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'Greening' the WTO Ban on China's Export Duties : Should WTO law allow China to use export duties to protect the environment and, if so, in what manner?

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This thesis was designed to answer the questions of whether China should be allowed to use export duties as part of demand-side policies for environmental protection and, if so, how to provide the necessary policy space despite the prohibitions affirmed in the *China—Raw Materials* and *China—Rare Earths* decisions. The short answer to the first question is in the affirmative, for export duties have the potential to address both local and global environmental concerns under certain circumstances. Moreover, China’s recent practice, in particular its prioritization of environmental concerns with regard to export duties in its most recent five-year plan, seems to suggest that the country could adopt these duties as a genuine environmental measure especially in the context of climate change. This consideration leads to the second question, regarding how the absolute ban on China’s export duties might be rendered more flexible. It indeed appears possible to ‘green’ the WTO ban, though doing so would likely be quite challenging. The final chapter to the thesis discusses the major implications of the findings. The discussion begins with a review of the findings of the previous chapters in order to draw lessons regarding how best to address trade-related environmental concerns and avoid extreme judicial outcomes. Next, in Section 9.2, the interpretative techniques employed by other tribunals to temper the rigidity of *stare decisis* are identified as a moderate alternative response to the AB crisis within the WTO framework. In Section 9.3, some of the findings are presented as a basis for the creation of mechanisms that would prevent China from abusing the proposed ‘export duties plus’. Lastly, in Section 9.4, it is argued that the very possibility of ‘greening’ the absolute ban on China’s export duties does not only indicate that the WTO is not standing in the way of environmental protection but also encourage global efforts to combat climate change.

9.1 LESSONS FOR ADDRESSING TRADE-RELATED ENVIRONMENTAL CONCERNS

In this section, the discussion focuses on the key lessons of the conflict between China and its trading partners, in particular regarding ways to address trade-related environmental concerns that could, in turn, inform future cooperative efforts to deal with cross-border issues. The first lesson is that addressing trade-related environmental concerns often requires the balancing of environmental and economic interests—and that doing so can

require some finesse. Second, environmental justification should not be used to circumvent WTO rules; this may provoke extreme responses. Third, because it could prove costly and difficult to moderate extreme outcomes, this path should probably be avoided.

9.1.1 Balancing environmental and economic interests

Environmental measures often have negative economic effects that elicit opposition, especially from developing countries. A feasible pollution control measure, therefore, must take economic considerations into account if it is to garner public support. In fact, when it comes to addressing global environmental concerns, even for countries with advanced economies such as the EU and the US, economic interests play an important role. Thus, for instance, various proposed carbon border tax adjustments have included free emissions allowances or even export rebates designed to address the issues of carbon emission outsourcing and competitiveness simultaneously.⁹⁹³

While the influence of economic considerations does not necessarily delegitimise an environmental measure, policymakers need to prevent non-environmental considerations from outweighing environmental goals. A recent empirical study has shown, for instance, that China at one point reduced export VAT refund rates in earnest as a type of demand-side control measure that ‘discourages exports of waste water, ammonium nitrogen, SO₂ and energy intensive products’.⁹⁹⁴ Export duties, however, being a similar instrument, have been more often ‘motivated by an attempt to protect downstream producers in China’.⁹⁹⁵ Indeed, a textual analysis of the Guidelines of China’s Eleventh and Twelfth Five-Year Plans (covering the years 2006-2010 and 2011-2015) suggests that, in the past, the country imposed export duties on so-called ‘high-energy-intensive, high-pollution, and resources-based’ products primarily as a means to pursue industrial purposes.⁹⁹⁶ A more environment-oriented policy would have also restricted the domestic consumption of those products.

Although the aforementioned duties were not primarily adopted for environmental purposes, some of them might have helped reduce pollution up to a point. Especially in the context of climate change, China’s export duties on steel, aluminium, coal, chemical products, and fertilizers were applauded by some commentators, who see their potential to tackle the

993 Madison Condon and Ada Ignaciuk, ‘Border Carbon Adjustment and International Trade: A Literature Review’, No. 6 OECD Working Paper (2013), at 4.

994 Sabrina Eisenbarth, ‘Is Chinese Trade Policy Motivated by Environmental Concerns?’, 82 *Journal of Environmental Economics and Management* (2017), at 95.

995 *Ibid.*, at 96.

996 For further information, see Chapter 5.

problem of carbon leakage in China as the largest emitter and exporter of carbon dioxide emissions.⁹⁹⁷ Those positive environmental effects may have incentivized China to try its luck under Article XX. For China, while its export duties were not environment-oriented, they might have indeed reduced the pollution associated with the manufacture of targeted products.⁹⁹⁸ Based on those good side-effects, China was trying to glamorize its duties.

