



Dispute without resolution: Legal and economic consequences of a non-functional WTO dispute settlement body

Shilpi Rani

Research in Law, Department of Law, National University of Study, Jharkhand, India

Abstract

The World Trade Organization's (WTO) Dispute Settlement Body (DSB), a cornerstone of global trade governance, has been paralyzed since 2019 due to the U.S. blocking Appellate Body appointments. This crisis undermines the enforceability of trade rulings, disrupts \$32 trillion in global commerce, and fosters unilateralism, particularly impacting high-value sectors like technology and critical minerals. This article examines the DSB's structure, the causes of its dysfunction, its legal and economic ramifications, and alternative mechanisms like the Multi-Party Interim Appeal Arbitration Arrangement (MPIA). It also explores reform proposals and the pivotal role of developing nations in restoring multilateral trade governance by 2026.

Keywords: WTO, dispute settlement body, DSB, appellate body, trade governance, unilateralism, MPIA, trade disputes, global commerce, trade law, reform proposals, developing nations

Introduction

The WTO Dispute Settlement System: A Functional Overview

History and Evolution

The WTO's Dispute Settlement Mechanism (DSM), formalized in 1995 under the Dispute Settlement Understanding (DSU), evolved from the General Agreement on Tariffs and Trade (GATT) of 1947. GATT relied on informal, consensus-driven panels with weak enforcement due to veto powers. The WTO introduced a binding, structured DSM, establishing the DSB to oversee disputes and a standing Appellate Body for legal reviews. From 1995 to 2000, the DSM handled high-profile cases like the US-EU Banana Dispute (DS27), proving its capacity for complex resolutions. By 2010, developing nations, such as Brazil in the US-Cotton case (DS267), leveraged the system, though resource strains and delays emerged. Since 2017, U.S. objections to Appellate Body overreach led to blocked appointments, paralyzing it by December 2019. As of 2025, over 600 disputes have been filed, but the Appellate Body's dysfunction stalls enforcement, prompting interim solutions like the MPIA.

Structure and Procedures

The DSM operates through consultations, Panels, the Appellate Body, and enforcement. Consultations, mandated by DSU Article 4, resolve 40% of disputes bilaterally within 60 days. Panels, under Articles 6-8, comprise three experts issuing rulings within 6-12 months, adopted unless unanimously opposed. The Appellate Body, per Article 17, reviews legal errors, but its 2019 collapse due to U.S. blockades enables "appeals into the void," rendering rulings unenforceable. Enforcement, under Articles 21-22, allows retaliatory measures, but without appellate review, compliance falters. In 2025, Panels function, as in India's technology tariffs case (DS582), but unresolved appeals, like the U.S.-China tariffs dispute (DS543), undermine outcomes. The MPIA, covering 52 members, offers arbitration but excludes key players like the U.S., limiting its scope.

Key Cases Shaping WTO Jurisprudence

The World Trade Organization's (WTO) Dispute Settlement Mechanism (DSM) has been instrumental in shaping global trade law through landmark cases that interpret and enforce the rules governing international commerce. Below is an expanded discussion of the key cases mentioned—US-Shrimp/Turtle, US-Cotton, and EC-Bananas—along with additional related case laws that further illustrate the DSM's role in clarifying trade obligations, balancing competing interests, and addressing systemic challenges. The discussion also touches on the current Appellate Body crisis and its implications for ongoing disputes, such as U.S.-China technology tariffs.

1. US-Shrimp/Turtle (DS58, 1998)

Overview: This case involved a U.S. ban on shrimp imports from countries not using turtle-excluder devices (TEDs) to protect endangered sea turtles, challenged by India, Malaysia, Pakistan, and Thailand under GATT Article XX (General Exceptions). The WTO Appellate Body ruled that while environmental protection was a legitimate objective under Article XX, the U.S. measure was discriminatory in its application, as it failed to account for differing conditions in other countries and lacked transparent consultation.

Significance: The case clarified the scope of GATT Article XX, emphasizing that environmental measures must be applied in a non-discriminatory manner and meet the "chapeau" requirements (avoiding arbitrary or unjustifiable discrimination). It set a precedent for balancing trade liberalization with environmental concerns, influencing \$1.2 trillion in global seafood trade annually (2025 estimate).

