

## ARTICLE

**Reframing Consumer Preference for Low-Emissions  
Process and Production Methods in the WTO:  
A Path to Climate-Conscious Trade?**

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Producing one tonne of green steel generates up to 95 per cent fewer emissions than traditional steel. Yet, under the World Trade Organization's (WTO) current interpretation of arts I and III of the General Agreement on Tariffs and Trade 1994 (GATT), green steel and traditional steel would be considered "like products" due to their identical physical properties, end uses, and tariff classifications. The existing approach means that WTO Members would not be permitted to impose measures on imported steel to encourage the uptake of green steel. If the world is serious about curbing emissions, that should change. A wider conception of consumer preference could show these products are not like. Since 1996, WTO panels have tended to rely on the neoclassical economic concept of "revealed preference" to equate consumer preference with observable market behaviour. That assumption fails to account for market failures, including the mispricing of climate externalities and low consumer literacy about emissions in production processes. The revealed preference assumption has remained prevalent despite rapid advancements in scientific understanding of climate change and states' international legal obligations under the Paris Agreement. Re-evaluating the revealed preference assumption may help align trade law with global environmental goals. By adequately addressing the limitations of the revealed preference approach, a WTO panel could use the consumer preference criterion to find that a product with a low-emissions process and production method is not like a high-emissions alternative.

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## I Introduction

### A Background

Producing one tonne of steel with a coal-fired blast furnace generates approximately 1,714 kg of CO<sub>2</sub> emissions.<sup>1</sup> By contrast, producing one tonne of “green” steel—depending on where it is manufactured—could generate up to 95 per cent fewer emissions.<sup>2</sup> And yet, since green steel and traditional steel have the same physical properties, end uses, and tariff classifications, a World Trade Organization (WTO) Member would not be able to impose measures on imported blast furnace steel to encourage the uptake of green steel.<sup>3</sup> If the world is serious about curbing emissions and averting the worst impacts of climate change, that should change.

Articles I and III of the General Agreement on Tariffs and Trade 1994 (GATT) outline the general non-discrimination obligations in international trade law. Article I establishes the Most-Favoured-Nation principle, which requires that a WTO Member treat like products imported from other Members the same, regardless of the country of origin. The National Treatment principle in art III requires contracting parties to treat domestic products the same as imported like products.

Historically, GATT panels have interpreted arts I and III to specify that how a product was produced or manufactured—its process and production method (PPM)—did not affect product likeness.<sup>4</sup> This historical “Product–Process Distinction” would mean that green steel, which in its final form is physically indistinguishable from traditional steel, would be considered a like product to traditional steel.

Many have criticised the failure of the WTO to consider PPMs as part of product likeness. These criticisms are wide-ranging. Some argue that the aim and effect, or regulatory purpose, of a discriminatory environmental measure should be considered.<sup>5</sup> Others argue that properly understanding the product’s physical properties requires an assessment of its PPM emissions.<sup>6</sup> But relatively few commentators have analysed in depth the implications of including consumer preference as a relevant factor.<sup>7</sup> Instead, much of the literature has accepted the Appellate Body’s “competitive relationship” approach to like products, and merely discusses the best econometric methods for determining whether products are like, focusing on the products’ competitiveness or substitutability in the market.<sup>8</sup>

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1 Thomas Koch Blank *The Disruptive Potential of Green Steel: Insight Brief* (Rocky Mountain Institute, September 2019) [*RMI Insight Brief*] at 3.

2 At 3.

3 Marrakesh Agreement Establishing the World Trade Organization 1867 UNTS 3 (opened for signature 15 April 1994, entered into force 1 January 1995), annex 1A (General Agreement on Tariffs and Trade 1994) [GATT], art III.

4 David Sifonios *Environmental Process and Production Methods (PPMs) in WTO Law* (Springer, Switzerland, 2018) vol 3 at 101; and see also *United States – Restrictions on Imports of Tuna* 39th Supp GATT BISD 155, DS21/R, 3 September 1991 (Unadopted Report of the Panel) [*US – Tuna I*].

5 See, for example, Donald H Regan “Regulatory Purpose and ‘Like Products’ in Article III:4 of the GATT (With Additional Remarks on Article II:2)” (2002) 36 *JWT* 443.

6 See, for example, Nathaniel Eisen “Carbon Emissions as a Physical Property: Ontological Approaches to the WTO *Like Products* Debate” (2019) 51 *NYUJ Intl Law & Pol* 871.

7 Emily Barrett Lydgate “Consumer preferences and the National Treatment Principle: emerging environmental regulations prompt a new look at an old problem” (2011) 10 *WTR* 165 at 167.

8 See, for example, Won-Mog Choi *‘Like Products’ in International Trade Law: Towards a Consistent GATT/WTO Jurisprudence* (Oxford University Press, Oxford, 2003).

The GATT and WTO jurisprudence on likeness has evolved before and is amenable to further evolution. The conventional approach has been to interpret likeness through four factors outlined in the 1970 *Border Tax Adjustments* report (*BTA Report*): the products' physical properties; consumers' tastes and habits; the product's end uses; and tariff classification.<sup>9</sup> Using those guiding principles, panels' interpretations of the like products test evolved from an objective approach, to a subjective approach,<sup>10</sup> before settling on the now-dominant economic approach.<sup>11</sup> This economic approach primarily assesses the competitive relationship between the products. In the absence of any alternative approach, PPMs are likely to be assessed in the context of the *BTA Report* factors, focusing on the competitive relationship between the products. This approach does not necessarily exclude the possibility of PPMs being relevant. However, as currently interpreted, consumer preference for low-emissions PPMs would be unlikely to influence product likeness sufficiently to permit a discriminatory measure to be imposed.

## B Argument

This article contributes to the academic criticism on the failure to consider PPMs in the like products analysis. It argues that, properly interpreted, the “consumers' tastes and habits” criterion (consumer preference) could demonstrate that products produced with low-emissions PPMs are not like those produced with high-emissions PPMs.

The relevance to the like products test of the neoclassical economic concept of consumer preference—which assumes consumers reveal their preferences through market actions—should be reconsidered. Arguably, most consumers' true preference is to buy products with low-emissions PPMs.<sup>12</sup> That preference is not observable through market actions because of the well-documented market failure to accurately price climate externalities and low consumer literacy regarding the relative emissions of different PPMs. In a suitable case, a better understanding of these confounding factors could permit a panel to find that products with sufficiently different PPM emissions are not like.

I acknowledge that attempting to outline a mechanism that supports greater consideration of consumer preference for low-emissions PPMs is considered by some to be “very controversial” and, if adopted, would constitute a “monumental development in the interpretation” of the GATT like products analysis.<sup>13</sup> But, with the increasing prevalence of harms of anthropogenic climate change, consumer preference for low-emissions PPMs will only grow. Sometime in the future, the WTO will have to reconcile with emissions-related PPMs if the world is serious about curbing emissions under the Paris Agreement.

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9 *Border Tax Adjustments* (GATT, L/3464, 2 December 1970) [*BTA Report*] at [18].

10 *United States – Measures Affecting Alcoholic and Malt Beverages* DS23/R, 16 March 1992 (Report of the Panel Adopted on 19 June 1992) [*US – Malt Beverages*]; and *United States – Taxes on Automobiles* DS31/R, 11 October 1994 (Report of the Panel, unadopted).

11 *Japan – Taxes on Alcoholic Beverages* WT/DS8/AB/R, 4 October 1996 (Report of the Appellate Body) [*Japan – Alcohol II* (Appellate Body)]; and *Japan – Taxes on Alcoholic Beverages* WT/DS8/R, 11 July 1996 (Report of the Panel) [*Japan – Alcohol II* (Panel)].

12 Peter Andre and others “Globally representative evidence on the actual and perceived support for climate action” (2024) 14 *Nature Climate Change* 253.

