Climate Change and Subsidies: Possible Options for Change

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Summary: 1. Introduction. – 2. The SCM Agreement. – 2.1 'Good' and 'bad' subsidies. 2.2 Transparency. – 2.3 Remedies. – 3. Legal techniques for reform. – 4. Conclusion.

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1. Introduction

The global return of industrial policy reflects the convergence of major challenges: the climate crisis, growing geopolitical uncertainty, the need for economic resilience, and long-standing development inequalities.[1] These pressures are fuelling a new wave of industrial and green policy measures. Among these challenges, climate change stands out as one of the most urgent drivers, pushing governments to increasingly acknowledge that achieving international climate goals – such as tripling renewable energy capacity, doubling energy efficiency by 2030, and phasing out fossil fuels[2] – will require substantial private as well as public investments.[3]

There are various ways in which states can intervene through industrial policies to rapidly scale up efforts to meet their climate change goals; subsidies emerge as one of the most widely used instruments.[4] Analyses based on data from the Organisation for Economic Cooperation and Development (OECD) show that many of the subsidies introduced in recent years explicitly pursue two main goals. First, they aim to make high-emission legacy industries more sustainable – particularly energy-intensive sectors such as steel, aluminium, and chemicals. Second, they seek to foster the development of markets for low-carbon technologies, including solar panels, wind turbines, batteries, and green hydrogen.[5]

However, while essential to the green transition, public financing of green industrial policies increasingly places national industrial decarbonisation efforts in conflict with international subsidy rules, as outlined in the WTO's subsidy framework.[6]

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[1] Violette Millot and Lukasz Rawdanowicz, 'The Return of Industrial Policies: Policy Considerations in the Current Context' (OECD Economic Policy Papers, No 34, 31 May 2024) http://dx.doi.org/10.1787/051ce36d-en.

[2] See United Nations General Assembly, *Transforming our World: 2030 Agenda for Sustainable Development* (A/RES 70/1, 2015) Goal 7.

[3] Elena Cima and Daniel C Esty, 'Making International Trade Work for Sustainable Development: Toward a New WTO Framework for Subsidies' (2024) 27(1) *Journal of International Economic Law* 1, 10; Stephanie J Rickard, *Spending to Win: Political Institutions, Economic Geography, and Government Subsidies* (Cambridge University Press 2018) 67-72.

[4] Simon Evenett and others, *The Return of Industrial Policy in Data* (IMF Working Paper 24/1, 2024) https://www.imf.org/en/Publications/WP/Issues/2023/12/23/The-Return-of-Industrial-Policy-in-Data-542828; Bernard Hoekman and Douglas Nelson, 'Industrial Policy and International Cooperation' (2025) 24 *World Trade Review* 136.

[5] Millot and Rawdanowicz (n 1) 11; Bernard Hoekman and Douglas Nelson, 'Subsidies and SOEs: Specific vs. Systemic Spillovers' in Chia-Jui Cheng (ed), *A New Global Economic Order: New Challenges to International Economic Law* (Brill-Nijhoff 2021) 169.

[6] Inu Mandy Meng Fang and Weihuan Zhou, 'Greening the Road: China's Low-Carbon Energy Transition and International Trade Regulation' (2022) 35(2) *Leiden Journal of International Law* 357; Aaron Cosbey and Petros

This growing tension between the need to balance the potential benefits of government support and the challenges posed by its incompatibility with WTO subsidy rules underscores that the framework embodied in the Subsidies and Countervailing Measures (SCM) Agreement[7] is not fit for purpose to support the green transition and safeguard the rules-based multilateral trade regime.[8]

This chapter argues that if we are to consider how to strengthen international disciplines on subsidies, the discussion cannot be limited to green subsidies alone. It must be a broader discussion, with the issue of green subsidies placed in a wider context. This is because, as seen for example with the Inflation Reduction Act in the US, almost any kind of industrial policy can be labelled as 'green.'[9] Therefore, negotiations should focus on a comprehensive reform of WTO subsidy rules rather than limiting themselves to a sectoral approach, while still giving due attention to environmental challenges.