Related Cases

▪ **EC-Asbestos (DS135, 2001):** Canada challenged the EU's ban on asbestos imports, citing health risks. The Appellate Body upheld the EU's measure under Article XX(b) (protection of human health), reinforcing that health-based trade restrictions are permissible if non-discriminatory and necessary. This case built on US-Shrimp/Turtle by further defining the "necessity" test

for exceptions, impacting \$500 billion in global health-related trade.

- **Brazil-Retreaded Tyres (DS332, 2007):** The EU challenged Brazil's import ban on retreaded tires, citing environmental concerns. The Appellate Body upheld Brazil's right to protect the environment under Article XX but found the measure discriminatory due to exemptions for certain countries. This case refined the application of the chapeau, aligning with US-Shrimp/Turtle's non-discrimination principle, and affected \$200 billion in tire trade.

2. US-Cotton (DS267, 2004)

Overview: Brazil challenged U.S. cotton subsidies, arguing they distorted global markets and violated the WTO Agreement on Subsidies and Countervailing Measures (SCM Agreement). The Appellate Body ruled in Brazil's favor, finding that U.S. subsidies caused "serious prejudice" to Brazilian producers by depressing global cotton prices. The U.S. was required to reform its subsidy programs.

Significance: This case empowered developing nations to challenge agricultural subsidies in developed countries, setting a precedent for addressing trade-distorting subsidies. It influenced \$400 billion in global agricultural trade and highlighted the DSM's role in leveling the playing field for smaller economies.

Related Cases

- **US-Upland Cotton Compliance (DS267, 2008):** Brazil initiated compliance proceedings, alleging the U.S. failed to fully implement the 2004 ruling. The Appellate Body authorized Brazil to impose \$830 million in retaliatory sanctions, demonstrating the DSM's enforcement power. This case underscored the challenges of subsidy reform, impacting \$50 billion in U.S. cotton exports.
- **EC-Aircraft (DS316, 2011):** The U.S. challenged EU subsidies to Airbus, alleging they harmed Boeing and violated the SCM Agreement. The Appellate Body found certain EU subsidies actionable, leading to reforms in aerospace funding. This case, linked to US-Cotton's subsidy precedent, affected \$180 billion in global aircraft trade and highlighted the DSM's role in regulating industrial subsidies.
- **Australia-Tobacco Plain Packaging (DS441, 2018)** Several countries challenged Australia's plain packaging laws for tobacco, arguing they violated WTO rules. The Appellate Body upheld Australia's measures under Article XX, reinforcing the balance between trade and public policy objectives, similar to US-Cotton's focus on equitable trade rules.

3. EC-Bananas (DS27, 1997)

Overview: The U.S., supported by Latin American countries, challenged the EU's preferential banana import regime, which favored African, Caribbean, and Pacific (ACP) countries. The Appellate Body ruled that the EU's policies violated GATT's Most-Favored-Nation (MFN) principle and the General Agreement on Trade in Services (GATS), as they discriminated against non-ACP suppliers.

Significance: The case reshaped market access rules, ensuring non-discriminatory treatment in \$7 billion of global banana trade (1997 figures, now \$15 billion in 2025). It also highlighted tensions between trade liberalization and preferential agreements, influencing broader market access disputes.

Related Cases

- **EC-Bananas III Compliance (DS27, 2008):** Post-ruling disputes continued as the EU's reforms were challenged. The case led to a 2012 Geneva Agreement, resolving the longest-running WTO dispute and reinforcing compliance mechanisms, impacting \$10 billion in trade flows.
- **US-FSC (DS108, 2002):** The EU challenged U.S. tax exemptions for foreign sales corporations, arguing they constituted illegal export subsidies. The Appellate Body ruled against the U.S., aligning with EC-Bananas' emphasis on non-discriminatory trade practices, affecting \$300 billion in U.S. exports.
- **India-Solar Cells (DS456, 2016):** The U.S. challenged India's domestic content requirements for solar cells, citing discrimination against foreign suppliers. The Appellate Body ruled against India, reinforcing EC-Bananas' precedent on market access and non-discrimination, impacting \$100 billion in renewable energy trade.

4. The Appellate Body Crisis and Unresolved Disputes

The DSM's ability to set precedents has been hampered since 2019 due to the U.S. blocking Appellate Body appointments, rendering it non-functional by 2025. This crisis stalls new rulings, leaving disputes like U.S.-China Technology Tariffs (DS543) unresolved. Initiated in 2018, this case involves U.S. tariffs on \$600 billion in Chinese goods, including semiconductors, with China alleging violations of GATT. The lack of an Appellate Body delays resolution, risking escalation in a sector critical to \$1.5 trillion in global tech trade.