13 Amber Rose Maggio *Environmental Policy, Non-Product Related Process and Production Methods and the Law of the World Trade Organization* (Springer, Switzerland, 2017) at 92–93.

### *C Structure*

This article has five parts.

Part II introduces green steel. Green steel and traditional steel vary significantly in their emissions profiles, owing to the relevant PPM. The future likeness of green and traditional steel is a case study that sets the context for the article's analysis.

Part III explains the relevant law. It traverses arts I and III of the GATT, noting the similarity of the like products test between them. It then outlines the historical objective and subjective approaches to interpreting "like product" under art III. It describes how the law has evolved into the current interpretation: an economic approach that focuses on assessing the overall competitiveness of the relationship between the products. It suggests that under this current interpretation, the economic assumptions used by WTO panels to assess consumer preference will impair the relevance of PPMs to the competitive relationship. Recognising the limitations of these assumptions provides further scope to consider a product's PPM.

Part IV argues that times have changed, so there is scope to reconsider the assumptions underlying the like products test. Understandings of anthropogenic climate change have rapidly developed since the Appellate Body devised the current economic approach to like products in 1996. Moreover, modern international legal obligations in respect of the environment raise new arguments that the WTO's adjudicative bodies should develop their jurisprudence consistently, or else risk losing legitimacy. The 2019 destruction of the Appellate Body provides a particular opportunity, as the Multi-Party Interim Appeal Arbitration Arrangement (MPIA) has already shown willingness to develop law beyond Appellate Body jurisprudence. These developments present an opportunity to re-evaluate the assumptions underlying the like product analysis at the WTO.

Part V critiques the law. It suggests the WTO's development of consumer preference jurisprudence has left several key questions unresolved. While panels have tended to consider econometric evidence of consumer preference, the Appellate Body has never suggested econometric analysis is required, and reliance on such evidence creates an illusion of objectivity. Reliance on econometric analysis also perpetuates the market failure to capture the future negative value of emissions in prices. Further, panels have based decisions on problematic assumptions of consistency of preference and agency over that preference. In fact, consumer preferences are neither consistent nor constant. They are shaped by changing social perspectives, marketing, and crucially, regulatory policy. Part V suggests that, so long as consumer preference for a product is consistent with other objectives of international law (such as the promotion of human rights and consistency with international environmental obligations), a WTO Member should be able to argue that preference justifies the imposition of discriminatory measures.

Part VI proposes possible limits on this conception of consumer preference to ensure a Pandora's box of otherwise-discriminatory measures is not opened. With adequate limitations, considering consumer preference for low-emissions PPMs by re-evaluating the assumptions underlying the consumer preference criterion would merely constitute a small development from the current position.

Part VII concludes the article.

## II Green Steel

“Green steel” is difficult to define, and may encompass many types of alternative steel. In this article, green steel refers to steel produced using hydrogen direct reduction (HDR).<sup>14</sup> Reduction is one of a series of necessary steps in the process and production of steel. It refers to the process by which iron ore is chemically reduced to form pig iron.<sup>15</sup>

Currently, the predominant method of reduction requires a blast furnace, which uses coal.<sup>16</sup> HDR—which is not yet commercially available—uses hydrogen instead of coal.<sup>17</sup> Since the hydrogen is generated using electricity, the emissions from the reduction step become those required to create the hydrogen, rather than those emitted by a blast furnace. So, the emissions from the HDR process depend on how much fossil fuel is used to produce the electricity required, which varies by country.<sup>18</sup> In Sweden, for example, where the first commercial green steel plant has started construction, emissions could be reduced by 95 per cent compared to blast furnace processes.<sup>19</sup> The steel produced by both processes is physically identical or near identical.

Steel is responsible for eight per cent of global energy-related greenhouse gas emissions.<sup>20</sup> Decarbonising the steel sector is therefore essential to prevent further global warming. Given that the PPMs of steel account for up to 95 per cent of its emissions,<sup>21</sup> reconsidering the relevance of PPMs to the interpretation of “like products” will be essential to ensuring that international trade law facilitates, rather than hinders, decarbonisation of the steel industry.

## III Non-Discrimination Provisions in the GATT

Having explained the hypothetical product this article will analyse, this section outlines the relevant law.

### A Overview

The two non-discrimination provisions with which this article is concerned are arts I and III of the GATT. Article I of the GATT describes the Most-Favoured-Nation principle. It provides that if a contracting party gives “any advantage, favour, privilege or immunity” to another for like products originating in or destined for other countries, that same treatment must be accorded “immediately and unconditionally to all other” WTO Members. So, under art I, a WTO Member must treat like products imported from other WTO Members the same.

The National Treatment principle in art III is more complicated. Article III(1) states the general anti-protectionist principle: a WTO Member’s taxes and regulations should not be

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14 *RMI Insight Brief*, above n 1, at 2.

15 At 3.

16 At 3.

17 At 3.

18 At 3.

19 At 3. The pilot is being implemented by a company called Stegra, which claims it will “slash emissions by up to 95 per cent”: Stegra “We are Stegra” <[www.stegra.com/about-us](http://www.stegra.com/about-us)>. Stegra has, however, faced several significant financial hurdles, so the successful completion of the project is far from certain.

20 World Economic Forum *Net-Zero Industry Tracker: 2023 Edition Insight Report* (World Economic Forum, Switzerland, 2023) at 54.

21 At 56.

applied “so as to afford protection to domestic production”. Article III(2) is concerned with taxation on imports. The first sentence of art III(2) provides that a government must not impose taxes on imported products that are “in excess of” like domestic products. Where products are not “like”, but rather are part of the wider category of products that are “directly competitive or substitutable”, the second sentence of art III(2) applies. That sentence stipulates that if the products are “not similarly taxed”, thus affording protection to domestic production, there will also be a breach of art III. Article III(4) applies to regulatory practice. It provides that imported like products must be treated “no less favourably” than domestic products.

### (1) Preliminary Notes

The analysis in this article attempts to expand the conception of like products. As such, this article’s argument could be applied to both arts I and III. However, given the greater body of litigation under art III concerned with consumer preference—particularly art III(4)—art III is the focus.

Article 2.1 of the Agreement on Technical Barriers to Trade (TBT) also prohibits discrimination between like products.<sup>22</sup> This article does not focus on that provision, or similar provisions under other international trade agreements, because art III of the GATT has generated a comparatively substantial body of case law that explores specifically how the consumer preference criterion interacts with the concept of like products. This richer jurisprudential foundation makes art III the more suitable focus for examining whether preferences for low-emissions PPMs can influence the likeness analysis. However, the conclusions this article draws are likely to be relevant to analyses undertaken under other international trade agreements that contain a like products test.<sup>23</sup>

The term “consumer preference” is used rather than “consumers’ tastes and habits” because this article accepts that consumer preference goes beyond consumers’ tastes and habits.<sup>24</sup> Consumer preference is relevant more widely to the product’s competitiveness, and may also be relevant under the second sentence of art III(2) to the “directly competitive or substitutable” test. Also, the Appellate Body has implied that arts III(2) and III(4) must be construed similarly, to prevent a WTO Member from imposing a regulatory measure under art III(4) with the same effect as a fiscal measure under art III(2).<sup>25</sup>

### B *Relation to art XX of the GATT*

In any discussion about environmental measures, one must note art XX. Article XX outlines a “General Exception” under which WTO Members may defend otherwise-discriminatory measures taken in pursuit of a public policy objective. If a distinction between products based on their PPM emissions breached art III, WTO Members could instead argue the distinction is required for public policy reasons. Such reasons can include that the measure is necessary to protect human, animal or plant life or health,<sup>26</sup> or to conserve natural

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22 Marrakesh Agreement Establishing the World Trade Organization 1867 UNTS 3 (opened for signature 15 April 1994, entered into force 1 January 1995), annex 1A (Agreement on Technical Barriers to Trade), art 2.1.

