system of various design elements and flanking support schemes.

Cost increases relating to ETS 'indirectly' raise issues under WTO law if a higher costs burden is placed on foreign producers, as preventing discrimination is a major objective of the WTO legal system. By contrast, a 'direct impact' of an ETS on trade in such situations is less obvious because trading in emission allowances does not

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[2] See P Wooders et al. (2009) 'Border Carbon Adjustment and Free Allowances: Responding to Competitiveness and Leakage Concerns', OECD, SG/SD/RT(2009)8, at 8-11. See also H van Asselt et al. (2009) 'Addressing Leakage Competitiveness in US Climate Policy: Issues Concerning Border Adjustment Measures', *Climate Strategies*, at 9, and R Ismer (2010) 'Mitigating Climate Change through Price Instruments: An Overview of the Legal Issues in a World of Unequal Carbon Prices', in C Herrmann and J Terhechte (eds), *European Yearbook of International Economic Law* (Berlin: Springer-Verlag) at 211-212.

constitute trade in its traditional sense. Traded are not conventional goods and services, but emissions allowances, which essentially represent rights to certain amounts of emissions.

While the legal status of emissions allowances under WTO law is disputable[3] and will remain so until it is clarified in a WTO dispute, one element appears certain: irrespective of whether emissions allowances fall within the scope of the WTO Agreement or not, restrictions on the eligibility of emissions allowances for compliance with an ETS requirement and also other design features of emissions trading have the potential to affect international trade indirectly, through an impact on trade in goods and services, and as such get in conflict with the rules of the General Agreement on Tariffs and Trade (GATT) and/or the General Agreement on Trade in Services (GATS).

This paper looks more closely at the design elements of an ETS that are most vulnerable to a WTO challenge.

2. Free allocation of emissions allowances

The initial stage of emissions trading is the allocation of emissions allowances, whereby a government distributes emissions allowances to firms participating in an ETS. There are several ways for the distribution of emissions allowances, most prominent are free allocation or auctioning.[4] Free allocation reduces the financial burden of an ETS for domestic firms and thus is widely used as an approach to addressing competitiveness and carbon leakage concerns under existing national cap-and-trade systems.[5]

While the free allocation of emissions allowances may help prevent carbon leakage,[6] it negatively affects the state budget,[7]reduces incentives for firms to reduce

[3] Some commentators put them in the regulatory ambit of the GATT (see e.g. J Button (2008), 'Carbon: Commodity or currency? The case for an international carbon market based on the currency model', *Harvard Environmental Law Review*, vol. 32, at 575–577); others subject them to the GATS disciplines (see e.g. R Howse (2009) 'World Trade Law and Renewable Energy: The Case of Non-Tariff Barriers', UNCTAD, at 15-16).

[4] In the 3rd phase of EU ETS (2012-2020), roughly half of the allowances is being auctioned. For instance, all electricity generators (with some exceptions) are obliged to buy emissions allowances at an auction. Yet, the free allocation is still available for carbon-intensive sectors with a significant risk of carbon leakage. The free allocation is based on the benchmark of the 10% most efficient EU producers in the sector. See I Jegou and L Rubini (2011) 'The Allocation of Emission Allowances Free of Charge: Legal and Economic Considerations', Transition to a Low Carbon Future Series' Issue Paper no. 18, ICTSD, at 3 and 6.

[5] S Dröge (2009) 'Tackling Leakage in a World of Unequal Carbon Prices', *Climate Strategies*, at 46.

[6] There is no conclusive evidence though. See e.g. I Jegou and L Rubini (2011) 'The Allocation of Emission Allowances Free of Charge', at 21.

[7] It is estimated that the foregone revenues from the free allocation of emissions allowances in the 3rd phase of the EU ETS (2012-2020) will constitute 100 billion Euros. See ibid.

emissions[8] and creates the risk of windfall profits. Concerns have also been raised in the literature about the consistency of free allocation of emissions with the WTO subsidy and anti-dumping rules.[9] They are examined in more detail below.

2.1 Issues arising under the WTO rules on subsidies

The analysis of the free allocation of emissions allowances under WTO rules begins with a consideration of whether the measure constitutes a subsidy within the meaning of the WTO Agreement. The WTO definition of a subsidy is contained in Article 1 of the WTO's Agreement on Subsidies and Countervailing Measures (ASCM)[10] and consists of two parts: (1) a measure must constitute a 'financial contribution' by a government or any form of 'income or price support' and (2) must confer a 'benefit'. The financial contribution by a government is understood as: (1) direct transfers of funds (e.g. loan guarantees); (2) fiscal incentives (government revenue that is otherwise due is forgone); and (3) provision of goods or services other than general infrastructure or purchase of goods.[11] In addition, the financial contribution covers situations where a government entrusts a private body to provide a financial contribution in any of the three forms or provides financial support indirectly (e.g. through a funding mechanism).[12]

Based on the fact that, under the free allocation, allowances are distributed for free instead of being exchanged for money, it could be argued that the free allocation would be a financial contribution by a government in the form of the revenue foregone that would otherwise have been due.[13] Consequently, the free allocation meets the first part

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[8] J Hoerner and F Muller (1996) 'Carbon Taxes for Climate Protection in a Competitive World', paper prepared for the Swiss Federal Office for Foreign Economic Affairs, at 46. But it could also be argued that an emissions allowance, even if a firm received it for free, would still have an opportunity cost. It can be sold on the carbon market instead of being used for compliance with ETS and therefore it still stimulates its holder to reduce emissions.

[9] See e.g. R Howse (2010) 'WTO Subsidies Disciplines and Climate Change Mitigation Policies: Options for Reconciliation', paper prepared for the IISD, at 10-11; and I Jegou and L Rubini (2011), 'The Allocation of Emission Allowances Free of Charge'.

[10] The rules governing the use of subsidies are also contained in GATT Art. XVI. The GATT and ASCM provisions form an integrated set of rules on subsidies. The ASCM does not however cover the use of subsidies in the agricultural sector, which are regulated by the provisions of the WTO Agreement on Agriculture.