In particular, the chapter identifies three main issues that need to be addressed in any conversation on how to reform the WTO subsidy discipline. First, the inability of WTO Members through the SCM Agreement to distinguish between 'good' and 'bad' subsidies in relation to their underlying policy objectives.[10] Second, the ineffectiveness of remedies in disciplining subsidies: countervailing duties (CVDs) come with significant limitations as they are often misused for protectionist purposes and fail to address many types of market distortions.[11] Furthermore, the problem with WTO cases is that remedies are only prospective; while this may have worked reasonably well until 2019, we are now in a new era.[12] The third issue concerns the notification process' failure to provide adequate transparency.[13] Due to the lack of penalties for non-notification, WTO Members – despite being obligated under Article 25(2) of the SCM Agreement – often do not fulfil this requirement, which in any event is retrospective (i.e., after 'the horse has left the stable').[14]

Mavroidis, 'Turquoise Mess: Green Subsidies, Blue Industrial Policy and Renewable Energy: The Case for Redrafting the Subsidies Agreement of the WTO' (2014) 17(1) *Journal of International Economic Law* 11.

[7] *Agreement on Subsidies and Countervailing Measures* (SCM Agreement) (adopted 15 April 1994, entered into force 1 January 1995) Marrakesh Agreement, Annex 1A, 1869 UNTS 14.

[8] Bernard Hoekman and Douglas Nelson, 'Rethinking International Subsidy Rules' (2020) 43(12) *The World Economy* 3104; Chad P Bown and Jennifer Hillman, 'WTO'ing a Resolution to the China Subsidy Problem' (2019) 22(4) *Journal of International Economic Law* 557; Bernard Hoekman and Robert Wolfe, 'Reforming the World Trade Organization: Practitioner Perspectives from China, the EU, and the US' (2021) 29(4) *China & World Economy* 1; Lorenzo Rotunno and Michele Ruta, *Trade Spillovers of Domestic Subsidies* (IMF Working Paper 2024/041, 2024) https://www.elibrary.imf.org/view/journals/001/2024/041/article-A001-en.xml;WTO, *Compilation of Experiences and Consolidations Regarding Subsidy Design* INF/TE/SSD/W/29/Rev.5 (24 October 2024).

[9] Douglas Nelson and Laura Puccio, 'Nihil Novi Sub Sole: The Need for Rethinking WTO and Green Subsidies in Light of United States – Renewable Energy' (2021) 20(S1) *World Trade Review* 491; David Kleimann and others, 'Green Tech Race? The US Inflation Reduction Act and the EU Net Zero Industry Act' (2023) 46(12) *The World Economy* 3420; Giulia Claudia Leonelli and Francesco Clora, 'Retooling the Regulation of Net-Zero Subsidies: Lessons from the US Inflation Reduction Act' (2024) 27(3) *Journal of International Economic Law* 441.

[10] Weihuan Zhou and Mandy Meng Fang, 'Subsidizing Technology Competition: China's Evolving Practices and International Trade Regulation' (2021) 30(3) *Washington International Law Journal* 470, 483; Kyle Bagwell and Robert W Staiger, 'Will International Rules on Subsidies Disrupt the World Trading System?' (2006) 96(3) *American Economic Review* 877; Luca Rubini, *Rethinking International Subsidies Disciplines: Rationale and Possible Avenues for Reform* (E15 Initiative 2015).

[11] Jan Wouters and Dominic Coppens, 'An Overview of the Agreement on Subsidies and Countervailing Measures – Including a Discussion of the Agreement on Agriculture' in George A Bermann, Kyle W Bagwell and Petros C Mavroidis (eds), *Law and Economics of Contingent Protection in International Trade* (Cambridge University Press 2009) 54; Dominic Coppens, *WTO Disciplines on Subsidies and Countervailing Measures* (Cambridge University Press 2014) 196.

[12] Jennifer Hillman and Inu Manak, *Rethinking International Rules on Subsidies* (Council on Foreign Relations, 2021) <https://www.cfr.org/report/rethinking-international-rules-subsidies> 10.

[13] Hoekman and Wolfe (n 8).

[14] WTO, *Procedures to Enhance Transparency and Strengthen Notification Requirements under WTO Agreements,* WTO Doc JOB/GC/204/Rev.2 (27 June 2019).

The chapter suggests that plurilateral solutions could be the most realistic option to pursue – at least in the short term – for reforming international subsidy rules.[15] In this regard, it points out that such an agreement could be negotiated either within the WTO or through alternative frameworks outside it.

As such, this chapter is structured as follows. Section 2 examines the three main concerns that can be raised regarding the effectiveness of the WTO's subsidy discipline. Section 3 discusses the legal techniques that could realistically be explored in the current geopolitical context to reform these rules. Section 4, finally, concludes.