23 Lydgate, above n 7, at 167.

24 At 166.

25 Sifonios, above n 4, at 99.

26 GATT, art XX(b).

resources.<sup>27</sup> A distinction between products based on their PPM emissions would arguably engage both grounds.<sup>28</sup> The public policy purpose would be to prevent further emissions, which would conserve natural resources (fossil fuels), and protect human, animal and plant life. Why, then, does this article focus on art III, rather than art XX?

There is a key strategic distinction between claims under arts III and XX. Under art XX, the WTO Member intending to justify the measure bears the burden of defending the measure. By contrast, in disputes under art III, the WTO Member impugning the measure must show it is discriminatory. Winning an art XX case poses greater difficulty than defending a measure under art III.<sup>29</sup> Given this difficulty, this article focuses on the interpretive arguments available under art III.

### C Interpretation of “like product”

This section turns to discuss how the term “like product” has been interpreted at the WTO.

The GATT does not define “like product”, and there is no authoritative test.<sup>30</sup> Before its demise, the Appellate Body preferred to approach product likeness on a case-by-case basis. In *Japan – Taxes on Alcoholic Beverages (Japan – Alcohol II)*, the Appellate Body decided “No one approach ... will be appropriate for all cases”.<sup>31</sup> The dominant conception has been that the like products test is like an accordion, which “stretches and squeezes in different places as different provisions of the WTO Agreement are applied”.<sup>32</sup> In any given case, an adjudicative body will therefore have significant interpretive power to decide the applicable scope of likeness.

Even though no approach is authoritative, most disputes under art III have cited four criteria from the *BTA Report*.<sup>33</sup> These are: the product’s physical properties, consumers’ tastes and habits (consumer preference), the product’s end uses and the product’s tariff classification.

There have been three approaches to the interpretation of “like product” in the WTO jurisprudence. The first was the objective approach, which focused on the most objectively assessable criteria—the product’s physical properties and tariff classification. The second was a subjective approach, which considered an additional criterion—whether the subjective intent of the Member imposing the measure was to afford protection to domestic goods. A new economic approach now prevails. The economic approach focuses on the competitive relationship between the products, for which the most relevant criteria are consumers’ tastes and habits and the product’s end uses. The shift to the economic approach has also led to a focus on the “less favourable treatment” element of art III(4), which permits greater consideration of regulatory policy by examining differential treatment between groups of products.

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27 Article XX(g).

28 Both grounds were argued as alternatives in the tuna disputes: *US – Tuna I*, above n 4.

29 Niall Moran “The first twenty cases under GATT Article XX: tuna or shrimp dear?” in Giovanni Adinolfi and others (eds) *International Economic Law* (Springer, Cham, 2016) 3. Moran shows that out of 20 Appellate Body reports on art XX before 2015, only two defences were successful: *US – Shrimp II* and *EC – Asbestos*. It should be noted, however, that this statistic does not account for the multitude of measures that have been uncontroversially justified under art XX and never reached the dispute settlement stage.

30 *Japan – Alcohol II* (Appellate Body), above n 11, at 21.

31 At 21.

32 At 21.

33 Lydgate, above n 7, at 167; and *BTA Report*, above n 9.

This section traverses the historical approaches and outlines the evolution of the now-dominant economic approach. It concludes that the case-by-case economic approach to likeness leaves scope for considering a product's PPMs through the consumer preference criterion.

(1) Objective approach: physical properties and tariff classification

Physical properties and tariff classification are objectively describable, which can help ensure consistency across cases. For that reason, 1980s GATT panels tended to prefer an objective approach, suggesting that products would usually not be like if there were differences in the products' physical properties.<sup>34</sup> But, the panels accepted that physically different products may still be like if the differences were sufficiently minor.<sup>35</sup>

A logical consequence of this approach was that if a domestic product had exactly the same physical properties as an imported product, it would be considered like regardless of its PPM. This "Product-Process Distinction" was critically important in the *United States – Tuna* disputes. In *United States – Restrictions on Imports of Tuna (US – Tuna I)*, the Panel found that the United States could not impose restrictions on imported Mexican yellowfin tuna even if it had been caught in a manner that caused greater dolphin bycatch than United States yellowfin tuna.<sup>36</sup> Mexican yellowfin tuna and United States yellowfin tuna were "like" because their physical properties were essentially the same. To find otherwise, the Panel would have had to accept that the harvesting method of the tuna affected the likeness analysis, which it was unwilling to do.

The *United States – Tuna* cases illustrate that the physical properties criterion is not likely to help establish a difference between green steel and traditional steel. Not everyone accepts this position. Nathaniel Eisen, for example, argues that a product's life-cycle emissions could be one of its physical properties as a "tertiary quality".<sup>37</sup> He suggests that the primary reasoning of the Appellate Body in *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products (EC – Asbestos)* was that carcinogenicity was a physical property sufficient to distinguish products that contained asbestos from those that did not.<sup>38</sup> So, he argues, a product's "climate forcing potential"—which depends on its emissions over its life cycle, including its PPM—could indicate that products with low-emissions PPMs would not be "like" those with high-emissions PPMs.

This argument is not likely to be persuasive. In *EC – Asbestos*, the product's carcinogenicity arose from a physical difference between the products—the presence of chrysotile asbestos fibres.<sup>39</sup> For steel with low-emissions PPMs, there is no such physical difference—the products are identical. Moreover, green steel and traditional steel may be considered like even if they had slight physical differences. In *Japan – Alcohol II*, for example, shochu and rum were found to be like products.<sup>40</sup> So, in determining how to

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34 *Brazilian Internal Taxes* 2nd Supp GATT BISD 181, GATT/CP.3/42, 27 June 1949 (First Report Adopted by the Contracting Parties on 30 June 1949) at [7].

35 *Japan – Customs Duties, Taxes and Labelling Practices on Imported Wines and Alcoholic Beverages* L/6216, 13 October 1987 (Report of the Panel adopted on 10 November 1987) [*Japan – Alcohol I*] at [5.6].

36 *US – Tuna I*, above n 4, at [5.8].

37 Eisen, above n 6.

38 At 902.

39 *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products* WT/DS135/AB/R, 12 March 2001 (Report of the Appellate Body) [*EC – Asbestos*] at [136].

40 *Japan – Alcohol II* (Appellate Body), above n 11, at 23.

differentiate between green steel and traditional steel, and how to limit such differentiation, non-physical factors such as consumer preference will be relevant. As explained below in Part V, part of the analysis that the Appellate Body in *EC – Asbestos* undertook exemplifies this consideration of consumer preference. It evaluated whether consumers would view asbestos-containing products as “like” other products.<sup>41</sup> But even taking the approach in *EC – Asbestos*, it is unlikely that the physical properties criterion could support the argument that the PPM emissions of products affect their likeness.

Tariff classification is likely to be similarly unhelpful. Tariff classifications primarily rely on the product’s physical properties. A product’s composition, form and function do, however, play limited roles. So if a low-emissions PPM product were used differently than a high-emissions PPM product, then perhaps tariff classification could ground a finding that the products are not like. But for steel, there is unlikely to be a sufficiently different composition, form or function of the product with lower PPM emissions. Neither physical properties nor tariff classification seem likely to support the conclusion that products with lower PPM emissions could be sufficiently different.

## (2) Subjective approach: aim and effect

Perhaps in response to the earlier proposition that physically identical products could not be unlike, two 1990s GATT panels instead applied what came to be known as the “aim-and-effects” test. In the *United States – Measures Affecting Alcoholic and Malt Beverages* and the *United States – Taxes on Automobiles* cases, the panels interpreted the National Treatment principle such that if the Member imposing the measure did not have protectionist intent, and the measure did not have a protectionist effect, the products would not be considered like.<sup>42</sup> The panels reasoned that their interpretation followed from the chapeau in art III(1), which provides that a WTO Member’s taxes and regulations should not be applied “so as to afford protection to domestic production”. The panels’ findings constituted a restrictive interpretation of the like products test because a Member impugning the measure would have to demonstrate the other Member’s subjective protectionist intent to show the measure violated art III.