[11] ASCM Art. 1.1(a)(1)(i)-(iii).

[12] ASCM Art. 1.1(a)(1)(iv).

[13] Depending on whether an emissions allowance could qualify as a good or service, the free allocation of emissions allowances could also acquire the meaning of a provision of goods and services under Article 1.1(a)1(iii). I Jegou and L Rubini draw here a parallel to the stumpage arrangements, which provided rights to lumber (which was found by the AB to be a good) to Canadian lumber harvesters. See I Jegou and L Rubini (2011) 'The Allocation of Emission Allowances Free of Charge', at 30-31. Providing rights to a good was found by the AB to constitute a financial contribution by government in the form of a provision of goods and services. See *US-Softwood Lumber IV*, AB report, para. 75. Yet, the difference of stumpage arrangements to emissions allowances is that the latter provide rights to emissions and not to such natural resources or goods as lumber. Since the AB considers a good to be a tangible and possessable item, it is difficult to qualify emissions allowances (i.e. rights to pollute) as a good.

of the subsidy definition under Article 1.1(a)1(ii) of the ASCM. Next, it could be argued that free allocation confers a benefit[14] to firms so long as an emissions allowance, which was received for free, can always be sold in the market if a firm achieves emissions reduction and has no need in the allowance to comply with its emissions quota.[15] Consequently, due to the receipt of the free allowance, a firm gets a better financial position than before, which is a benefit.[16] That means that the second part of the ASCM subsidy definition is also fulfilled.

The finding that the free allocation of emissions allowances constitutes a government financial contribution that confers a benefit to a firm would be enough to render the free allocation a subsidy under WTO law. However, it would not be enough for the complaining party to win a dispute in the WTO or to justify its unilateral imposition of countervailing duties on subsidized imports.[17] As long as emissions allowances are not provided for free specifically on exportation[18] or under the condition that a firm would use domestically produced components, the free allocation is unlikely to be viewed as a prohibited subsidy.

However, because the free allowances are usually available only to certain firms or industries, namely to those under a significant risk of carbon leakage, the free allocation is likely to be viewed as a specific subsidy,[19] and as such, could potentially be actionable. This means that this measure could successfully be challenged in the WTO, and eventually forced to be withdrawn, or could be targeted by trading partners through CVDs, if the complaining party (or the CVD-imposing country) could claim adverse effects, including material injury to its domestic industry.[20]In this respect, one could

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[14] In *Canada-Aircraft*, when interpreting the meaning of the benefit under this provision, the AB noted: 'the word "benefit", as used in Article 1.1(b), implies some kind of comparison. This must be so, for there can be no "benefit" to the recipient unless the "financial contribution" makes the recipient "better off" than it would otherwise have been, absent that contribution. In our view, the marketplace provides an appropriate basis for comparison in determining whether a "benefit" has been "conferred"…'. See *Canada-Aircraft*, AB report, para. 157.

[15] I Jegou and L Rubini (2011) 'The Allocation of Emission Allowances Free of Charge', at 22.

[16] Ibid., at 22. See also L Rubini (2013), 'Subsidies for emissions mitigation under WTO law', in G. Van Calster and D. Prevost (eds), *Research Handbook on Environment, Health and the WTO* (Edward Elgar) at 575-576.

[17] Not every subsidy is illegal under WTO law. The use of government support measures comes under legal scrutiny only if they (1) promote exports or support import substitution (ASCM Art. 3) and (2) adversely affect the interests of other WTO members, including injury to their industries, impairment of their benefits under tariff concessions and serious prejudice to their interests (ASCM Art. 5).

[18] It could be argued that the link to exports could be established based on the fact that the government gives allowances for free to those industries that are most carbon-intensive and trade-exposed. However, the trade exposure is also understood in terms of the dependency on imports. See 'Carbon allowance rebates seen as possible export subsidies' *Inside U.S. Trade* (26 June 2009) at 2.

[19] A subsidy is deemed to be specific when it is not sufficiently broadly available throughout an economy. See *US-Upland Cotton*, Panel report, para. 7.1142.

[20] ASCM Art. 5.

argue that the case of free allocation of emissions allowances to specific industries has an analogy to the free access to natural resources in the *Lumber* case. In the *US-Softwood Lumber IV* dispute, the claim of subsidy was based on the fact that the companies did not pay 'adequate remuneration' to the government for the access to lumber.[21] But there is at least one circumstance around the free allocation of emissions allowances that makes these cases different. The analogy would be indisputable if complaining countries themselves had ETSs in place.[22] In that case, such countries, especially those with ETSs based on auctioning, might be able to claim that their domestic industries buying emissions allowances in an auction are adversely impacted by imports from countries where emissions allowances are distributed for free.[23] But currently there are very few countries, in which domestic producers bear emissions costs. For countries with no climate change legislation in place, it would be difficult to claim that the free allocation of emissions allowances causes adverse effects to their domestic industries, which bear no emissions costs at all.[24] Therefore, in our view, the risk of disputes that could be brought under the ASCM against the free allocation of emissions allowances currently appears to be minimal.

2.2 Issues arising under WTO anti-dumping rules

A legal issue over the distribution of emissions allowances for free may also arise under WTO anti-dumping rules. The free allocation may trigger the initiation of anti-dumping procedures by trading partners and lead to the imposition of anti-dumping duties (ADDs) on imports coming from countries where producers receive emissions allowances for free. It could be argued that the free allocation enables producers to charge unusually low prices. Imports originating from such enterprises could then be viewed as dumped imports. Under WTO anti-dumping rules, if dumped imports cause or threaten material injury to a domestic industry, they can be offset by anti-dumping duties charged in addition to the ordinary import duties.[25]

Yet, the case of the free allocation of emissions allowances does not easily fall within the WTO understanding of dumping. Under the definition of dumping contained

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21 R Howse (2010) 'WTO Subsidies Disciplines and Climate Change Mitigation Policies', at 10-11.