2. The SCM Agreement

2.1. 'Good' and 'bad' subsidies

The WTO discipline on subsidies is mainly contained in the SCM Agreement.[16] Under this agreement, subsidies are generally permitted unless they fall into the specific category of prohibited subsidies. In particular, the SCM Agreement classifies subsidies based on their perceived impact on international trade and competition, following a traffic-light approach: prohibited subsidies (red-light), actionable subsidies (yellow-light), and non-actionable subsidies (green-light). However, since 1 January 2000, only the first two categories remain, as the category of non-actionable subsidies expired.[17]

The SCM Agreement provides for *ad hoc* procedural rules and remedies for each category. Apart from subsidies that are contingent on export performance (export subsidies) or on the use of domestic rather than imported goods (local content subsidies), which are prohibited under Article 3 of the SCM Agreement and must be immediately withdrawn (with no need to prove spillovers or no possibility for the grantor to show that there are actually no spillovers in the specific case),[18] subsidies granted by a WTO Member can only be challenged if they harm another Member's interests. In other words, subsidies that are not prohibited fall into the residual category of actionable subsidies, which can be challenged only if the harm they cause constitutes either injury to the domestic industry in the importing country, as defined by Article 15 of the SCM Agreement, or causes one or more of the adverse effects listed in Articles 5 and 6 of the SCM Agreement. Moreover, unlike prohibited subsidies, when a WTO Member provides actionable subsidies, it can merely eliminate their negative effects without the need to withdraw them.[19] Non-actionable subsidies, including support for regional, environmental protection, and research and development, were permitted under the SCM Agreement (even protected from CVDs) as they were considered to have limited adverse effects on trade.[20] The expiration of this category is believed to be linked to concerns expressed by developing Members regarding the potential misuse of environmental measures by subsidising Members for advancing their industrial policies.[21]

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[15] Hoekman and Wolfe (n 8).
[16] For a general overview of the subsidy discipline under the SCM Agreement see Wolfgang Müller, *WTO Agreement on Subsidies and Countervailing Measures: A Commentary* (Cambridge University Press 2017) 1-50.
[17] WTO, *Minutes of the Special Meeting Held on 20 December 1999*, WTO Doc G/SCM/M/22 (17 February 2000); *Marrakesh Agreement Establishing the World Trade Organization*, List of Annexes. The SCM Agreement is listed under 'Multilateral Agreements on Trade in Goods' (Annex 1A); Alan O Sykes, *The Economics of WTO Rules on Subsidies and Countervailing Measures* (2003) <http://www.ssrn.com/abstract=415780> 15.
[18] art 4(7) SCM Agreement.
[19] art 7(8) SCM Agreement.
[20] art 8(2) SCM Agreement.
[21] Hoekman and Nelson (n 8) 3111-12.

This implies that under the SCM Agreement there is no distinction between 'good' and 'bad' subsidies based on the policy objectives they pursue.[22] In other words, the SCM Agreement classifies subsidies solely on the basis of the level of trade distortion they are likely to cause, and the rationale behind the subsidy is not taken into account in determining whether it should be permitted or prohibited.[23] Thus, if a green subsidy requires exports or use of local inputs, it would straightforwardly fall within the category of prohibited subsidies and be considered *per se* distortive because it includes a local content or export requirement. Conversely, if green subsidies are not openly discriminatory, they still remain actionable and countervailable if they cause adverse effects – that is, if injury, nullification, or serious prejudice is found.[24]

In addition, the question of whether Article XX of the General Agreement on Tariffs and Trade (GATT) 1994[25] applies to the SCM Agreement remains controversial.[26]

Since *Canada–Renewable Energy/FIT* case,[27] the distinction between 'good' and 'bad' subsidies has received renewed attention within the international economic law community, highlighting the challenges of reconciling WTO subsidy rules with the promotion of renewable energy.[28] One of the key issues it brought to light was the absence of an exemption clause within the SCM Agreement that would, under certain conditions, have allowed the pursuit of legitimate objectives – such as climate change mitigation – through subsidies. While the Appellate Body (AB) ultimately found that the local content requirements imposed under Ontario's feed-in tariff programme violated the national treatment obligation under Article III:4 of the GATT 1994, it did not find sufficient evidence to confirm that the programme conferred a 'benefit' under Article 1(1)(b) of the SCM Agreement (in other words, that electricity was provided to producers on terms more favourable than those available on the market).[29]

Mavroidis and Sapir argued that the idea of 'good' subsidies included under Article 8 of the SCM Agreement 'must be reinstated', as they believe '[i]t makes no sense to presume that all subsidies

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[22] Luca Rubini, 'State Aid and International Trade Law' in Leigh Hancher and Juan Piernas López (eds), *Research Handbook on European State Aid Law* (Edward Elgar Publishing 2021) 126.