9.1.2 Hard cases make bad law

China's questionable litigation tactic thus provoked the complaining governments to 'minimize China's chances of prevailing' by denying its right to impose export duties in a manner consistent with Article XX.⁹⁹⁹ This was an obvious tit-for-tat response, for the complainants could have based their arguments 'on the merits of China's contention that its export duties were justified for environmental reasons'.¹⁰⁰⁰ Article XX provides fairly strict tests that could be used to prevent China from using the duties for protectionist purposes; thus the duties at issue in the *China—Raw Materials* and *China—Rare Earths* cases did not even pass the first-tier test under Article XX.

The extreme stance of the complaining governments also steered these cases away from a conventional issue—namely the design of an environmental measure so as to meet the requirements under Article XX—and towards a very controversial issue—the applicability of Article XX to China's WTO-plus commitments. The panel and the AB, apparently swayed by the unconvincing nature of China's arguments, ruled in favour of the complaining governments.

This outcome has incurred strong criticism over the unfairness, especially given that most WTO members remain free to impose duties on exports for any purpose.¹⁰⁰¹ More importantly, this thesis shows that an absolute ban on China export duties would also have negative environmental impacts. The practice of WTO members shows that export duties can be useful to reduce local or global pollution under certain circumstances, possibly because the theoretically first-best environmental policies are not always feasible in financial or practical terms. The environmental regulatory

997 For further information, see Chapter 6.

998 For instance, China adduces two empirical studies in *China – Raw Materials* which show that 'elimination of the export duty of 20% on manganese metal would imply an increase in production by 4.28%'; 'eliminating the 40% export duty on coke would increase domestic production of coke by 2.2%'. Panel Reports, *China – Raw Materials*, paras 7.519–7.520.

999 Bronckers and Maskus (2014), above n 19, at 402.

1000 Ibid.

1001 For further information, see Chapter 3.

autonomy with respect to export duties is thus always preserved for WTO members at both the multilateral and regional levels.¹⁰⁰² For instance, the EU's proposal generally prohibiting the use of export duties did recognize the environmental regulatory autonomy of WTO members by incorporating Article XX.

An investigation of the actual motives behind China's export duties shows that those duties could be part of China's climate policy to curtail carbon leakage.¹⁰⁰³ Although this problem could also be addressed by duties on the carbon-intensive imports from China, this type of solution has never been put into practice largely owing to well-founded fear of sparking a trade war. Thus the potential role of China's export duties has been encouraged by a number of climate studies including the well-known Stern Review on the economics of climate change, its follow-up article, and a World Bank research paper, especially in the context of China as 'the world's most unbalanced virtual emissions' trader, for its emissions associated with its exports being eight times those associated with its imports.¹⁰⁰⁴ In this sense, the absolute ban on China's export duties would risk undermining international cooperation on climate change and thus serves as a good example of the lawyer's adage that 'hard cases make bad law'.

9.1.3 Moderation of extreme judicial outcomes is possible but would be difficult

With regard to expanding the desirable policy space in light of the *China—Raw Materials* and *China—Rare Earths* decisions, this thesis provides a comprehensive assessment of the feasibility of moderating the absolute ban on such duties through either a judicial or a political approach.¹⁰⁰⁵ The conclusions reached are that the AB's decisions are not easily altered and that considerably more effort would be required to temper the negative environmental implications of the ban than would have been required to avoid producing the ban in the first place.

A judicial approach requires a new interpretation to alter the absolute ban on China's export duties. Given that the AB has never, in its more than 20 years of jurisprudence, explicitly reversed itself, a more nuanced approach has been proposed in this thesis that draws a line between duties that are applied exclusively to exports on the one hand and so-called 'export duties plus', which are adopted in conjunction with corresponding but not identical restrictions on domestic consumption, on the other. By permitting China to justify the use of 'export duties plus' under Article XX, this

1002 For further information, see Chapter 4.

1003 For further information, see Chapter 5.

1004 For further information, see Chapter 6.

1005 For further information, see Chapter 7.

interpretation would moderate the negative environmental impact of the absolute ban.

Admittedly, such a judicial correction would still require the AB to go beyond its preferred strict textual approach. Such a move could incur opposition from WTO members that distrust China, something that the AB may prefer to avoid, especially at this moment when, as discussed, the process by which its members are appointed and reappointed has been blocked by the US for more than two years. To the extent, however, that the AB's membership crisis is the result of US concerns over its interpretations of certain cases, the AB (when it is still functional) could rely on the distinguishing technique as a less aggressive way to correct judicial decisions within the WTO framework. If the AB were in this way to support the more nuanced approach—the one that implicitly departs from the absolute ban on China's export duties—it would perhaps paradoxically send a positive message to the US of its willingness to engage in self-correction should a WTO member provide it with sufficient reasons to do so. A detailed account of how use of distinguishing technique could help to resolve the AB crisis is discussed in Section 9.2.