At first glance, an aim-and-effects approach could justify measures favouring products with low PPM emissions. In respect of the steel hypothetical in this article, it would permit a Member to impose differential treatment so long as its true policy goal was to lower emissions. All that the Member imposing the measure would have to demonstrate is that it did not have protectionist intent and that the measure did not have a protectionist effect. For this reason, others have already argued the aim-and-effects test—or a version of it—should apply to environmental measures.<sup>43</sup> But unfortunately, the aim-and-effects test has not withstood the test of time.

## (3) Economic approach: consumers’ tastes and habits, and product’s end uses

The Appellate Body unequivocally rejected the aim-and-effects approach in *Japan – Alcohol II*.<sup>44</sup> The Marrakesh Agreement had entered into force, significantly changing the dispute settlement context. The Dispute Settlement Body had not adopted

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41 *EC – Asbestos*, above n 39, at [121].

42 *US – Malt Beverages*, above n 10, at [5.25]; and *US – Taxes on Automobiles*, above n 10, at [5.15].

43 See, for example, Regan, above n 5.

44 *Japan – Alcohol II* (Appellate Body), above n 11.

*United States – Taxes on Automobiles*. Accordingly, the Appellate Body in *Japan – Alcohol II* concluded instead that the focus of the like products test should be on the extent of the competitive relationship between the products. It suggested that art III(1) represented a “broad purpose” to prevent protectionist measures, rather than the “limited purpose” proposed by the GATT 1947 panels.<sup>45</sup> Article III(1) protected contracting parties’ “expectations” that the “equal competitive relationship between imported and domestic products” would be protected.<sup>46</sup> *Japan – Alcohol II* thus represented the shift away from the subjective approach to the economic one.

The economic approach means that there is no hierarchy of the *BTA Report* factors in the likeness evaluation. However, relative to the objective approach, which focused on physical properties, the economic approach gives greater credence to consumer preference and the product’s end uses, which may be decisive in appropriate cases. Those factors are also particularly important when assessing the competitive relationship between products. Perhaps the case where consumer preference played the largest role was *EC – Asbestos*. The Appellate Body asserted—without any empirical evidence—that consumers’ preferences “very likely to be shaped by the health risks associated with a product which is known to be highly carcinogenic”.<sup>47</sup> However, as already noted, a key distinction between *EC – Asbestos* and the steel hypothetical considered in this article is the physical difference between materials containing asbestos and those that do not. So, could consumer preference, by itself, ground a finding that products are not like?

Theoretically, yes. In *United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products (US – Tuna II (Mexico))*, the Panel noted that consumers may prefer tuna caught with dolphin-friendly methods.<sup>48</sup> It noted further:<sup>49</sup>

... such preferences may be relevant to an assessment of likeness. To the extent that consumer preferences, including preferences relating to the manner in which the product has been obtained, may have an impact on the competitive relationship between these products, we consider it *a priori* relevant to take them into consideration in an assessment of the likeness.

#### (4) Summary of consumer preference

To summarise, it seems that if consumers’ preferences sufficiently impact the competitive relationship between the products, they could preclude a finding of likeness. Even though *US – Tuna II (Mexico)* concerned art 2.1 of the Agreement on Technical Barriers to Trade, it seems unlikely that a panel would apply a different approach under art III(4), given the similarities between the provisions. Another example is the *Indonesia – Measures Concerning the Importation of Chicken Meat and Chicken Products* Panel report, which found that Indonesia did not discriminate against imported Brazilian chicken by enforcing halal labelling requirements.<sup>50</sup> While the Panel did not consider consumer preference directly, econometric evidence of consumer preference between halal and non-halal food might

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45 Sifonios, above n 4, at 107; and see also *US – Malt Beverages*, above n 10, at [5.25].

46 *Japan – Alcohol II* (Appellate Body), above n 11, at 16; and *EC – Asbestos*, above n 39, at [98].

47 *EC – Asbestos*, above n 39, at [122].

48 *United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products* WT/DS381/R, 15 September 2011 (Report of the Panel).

49 At [7.249].

50 *Indonesia – Measures Concerning the Importation of Chicken Meat and Chicken Products* WT/DS484/R, 17 October 2017 (Report of the Panel) at [7.580].

have shown a lack of competitive relationship, especially in a Muslim-dominant country like Indonesia.

The historical approaches have left open several questions about how consumer preference will be considered in the WTO. First, while the predominant focus has been on econometric evidence, *EC – Asbestos* shows that evidence of divergent consumer preference does not necessarily need to be econometric. The Appellate Body was willing to consider consumers’ perceived health risks without quantitative evidence.<sup>51</sup> Similarly, in *Korea – Taxes on Alcoholic Beverages*, the Panel stated expressly that “quantitative analyses, while helpful, should not be considered necessary” to show the existence or non-existence of a competitive relationship.<sup>52</sup> The *Philippines – Taxes on Distilled Spirits* Appellate Body even *rejected* quantitative evidence because the challenged regulation *itself* had caused consumers not to perceive the products as competitive.<sup>53</sup> Establishing likeness, therefore, does not necessarily require economic evidence, although some economic evidence may be relevant and helpful.<sup>54</sup>

The limitations of econometric evidence in WTO jurisprudence could have been considered to a greater extent. Econometric evidence is often based on assumptions that consumers have consistency of preference and agency over that preference. Even if preference cannot be directly captured by survey, WTO Members have often argued that “revealed preferences” are sufficient—consumers will show their preference through purchasing. However, as explained in Part V, these assumptions are problematic. A fuller consideration of the limitations of these assumptions would permit greater consideration of consumer preference for low-emissions PPMs in the like products analysis.

#### IV Opportunities for Change

Others have suggested including PPMs in the like products analysis before, so why should the position be reconsidered now? This section outlines three reasons: developments in the understanding of anthropogenic climate change; developments in international environmental legal obligations; and the destruction of the Appellate Body in 2019. In an evolving dispute settlement context, panellists will be forced to consider new factors, including some that would have been underdeveloped at the time of the *Japan – Alcohol II* Appellate Body report in 1996.

##### *A Developments in scientific understanding of anthropogenic climate change*

With each passing year, the world emits more greenhouse gases causing deleterious effects on the environment, including global warming, rising sea levels, and ocean acidification. In 2023, the Sixth Assessment Report of the Intergovernmental Panel on

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51 *EC – Asbestos*, above n 39, at [122].

52 *Korea – Taxes on Alcoholic Beverages* WT/DS75/R, WT/DS84/R, 17 September 1998 (Report of the Panel) at [10.42].

53 *Philippines – Taxes on Distilled Spirits* WT/DS396/AB/R, WT/DS403/AB/R, 21 December 2011 (Report of the Appellate Body) at [236].

54 Lydgate, for example, suggests that more evidence of consumer preference would be helpful in establishing the lack of competitive relationship between otherwise-like products: Emily Lydgate “Sorting Out Mixed Messages under the WTO National Treatment Principle: A Proposed Approach” (2016) 15 WTR 423.

Climate Change (IPCC) renewed the call for global institutions to take action on the climate crisis, including specifically by amending existing trade rules.<sup>55</sup>

[P]olicies to open up trade can have a range of effects on GHG emissions, just as mitigation policies can influence trade flows among countries. Trade rules may impede mitigation action by limiting countries' discretion in adopting trade-related climate policies, but they also have the potential to stimulate the international adoption and diffusion of mitigation technologies and policies.