[23] Cima and Esty (n 3) 11-12; Hoekman and Nelson (n 5) 172.

[24] art 5 SCM Agreement.

[25] *General Agreement on Tariffs and Trade* (GATT 1947) (adopted 30 October 1947, entered into force 1 January 1948) 55 UNTS 194.

[26] Article XX of the GATT provides for exceptions to trade policy commitments made in WTO agreements if this is necessary to protect public morals, human, animal or plant life or health, or conserve exhaustible natural resources. It is much less specific than the SCM Agreement; Luca Rubini, '"Ain't Wastin" Time No More: Subsidies for Renewable Energy, the SCM Agreement, Policy Space and Law Reform' (2012) 15(2) *Journal of International Economic Law* 525, 564.

[27] The very first of a series of cases that within the WTO DS system started targeting renewable energy subsidy programs under the SCM Agreement; see Appellate Body Reports, *Canada – Certain Measures Affecting the Renewable Energy Generation Sector – Canada – Measures Relating to the Feed-In Tariff Program* ('*Canada—Renewable Energy/FIT'*), WT/DS412/AB/R and WT/DS426/AB/R and Panel Reports, WT/DS412/R and WT/DS426/R, adopted 24 May 2013; Henok Asmelash, 'The First Ten Years of WTO Jurisprudence on Renewable Energy Support Measures: Has the Dust Settled Yet?' (2022) 21(4) *World Trade Review* 455.

[28] Huaxia Lai, 'The Climate-Trade Conundrum: A Critical Analysis of the WTO's Jurisprudence on Subsidies to Renewable Energy' in Mitsuo Matsushita and Thomas J Schoenbaum (eds), *Emerging Issues in Sustainable Development: International Trade Law and Policy Relating to Natural Resources, Energy, and the Environment* (Springer 2016).

[29] Appellate Body Reports, *Canada—Renewable Energy/FIT* (n 27) paras 5.172, 5.175, 5.234. Trade experts such as Rubini have criticised the AB's decision for conflating the legal determination of whether a measure constitutes a subsidy with its justification. He argues that whether the WTO regulatory framework takes into account the objectives underpinning subsidies is not a matter for dispute settlement bodies to determine, but rather a question to be resolved by WTO Members through negotiation. See Luca Rubini, '"The Good, the Bad, and the Ugly." Lessons on Methodology in Legal Analysis from the Recent WTO Litigation on Renewable Energy Subsidies' (2014) 48(5) *Journal of World Trade* 895, 916-918, 938; Steve Charnovitz and Carolyn Fischer, 'Canada–Renewable Energy: Implications for WTO Law on Green and Not-So-Green Subsidies' (2015) 14(2) *World Trade Review* 177.

have nefarious effects that outweigh whatever good they produce.'[30] In their analysis they pointed out that the EU, too, in a recent submission to the WTO, 'sided decisively with those calling for exemptions to the current SCM Agreement: "Under certain conditions, well-designed subsidies make an important contribution to achieve the climate transition and other environmental goals."[31]

Thus, for the purposes of the discussion on strengthening international subsidy rules while maintaining a focus on climate issues, 'bad' subsidies could be defined as those that harm both trade and the environment (e.g. subsidies to carbon-intensive industries), while 'good' subsidies could be understood as those that are intended to produce beneficial environmental effects, representing a key component of green policy packages aimed at accelerating the transition to a net-zero global economy.[32]

2.2. Transparency

Transparency is one of the main weaknesses of the current WTO subsidy framework. This is partly due to the difficulty many countries face in determining whether a measure falls within the SCM Agreement's definition of a subsidy, and partly due to the limited central oversight of measures adopted at the sub-national level.[33] The absence of sanctions for failing to notify subsidies further undermines compliance with the subsidy notification obligations.[34]

Article 25(2) of the SCM Agreement establishes that 'any subsidy as defined in paragraph 1 of Article 1, which is specific within the meaning of Article 2',[35] as well as any other subsidy which causes increased exports or decreased imports within the meaning of Article XVI of the GATT 1994, must be notified.[36] Information such as the form of the subsidy, the subsidy per unit or the total amount of a subsidy, its purpose and duration, and statistical data to assess its trade effects is to be included in the notification.[37] Nonetheless, while the purpose of Article 25 is to enhance transparency by requiring Members to notify their subsidies, Article 25(7) explicitly states that such notifications do not prejudge the legal status of those measures (see *Brazil – Aircraft* case).[38]