[22] K Holzer (2014) *Carbon-related border adjustment and WTO law* (Edward Elgar) at 212-213.

[23] Ibid.

24 Ibid., at 213.

[25] See GATT Art. II:2 and GATT Art. VI. The imposition of anti-dumping duties is further regulated by the Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade 1994 (the Anti-Dumping Agreement).

in Article VI:1 of the GATT (and Art. 2 of the Anti-Dumping Agreement), dumping is a situation where the export price of the product is

> (a) less than the comparable price, in the ordinary course of trade, for the like product when destined for consumption in the internal market of the exporting country, or,
> (b) in the absence of such domestic price, is less than either
>> (i) the highest comparable price for the like product for export to any third country in the ordinary course of trade, or
>> (ii) the cost of production of the product in the country of origin plus a reasonable addition for selling cost and profit.

In other words, in all these cases of dumping, the price of the imported product does not represent the normal value of the product.[26] And the comparison is always made with the price at which the like product is sold in the market of the exporting country or with the price, which is otherwise related to the exporting country.

By contrast, when dumping is referred to the case of the free allocation of emissions allowances, the comparison is made with the price of the like product in the market of the importing country that, for example, distributes allowances through an auction. This does not reflect the WTO meaning of dumping and, hence, does not provide justification for the imposition of ADDs.[27] The mere non-payment of emissions costs that results in the lower prices would hardly suffice to make a case for the imposition of ADDs.

And yet, it could be argued that the case of dumping can be made under the provisions of Article 2.2 of the Anti-Dumping Agreement, which refers to the situation where the comparison with the price in the internal market of the exporting country is not possible 'because of the particular market situation'. The non-payment for emissions allowances results in the price of products not reflecting the normal value of the good, and therefore the export price cannot be compared to the price in the internal market.[28] In that situation, the comparison would need to be made with 'the cost of production in the country of origin plus a reasonable amount for administrative, selling and general costs and for profits' (ASCM Article 2.2) and 'costs shall normally be

[26] The normal value is thus a benchmark, against which the export price is compared in dumping cases.

[27] J Pauwelyn (2013) 'Carbon leakage measures and border tax adjustments under WTO law', in D. Prevost and G. Van Calster (eds.), *Research Handbook on Environment, Health and the WTO* (Edward Elgar) at 505.

[28] P Holmes et al. (2011) 'Border carbon adjustments and the potential for protectionism', *Climate Policy*, vol. 11, at 889.

calculated on the basis of records kept by the exporter or producer under investigation, provided that such records ... reasonably reflect the costs associated with the production and sale of the product under consideration' (ASCM Article 2.2.1.1). It could be argued that the costs associated with the production of imported products are not reasonably reflected because of the distribution of emissions allowances for free. In this regard, Peter Holmes et al. (2011) refer to the anti-dumping procedure initiated against the Ukrainian steel some time ago.[29] In that case, the dumping resulted from the fact that the price of gas in Ukraine was not reasonably reflected in the production costs of Ukrainian steel producers and hence in the price of the Ukrainian steel.[30] Similarly, in the case of the free allocation of emissions allowances, the country with an ETS, which is fully based on auctioning of emissions allowances, could argue that the price of exports from countries with the free allocation of emissions allowances does not reflect the normal value.[31] The benchmark for the normal value could be the price in the market of the importing country or a third country distributing emissions allowances only through auction. The difference between the 'normal value' and the actual export price would then be a margin of dumping to be offset with anti-dumping duties.[32]

Whether the 'reasonable costs' argument can establish a solid foundation for the imposition of ADDs in the case of non-payment of emissions costs under free allocation of emissions allowances in exporting countries can only be tested in future disputes.[33] All that can be said at the moment is that the use of ADDs, like the use of CVDs, for leveling the playing field between domestic and foreign producers in the world of different emissions costs cannot be excluded.

3. Revenue recycling

Another feature of an ETS which could be put under WTO law scrutiny is the mode of allocation of state revenues from emissions allowances. A government can use revenues it receives from the distribution of emissions allowances at an auction in many ways.[34]

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[29] See Council Regulation (EC) No 954/2006 of 27 June 2006 imposing definitive anti-dumping duty on imports of certain seamless pipes and tubes, of iron or steel originating in Croatia, Romania, Russia and Ukraine.

[30] Until the mid-2000s Ukraine bought gas from Russia at prices which were considerably lower than the market price.

[31] P Holmes et al. (2011) 'Border carbon adjustments and the potential for protectionism', at 889.

[32] Ibid., at 888-889.

[33] J Pauwelyn (2013) 'Carbon leakage measures and border tax adjustments under WTO law', at 505.

[34] A Baranzini et al. (2000) 'A future for carbon taxes', Ecological Economics, vol. 32, at 400.

It can allocate the revenues in various social and infrastructure programs (salaries, pensions, medical care, army etc.), as it normally does with all other tax revenues. It can also use them to enable the economy-wide tax reform through the reduction of other taxes, for instance, capital taxes (corporate taxes, personal income rates on interest, dividends, capital gains etc.) or labor taxes (payroll, personal income taxes etc.).[35] The revenues can also be earmarked, i.e. they can be spent to fund climate change and other environmental projects.[36]

Finally, the revenues can also be recycled (i.e. redistributed) through lump sum rebates to low-income households, which are most disadvantaged by increase emissions costs. Or a government may choose to recycle the emissions allowances revenues back to firms, particularly to those, which are most vulnerable to competitiveness losses. In that case, while the revenue recycling can serve as a tool of preventing carbon leakage,[37] it will raise issues under the WTO rules on subsidies. Like the WTO law analysis of free allocation of emissions allowances, the examination of ETS revenue recycling schemes under the WTO legal framework focuses on the question of whether a particular mode of revenues allocation subsidizes national producers to the detriment of foreign industries, and as such is an actionable subsidy. As already discussed, to qualify as an actionable subsidy, a measure must constitute a financial contribution or any form of income or price support from a government, must confer a benefit, be specific and create adverse effects on foreign industries.