Given the AB's membership crisis, it is probably not the best time to rely on a judicial approach. In terms of political solutions, China could follow the lead of Mongolia, which made a successful request in 2007 for a waiver of its export duty commitments on raw cashmere for the purpose of responding to 'extensive environmental damages and desertification' by limiting the growth of goat herds.¹⁰⁰⁶ China's chances of obtaining such a waiver would, however, be relatively small in practice given the WTO's *de facto* consensus requirement. Thus China would also need to convince the parties that prevailed in *China-Raw Materials* and *China-Rare Earths* to view its export duties, not as a means to protect domestic industry, but in a new light, as a policy instrument designed to curb environmentally destructive practices. The argument here has been that China's best chance for success in this effort would be to apply for a collective waiver allowing for the adoption of all climate policies that could potentially violate WTO rules. The disadvantage of such a waiver is that, as observed earlier, it could carry the unwelcome political implication that WTO law generally prevents China, and other countries, from protecting the environment in the absence of a supplementary agreement.

While waivers could be useful as a stopgap measure, China may request amendments or authoritative interpretations as a long-term solution in order to better accommodate the climate considerations.¹⁰⁰⁷ The latter one is

1006 Communication from Mongolia, 'Request for a Waiver', on 26 January 2007, G/C/W/571.

1007 Dröge (2009), above n 225, at 68.

recommended because it is more flexible than amendments which generally require formal acceptance.¹⁰⁰⁸ But, given the deep unpopularity of authoritative interpretations in practice, China is advised to avoid the discussion of whether authoritative interpretations are a proper instrument to correct the *China—Raw Materials* and *China—Rare Earths* decisions. Alternatively, it may request the Ministerial Conference to take a decision updating its accession protocol regarding the use of export duties to protect the environment as a ‘fudge’.¹⁰⁰⁹ To make such updates more acceptable to the victorious parties in the two cases, they may avoid explicitly contradicting the *China—Raw Materials* and *China—Rare Earths* decisions but rather to distinguish them by drawing a line between export duties and ‘export duties plus’. Moreover, in order to make such updates even more attractive to the WTO’s membership at large, they could also include a redefinition of other commitments in China’s accession protocol such as subsidies or technology transfer.

9.2 LOOSENING THE GRIP OF PRECEDENT WITHIN THE WTO’S LEGAL FRAMEWORK

In addition to shedding light on the ‘greening’ the absolute ban on China’s export duties, the analysis of the feasibility of various options for correcting an AB decision serves to identify ways to resolve the persistent blocking of the appointment of AB members by the US. The latter country’s actions in this regard have had a detrimental impact on the operation of WTO’s dispute-resolution mechanism for the obvious reason that it is resulting in a shortage of AB members. The minimum number of members to review a case on appeal is three. Should the US continue to prevent any new members from joining the board, only one will be left by 10 December 2019.

The US has justified its obstructionism in this regard with reference to ‘systemic concerns’ over the ‘adjudicative approach and proper role’ of the AB in certain cases.¹⁰¹⁰ Thus, for example, a 2016 US statement blocking the reappointment of an AB member raised concerns regarding both the *obiter*

1008 As discussed in Chapter 7, it has been argued that China’s accession protocol could be seen as a bilateral treaty between China and the WTO. In this scenario, once the WTO as a contracting party agrees to amend China’s export duty commitments, no such further formal acceptance as ratification by individual WTO members would be required. This alternative reading, however, comes with a considerable degree of uncertainty because neither Article X (Amendments) nor Article XII specifies the procedure for amendments to an accession protocol.

1009 For general discussion of the decision-making in the WTO, see Pieter (2009) and Footer (2006), above n 851.

1010 Statement by the United States at the Meeting of the WTO Dispute Settlement Body Geneva, 23 May 2016, https://www.wto.org/english/news_e/news16_e/us_statement_dsbmay16_e.pdf (visited on 1 January 2019).

dicta in AB reports¹⁰¹¹ and the AB's approach to reviewing WTO members' domestic laws.¹⁰¹² The US, then, has generally criticized the AB for failing to perform its assigned role under WTO law, at least in certain cases. An analysis of the merit of these concerns is, however, beyond the scope of this thesis.

The discussion here takes up a more general issue, namely the WTO's precedent system, which the US raised at the beginning of 2018. This issue plays an important role in the current AB crisis in relation to fears on the part of the US that the AB's allegedly incorrect interpretations would be further exacerbated by the *de facto stare decisis* regime underlying the WTO's dispute resolution mechanisms.¹⁰¹³ In other words, owing to the rule of precedent in the WTO, what the US views as a problematic approach would impact future cases. So it was that, late in 2018, the US even began to challenge the precedential value of the AB's decisions at the DSB meeting.¹⁰¹⁴ From the perspective of the US, the AB's decisions cannot be treated as precedent under WTO law.