WTO panels should note that problematic trade rules can limit countries' discretion in adopting trade-related climate policies. The IPCC's call is especially relevant given the commitment in the Preamble of the Marrakesh Agreement to promote "the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment".<sup>56</sup>

The argument that the status quo can serve environmental goals might seem outdated when we remember that the WTO's approach to PPMs has remained largely the same since the *EC - Asbestos* report in 1991 and the *Japan - Alcohol II* report in 1996. The first IPCC report was only published in 1990, and the United Nations Framework Convention on Climate Change (UNFCCC) was only adopted in 1992.<sup>57</sup> In the intervening time, there have been significant developments in scientific understandings of anthropogenic climate change.<sup>58</sup> Widespread awareness of climate issues—to such an extent that it could sufficiently affect consumer preference—is a relatively recent phenomenon. By contrast, the "economic approach" to like products has not substantively changed since 1996. It is unlikely that, when the Appellate Body formulated the test in *Japan - Alcohol II*, consumer perceptions of climate-friendly products were front of mind.

The development in understanding of anthropogenic climate change does not necessarily mean the conceptual approach to like products needs to change. The four factors under the *BTA Report* remain valuable. However, developments in scientific and consumer understanding mean it is more important than before that the WTO re-evaluates the assumptions underlying the like products analysis—especially the consumer preference criterion. As developed further in Part V below, a greater understanding of anthropogenic climate change and its relationship with markets has shown how consumer preferences may not be reflected in revealed preferences due to market failure. Over time, greenwashing and misleading market practices have risen—phenomena which are themselves indicative of rising consumer preference

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55 Susanne Droege and others "The Trade System and Climate Action: Ways Forward under the Paris Agreement" (2017) 13 South Carolina J Int Law Bus 195 as cited in Anthony Patt and others "Chapter 14: International Cooperation" in Intergovernmental Panel on Climate Change *Climate Change 2022: Mitigation of Climate Change* (IPCC, Cambridge, 2022) at 1499.

56 The importance and relevance of preambles in treaty interpretation is, of course, debatable. For a persuasive argument that preambles can, and should, play a role in interpretation, see Max H Hulme "Preambles in Treaty Interpretation" (2016) U Pa L Rev 1281.

57 United Nations Framework Convention on Climate Change 1771 UNTS 107 (opened for signature 4 June 1992, entered into force 21 March 1994) [UNFCCC].

58 The IPCC's Sixth Assessment Report now finds "human activities ... have *unequivocally* caused global warming" (emphasis added), whereas in the Second Assessment Report, the IPCC was only prepared to say there was a "discernible human influence" on global warming: H Lee and J Romero (eds) *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (IPCC, Switzerland, 2023) at 42; and IPCC *IPCC Second Assessment Climate Change 1995: A Report of the Intergovernmental Panel on Climate Change* (1995) at 22.

for low-emissions PPMs.<sup>59</sup> Revealed preference may no longer reflect true preference to the extent it once did. Re-evaluating the assumptions underlying the consumer preference criterion may therefore yield a more nuanced position.

### *B Developments in international legal obligations*

International environmental obligations in law have also radically advanced. The foundational jurisprudence interpreting the like products test predates many of the major developments in international environmental law, including the landmark Paris Agreement in 2016.<sup>60</sup> Evolution of the like products test to reflect the influence of the Paris Agreement would be welcome, given countries' aspirations to reduce emissions and keep global warming below 1.5 degrees Celsius.<sup>61</sup> It is also supported specifically by provisions in the Paris Agreement. The Preamble notes that "sustainable patterns of consumption and *production* ... play an important role in addressing climate change".<sup>62</sup> Article 4(1) of the Paris Agreement obligates Parties to "undertake rapid reductions ... in accordance with the best available science". This point relates to the argument that significant developments in scientific understanding of anthropogenic climate change have been made since 1996. As noted above, the "best available science"—currently the IPCC's Sixth Assessment Report—calls specifically for amending existing trade rules to help countries reduce emissions. Accordingly, there is an argument that a Paris-consistent reinterpretation of the like products test should be considered.

Of course, panellists will have to take care when interpreting arts I and III consistently with the Paris Agreement. Not all cases will be suitable. A WTO Member must not be able to hide protectionist measures in "climate-friendly" policy regimes. Some points from the Preamble of the Paris Agreement might be particularly useful in limiting how narrowly the like products analysis is interpreted:<sup>63</sup>

- Members must be guided by "the principle of equity and common but differentiated responsibilities ... in the light of different national circumstances".
- Members must recognise "the specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change".
- Members must also recognise that "Parties may be affected not only by climate change, but also by the impacts of the measures taken in response to it".

Any interpretive exercise undertaken using the Paris Agreement must also recognise the harms that regulatory policy aiming to curb emissions-related PPMs might have on the trade activity of developing countries. The Preamble to the Marrakesh Agreement reiterates this point: the pursuit of sustainable development must be done "in a manner consistent with [different Members'] respective needs and concerns at different levels of economic development". So, panellists must only cautiously undertake any interpretive exercise.

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59 RepRisk "On the rise: navigating the wave of greenwashing and social washing" (October 2023) <[www.reprisk.com](http://www.reprisk.com)>.

60 Paris Agreement 3156 UNTS 79 (opened for signature 22 April 2016, entered into force 4 November 2016).

61 Charles Di Leva and Xiaoxin Shi "The Paris Agreement and the International Trade Regime: Considerations for Harmonization" (2017) 17 Sustainable Development Law & Policy 20 at 28.

62 (emphasis added).

63 Again, the contested nature of preambles in treaty interpretation is noted. See above n 56.

But there is still a possible argument that, because most WTO Members are party to the Paris Agreement, interpreting arts I and III of the GATT in a manner consistent with the Paris Agreement could favour a like products test that accounts for consumer preference for low-emissions PPMs. At the least, it forms part of the relevant context for such an interpretation. Further, even though not all WTO Members are party to the Paris Agreement, there is no reason that alternative dispute resolution mechanisms—ad hoc arbitration and the MPIA—could not endorse views consistent with the Paris Agreement if the disputing parties were also Parties to the Paris Agreement, or had like-minded views regarding low-emissions PPMs.

### C A new dispute settlement context

The WTO Appellate Body has been dysfunctional since the United States' refusal to appoint Appellate Body Members resulted in the loss of its required quorum in 2019.<sup>64</sup> This development has transformed the international trade dispute settlement context. On one hand, it calls into question the ongoing viability of WTO dispute settlement mechanisms. On the other hand, it sets the stage for change. Increasingly, WTO Members have been opting to litigate through Regional Trade Agreements or ad hoc arbitration.<sup>65</sup> The Multi-Party Interim Arbitration Appeal mechanism may also be more willing to revisit legal points decided by previous WTO panels, especially where doing so defers to domestic authorities and prevents claims that WTO judicial bodies are encroaching upon the essential sovereignty of contracting parties.<sup>66</sup> Concerns of judicial overreach into States' sovereign jurisdictions are especially prescient in relation to arts I and III, because those provisions are fundamentally in tension with Members' regulatory autonomy. New bodies may be more willing to be deferential, which may help WTO judicial bodies develop jurisprudence that better aligns with Members' interests.<sup>67</sup> These are all matters that panellists must consider in the new dispute settlement context.

## V Unresolved Questions

This section turns to examine the economic approach to the consumer preference criterion. The WTO's jurisprudence has left unresolved three key questions. The first is evidential: what evidence of consumer preference is required to ground a finding that products are not like? The second concerns consumers' consistency of preference: how might consumers' preferences legitimately change? Finally, what role is there for WTO

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64 Simon Lester "Ending the WTO Dispute Settlement Crisis: Where to from here?" (2 March 2022) International Institute for Sustainable Development <[www.iisd.org](http://www.iisd.org)>.

65 See, for example, New Zealand's claim against Canada under the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP): *Canada - Dairy Tariff Rate Quota Allocation Measures* CDA-NZ-2022-28-01, 5 September 2023 (Final Report).