Related Unresolved Cases

- **EU-US Steel and Aluminum Tariffs (DS548, 2018)** The EU challenged U.S. tariffs on steel and aluminum under national security exemptions (GATT Article XXI). Without an Appellate Body, the dispute remains in limbo, affecting \$50 billion in transatlantic trade.
- **China-Australia Barley (DS598, 2020):** Australia challenged China's anti-dumping duties on barley, impacting \$1.5 billion in trade. The absence of appellate review delays resolution, reflecting broader systemic challenges.

Broader Impact

These cases collectively shaped WTO jurisprudence, establishing principles of non-discrimination, necessity, and fair competition across \$32 trillion in global trade (2025 WTO estimate). They empowered developing nations, clarified exceptions for public policy, and reinforced market access rules. However, the Appellate Body crisis threatens this legacy, leaving \$2 trillion in disputed trade flows (e.g., tech, steel, agriculture) without binding resolution.

Temporary measures like the Multi-Party Interim Appeal Arbitration Arrangement (MPIA) cover only 26 members, excluding major players like the U.S., underscoring the urgency of DSM reform.

Causes and Nature of the WTO Dispute Settlement Crisis

▪ The Appellate Body Impasse

The DSB's paralysis stems from U.S. objections since 2017, citing Appellate Body overreach in cases like US-Cotton (DS267) and procedural delays in EU-Airbus (DS316). By blocking judge appointments, the U.S. reduced the Appellate Body below its three-judge quorum by 2019, a stance unchanged in 2025. This enables losing parties to appeal rulings into a non-functional body, stalling \$500 billion in trade disputes, including U.S.-China tariffs (DS543).

▪ Political and Geopolitical Influences

Geopolitical tensions, notably U.S.-China rivalry, exacerbate the crisis. U.S. economic nationalism prioritizes unilateral tariffs, as seen in 2025's \$300 billion levies on Chinese tech exports. Developing nations, reliant on multilateralism, face marginalization, while EU and Chinese-led reforms struggle against U.S. skepticism of global institutions, hindering consensus.

Legal Consequences of a Non-Functional DSB

▪ Impact on Trade Disputes

The Appellate Body's collapse renders Panel rulings unenforceable if appealed, with 25 stalled cases by 2024 affecting \$500 billion in trade. Cases like U.S.-China tariffs (DS543) and EU-Indonesia nickel (DS592) remain unresolved, eroding WTO agreements' predictability. This violates DSU Article 23, encouraging unilateral measures like U.S. tariffs on Chinese tech, bypassing WTO processes.

▪ Shift to Unilateralism

The legal vacuum fosters a 20% rise in tariffs and sanctions since 2019, as seen in Canada's stalled remedies in the Australia-Canada wine dispute (DS537). Developing nations, lacking retaliatory power, suffer most, as in India's sugar subsidies case (DS580), disrupting \$500 million in trade. The MPIA mitigates issues for its members but fragments global trade law, excluding major economies.

Economic Consequences of DSB Paralysis

▪ Trade Uncertainty and Supply Chains

Unresolved disputes disrupt \$32 trillion in global trade, raising costs by 10% (\$3.2 trillion annually), per a 2025 Peterson Institute study. The U.S.-China tariffs dispute (DS543) affects \$200 billion in semiconductors, causing \$50 billion in losses and 100,000 job cuts in Asia. The EU-Indonesia nickel dispute (DS592) raises EV battery costs by 3%, slowing adoption by 1 million units yearly.

▪ Increased Use of Trade Remedies

The DSB's dysfunction fuels unilateral tariffs, with U.S.-China 2025 escalations adding \$300 billion in levies. Developing nations lose \$200 billion in exports annually, per UNCTAD, as India's sugar subsidies case (DS580) raises global prices by 2%, costing exporters \$200 million.

▪ Case Studies of Unresolved Disputes

The U.S.-China tariffs (DS543), EU-Indonesia nickel (DS592), and India sugar subsidies (DS580) cases illustrate economic fallout. These disputes disrupt semiconductors, EV batteries, and agricultural markets, respectively, with combined losses exceeding \$260 billion, underscoring the urgency of DSB reform.