Based on case law, it could be argued that the recycling of revenues from emissions allowances back to the most vulnerable producers may constitute a state financial contribution in the form of a direct transfer of funds (ASCM Article 1.1(a)(1)(i)) or foregone budget revenues (ASCM Article 1.1(a)(1)(ii)).[38] Yet, strong objections can be raised against this.[39] First, under this mode of revenue allocation, same money that was collected would be recycled back to the contributing entities (firms), and not the revenues from other sources that were collected before and put in the state budget or comprising state reserves. Hence, the recycling of emissions allowances revenues back

[35] J Carbone et al. (2014) 'Getting to an Efficient Carbon Tax – How the revenue is used matters', *Resources*, vol. 185.

[36] In this respect, it is argued that ETSs can be an important source for global and national action on climate change. See e.g. A Esch (2013) 'Using EU ETS Auctioning Revenues for Climate Action: What is the Appetite for Earmarking within Specific EU Member States?' Brief Paper (Germanwatch) at 6-7.

[37] N Shariff (2012) 'Enhancing Competitiveness and Addressing Carbon Leakage: A Value Added Based Approach to Emissions Pricing System Design' (University of Bern) at 35.

[38] See e.g. *EC and certain Member States – Large Civil Aircraft*, Panel report, para. 7.1292; *US-Large Civil Aircraft (2nd complaint)*, AB report, paras. 617, 812, 815; *US-FSC (Art. 21.5-EC)*, AB report, para. 104.

[39] N Shariff (2012) 'Enhancing Competitiveness and Addressing Carbon Leakage', at 48.

to firms looks as a redistribution of funds between private entities rather than a direct transfer of funds from the budget.

Second, even though the allegation of foregone government revenues might be correct, one should not forget that such a judgment cannot be taken out of context. As Nashina Shariff (2012) rightly put it, '[i]n a country where the status quo is not to tax emissions at all, which is the normal case, the institution of a charge and rebate system should not constitute foregoing government revenue otherwise due, but simply a means of taxation that limits the cost impacts of the measure on its industry'.[40] For similar reasons, it is difficult to argue that such mitigation of ETS impacts on industries confers a benefit to the firms, and even more difficult it would be to prove that ETS revenue rebates created adverse effects for foreign industries.[41]

Nevertheless, certain design elements of a revenues recycling scheme need to be included in order to withstand allegations of WTO law-inconsistency. First, an ETS revenue recycling scheme needs to be administered so that it can demonstrate a clear connection between the revenue received from the allocation of emissions allowances and its recycling back to firms.[42] This could help address the claim of a direct transfer of government funds. Second, if the government revenues under an ETS were used, even partially, to fund environmental and climate change projects, this could serve as evidence of the environmental rationale of an ETS and constitute an important indicator of the neutrality of the system. It would also increase chances for justification of some elements of ETS under the environmental exception of GATT Article XX, as discussed below.[43] Finally, WTO law does not impose obstacles to redistributing revenues as part of a national tax reform. Revenues received from climate policy-related charges could legally be used to reduce the rates of mandatory social charges, such as health insurance premiums, or income taxes.[44]

4. Border carbon adjustments

A border carbon adjustment (BCA) is undoubtedly the most controversial of all design features of an ETS, seen from the perspective of WTO rules. A BCA is meant to equalize emissions costs of domestic and foreign producers. For someone from the field

[40] Ibid.
[41] Ibid.
[42] Ibid., at 50.
[43] K Holzer (2014) *Carbon-related border adjustment and WTO law*, at 237.
[44] For more on this, see T Cottier et al. (2014) 'Differential Taxation of Electricity', a study prepared for the Swiss Federal Finance Administration (FFA) and the Swiss Federal Office of Energy (SFOE), 18 April 2014, at 60-63.

of tax law, a BCA is normal practice, as it puts in effect the destination principle of taxation, whereby the ETS requirement applies equally with respect to domestic products and imports, on the one side, and emissions allowance rebates can be provided to domestic producers on exportation, on the other side.[45] However, little clarity exists regarding the compatibility of BCAs with obligations under the WTO Agreement. On the one hand, it is because they have never been tested in a WTO dispute. On the other hand, it is due to the special nature of the measures, which belong to the category of non-product related process and production methods (npr-PPMs). BCAs are imposed in connection to emissions, which are intangible and cannot be traced in the final product.[46] The matter becomes even more complex given the fact that emissions result from the production process happening abroad. In this respect, BCAs are measures with an extraterritorial reach, as they interfere with other countries' jurisdiction to regulate environmental matters and the use of technologies.[47] While the use of npr-PPMs remains a politically sensitive issue, a more tolerable approach to npr-PPMs is emerging in the judicial field. It seems that WTO case law is moving towards the position that admits that npr-PPMs are not illegal so long as they apply on a non-discriminatory basis.[48] In case if they are found to discriminate against imports, they may still be justified under the exceptions provided in GATT Article XX for measures taken with moral, health, environmental and other public policy objectives.

4.1 The inclusion of imports in an ETS

One way to equalize emissions costs between domestic and foreign producers competing on the market of a country putting an ETS in place is to include imports in the ETS. That means that importers will be obliged to surrender emissions allowances, if they want to sell products from a sector covered by the ETS. This will follow the principle of import-side border tax adjustment. Instead of taxes, however, adjusted will

[45] This is, for instance, usual practice for the application of value-added taxes (VAT).

[46] See e.g. S Charnovitz (2002) 'The Law of Environmental "PPMs" in the WTO: Debunking the Myth of Illegality', *Yale Journal of International Law*, vol. 27, at 62-63.