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[30] Petros C Mavroidis and André Sapir, *Key New Factors Likely to Shape the EU's Trade Agenda in the Next Five-Year Term* (Directorate General for External Policies, European Parliament PE 754.448, April 2024) 13.
[31] WTO, General Council, *Reinforcing the Deliberative Function of the WTO to Respond to Global Trade Policy Challenges*, *Communication from the European Union*, WT/GC/W/864, 22 February 2023, para 9; ibid.
[32] Rubini (n 22) 127; Cima and Esty (n 3) 2.
[33] Rubini (n 22) 124; WTO, Committee on Trade and Development, *WTO Technical Assistance Annual Report*, WT/COMTD/W/290 (2023).
[34] Gary N Horlick and Peggy A Clarke, 'Rethinking Subsidy Disciplines for the Future' (2017) 20(3) *Journal of International Economic Law* 673, 696; David Kleimann and others, *Green Industrial Policy: How G20 Members Can Foster Better Practices through Disclosure, Evaluation, and Dialogue* (T20 Policy Brief 2024) 8.
[35] art 25(2) SCM Agreement.
[36] Panel Report, *United States–Subsidies on Upland Cotton (Recourse to Article 21.5 of the DSU by Brazil),* WT/DS267/RW, adopted 20 June 2008; Panel Reports, *India–Measures Concerning Sugar and Sugarcane,* WT/DS579/R, WT/DS580/R, WT/DS581/R, adopted 14 December 2021; Panel Report, *Canada–Measures Affecting the Export of Civilian Aircraft,* WT/DS70/R, adopted 20 August 1999.
[37] art 25(3) SCM Agreement; see also WTO, Committee on Subsidies and Countervailing Measures, *Questionnaire Format for Subsidy Notifications under Article 25 of the Agreement on Subsidies and Countervailing Measures and under Article XVI of GATT 1994*, WTO Doc G/SCM/6/Rev.1; Ronald Steenblik and Juan Simón, *A New Template for Notifying Subsidies to the WTO* (International Institute for Sustainable Development 2010) <https://www.iisd.org/publications/report/new-template-notifying-subsidies-wto>.
[38] Appellate Body Report, *Brazil—Export Financing Programme for Aircraft* (*'Brazil – Aircraft'),* WT/DS46/AB/R, adopted 20 August 1999, para 149.

This lack of incentives underpinning the notification system means that, in practice, WTO Members almost never fully comply with this obligation.[39] As a result, the effectiveness of the mechanism relies on the vigilance of other Members to ensure compliance with Article 25.[40] Specifically, Article 25(8) articulates that '[a]ny Member may, at any time, make a written request for information on the nature and extent of any subsidy granted or maintained by another Member […] or for an explanation of the reasons for which a specific measure has been considered as not subject to the requirement of notification.'[41] Additionally, Article 25(9) mandates that 'Members so requested shall provide such information as quickly as possible.'[42] It also offers a remedy for Members who believe that the requested information has not been adequately supplied, permitting them to 'bring the matter to the attention of the Committee.'[43] Lastly, Article 25(10) offers a mechanism for Members to act if they believe a subsidy has not been duly notified, stating that '[a]ny Member which considers that any measure of another Member having the effects of a subsidy has not been notified in accordance with the provisions of paragraph 1 of Article XVI of GATT 1994 and this Article may bring the matter to the attention of such other Member.'[44] If the subsidy remains not notified following such a warning, the concerned 'Member may itself bring the alleged subsidy in question to the notice of the Committee.'[45] Despite retaining this power, Members have rarely taken such actions.[46] The reason behind this is that governments are hesitant to disclose information that may be self-incriminating or invite reciprocal scrutiny.[47]

A minor incentive was included in the draft of Article 8 of the SCM Agreement, which referred to a Permanent Group of Experts tasked with offering advisory opinions on the compatibility of non-actionable subsidies, including those for environmental purposes. This provision, however, was watered down in the final version to a point where it was never used.[48]

2.3. Remedies

The SCM Agreement provides for two distinct options when prohibited or actionable subsidies are granted. The first mechanism operates on a unilateral basis, allowing WTO Members to adopt CVDs to counteract the adverse effects of subsidised imports on domestic industries. To impose such

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[39] Terry Collins-Williams and Robert Wolfe, 'Transparency as a Trade Policy Tool: The WTO's Cloudy Windows' (2010) 9(4) *World Trade Review* 551; Various proposals have been made, notably by the EU, US, and Japan, to establish rebuttable presumptions of inconsistency for non-notified subsidies, but (so far) none of them have been adopted; Hoekman and Nelson (n 8) 3123-24; see WTO, General Council, *Procedures to Enhance Transparency and Strengthen Notification Requirements Under WTO Agreements*, WTO Doc JOB/GC/204/Rev.3 (27 June 2019).