However, even the US has recognized that the AB's decisions 'can provide valuable clarification of the covered agreements'.¹⁰¹⁵ In this sense, complete dismissal of the precedential value of the AB's decisions would inevitably undermine their capacity to clarify WTO law, thereby further rendering interpretation inconsistent.¹⁰¹⁶ Put another way, legal clarification would obviously be of no benefit in future cases if it were limited to the case at hand. This result seems to be contrary to the mandate of the WTO's dispute settlement system, which calls for 'providing security and predictability to the multilateral trading system'.¹⁰¹⁷

1011 *Ibid.*, at 3

1012 *Ibid.*

1013 Tetyana Payosova, Gary Clyde Hufbauer, and Jeffrey J. Schott, 'The Dispute Settlement Crisis in the World Trade Organization: Causes and Cures', March 2018, <https://piie.com/system/files/documents/pb18-5.pdf> (visited on 1 January 2019).

1014 Statements by the United States at the Meeting of the WTO Dispute Settlement Body Geneva, 18 December 2018, https://geneva.usmission.gov/wp-content/uploads/sites/290/Dec18.DSB_Stmt_as-deliv.fin_public.pdf (visited on 1 January 2019).

1015 Office of the United States Trade Representative, '2018 Trade Policy Agenda and 2017 Annual Report', March 2018, <https://ustr.gov/sites/default/files/files/Press/Reports/2018/AR/2018%20Annual%20Report%20FINAL.PDF>, (visited on 1 January 2019), at 28

1016 Simon Lester, 'What Is the Precedential Value of Appellate Body Reports?', 1 March 2018, <https://worldtradelaw.typepad.com/ielpblog/2018/03/what-is-the-precedential-value-of-appellate-body-reports.html>, (visited on 1 January 2019).

1017 'The dispute settlement system of the WTO is a central element in providing security and predictability to the multilateral trading system'. Article 3.2 of the DSU.

Indeed, one of the problems of the old GATT dispute settlement system, which did not include the AB, was inconsistency among the clarifications provided in panel reports.¹⁰¹⁸ To avoid this outcome, WTO members, including the US, have frequently cited AB reports in their submissions in what amounts to a clear recognition of their precedential value in ensuring that clarifications remain consistent.

This perception echoed during the reform negotiations of the investor-state dispute settlement (ISDS) system, which in its current form has been criticized for ‘inconsistency and lack of coherence’ in regard to its arbitral awards to an extent that could further undermine ‘the reliability, effectiveness and predictability of the ISDS regime and its credibility’.¹⁰¹⁹ The consensus decision from the US and other UNCITRAL members last year to move forward in considering possible ISDS reforms shows that the US seeks a precedent system that, on the one hand, avoids ‘unjustified inconsistency’ and, on the other, accommodates ‘divergent decisions’ justified by ‘for example, rules of treaty interpretation or different facts and evidence before the tribunal’.¹⁰²⁰ The reasoning is that ‘in certain cases you may have the same treaty, same provision, and you may have different treatment of it’.¹⁰²¹ However, given that the AB has both upheld all of its prior decisions, at least explicitly, and also repeatedly reversed decisions by the panel that have departed from the AB’s reports, the US has reason to suspect that the AB would not support a more nuanced precedent system. Therefore, in order to create a situation in which ‘divergent decisions’ are available, the US has sought to deny the precedent system in the WTO as a whole, even at the cost of interpretative consistency, though it could have made good use of authoritative interpretations as a means to correct judicial interpretation.¹⁰²²

It has been demonstrated in this thesis that the US could achieve its objective of allowing for interpretations that, while reasonably divergent, are not so divergent as to undermine the predictability of the WTO system. The technique of distinguishing, which has been commonly used by tribunals at the international, regional, and national levels, has the dual benefits of, on the one hand, injecting valuable flexibility into the WTO’s precedent system

1018 Lester (2018), above n 983.

1019 UNCITRAL, ‘Possible reform of investor-State dispute settlement (ISDS): Consistency and related matters’, 28 August 2018, http://www.uncitral.org/uncitral/en/commission/working_groups/3Investor_State.html (visited on 1 January 2019), at 3.

1020 *Ibid.*, at 2.

1021 Anthea Roberts, ‘UNCITRAL and ISDS Reforms: Concerns about Consistency, Predictability and Correctness’, 5 June 2018, <https://www.ejiltalk.org/uncitral-and-isds-reforms-concerns-about-consistency-predictability-and-correctness/> (visited on 1 January 2019).