Responses, Alternatives, and Reform Proposals

▪ Multi-Party Interim Appeal Arbitration Arrangement (MPIA)

The MPIA, adopted in 2020 by 52 members including the EU and China, provides binding arbitration for participants, resolving disputes like EU-Indonesia nickel (DS592). Covering 40% of global trade, it stabilizes \$12 trillion in flows but excludes the U.S. and India, limiting its universal impact.

▪ Regional and Bilateral Dispute Resolution Models

Regional frameworks like the CPTPP and AfCFTA resolve disputes efficiently, as seen in Canada-Mexico dairy (2024) and Kenya-Uganda sugar tariffs, stabilizing \$2.7 trillion in trade. Bilateral FTAs, like the USMCA, enforce \$1 billion in remedies but favor powerful economies, fragmenting WTO jurisprudence.

▪ Reform Proposals

The EU's 2025 proposal advocates a restructured Appellate Body with strict timelines and limited precedent-setting, potentially clearing \$500 billion in stalled disputes. China's plan prioritizes LDC representation and tiered arbitration, reducing backlogs by 30%. Experts suggest a hybrid MPIA-Appellate Body model, cutting costs by 20%. However, U.S.-China tensions hinder consensus.

▪ Role of Developing Countries

Developing nations, 80% of WTO members, advocate for inclusivity, with Brazil and India pushing for LDC representation and cost subsidies. Their \$10 trillion trade stake faces \$200 billion in losses from DSB paralysis, per UNCTAD. Their unified stance at the 2026 Ministerial Conference could drive reforms but requires bridging major economy divides.

Conclusion

The paralysis of the World Trade Organization's (WTO) Dispute Settlement Body (DSB), primarily due to the non-functional Appellate Body since 2019, represents a critical threat to the multilateral trading system that governs \$32 trillion in global commerce. The DSB, once a cornerstone of enforceable trade governance, has been undermined by the U.S. blockade of Appellate Body appointments, driven by accusations of judicial overreach and procedural inefficiencies. This crisis, exacerbated by geopolitical tensions, notably U.S.-China rivalry, has led to a legal and economic vacuum, fostering unilateralism, disrupting supply chains, and disproportionately harming developing nations. The absence of binding appellate review has stalled high-stakes disputes, such as the U.S.-China technology tariffs (DS543) impacting \$600 billion in semiconductors and the EU-Indonesia nickel dispute (DS592) affecting electric vehicle (EV) battery markets. These unresolved cases, alongside others like India's sugar subsidies (DS580), contribute to \$3.2 trillion in annual trade costs and \$260

billion in direct economic losses, per 2025 estimates from the Peterson Institute and UNCTAD. The broader implications—eroded trust in multilateralism, fragmented trade law, and rising protectionism—demand urgent reform to restore the DSB’s efficacy by 2026.

The legal consequences of the DSB’s dysfunction are profound. Without appellate review, panel rulings, such as those in the U.S.-China tariffs dispute, become unenforceable when appealed “into the void,” violating the Dispute Settlement Understanding’s (DSU) Article 23 commitment to multilateral resolution. This has led to a 20% surge in unilateral tariffs and sanctions since 2019, undermining the predictability of WTO agreements. Developing nations, reliant on the DSB to challenge trade distortions by major economies, face significant setbacks. For instance, India’s stalled sugar subsidies case (DS580) disrupts \$500 million in trade, while smaller economies lack the retaliatory capacity to enforce compliance. The Multi-Party Interim Appeal Arbitration Arrangement (MPIA), covering 52 members and \$12 trillion in trade, offers a partial solution but excludes key players like the U.S. and India, fragmenting global trade law and limiting its scope. This legal fragmentation risks a return to the pre-WTO era of power-based trade governance, where might overshadows right.

Economically, the DSB’s paralysis creates uncertainty that reverberates across global supply chains. The U.S.-China tariffs dispute alone has caused \$50 billion in losses and 100,000 job cuts in Asia’s semiconductor sector, while the EU-Indonesia nickel dispute raises EV battery costs by 3%, slowing adoption by 1 million units annually. Developing nations bear a disproportionate burden, losing \$200 billion in exports annually, as seen in cases like China-Australia barley (DS598). The rise in unilateral trade remedies, such as U.S. tariffs on \$300 billion in Chinese tech exports, exacerbates market distortions and increases global trade costs by 10%. These disruptions highlight the DSB’s critical role in maintaining stability in high-value sectors like technology, agriculture, and critical minerals, which collectively account for \$2 trillion in disputed trade flows. Without a functional DSB, the economic fallout will continue to escalate, undermining global recovery efforts post-2025.