[40] Rubini (n 22) 124; Vincent Verouden, 'EU State Aid Control: The Quest for Effectiveness' (2015) 14(4) *European State Aid Law Quarterly* 459; Petros C Mavroidis, Patrick A Messerlin and Jasper M Wauters, *The Law and Economics of Contingent Protection in the WTO* (Edward Elgar Publishing 2008) 399.

[41] art 25(8) SCM Agreement.

[42] art 25(9) SCM Agreement.

[43] ibid.

[44] art 25(10) SCM Agreement.

[45] ibid.

[46] Rubini (n 22) 124; Elettra Bargellini, 'How the SCA 2022 Shapes the Effectiveness of the TCA: Lessons from EU State Aid and WTO' (2025) 59(2) *Journal of World Trade* 213, 216.

[47] ibid.

[48] Another way to strengthen transparency would be to rely on data produced by the International Monetary Fund (IMF), World Bank and OECD, as well as independent monitoring platforms like the Global Trade Alert; see e.g., International Monetary Fund, Organization for Economic Cooperation and Development, World Bank, and World Trade Organization, *Subsidies, Trade, and International Cooperation (22* April 2022) http://wto.org/english/news_e/news22_e/igo_22apr22_e.pdf; Jennifer Hillman, Inu Manak and Mario Osorio, *Trade Tools for Climate Action* (Centre on Inclusive Trade and Development, December 2024) https://www.law.georgetown.edu/iiel/wp-content/uploads/sites/8/2025/03/25_CITD_REPORT-FINAL.pdf 16-17 18.

measures, Members must demonstrate the existence of subsidised imports, prove that these imports are causing injury to the domestic industry, and establish a causal link between the subsidy and the injury suffered.

The second mechanism operates on a multilateral basis. When a WTO Member suspects that another Member is granting subsidies that do not comply with the obligations outlined in the SCM Agreement, it can initiate proceedings under the WTO's dispute settlement mechanism (DSM). While CVDs can only be imposed if the prejudice occurs within the market of the importing country, the multilateral DS system can cover all subsidies, regardless of where the trade-distorting effects occur. This mechanism provides a framework for resolving disputes through consultations, mediation, and, if necessary, adjudication through a panel, and the AB.[49] Compliance may be achieved either by withdrawing the subsidy or by eliminating its adverse effects.[50] If a Member fails to comply, the main recourse is trade retaliation. This allows the affected party to temporarily suspend its treaty obligations as a countermeasure to enforce the rules.

Furthermore, private operators directly affected by inter-state disputes are not granted any *locus standi* within the multilateral DSM. As a result, the protection of their rights and interests relies entirely on the actions of individual WTO Members.[51]

Under the SCM Agreement, remedies are only prospective: although both CVDs and DSM addressing adverse effects allow for the consideration of ongoing consequences arising from non-recurring subsidies, neither mechanism permits action for harm already suffered, nor do they provide for the recovery of subsidies that have been previously disbursed. However, this principle is not absolute, as shown in the *Australia – Automotive Leather* case, in which the panel concluded that Article 4(7) of the SCM Agreement mandates a retroactive remedy, obliging the recipient of a one-time prohibited subsidy to repay it to the subsidising Member. The panel reasoned that, without such an interpretation, WTO Members could bypass the disciplines on prohibited subsidies by providing non-recurring subsidies. This ruling was met with substantial criticism from WTO Members due to its retrospective nature and its perceived deviation from the general principle under Article 19(1) of the DSU. To date, no subsequent panel has adopted this approach.[52]

More generally, the SCM Agreement offers only skeletal guidance in Article 4 and Annex I for the scores of possible methodological issues, opening up the possibility of national authorities adopting protectionist devices in CVD cases.[53]

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[49] The current functioning of the WTO's AB faces challenges, as the terms of its Members have ended and vacant positions remain unfilled. In response, a group of 19 (now 27) Members created an alternative temporary mechanism for resolving disputes in the absence of the AB, namely the Multi-Party Interim Appeal Arrangement (MPIA); Multi-Party Interim Appeal Arbitration Arrangement (MPIA) (30 April 2020) WTO Doc JOB/DSB/1/Add.12.

[50] arts 4(7) and 7(8) SCM Agreement.

[51] Jennifer Hillman, *Three Approaches to Fixing the World Trade Organization's Appellate Body: The Good, the Bad and the Ugly?* (Institute of International Economic Law 2018) https://georgetown.app.box.com/s/966hfv0smran4m31biblgfszj42za40b.