1022 Only one request has yet been made for an authoritative interpretation which was rejected by the US itself.

and, on the other, not requiring the AB to depart explicitly from its previous decisions. Thus, were the US to prove a divergent interpretation to be justified based on, for instance, new facts and evidence, the AB could distinguish its prior decisions. In this way, the AB's legal clarifications would be consistent by default, thereby ensuring the security and predictability of the WTO system. Furthermore, this technique could serve to address the concerns raised by the US over the AB's interpretations of certain cases—provided, of course, that these concerns have merits.¹⁰²³

Although the AB is currently not able to review any new appeals,¹⁰²⁴ the proposed judicial correction remains relevant for bilateral appeal arrangement advocated by the EU or for panel decisions.¹⁰²⁵ If the AB is revived in the future, it may consider the use of distinguishing in order to temper the rigidity of its precedent system.¹⁰²⁶

9.3 PREVENTING CIRCUMVENTION OF WTO RULES: ALUMINIUM SECTOR AS AN EXAMPLE

While this thesis challenges a simple ban on China's export duties for the sake of the environment, it is equally important to acknowledge concerns that China might use export duties to unfairly favour its downstream producers and thus circumvent WTO rules. A more sophisticated approach is thus offered to balance environmental and economic interests. It begins with a distinction between export duties and the 'export duties plus' that are imposed in combination with restrictions on Chinese consumption. The environmental exceptions under GATT Article XX would only apply to the latter one, which are by nature much less protectionist than those imposed exclusively on exports. Furthermore, Chapter 8 suggests that 'export duties plus' should generally treat domestic and foreign consumers in an identical manner in order to stand the best chance of satisfying the requirements of Article XX. For the purpose of fighting climate change, however, given the different commitments that are made by Annex I and non-Annex I parties under the UNFCCC, the treatment between the two categories might thus

1023 Thus, US support for the judicial or political correction of the *China—Raw Materials* and *China—Rare Earths* decisions would serve as a good example to alter other questionable precedents that are more troubling for the US.

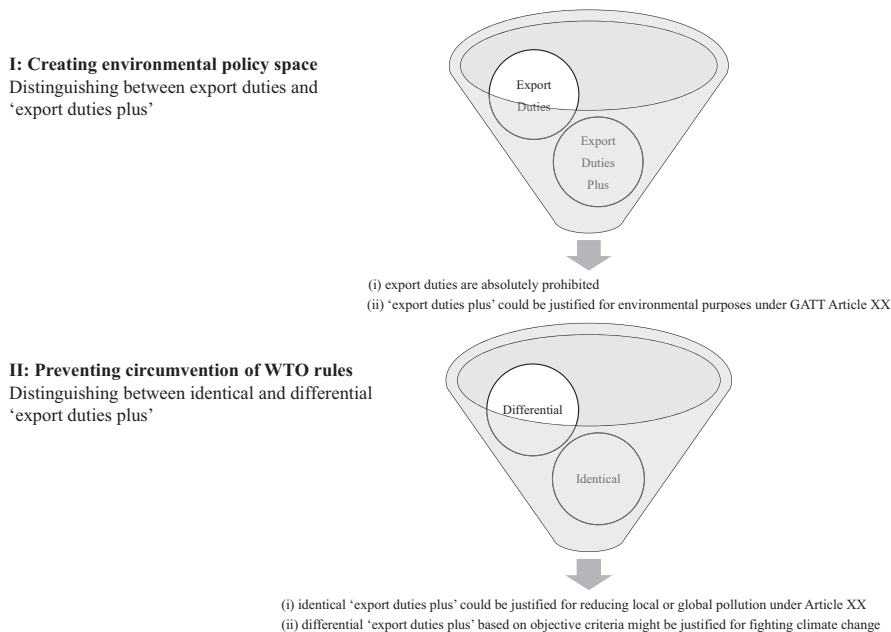
1024 The AB no longer had a quorum to hear new appeals because the mandates of two of the three remaining members was expired on 10 December 2019.

1025 EU has signed agreements on interim dispute resolution with Canada and Norway. Although China has not joined this interim appeal system, it might agree to this interim solution in order to correct the ban on China's export duties or other precedents.

1026 Compared with a clear change in jurisprudence, a change made in disguise, which seems to be preferred by the AB, is more likely to reduce predictability. See Frieder Roessler, 'Change in the Jurisprudence of the WTO Appellate Body during the past Twenty Years', No. 72 EUI Working Papers (2015), at 14.

differ under Article XX (Chart 4). This proposed solution is very unlikely to be abused in practice as shown in the below example of 'export duties plus' covering aluminium sector.