[47] Besides the coercive effect on policies of other countries, which enjoy sovereign rights and regulatory autonomy under international public law, PPMs inflict considerable costs on exporting countries. To meet the requirements of an importing country, exporting countries have to make investments in technological modernization and upgrading of their standards. It is therefore not surprising that PPMs with extraterritorial jurisdiction are opposed, especially by developing countries. See e.g. the Statement of Mexico, the complaining party in the Tuna/Dolphin dispute before the panel: US-Tuna (Mexico), GATT Panel report (unadopted), para 3.31.

[48] K Holzer (2014) *Carbon-related border adjustment and WTO law*, at 96-98. See also N Bernasconi-Osterwalder et al. (2006) *Environment and Trade: A Guide to WTO Jurisprudence* (London: Earthscan) at 205-218.

be costs of emissions allowances. Does it matter for the compliance with the WTO rules on border tax adjustment?

Since only indirect taxes (i.e. taxes applied to products) can be adjusted at the border,[49] a starting point in the analysis of WTO law legality of BCAs (no matter whether import-side or export-side) is the determination of whether the ETS requirement to surrender emissions allowances can qualify as an indirect tax. More precisely, whether the requirement to surrender emissions allowances is a tax at all, and if it is a tax, whether it is an indirect tax. The first question is important because the rules on border adjustment vary with the type of the measure. If the ETS requirement is a tax (or a charge), when adjusted on importation, it falls under GATT Article III:2 and, accordingly, the tax burden for imports must be the same as for the like domestic products.[50] If it is a domestic regulation, when applied to imports, it falls under the provisions of GATT Article III:4 and, accordingly, the treatment of like imported products may sometimes be different but never less favourable.[51] The second question matters because only indirect taxes, i.e. taxes levied on products and not on producers, are adjustable.[52]

There is no consensus on whether the ETS requirement to surrender emissions allowances can qualify as a tax. Referring to the OECD definition of a tax being 'an unrequited payment to the government' or 'a compulsory contribution imposed by the government for which taxpayers receive nothing identifiable in return', both Javier De Cendra (2006) and Joost Pauwelyn (2007) consider an emissions allowances requirement to be a tax eligible for adjustment at the border.[53] They submit that an emissions allowance requirement can qualify as a tax even if emissions allowances are distributed for free, given that allowances always have an opportunity cost.[54] This contrasts with Lorand Bartels (2011)' argument that the ETS requirement is a domestic

[49] The availability of border adjustment only for indirect taxes follows from the text of the legal provisions of GATT Art. II:2(a), Art. VI:4 and Ad Art. XVI. It is also confirmed by the GATT Working Working Party on Border Tax Adjustments (L73464, 2 December 1970, BISD 18S797, para. 14).

[50] *Japan-Alcoholic Beverages II*, AB report, at 18 and 22.

[51] *Korea-Various Measures on Beef*, AB report, para. 137.

[52] This follows from the text of the provisions relevant for border adjustment, including GATT Art. II:2(a), Art. VI and Ad Art. XVI. See also GATT Working Party Report on Border Tax Adjustments, para. 14.

[53] J de Cendra (2006) 'Can Emissions Trading Schemes be Coupled with Border Tax Adjustments? An Analysis vis-à-vis WTO Law', *RECIEL*, vol. 15(2) at 136, and J Pauwelyn (2007) 'U.S. Federal Climate Policy and Competitiveness Concerns: the Limits and Options of International Trade Law', Working Paper, Nicholas Institute for Environmental Policy Solutions, Duke University, at 21-22. Also supported by R Ismer and K Neuhoff (2008) 'International Cooperation to Limit the Use of Border Adjustment', a paper prepared for the Climate Strategies workshop held in Geneva on 10 September 2008, at 8.

[54] J Pauwelyn (2007) 'U.S. Federal Climate Policy and Competitiveness Concerns', at 22.

regulation (i.e. a non-fiscal measure), for it cannot be an unrequited payment so long as emissions allowances can be sold in the carbon market and bring revenue.[55] This echoes with the ECJ finding that the ETS requirement constitutes a market-based measure, rather than a tax.[56]

If the ETS requirement is a domestic regulation (i.e. a non-fiscal measure), the discussion about direct and indirect taxes becomes no longer relevant[57] because the analysis shifts to the examination of the application of the measure. The thorny issue here is the likeness of carbon-intensive and low-carbon products, as the non-discrimination rules (the most favoured nation (MFN) and national treatment (NT) principles) governing the application of BCAs to imports are relevant only for like products.[58] Traditionally, when determining whether products are like, WTO adjudicative bodies look at whether the competitive relationship between products is strong enough, and whether products are characterized by the same physical characteristics, end-uses, consumer preferences and tariff codes.[59] Based on this traditional 'like product' test, it is difficult to refer to the imported steel produced in an open hearth process (with a higher GHG emission footprint) and the domestic steel produced with the electric arc technology (with a lower GHG emission footprint) as unlike products. Yet, the increasing consumer awareness of climate change and their growing preferences for products with the low carbon footprint may impact the competitive relationship and render carbon-intensive and low-carbon products unlike.[60]

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[55] L Bartels (2011) 'The Inclusion of Aviation in the EU ETS: WTO Law Considerations', Global Platform on Climate Change, Trade and Sustainable Energy Issue Paper no. 6, ICTSD, at 4.

[56] The ECJ did not find the ETS requirement to be a tax for the following reasons. First, a tax has a fixed rate, whereas the costs of emissions allowances for a firm vary depending on the number of allowances initially allocated for free and the market price of an allowance if the firm purchased additional allowances to comply with its obligations under the ETS. Second, unlike a tax, the ETS requirement is not primarily intended to generate revenue in the budget. See ECJ Case C-366/10, *Air Transport Association of America and others v. Secretary of State for Energy and Climate Change* [2011] ECR I-1133, paras. 142-144, 147.