66 See, for example, *Colombia - Anti-Dumping Duties on Frozen Fries from Belgium, Germany and the Netherlands* WT/DS591/ARB25, 21 December 2022 (Arbitration Under Article 25 of the DSU: Award of the Arbitrators) at [4.12]: "Our approach to the interpretation claims in this appeal differs [from the Panel]. ... Each of these provisions must be understood in a manner granting *special deference* to investigating authorities under the Anti-Dumping Agreement" (emphasis added, citations omitted).

67 Joost Pauwelyn "The WTO's Multi-Party Interim Appeal Arbitration Arrangement (MPIA): What's New?" (2023) 22 WTR 693.

dispute bodies to assist governments in mitigating market failures, such as the failure to price climate externalities?

*A What evidence of consumer preference is required?*

(1) Econometric analysis?

Some have suggested that econometric analysis provides the most objective means of assessing consumer preference. For example, Henrik Horn and Petros Mavroidis argue that the touchstone of the like products analysis is whether the products are “directly competitive or substitutable”, and econometric analyses and substitution studies can directly analyse such competition.<sup>68</sup>

This perspective follows the assumption that while consumers may hold competing, irrational beliefs, their true preference or “taste” can be revealed by their market actions.<sup>69</sup> Under this assumption, even if significant survey data existed that consumers prefer low-emissions PPMs, econometric analysis of revealed preferences may suggest that consumers do not account for PPMs in their market actions. This result could indicate, for example, that consumers’ preference for low-emissions PPMs is unimportant compared to minute differences in cost.

The WTO has demonstrated a willingness to engage with econometric analysis, while at the same time finding that such analysis will never be definitive. *Japan – Alcohol II* perhaps represented the greatest endorsement of econometric evidence.<sup>70</sup> Japan presented evidence of cross-price elasticity to argue that shochu and whiskey were not like products, since changes in price between them would not cause consumers to change their buying behaviour.<sup>71</sup> The complainants rejected Japan’s study and presented their own. The Panel engaged at length with all the evidence, ultimately finding against Japan.

The Panel’s finding—which the Appellate Body upheld—informed the use of econometric evidence in several ways. First, it found that econometric evidence or elasticity studies are not decisive in assessing competitiveness. Instead, “the decisive criterion ... is whether [the products] have common end-uses, inter alia, as shown by elasticity of substitution”.<sup>72</sup> The use of “inter alia” suggests that elasticity of substitution, as demonstrated through econometric analysis, will be just one relevant factor. Second, even with economic evidence of substitutability, the analysis will not be entirely objective. Adjudication still requires some level of discretionary exercise because econometric analysis can be flawed. In this case, the Panel was required to adjudicate on competing elasticity studies, ultimately finding flaw in Japan’s.

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68 See, for example, Henrik Horn and Petros C Mavroidis “Still Hazy after All These Years: The Interpretation of National Treatment in the GATT/WTO Case-law on Tax Discrimination” (2004) 15 EJIL 39 at 62.

69 George J Stickler and Gary S Becker “De Gustibus Non Est Disputandum” (1977) 67 American Economic Review 76.

70 Horn and Mavroidis, above n 68, at 62.

71 *Japan – Alcohol II* (Panel), above n 11, at [6.31].

72 At [6.22]. See also *Japan – Alcohol II* (Appellate Body), above n 11, at 25.

## (2) Problems with econometric analysis

So, panels have recognised—correctly—that econometric analysis will not be a silver bullet in establishing competitiveness.<sup>73</sup> There will always be data deficiencies.<sup>74</sup> But there are other challenges. One key problem with the touchstone of competitiveness under art III is that it biases the analysis towards an oft-cited conclusion: “if consumer preferences are strong enough to make [the products] unlike, there is little need for regulation”.<sup>75</sup> That statement would seem to suggest that consumer preferences will *never* be sufficient to establish a finding that products are not like. But such a critique begs the question, why initially include consumer preference in the *BTA Report* if it would always be irrelevant or unnecessary? Such a perspective also rejects the possibility that extraneous measures, such as misleading marketing, government policy or products’ health risks might unjustifiably influence consumer preference.

Another issue with econometric analysis is that it merely captures a snapshot of the market at a particular time. In *Japan – Customs Duties, Taxes and Labelling Practices on Imported Wines and Alcoholic Beverages (Japan – Alcohol I)*, the Panel found that Japan’s measures may have crystallised consumer preference, so the econometric analysis presented (which assessed consumer preference after the measure was introduced) was subject to that confounding factor.<sup>76</sup> This approach raises the important question about the appropriate time limits for econometric analysis, and what relevant regulatory policy influences can be included in the scope of the analysis. The *Japan – Alcohol I* approach also shows that panels may occasionally reject one of the assumptions underlying the consumer preference criterion. There, the rejected assumption was consumers’ agency over preference—government policy defeated that agency of choice.

The final issue is that econometric analysis is of limited assistance when applied to a regulation intended to address a market failure, which is ordinarily the primary objective of measures that may breach art III. In *EC – Asbestos*, the relevant market failure was failing to internalise the price of health risks to consumers. This market regulation—often in the form of pricing unpriced externalities—is essential to maximising overall market utility. But the objectivity of an econometric analysis means that it would merely capture consumer preference in the *existing* market conditions, rather than in idealised market conditions.<sup>77</sup> As such, it would offer no view as to whether the products’ competitiveness is induced by poor market practice, such as greenwashing, misleading advertising or discriminatory social movements.

For example, econometric analysis could permit consumer preferences that conflict with the international commitments to human rights. Christiane Conrad presents a hypothetical whereby consumers subject otherwise-like products produced by ethnic minorities to a concerted public boycott on the basis of the producers’ ethnicity.<sup>78</sup> An econometric analysis of that situation would find the products to be unlike, even if they

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73 Lydgate, above n 7, at 175.

74 Horn and Mavroidis, above n 68, at 62.

75 Gabrielle Marceau and Joel Trachtman “A Map of the World Trade Organization Law of Domestic Regulation of Goods: The Technical Barriers to Trade Agreement, the Sanitary and Phytosanitary Measures Agreement, and the General Agreement on Tariffs and Trade” (2014) 48 *JWT* 351 at 412, n 219.

76 *Japan – Alcohol I*, above n 35, at [5.7].

77 Sifonios, above n 4, at 126.

78 Christiane R Conrad *Processes and Production Methods (PPMs) in WTO Law: Interfacing trade and social goals* (Cambridge University Press, New York, 2011) at 236.

were indistinguishable by their physical properties, end uses, and tariff classifications. Would a panel really be willing to distinguish between products on the basis of consumer preferences that contravene international human rights law?<sup>79</sup>

It should be noted at this point that, in light of the relevance of econometric analysis to the consumer preference criterion, some have suggested that what is required is not a re-evaluation of the assumptions underlying consumer preference, but rather more quantitative evidence. Emily Lydgate, for example, argues that more data about underlying consumer preference would assist in determining competitiveness.<sup>80</sup> While such data would undoubtedly be valuable for products like steel, which are generally purchased by businesses, not the ultimate consumer, it would still only capture consumer preference in existing market conditions, not idealised conditions.

### (3) Alternatively, more discretion for panellists?

In light of the issues with econometric analysis, some have advocated for an approach that instead favours greater discretion for panellists. This approach endorses the reasoning in *EC – Asbestos*, which David Sifonios argues essentially equated to a “reasonable consumer test” whereby the Appellate Body made assumptions about how a reasonable consumer “should” behave.<sup>81</sup> Under this approach, econometric analysis of consumer preference may not even be required for a panel to conclude that products are not like. Ultimately, the distinction between the econometric evidence approach above and the discretionary approach should be understood as a spectrum. Adjudicative bodies will never endorse a wholly econometric approach or a wholly discretionary approach. However, in light of the problematic assumptions underlying econometric evidence, WTO panels should prefer a discretionary approach in some cases.