Chart 4: A more sophisticated approach to balance environmental and economic interests



The production of primary aluminium metal consists of bauxite mining, refining bauxite into alumina, and smelting alumina into aluminium.¹⁰²⁷ Various environmental issues are associated with these operations. In the first stage of bauxite mining, for instance, the activities of clearing and removal of land may cause air pollution.¹⁰²⁸ Moreover, bauxite washing may also cause serious water quality problems.¹⁰²⁹ In contrast, the energy demand associated with the extraction of bauxite is much lower compared with the other two stages.¹⁰³⁰ To refine bauxite, for instance, could be

1027 Aluminium metal is further processed into thousands of final products.

1028 Noor Hisham Abdullah, Norlen Mohamed, Lokman Hakim Sulaiman, Thahirahtul Asma Zakaria, and Daud Abdul Rahim, 'Potential Health Impacts of Bauxite Mining in Kuantan', 23(3) Malaysian Journal of Medical Sciences (2016), at 2.

1029 Ibid. Also see BBC, 'Bauxite in Malaysia: The environmental cost of mining', 19 January 2016, available at <https://www.bbc.com/news/world-asia-35340528> (visited on 20 July 2019).

1030 Possibly because drilling or blasting operations are generally not required owing to the soft earthy nature of many bauxite deposits. See U.S. Department of Energy, 'U.S. Energy Requirements for Aluminum Production: Historical Perspective, Theoretical Limits and Current Practices', February 2007, available at https://www.energy.gov/sites/prod/files/2013/11/f4/al_theoretical.pdf (visited on 20 July 2019), at 16.

energy-intensive.¹⁰³¹ The red mud disposal and storage involved in the refining process may also cause the pollution of soil and water.¹⁰³² The third stage of smelting is the most energy-intensive one largely owing to the electrolysis process involved.¹⁰³³ This process may also cause air pollution.¹⁰³⁴ Given the strong growth in China's aluminium sector, 'export duties plus' could be imposed on (i) bauxite, alumina, or aluminium to reduce local or global pollution, and (ii) alumina and aluminium to fight climate change.

Such 'export duties plus' may be designed to treat domestic and foreign consumers in an identical manner. As a result, Chinese downstream producers would not gain favourable access to bauxite, alumina, or aluminium. A Swedish tax on natural gravel provides a similar example. This tax has been introduced by Sweden since 1996 in order to conserve natural gravel which is crucial for providing clean drinking water.¹⁰³⁵ Unlike those taxes adopted in Denmark and the UK where exports are relieved from the taxes,¹⁰³⁶ both the extraction consumed in Sweden and extraction for export are covered by the same natural gravel charges.¹⁰³⁷ Identical 'export duties plus' thus would not raise concerns over circumvention.

If China decides to impose differential 'export duties plus', the analysis provided in Chapter 8 suggests that they might only be allowed for the purpose of fighting climate change. Bauxite thus should be excluded even though the production of it may cause air pollution.¹⁰³⁸ With respect to the differential 'export duties plus' on alumina and aluminium, the 'even-

1031 'This broad range of energy intensity reflects both bauxite quality (alumina content) and refinery design'. *Ibid.*

1032 Valentina Dentoni, Battista Grosso and Giorgio Massacci, 'Environmental Sustainability of the Alumina Industry in Western Europe', 6 *Sustainability* (2014), at 9478.

1033 The production of one tonne of sawn primary aluminium ingot requires 37 GJ of thermal energy and 58 GJ of electricity, whereas the processes of bauxite and alumina only requires (i) 0.02 GJ and 10 GJ of thermal energy, and (ii) 0.003 GJ and 0.65 GJ of electricity. J.A. Moya, A. Boulamati, S. Slingerland, R. van der Veen, M. Gancheva, K.M. Rademaekers, J.J.P. Kuenen, A.J.H. Visschedijk, 'Energy Efficiency and GHG Emissions: Prospective Scenarios for the Aluminium Industry', Publications Office of the European Union, 2015, available at <http://publications.jrc.ec.europa.eu/repository/bitstream/JRC96680/1dna27335enn.pdf> (visited on 20 July 2019), at 7-8.

1034 Stephen Claude Martin and Claude Lariviere, 'Community Health Risk Assessment of Primary Aluminum Smelter Emissions', 56(5) *Journal of Occupational and Environmental Medicine* (2014).

1035 Patrik Söderholm, 'Taxing Virgin Natural Resources: Lessons from Aggregates Taxation in Europe', 55(11) *Resources, Conservation and Recycling* (2011).

1036 ECOTEC Research & Consulting, 'Study on Environmental Taxes and Charges in the EU', April 2001, http://ec.europa.eu/environment/enveco/taxation/pdf/ch11_aggregated_taxes.pdf (visited on 1 April 2019), at 213.