[57] Opinions vary as to whether the ETS requirement can be attributed to indirect taxes. For the arguments in favour, see J Hoerner and F Muller (1996) 'Carbon Taxes for Climate Protection in a Competitive World'; J Pauwelyn (2007) 'U.S. Federal Climate Policy and Competitiveness Concerns'; P Wooders and A Cosbey (2010) 'Climate-linked tariffs and subsidies: Economic aspects (competitiveness and leakage)', a paper prepared for the TAIT second conference on 'Climate Change, Trade and Competitiveness: Issues for the WTO' held in Geneva on 16-18 June 2010. For the arguments against, see G Goh (2004) 'The World Trade Organization, Kyoto and Energy Tax Adjustments at the Border', *Journal of World Trade*, vol. 38(3); P Low et al. (2010) 'The interface between the trade and climate change regimes: Scoping the issue', a paper prepared for the TAIT second conference on 'Climate Change, Trade and Competitiveness: Issues for the WTO' held in Geneva on 16-18 June 2010.

[58] GATT Art. I and Art. III. If the ETS requirement is a regulation, it might also be subject to the provisions of the WTO's Agreement on Technical Barriers to Trade (TBT Agreement). See K Holzer (2014) *Carbon-related border adjustment and WTO law*, at 140-145.

[59] See e.g. *EC-Asbestos*, AB report, para. 101; *Philippines-Distilled Spirits*, AB report, paras 119 and 131.

[60] T Cottier et al. (2014) 'Differential Taxation of Electricity', at 32-33.

In that case, the application of BCAs would not trigger a violation of the MFN and NT provisions.

Under present circumstances, however, a more likely scenario is that the use of BCAs would need justification under the general exceptions of GATT Article XX.[61] BCAs fit in the scope of paragraph (b), which provides justification for measures 'necessary to protect human, animal or plant life or health', and paragraph (g), which exempts from compliance measures 'relating to the conservation of exhaustible natural resources…'. Yet, the major challenge for justification of BCAs is the conditions of the chapeau of Article XX. The chapeau requires that a measure does not constitute 'a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade'. In simple terms it means that it would not tolerate any differences in the design and the implementation of a measure made in relation to countries, where conditions relevant for the policy objective pursued by the measure are the same.[62] BCAs should therefore be flexible enough to exclude imports from countries that pursue emissions reduction policies, no matter whether in the form of an ETS, a carbon tax or any other measure. No single recipe however exists for the application of BCAs in compliance with WTO rules. The WTO law-consistency of the inclusion of imports in an ETS will be decided by WTO adjudicative bodies on a case-by-case basis, and the outcome of each case will be predetermined by the concrete design of the scheme.

4.2 Export rebates

In addition to the inclusion of imports in a national ETS, the playing field between domestic and foreign producers could also be levelled through export rebates (export-side BCA). This could be done through the reservation of some percentage of emissions allowances in the total allocation of emissions allowances and recycling them to firms on exportation.[63] Alternatively, export rebates could be provided through the reimbursement of costs of emissions allowances.[64]

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[61] See e.g. J Pauwelyn (2007) 'U.S. Federal Climate Policy and Competitiveness Concerns'.

[62] *Brazil-Retreaded Tyres*, AB report, para. 227; *EC-Seal Products*, AB report, paras. 5.299-5.300. See also R Quick (2000) 'The Community's Regulation on Leg-Hold Traps: Creative Unilateralism Made Compatible with WTO Law through Bilateral Negotiations?' in M. Bronckers and R. Quick (eds), *New Directions in International Economic Law: Essays in Honour of John H. Jackson* (Kluwer Law International) at 254; J Pauwelyn (2007) 'U.S. Federal Climate Policy and Competitiveness Concerns', at 43.

[63] See Art. 29:5 of the 2007 version of draft Proposal amending the EU ETS Directive.

[64] In that case, the calculation of adjustment level may present a problem, given that some emissions allowances were distributed for free and others were purchased on a secondary market at various prices.

Unlike the inclusion of imports in an ETS, which mainly falls under the GATT non-discrimination rules (MFN and NT), the adjustment of the ETS requirement on exportation will primarily be regulated by WTO subsidy rules. Like the import-side border adjustment, the border adjustment on exportation is possible only for indirect taxes.[65] Rebates of direct taxes will be deemed to constitute a prohibited export subsidy.[66] As already discussed, it is uncertain whether the ETS requirement can qualify as an indirect tax or a tax at all. If the ETS requirement qualifies as a domestic regulation, its WTO-compliance will be assessed against general rules of the ASCM.

If the ETS requirement is found to be an indirect tax, it will be eligible for adjustment on exportation subject to the requirement that they are given 'not in excess' of surrendered allowances or incurred costs.[67] Exports rebates would fail to meet the 'not in excess' requirement under an ETS with the free allocation of emissions allowances. It also seems difficult not to provide exports rebates 'in excess' under an ETS with auctioning of allowances, given that allowances can also be acquired at various prices on a secondary market.[68]

The issue of likeness of carbon-intensive and low-carbon products can also be relevant. Ad Article XVI of the GATT and footnote 1 to the ASCM do not consider the 'exemption of an exported product from duties or taxes borne by the *like* product when destined for domestic consumption…' an export subsidy (italics added). As carbon-intensive and low-carbon products may qualify as like, to avoid an allegation of export subsidy, export rebates need to be given at a rate that corresponds to the lowest level of emissions in the industry (e.g. based on the benchmark of the best available technology[69]).

Moreover, the issue of a prohibited export subsidy may arise, if rebates on exportation are given selectively to certain sectors, rather than to all the sectors covered by an ETS. The coverage of sectors by export rebates should therefore correspond to the coverage of sectors by an ETS.[70]

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[65] See e.g. GATT Ad Art. XVI.

[66] *US-FSC*, Panel report, paras. 7.108 and 7.131.

[67] Both Ad Art. XVI of the GATT and footnote 1 of the ASCM stipulate that '…the remission of such duties or taxes in amounts not in excess of those which have accrued, shall not be deemed to be a subsidy'.