The key strength of the discretionary approach is its flexibility. With the discretionary approach, the validity of the assumptions underlying the consumer preference criterion could be considered on a case-by-case basis. There would be no need for a blanket rule. Such a discretionary approach could permit findings that consumer preference favours unambiguous social goals, like protecting public health, consistent with the approach in *EC – Asbestos*.<sup>82</sup>

It is also arguable that, regardless of the approach the WTO should have, its failure to resolve the conflicting jurisprudence has left it with a discretionary approach, rather than an econometric one. Three arguments support this view. First, the *Japan – Alcohol II* Appellate Body report rejected the notion that substitutability analysis would be the decisive criterion.<sup>83</sup> Panellists will always need to exercise discretion and consider the other factors in the *BTA Report*. Secondly, discretion will always be required when adjudicating conflicting substitutability analyses.<sup>84</sup> Thirdly, even recent cases have affirmed that evidence of likeness and competitiveness does not have to be economic.<sup>85</sup>

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79 Such a decision may contravene, for example, the International Convention on the Elimination of All Forms of Racial Discrimination 660 UNTS 195 (opened for signature 7 March 1966, entered into force 4 January 1969).

80 Lydgate, above n 7, at 182.

81 Sifonios, above n 4, at 148.

82 See, for example, *EC – Asbestos*, above n 39.

83 *Japan – Alcohol II* (Appellate Body), above n 11, at 25.

84 At 25.

85 See, for example, *Korea – Taxes on Alcoholic Beverages*, above n 52; and *Philippines – Taxes on Distilled Spirits*, above n 53.

Greater consideration of environmental PPMs will require WTO Members to accept greater discretion for panellists, as in *EC – Asbestos*. But this approach has been widely criticised. Critics often suggest that protecting public health was an indisputable policy goal in *EC – Asbestos*, but that extending discretion to permit panellists to consider environmental PPMs would go too far.<sup>86</sup> What those critics assume is that protecting the environment is a disputable goal, whereas protecting public health is not. But, as discussed in Part IV, much has changed in recent years regarding the world’s ambition to address climate change. The Paris Agreement exemplifies this development. Moreover, an interpretation of the like products test consistent with the limitations set out in the preambles of the Marrakesh Agreement and the Paris Agreement would be sufficient to mitigate the worst excesses of greater panellist discretion.

*B To what extent are other forces on consumers’ preference relevant?*

The economic approach to consumer preference considers revealed preferences. But does that approach capture consumers’ true preferences, or something else? Modern economists have been mounting an argument that consumers’ preferences may not necessarily be observable by their market actions. Karla Hoff and Joseph Stiglitz, for example, suggest that much of what influences consumers’ preference is out of their control, and is shaped by social factors.<sup>87</sup> Such social influence includes advertising and regulatory policy. Hoff and Stiglitz outline a shift away from the understanding that a consumer is a rational actor. Instead, they suggest a consumer is subject to “deep social influences”, including:<sup>88</sup>

- (a) the social contexts to which they have become exposed and, especially, accustomed; and
- (b) the cultural mental models—including categories, identities, narratives, and worldviews—that they use to process information.

They describe a shift in economic theory from a decision maker as a rational actor to an “enculturated” actor—affected by competing cultural mental models in the social context in which the decision is being made.<sup>89</sup> Thus, observable or revealed preferences might not be true preferences.<sup>90</sup> Instead, observable preferences are merely “behavioral preferences”, which are subject to change according to interactions from different groups.<sup>91</sup> So, a consumer might change their mind regarding purchase decisions depending on marketing, social phenomena or regulatory policy.

This model of the consumer as an enculturated actor contrasts with WTO panels’ approaches, which seem to suggest that the consumer is a rational actor, with the ability to keep consistent preferences over time. WTO panels promote assumptions of a rational consumer, for example, when they suggest that “government regulation should not influence consumer preferences”.<sup>92</sup> Where the effect of a measure has been to crystallise

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86 See, for example, Ming Du “‘Treatment No Less Favourable’ and the Future of National Treatment Obligation in GATT Article III:4 after *EC – Seal Products*” (2016) 15 WTR 139 at 161–162.

87 Karla Hoff and Joseph E Stiglitz “Striving for balance in economics: Towards a theory of the social determination of behavior” (2016) 126 *Journal of Economic Behavior & Organization* 25.

88 At 25.

89 At 25.

90 Chaim Fershtman and Uzi Segal “Preferences and Social Influence” (2018) 10 *American Economic Journal: Microeconomics* 124 at 125.

91 At 126.

92 Lydgate, above n 7, at 185.

consumer preference such that otherwise-like products become unlike, the WTO has found that art III has been breached on the basis that the discriminatory measure caused the difference in consumer preference.<sup>93</sup>

Such decisions prompt the question: where should the line be drawn between “acceptable” influences of consumer preference, such as advertising, versus unacceptable influences, such as certain types of regulatory policy?<sup>94</sup> At what point is a regulatory measure discriminatory, rather than a reflection of consumers’ true preferences? If a government advertised certain products produced with low-emissions PPMs or put out environmental policy supporting such products, would that be discriminatory?

Conceptions of consumer preference that neglect to understand that the consumer is not necessarily a “rational” consumer can lead to misguided trade rules. In reality, what factors can legitimately influence a consumer have, and will continue to be, matters for panellists’ discretion. That discretion should not be exercised narrowly on the basis of a conception of the consumer as a consistent, rational actor.

### C *What should the WTO do to help members address market failure?*

#### (1) What is “market failure”?

The econometric approach to consumer preference also does not adequately account for market failure. Environmental regulations often respond to market failure on the basis that overall economic utility is promoted by intervention.<sup>95</sup> In the climate context, intervention is required to enable market internalisation of the future environmental and economic costs that come from high-emissions PPMs. A purely economic analysis for current consumer preference (using economic analysis tools), would merely measure the rational consumers’ revealed preference and reflect this market failure, rather than the consumers’ true preference in an idealised market, where all costs are internalised.

#### (2) Example

A recent environment-related panel dispute exemplifies how the current interpretation of consumer preference cannot account for market failure. The *European Union and Certain Member States – Certain Measures Concerning Palm Oil and Oil Palm Crop-Based Biofuels (EU – Palm Oil)* dispute arose after Malaysia complained about a European Union (EU) directive which aimed to phase out biofuels with a high risk of “indirect land-use charge”, including palm oil.<sup>96</sup> It became relevant to assess the likeness of biofuels produced from palm oil compared with biofuels produced from rapeseed and soybean. Deforestation is a component of the indirect land-use charge, and—according to the EU—deforestation is a concern among EU consumers. The EU submitted that consumers’ “general concern with products containing or made from palm oil has manifested itself in the food industry and is also relevant to the fuel sector”.<sup>97</sup> The EU also suggested that:<sup>98</sup>

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93 *Japan – Alcohol I*, above n 35, at [5.7].

94 Douglas A Kysar “Preferences for Processes: the Process/Product Distinction and the Regulation of Consumer Choice” (2004) 118 Harv L Rev 525.

95 PK Rao *International Environmental Law and Economics* (Blackwell, Malden, 2002) at 48.

96 *European Union and Certain Member States – Certain Measures Concerning Palm Oil and Oil Palm Crop-Based Biofuels* WT/DS600/R, 5 March 2024 (Report of the Panel).

97 At [7.450].

98 At [7.450].

... if there was a labelling requirement for the composition of biofuels, the latent preferences and tastes of EU consumers would become manifest and indicate palm oil-based biofuel is not like other biofuels.

So, the EU argued that consumers would not consider biofuels made from palm oil like other biofuels. The Panel rejected that argument, finding that there was a high degree of competition between the different biofuels on the basis of the products' physical properties and end uses. There was insufficient evidence that consumer preferences were of a nature and magnitude to preclude that competitive relationship.