1037 *Ibid.*, at 205. Exporters are not allowed to reclaim the natural gravel tax.

1038 Differential 'export duties plus' for the purpose of reducing air pollution cannot be justified under the first condition of the chapeau. For further information, see Chapter 8.

handedness' requirement under Article XX(g) prohibits 'a significantly more onerous burden on foreign consumers or producers'.¹⁰³⁹ Hypothetically, one may argue that a 1/4 difference between export duties (20%) and domestic charges (15%) might be permitted, whereas a 1/2 difference (20% export duties plus 10% domestic charges) could be prohibited. Chinese downstream producers thus are unlikely to have considerable advantages of acquiring alumina and aluminium. In addition, the second condition of the chapeau regarding 'disguised restriction on international trade' may prohibit China from exclusively targeting alumina according to the objective criteria of carbon-intensity and trade sensitivity.¹⁰⁴⁰ The advantages of Chinese aluminium producers would thus be further weakened by charges on their aluminium exports, though, admittedly, the additional benefit may not be completely eliminated. This result, however, as the panel held in *EC—Asbestos*, 'in itself cannot justify the conclusion that the measure has a protectionist aim, as long as it remains within certain limits'.¹⁰⁴¹

Another scenario is that differential 'export duties plus' are used to counter a carbon border adjustment. For instance, the EU's carbon border measure may cover the listed sectors that could be 'at risk of carbon leakage for the period 2021 to 2030'.¹⁰⁴² Comparable 'export duties plus' should then be imposed to cover those products. If the EU's measure focuses on a narrower scope of sectors by, for instance, only targeting cement, steel, and primary aluminium,¹⁰⁴³ to achieve a more ambitious climate target, China may go beyond this coverage by including alumina and other products based on the objective criteria of carbon intensity and trade sensitivity.

Besides the fairly strict tests specified in Article XX, the findings of this thesis also indicate that a non-judicial approach may address concerns about the abuse of 'export duties plus' in three respects. First, the abuse could be forestalled during the drafting of China's Five-Year Plan. As discussed in Chapter 5, past Five-Year Plans (2006-2015) have prioritized the economic purposes of export restrictions, for which reason the restrictions were disputed as protectionist, but the current Five-Year Plan (2016-2020) marks an explicit shift to environmental protection. The envi-

1039 AB Report, *China – Rare Earths*, para 5.134.

1040 In 2018, 2% alumina and 16% aluminium were exported from China. Reuters, 'China Dec alumina exports at 177,430 tonnes - customs', 23 January 2019, <https://www.reuters.com/article/china-economy-trade-alumina/china-dec-alumina-exports-at-177430-tonnes-customs-idUSB9N1ZB001> (visited on 1 April 2019). Reuters, 'China December aluminum production surges to record monthly high', 21 January 2019, <https://www.reuters.com/article/us-china-economy-output-aluminium/china-december-aluminum-production-surges-to-record-monthly-high-idUSKCN1PF0C2> (visited on 1 April 2019).

1041 Panel Report, *EC – Asbestos*, para 8.239.

1042 Commission Delegated Decision (2019), see above n 939.

1043 It has been argued that carbon border measures should avoid over-broad sectoral coverage. See Cosbey (2012), above n 885, at 13.

ronmental rationale behind these duties could thus be further specified so as to ensure that subsequent versions of the duties will be environmentally oriented. This increased transparency regarding China's policy rationale could also help to allay the suspicions of its trading partners, and scholars have an important role to play in explicating the environmental rationale during the public consultation and expert review stages of the formulation of Five-Year Plans. Second, after the adoption of a Five-Year Plan, any remaining potential for abuse could be addressed in the formulation of the export duties themselves. The infrastructure is already in place, for, in the immediate aftermath of the *China—Rare Earths* decision, China established a compliance system that empowers its Ministry of Commerce to examine the compatibility of any proposed trade-related measures with WTO law and to reject any duties not clearly justified under Article XX. Third, after the adoption of 'export duties plus', any doubts about the environmental rationale behind them could be further explained by the Ministry of Commerce to the WTO in good faith and with the support of a clear rationale or evidence. In the past, by contrast, China has offered only summary dismissals of countervailing arguments, a response that should be avoided in the future.

Admittedly, China's trading partners are unlikely to alter their established perceptions of its export duties without considerable effort by China to show its good faith. With time, though, other countries may begin to reassess the environmental merit of the duties.

9.4 FINAL REMARKS

The proper balance between trade liberalization and environmental protection has long been a matter of debate.¹⁰⁴⁴ A key issue in this discussion concerns the policy space of WTO members to adopt trade-related measures designed to address environmental concerns, especially those with an extraterritorial reach. It has been argued that WTO law would not prevent countries from taking such unilateral actions as carbon border adjustments, and therefore the WTO is no excuse for countries with powerful markets to forego incentivising their less environmentally advanced counterparts to join in international cooperative efforts.¹⁰⁴⁵ So also it is argued here that the WTO's legal regime is likewise no excuse to prevent the latter ones such as China from actively taking steps to protect the environment.