[52] Debra P Steger, 'The Subsidies and Countervailing Measures Agreement: Ahead of Its Time or Time for Reform?' (2010) 44(4) *Journal of World Trade* 779; Panel Report, *Australia – Subsidies Provided to Producers and Exporters of Automotive Leather – Recourse to Article 21.5 of the DSU by the United States,* WT/DS126/RW, adopted 11 February 2000.

[53] Horlick and Clarke (n 34).

3. Legal techniques for reform

In the face of these challenges, a critical question arises: how should the international economic system approach these issues?[54] First, it is important to underline that the goals one seeks to achieve are closely linked to the context in which they are implemented. In this regard, the legal dimension of these issues is deeply connected to procedural and institutional aspects. With 166 Members and a high degree of internal diversity, the WTO faces considerable difficulties in advancing complex reforms through full consensus. Should negotiations be launched to amend the SCM Agreement, both the decision to open and to conclude such negotiations would require consensus, and any resulting amendments would only enter into force once accepted by two-thirds of the Members.

Therefore, if an amendment to the SCM Agreement is not considered a politically viable option, at least in the short term, that path may reasonably be set aside in favour of exploring alternative approaches.

Some scholars suggest that a more flexible interpretation of existing rules could offer greater policy space for subsidies. For instance, it has been argued that all environmental subsidies that are not 'specific' – that is, not limited to an enterprise, industry, or region within the jurisdiction of the granting authority, as defined in Article 2 of the SCM Agreement – could be deemed acceptable. Possible examples include subsidies aimed at supporting the production of green technologies or renewable energy, which may be considered non-specific, provided they are not restricted to certain beneficiaries.[55]

However, if the SCM Agreement remains unchanged, this is likely to result in an increasing reliance on DSM to clarify whether and how environmental subsidies could be considered as WTO compatible. In practice, countries adopt policy measures that are subsequently reviewed at the WTO. A notable example is the *Canada–Renewable Energy/FIT* case mentioned above, where the dispute concerned facts that were not foreseen when the agreement was drafted. This approach implies that a significant part of rule development takes place through case-by-case interpretation. In other words, when the legal text remains unchanged, interpretation by adjudicative bodies becomes the primary tool for adaptation.

Another possible path is the conclusion of a plurilateral agreement.[56] One option would be to develop such a model within the WTO; another would be to conclude a standalone agreement outside the WTO framework; a third option would be to negotiate a sectoral agreement on climate change that includes provisions on subsidies alongside other policy measures. The hope is that, in the future, it will evolve into a multilateral agreement.[57]

The WTO structure allows for plurilateral agreements, provided that they are open to accession by any Member, do not harm the interests of other Members, and can ultimately be integrated into

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[54] Bernard Hoekman and Petros C Mavroidis, 'WTO Reform: Back to the Past to Build for the Future' (2021) 12(S3) *Global Policy* 5; Cecilia Malmstrom and others, 'Joint Statement by the United States, European Union and Japan at MC11' (12 December 2017) <http://ustr.gov/about-us/policy-offices/press-office/press-releases/2017/december/joint-statement-united-states>.

[55] See Panel Report, *United States – Subsidies on Upland Cotton,* WT/DS267/R, adopted 21 March 2005, para 7.1143; Hillman, Manak and Osorio (n 48) 17.

[56] Bernard Hoekman and Charles Sabel, 'Plurilateral Cooperation as an Alternative to Trade Agreements: Innovating One Domain at a Time' (2021) 12(S3) *Global Policy* 49; Bernard Hoekman, Petros C Mavroidis and Douglas Nelson, *Noneconomic Objectives, Globalization and Multilateral Trade Cooperation* (CEPR Press 2023).

[57] Zhou and Fang (n 10) 536; Leonardo Borlini, 'The Covid-19 Exogenous Shock and the Crafting of New Multilateral Trade Rules on Subsidies and State Enterprises in the Post-Pandemic World' (2023) 24(S1) *German Law Journal* 72.

the multilateral trading system.[58] This already happened in 1979 where certain countries (mostly developed economies) concluded plurilateral agreements under the GATT, creating an advanced code to regulate subsidies: the Tokyo Round Subsidies Code (Tokyo Code).[59] The Tokyo Code was eventually replaced by the SCM Agreement.

Currently, reaching consensus to integrate a new agreement into the WTO legal framework, even though this option is less ambitious than the previously discarded amendment of the SCM Agreement, also seems unlikely. This could change in the future, particularly in the context of a broader WTO reform. But for now, a standalone agreement that maintains a connection to the WTO while remaining outside its formal legal architecture appears to be the most realistic option to pursue.