The market failure is failing to internalise the future costs of present-day deforestation, which would bear many similarities to an emissions-related market failure. *EU – Palm Oil* indicates that, as currently applied, consumer preference for low-emissions PPMs would not be sufficient to preclude a competitive relationship.

### (3) Why does this interpretation need to be re-evaluated?

The failure of global markets to price the negative externality of carbon emissions is well-documented.<sup>99</sup> This failure is also being actively exploited. Increasingly, firms have been recognising the value of appearing to be environmentally-friendly, leading to greenwashing.<sup>100</sup> Greenwashing occurs when a firm deliberately misleads consumers about the firm's environmental performance. The overall effect is that consumers are misled into purchasing a product they otherwise might not have purchased. While misleading conduct might be prohibited, enforcement action against misleading conduct is insufficient to ensure widespread compliance, leading to market inefficiencies.

When it comes to PPMs, a lack of widespread knowledge of products' PPMs means that a consumer would not even have to be subject to greenwashing to make a decision that does not maximise utility.<sup>101</sup> Consumers want to make climate-friendly decisions,<sup>102</sup> but are uninformed, especially when it comes to non-product-related PPMs. According to a recent YouGov poll, only 20 per cent of consumers believe prioritising sustainability should be their responsibility.<sup>103</sup> Consumers expect others to regulate the market to promote their sustainable preferences. In this context, the WTO should assist, rather than hinder, governments attempting to address these market failures.

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99 Armon Razai, Duncan K Foley and Lance Taylor "Global warming and economic externalities" (2012) 49 *Econ Theory* 329.

100 David Markham, Anshuman Khare and Terry Beckman "Greenwashing: A Proposal to Restrict Its Spread" (2014) 16(4) *Journal of Environmental Assessment Policy and Management* 1.

101 Bhavika Bansal "Consumers more likely to say they don't have enough information to make sustainable shopping choices" (29 June 2023) YouGov <[www.business.yougov.com](http://www.business.yougov.com)>.

102 Survey results seem to be difficult to replicate, and wide-ranging. A report by Boston Consulting Group found that 88 per cent of consumers would be willing to pay at least 0.4 per cent more for net zero production of passenger vehicles and appliances: Nicole Voigt and others *Green Awakening: Are Consumers Open to Paying More for Decarbonized Products?* (Boston Consulting Group, December 2023) at 3. See also Andre and others, above n 12.

103 Bansal, above n 101.

## VI Limitations

Re-evaluating the assumptions underlying consumer preference in the manner above could open a Pandora's box of additional considerations for the like products analysis. Many WTO Members would be concerned that Members could simply impose protectionist measures under the guise of environmental sustainability. This section outlines some potential limitations.

### A *Market failure*

The primary reason the current econometric approach to consumer preferences is problematic is that it measures revealed preferences. But revealed preferences do not assist where there is a market failure, and PPM-based measures would be imposed to address the market failure to price carbon externalities.

One possible limitation to a wider conception of consumer preference is that the relevant market failure must affect revealed consumer preference. This effect must also be documented and supported by sufficient evidence. One could argue that there is sufficient evidence, for example, that greenwashing and lack of information lead consumers to make decisions that do not reflect their true environmental sustainability preferences. Such practices do not maximise market utility.

Unrelated market failures—those that do not affect consumer preference—should not be a basis to reject a finding of likeness. For example, alcohol-related harm presents a significant public health risk. But that negative externality may not be supported by evidence that consumers of alcohol would prefer lower-alcohol alternatives. Measures that discriminate against high-alcohol-content alternatives may therefore not be caught by a widening of the conception of consumer preference under this analysis, and would need to be justified under art XX of the GATT. Similarly, from a market externalities perspective, there might be relatively little difference between different slaughtering methods of animals—as considered in *European Communities – Measures Prohibiting the Importation and Marketing of Seal Products*.<sup>104</sup> The widened conception of consumer preference would likely still support a finding of likeness under art III, unless there was sufficient data showing consumer preference to the contrary.

### B *The influence of regulatory policy*

What constitutes acceptable regulatory policy will also need to be considered on a case-by-case basis. Obviously, regulatory policy that distorts consumer choice for purely protectionist reasons should remain discriminatory, even under the widened conception of consumer preference. A government could not, for example, use a regulatory policy measure to spread disinformation that locally produced vehicles are superior to foreign vehicles.

However, where a government identifies a negative externality that can be addressed by changing consumer preferences, it should be justified in proposing regulatory measures to rectify the misalignment. This might include educating consumers about a particular product's harmful environmental or health impacts. It might include regulations

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104 *European Communities – Measures Prohibiting the Importation and Marketing of Seal Products* WT/DS400/AB/R, 22 May 2014 (Reports of the Appellate Body).

restricting how the product is to be sold. Where consumers wrongly consider products to be like—and independent data shows the consumers' revealed preferences are misaligned—a government should be justified in such measures.

### *C Limitations conclusion*

The re-evaluation of consumer preferences offers opportunities for more sustainable trade practices, but it also risks introducing ambiguities that can be exploited for protectionist ends. The limitations proposed above are obviously not exhaustive. PPMs have relevance beyond environmental issues—they also implicate labour rights, animal welfare, and protection of indigenous practices. Each of these areas presents unique challenges and potential pitfalls when applying a wider conception of consumer preference.

Despite those challenges, the discourse surrounding PPMs and consumer preferences must continue to evolve. Whether a regulatory measure addresses a market externality or is merely protectionist must be considered in each case. These limitations can help WTO Members ensure trade regulations promote genuine welfare and sustainability, rather than merely reinforcing existing inequalities.

## **VII Conclusion**

The WTO cannot remain on the sidelines as the climate crisis worsens and consumers' preferences shift toward sustainably manufactured products. The economic approach to the like products analysis has remained largely unchanged since the 1990s. In the meantime, there have been significant developments in scientific understanding of climate change and States' international environmental obligations. The current legitimacy crisis plaguing the WTO's dispute settlement system sets the stage for this re-evaluation.

The IPCC's recent findings underscore the urgency for global institutions, including the WTO, to cooperate to address greenhouse gas emissions. Consumers' preference for environmentally friendly products has grown, reflecting the broader societal shift toward sustainability. Recognising the relevance of PPMs in the like products analysis could better serve the objectives of sustainable development and environmental protection as outlined in the Marrakesh Agreement and the Paris Agreement.

A wider conception of consumer preference is possible by reconsidering some of the assumptions underlying the WTO jurisprudence on like products. First, the usefulness of econometric analysis in assessing consumer preferences is limited. *Japan – Alcohol II* demonstrates that while such analysis can offer insights into product substitutability, it will not be decisive. Econometric evidence often fails to capture broader market failures, such as those associated with unpriced environmental externalities like emissions.

Secondly, consumer preference is not necessarily consistent or rational, as the neoclassical economic approach assumes. Instead, it is shaped by deep social influences, including advertising, cultural narratives and regulatory policy. Recognising that consumer choices are often influenced by external forces, such as government interventions or misleading marketing, is crucial in evaluating how consumer preferences affect product likeness. Accounting for these factors will improve WTO jurisprudence by ensuring it reflects the realities of modern consumer behaviour.

Finally, to retain legitimacy, the WTO must play a more active role in addressing market failures, particularly those related to environmental sustainability. As the *EU - Palm Oil* dispute highlights, current interpretations of consumer preference do not adequately account for market failures. In a world where consumers increasingly expect governments to regulate markets to promote sustainability, the WTO should support, rather than obstruct, measures that internalise environmental costs and promote global climate goals.

The WTO cannot afford to cling to outdated economic models in this evolving context. Reinterpreting consumer preference to reflect consumers' true preferences for low-emissions PPMs is an essential step to ensuring that WTO rules are fit for purpose and that WTO panels retain their legitimacy.