[68] M Genasci (2008) 'Border Tax Adjustments and Emissions Trading: The Implications of International Trade Law for Policy Design', *Carbon and Climate Law Review* vol. 1, at 39-41.

[69] R Ismer and K Neuhoff (2008) 'International Cooperation to Limit the Use of Border Adjustment'.

[70] This match is also important for the import-side adjustment. If the sectorial coverage for the inclusion of imports in an ETS does not correspond to the ETS coverage of domestic industries, it will entail a violation of the national treatment principle.

It is important to note that the WTO rules applicable to border adjustment do not require implementing a BCA scheme symmetrically on importation and exportation.[71] A country would be free to apply the adjustment only on exportation, combine export rebates with the inclusion of imports in an ETS, or limit a BCA scheme only to the application of the ETS requirement to imports.[72]

Besides the uncertainty about the consistency of export-side BCAs with the WTO rules on subsidies, both Gavin Goh (2004) and Julia Reinaud (2009) allude to the problem of environmental integrity of export rebates.[73] They argue that export rebates of emissions costs are not consistent with the 'polluter pays' principle and contrary to the climate policy objective of emissions reduction.[74] This may create a hurdle for justification of a BCA scheme consisting of both import-side and export-side border adjustment under the environmental exception clause of GATT Article XX.[75] At the same time, one could argue that the purpose of export rebates is to prevent carbon leakage and thus reduce global emissions.[76] In this sense, export rebates contribute to the environmental objectives.

In sum, the adjustment of ETS requirement on exportation, be it in the form of remission of emissions allowances or compensation of emissions allowances costs, is characterized by legal uncertainty. It raises the issue of a prohibited export subsidy and reduces the chances for a BCA scheme to be justified under the GATT exceptions as a measure taken for environmental purposes.

5. International emissions trading

After the examination of WTO-consistency of various design features of a national ETS, this section turns to discuss WTO law issues that might arise from emissions trading among countries. International emissions trading can emerge as a result of linking arrangements among different national ETSs or as a flexibility mechanism under existing or potential international climate agreements.

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[71] K Holzer (2014) Carbon-related border adjustment and WTO law, at 78-80. See also K Holzer, 'Proposals on carbon-related border adjustments: Prospects for WTO Compliance' (2010) *Carbon and Climate Law Review*, vol. 4(1), at 62-64.

[72] Ibid.

[73] G Goh (2004) 'The World Trade Organization, Kyoto and Energy Tax Adjustments at the Border', at 405; J Reinaud (2009), 'Would Unilateral Border Adjustment Measures be Effective in Preventing Carbon Leakage?' in *Climate and Trade Policies in a Post-2012 World* (UNEP) at 74.

[74] Ibid. The reimbursement of emissions costs can encourage the expansion of carbon-intensive production for exports.

[75] G Hufbauer et al. (2009) *Global Warming and the World Trading System* (Washington DC: Peterson Institute for International Economics) at 69.

[76] Ecoplan et al. (2013) 'Border tax adjustments: Can energy and carbon taxes be adjusted at the border?', a study prepared for the Swiss State Secretariat for Economic Affairs (SECO), at 99.

As ETSs are spreading among countries,[77] linkages among different ETSs through the acceptance of allowances from different jurisdictions could be established and a global carbon market could emerge.[78] Moreover, the EU ETS is linked to the emissions credits systems under the Kyoto Protocol. Credits earned by companies under Clean Development Mechanism (CDM) and Joint Implementation (JI) projects are accepted in a limited quantity for achieving compliance under the EU ETS.[79]

Linking of ETSs is crucial for achieving the maximum efficiency of emissions reductions and minimizing carbon leakage.[80] However it is not an easy task given the differences between ETSs in terms of size, sectorial coverage, stringency of emissions reduction targets and other design features.[81] To preserve the environmental integrity of its ETS, a country would need to use certain conditions or criteria for linking. Countries may also condition the admittance of emissions allowances on countries' commitments under the Kyoto Protocol or a post-Kyoto international climate agreement.[82] Such conditions could be established either unilaterally through the inclusion of the clause in the ETS legislation specifying the condition for acknowledging other countries' emissions allowances, or bilaterally/plurilaterally through the conclusion of a mutual recognition agreement (MRA) over the ETS-related issues with other countries.[83]

Restrictions on admittance of emissions allowances issued in other jurisdictions could potentially trigger violations of WTO non-discrimination rules, particularly the MFN principle. Depending on whether emissions allowances could qualify as commodities or services or not, violations would be direct or indirect. For instance, if an emissions allowance is a financial service (e.g. 'negotiable instrument'), restrictions on the eligibility of emissions allowances can be challenged under the market access provisions of GATS Article XVI:2(b) if a country imposing such a restriction undertook in this sector a specific commitment not to limit market access on the basis of 'the total

[77] Besides the EU, ETSs have also been established in Switzerland, Norway, New Zealand, Australia and some US states and Canadian provinces. See A Tuerk et al. (2009) 'Linking Emissions Trading Schemes', at 7.

[78] The EU ETS legislation foresees linking of the EU ETS with ETSs of countries that undertook quantified emissions reduction commitments under the Kyoto Protocol (Annex B countries) through the mutual recognition of emissions allowances. See Art. 25.1 of Directive 2003/87/EC. The EU ETS is already linked with the Norwegian ETS and preparations are being made to link it with the Swiss ETS.

[79] See Directive 2004/101/EC ('EU ETS Linking Directive').

[80] A Tuerk et al. (2009) 'Linking Emissions Trading Schemes', *Climate Strategies*, at 4-5.

[81] Some schemes are based on an absolute cap, while others use the benchmark of emissions intensity; some are based on the free allocation of emissions allowances, while others foresee allocation through an auction.

[82] J Werksman and J Lefevere (1999)'WTO Issues Raised by the Design of an EC Emissions Trading System', Scoping Paper no. 3, at 9.