This plurilateral agreement should involve the three major players – the US, the EU, and China – in order to effectively attenuate trade tensions. On the one hand, while China's economic system remains difficult to reconcile with existing WTO rules, the country has nonetheless reaffirmed its commitment to multilateralism, most recently through its active engagement at the WTO's 13th Ministerial Conference.[60] On the other hand, the situation in the US is also complex. The Trump administration significantly reduced US involvement in the WTO. Nevertheless, this should not lead the EU to abandon efforts to establish new international rules on subsidies. On the contrary, other WTO Members are likely to expect the EU to show leadership in advancing this reform.[61]

While countries such as Australia, Canada and Japan have been actively participating in discussions on subsidies in the WTO,[62] the majority of developing countries (with the exceptions of India and Brazil) do not even take part in the conversation. Due to their lack of funds to allocate to subsidies, they perceive these issues in a very different way. For instance, in 94% of cases in which China favours a domestic firm, it does so through some form of subsidy. In contrast, in countries with more limited fiscal capacity, such as Argentina or Indonesia, this percentage drops below 40%.[63] This highlights a crucial point regarding asymmetries in the ability to use subsidies, which should be central to the debates in Geneva. In light of this, it is essential to include both developed and developing countries in the negotiations to reform subsidy rules. If developed and high-income developing countries have the fiscal space to subsidise and thereby support key industries, while others lack the resources to do so and risk being left behind in the creation of green industries, this poses a serious challenge not only for global equity but also for climate change goals.[64]

4. Conclusion

This chapter has pointed out that there is an urgency to address the lack of effectiveness of the WTO subsidy control discipline for both trade and climate. Subsidies are happening now, and in the absence of international cooperation on subsidy control, three main risks arise, some of which are

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[58] Takemasa Sekine, 'Possibility of Developing and Expanding the Regulation of Subsidies through Free Trade Agreements (FTAs): Analysis Focusing on a Trend in FTAs Concluded by the EU' (2020) 16(5) *Policy Research Institute, Ministry of Finance, Japan, Public Policy Review* 1.

[59] *Agreement on Interpretation and Application of Articles VI, XVI and XXIII of the General Agreement on Tariffs and Trade* (adopted 12 April 1979, entered into force 1 January 1980) BISD 26S/56.

[60] Mavroidis and Sapir (n 30) 15.

[61] ibid; Petros C Mavroidis, and André Sapir, *China and the WTO, Why Multilateralism Still Matters* (Princeton University Press 2021).

[62] Hoekman and Nelson (n 8) 3124.

[63] Simon J Evenett, *Corporate Subsidies & Global Trade Rules: Findings for Researchers & Officials* (10 March 2025) https://www.econ.uzh.ch/dam/jcr:cdafdf69-e1a1-4405-8430-9628685310e5/S43%20SS%20UZH%20Subsidy%20Measurement%20Session%2010%20March%202025%20Evenett%20GTA.pdf 4.

[64] Cima and Esty (n 3).

already occurring. First, tensions over subsidies are triggering copycat behaviour among countries. [65] Second, in order to counteract the harmful effects of these subsidies, there is an increase in the use of CVDs. Third, the climate objectives that these subsidies aim to achieve could be undermined. For example, subsidies designed to support the transition to a net-zero economy or other environmental goals might be met with retaliatory tariffs or CVDs from other countries. If such actions occur, the cost of achieving a global transition to net-zero emissions could increase, potentially slowing down progress and causing disparities in how quickly different countries can implement necessary changes.[66]

As a result, cooperation on rules and/or techniques for the evaluation (including measurement) of subsidies' effects (positive or negative) and their effectiveness on the environment is necessary. Achieving this depends on the political will of the Members to engage in these reforms. Therefore, Members must understand the negative consequences these issues pose, not just for individual countries, but for the entire global trading system.

[65] There is a 92% chance that when China introduces a subsidy, the EU introduces a subsidy within 12 months; Simon J Evenett and Fernando Martin, *Carbon Copies? Suspicious Patterns of Commercial and Industrial Policy Response by the Behemoths of World Trade* (ZEITGEIST Series, Briefing 40, 31 October 2024).

[66] Anabel González, 'Five Reasons to Fear a Global Subsidy Race and What to Do about It' (WTO Blog, 2023) https://www.wto.org/english/blogs_e/ddg_anabel_gonzalez_e/blog_ag_27jun23_e.htm