1044 The link between trade and environmental protection was recognized as early as 1970. See WTO, 'Early years: emerging environment debate in GATT/WTO', https://www.wto.org/english/tratop_e/envir_e/hist1_e.htm (visited on 1 January 2019).

1045 For instance, Barbara Cooreman, 'Global Environmental Protection through Trade: A Systematic Approach to Extraterritoriality' (Edward Elgar, 2016), at 281.

The findings in this thesis particularly stand to benefit global efforts to combat climate change in three respects. First, given that a large portion of China's carbon emissions results from the manufacture of products for export, 'export duties plus' that reduce this source of emissions would contribute to the achievement of global carbon reduction targets. Second, the proper use of export duties as a climate measure by China would set a good example for other pollution-outsourced countries, such as India, where 20% of the emissions are related to exports.¹⁰⁴⁶ As it is, while China has been working to reduce its emissions, it has done so in part by pushing some of its more carbon-intensive activities onto such neighbouring countries as Cambodia, Vietnam, and India.¹⁰⁴⁷ In this game of 'whack-a-mole', export duties could represent an appealing option for carbon-outsourced countries seeking to join in the global effort to combat climate change. Third, 'export duties plus' would also address the competitive concerns of Western nations so that they would be better able to win public support for more ambitious climate actions.¹⁰⁴⁸ For instance, while a 'Carbon Border Tax' involved in the European Green Deal has been proposed to ensure a level playing field for EU companies, its ultimate goal is to strengthen the current Emissions Trading System.¹⁰⁴⁹ The option of export duties as a countermeasure may also be extended to other countries that are covered by carbon border adjustments. This offer representing good faith from the West, then, could both temper political opposition from other countries and increase the chances that their extraterritorial actions would be justified under Article XX.¹⁰⁵⁰

We should never let the perfect become the enemy of the good. The world's slow progress in fighting climate change is in part attributable to countries' obsession with the first-best climate policies, such as an effective carbon tax.¹⁰⁵¹ While the debate over the enormous difficulties involved with adopting the ideal environmental tools shows no sign of abating, the problems associated with climate change are worsening more rapidly than experts had expected just a few years ago. A recent IPCC report thus has

1046 Brad Plumer, 'You've Heard of Outsourced Jobs, but Outsourced Pollution? It's Real, and Tough to Tally Up', 4 September 2018, <https://www.nytimes.com/2018/09/04/climate/outsourcing-carbon-emissions.html>, (visited on 1 January 2019).

1047 Ibid.

1048 Mattoo and Subramanian (2013), above n 51. The more recent development shows that the EU may indeed have prepared to impose a carbon border tax. See Alan Beattie, 'Carbon border tax sends signals for trade deals', FT, 29 May 2019, <https://www.ft.com/content/016adba8-82ed-11e9-b592-5fe435b57a3b>, (visited 15 June 2019).

1049 Von der Leyen (2019), above n 12, at 5.

1050 For instance, the US Rep. Bill Pascrell has proposed to draw the link between climate change and national security. 'Pascrell Calls for National Security Investigation of Carbon Pollution', 12 March 2019, <https://pascrell.house.gov/news/documentsingle.aspx?DocumentID=3855>, (visited on 1 April 2019).

1051 Justin Gillis, 'Forget the Carbon Tax for Now', 27 December 2018, <https://www.nytimes.com/2018/12/27/opinion/carbon-tax-climate-change.html>, (visited on 1 January 2019).

called for 'rapid, far-reaching and unprecedented' actions on the part of all nations.¹⁰⁵² China's 'export duties plus' targeting carbon consumption could be among these actions.¹⁰⁵³

1052 'Limiting global warming to 1.5°C would require rapid, far-reaching and unprecedented changes in all aspects of society'. See IPCC, 'Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C approved by governments', 8 October 2018, <https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/>, (visited 14 November 2018).

1053 As suggested by the same report, demand-side solutions would play a key role in mitigating climate change through enabling lifestyle and behavioural change. IPCC, 'Chapter 4: Strengthening and implementing the global response', at 8, https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15_Approval_Chapter_4.pdf, (visited on 23 August 2019).

Moreover, according to an EU research project, given that 'upward drivers of GHG emissions come from consumption', demand-side measures can complement current climate actions focusing on production. European Commission, 'Carbon emission mitigation by Consumption-based Accounting and Policy', 2013, <https://cordis.europa.eu/project/rcn/110539/factsheet/en>, (visited on 23 August 2019).