[83] A Tuerk et al. (2009) 'Linking Emissions Trading Schemes', at 2-3.

value of service transactions or assets in the form of numerical quotas'.[84] Yet, even if emissions allowances do not fall within the scope of the WTO Agreement, origin-based restrictions on the admittance of allowances have the potential to hamper sales of products or services and thus may entail violations of the MFN or NT rules of GATT or GATS.

However, if restrictions on the eligibility of emissions allowances for compliance were based on some objective criteria that are fixed in MRAs, it is unlikely that they would raise issues under the MFN and NT rules.[85] Furthermore, restrictions based on objective criteria, such as stringency of emissions caps, can be justified under the general exceptions of GATT or GATS as measures taken for health or environmental purposes or with the objective to secure compliance with domestic laws that are not themselves inconsistent with WTO rules.[86]

Moreover, an international emissions trading can also be established under an international climate agreement.[87] It will imply a state-to-state transfer of units within countries' emissions caps (emissions reduction targets). Such an option was available for Annex B Parties of the Kyoto Protocol (i.e. countries with emissions reduction commitments) under the first commitment period. Under Article 17 of the Kyoto Protocol, countries that have spare emission units (i.e. emissions amounts permitted to them but not used) can sell their excess of emissions rights to countries that experience difficulties to meet their emissions reduction commitments.

As it is not clear whether an international emissions trading system will be established under the post-2020 international climate agreement, it is difficult to draw definitive conclusions about the WTO-compatibility of this mechanism. It is also unclear whether a state-to-state emissions trading will fall within the scope of the WTO Agreement. On the one hand, it can be argued that a state-to-state transfer of emissions units merely implies a re-allocation of sovereign obligations under an international

[84] J Werksman and J Lefevere (1999) 'WTO Issues Raised by the Design of an EC Emissions Trading System', at 10.

[85] We have to admit though that the compliance of MRAs themselves with the MFN principle can be a matter of discussion. See W Davey and J Pauwelyn (2000) 'MFN Unconditionality: A Legal Analysis of the Concept in View of its Evolution in the GATT/WTO Jurisprudence with Particular Reference to the Issue of "Like Product"' in T Cottier, P Mavroidis and P Blatter (eds.), *Regulatory Barriers and the Principle of Non-Discrimination in World Trade Law* (University of Michigan Press). However, entering into MRAs is widespread practice and no complaints in the WTO have been made so far.

[86] J Werksman and J Lefevere (1999) 'WTO Issues Raised by the Design of an EC Emissions Trading System', at 17-19.

[87] For instance, it could be done under a follow-up implementation protocol to the post-Kyoto international climate agreement concluded by UNFCCC parties in December 2015.

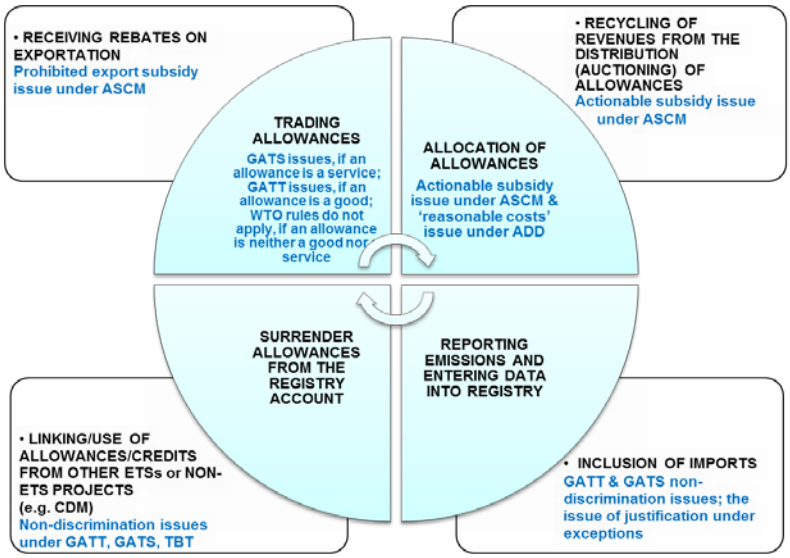
treaty.[88] On the other hand, if a state-to-state emissions trading affects a competitive relationship between domestic and foreign producers (e.g. where it involves the exchange of credits among private legal entities, like the use of credits earned under the Clean Development Mechanism and Joint Implementation projects, or affects the price of allowances of a domestic ETS), it could become an issue of scrutiny under WTO rules.

6. Conclusions

WTO compliance is an important consideration in the debate regarding design elements of an ETS. Considerable research has been devoted to this area. However, no study can predict with confidence the outcome of scrutiny of an ETS under WTO law. There are a few reasons for that. First, an ETS does not have a fixed design and design elements significantly vary with a scheme. Second, ETS-related issues have never been raised in WTO disputes and have not been tested thus far. This adds uncertainty to the analysis of compliance of emissions trading with WTO rules.

The design measures of an ETS that seem most likely to be challenged under WTO law include the free allocation of emissions allowances, recycling of ETS revenues to domestic producers, the inclusion of imports in an ETS and emissions allowance rebates on exportation. They raise issues under the GATT non-discrimination rules and ASCM disciplines on subsidies (*see Figure below*). The availability of exceptions for justification of these measures is therefore of great importance.

Figure: ETS design elements and WTO issues



[88] J Werksman and J Lefevere (1999) 'WTO Issues Raised by the Design of an EC Emissions Trading System', at 6.

WTO rules are also relevant in the context of international emissions trading, where national ETSs get linked to each other through the mutual recognition of emissions allowances, so that allowances issued in one jurisdiction are accepted for compliance under an ETS in another jurisdiction. Agreeing on the common design features of ETSs of different countries and bringing them into compatibility with each other presents the main challenge of ETS linking arrangements. WTO law would apply in this case to the terms of the mutual recognition of emissions allowances of different origin. It would ensure that conditions for the acceptance of emissions allowances do not negatively affect the competitive relationship between domestic and foreign producers or service suppliers.