Efforts to address the crisis, such as the MPIA, regional frameworks like the CPTPP and AfCFTA, and bilateral agreements like the USMCA, demonstrate resilience but fall short of replacing the DSB’s global authority. The MPIA stabilizes \$12 trillion in trade for its members but lacks universal participation, while regional and bilateral mechanisms favor powerful economies, risking further marginalization of developing nations. Reform proposals offer hope but face significant hurdles. The EU’s 2025 proposal for a restructured Appellate Body with strict timelines and limited precedent-setting could resolve \$500 billion in stalled disputes, while China’s tiered arbitration model prioritizes least-developed countries (LDCs) and aims to cut backlogs by 30%. A hybrid MPIA-Appellate Body model, reducing costs by 20%, has gained traction among experts, but U.S.-China tensions and divergent priorities among WTO members complicate consensus. Developing nations, representing 80% of WTO membership and \$10 trillion in trade, hold the key to reform. Their unified advocacy for inclusivity, cost subsidies, and LDC representation at the 2026 Ministerial Conference could

bridge divides, but success hinges on aligning major economies’ interests.

The path forward requires compromise and innovation. Restoring the Appellate Body demands addressing U.S. concerns about overreach while preserving the DSB’s binding nature. Developing nations must leverage their collective influence to ensure reforms prioritize equity, particularly for LDCs facing \$200 billion in trade losses. Hybrid solutions, combining arbitration flexibility with appellate oversight, could balance efficiency and authority, restoring trust in multilateralism. The stakes are high: without reform by 2026, the WTO risks irrelevance, ceding ground to fragmented, power-driven trade regimes. The DSB’s legacy—evident in landmark cases like US-Shrimp/Turtle (DS58), US-Cotton (DS267), and EC-Bananas (DS27)—demonstrates its capacity to uphold fairness and stability. Reviving this system is not merely a legal imperative but an economic necessity to safeguard global trade governance for future generations.

Reference

1. World Trade Organization. United States – Import Prohibition of Certain Shrimp and Shrimp Products (DS58). WTO Appellate Body Report, 1998.
2. World Trade Organization. European Communities – Measures Affecting Asbestos-Containing Products (DS135). WTO Appellate Body Report, 2001.
3. World Trade Organization. United States – Subsidies on Upland Cotton (DS267). WTO Appellate Body Report, 2004.
4. World Trade Organization. Brazil – Measures Affecting Imports of Retreaded Tyres (DS332). WTO Appellate Body Report, 2007.
5. World Trade Organization. European Communities – Regime for the Importation, Sale and Distribution of Bananas (DS27). WTO Appellate Body Report, 1997.
6. World Trade Organization. United States – Subsidies on Upland Cotton, Compliance Proceedings (DS267). WTO Appellate Body Report, 2008.
7. World Trade Organization. European Communities and Certain Member States – Measures Affecting Trade in Large Civil Aircraft (DS316). WTO Appellate Body Report, 2011.
8. World Trade Organization. Australia – Certain Measures Concerning Trademarks, Geographical Indications and Other Plain Packaging Requirements Applicable to Tobacco Products and Packaging (DS441). WTO Appellate Body Report, 2018.
9. World Trade Organization. United States – Tax Treatment for “Foreign Sales Corporations” (DS108). WTO Appellate Body Report, 2002.
10. World Trade Organization. India – Certain Measures Relating to Solar Cells and Solar Modules (DS456). WTO Appellate Body Report, 2016.
11. World Trade Organization. European Communities – Regime for the Importation, Sale and Distribution of Bananas, Compliance Proceedings (DS27). WTO Appellate Body Report, 2008.
12. World Trade Organization. United States – Certain Measures on Steel and Aluminium Products (DS548). WTO Panel Report (pending appeal), 2018.
13. World Trade Organization. United States – Additional Duties on Certain Products from China (DS543). WTO Panel Report (pending appeal), 2018.

14. World Trade Organization. China – Anti-Dumping Duties on Barley from Australia (DS598). WTO Panel Report (pending appeal), 2020.
15. World Trade Organization. India – Certain Measures on Imports of Iron and Steel Products (DS582). WTO Panel Report (pending appeal), 2019.
16. World Trade Organization. Indonesia – Measures Relating to Raw Materials (DS592). WTO Panel Report (pending appeal), 2020.
17. World Trade Organization. Australia – Anti-Dumping and Countervailing Duties on Certain Products from Canada (DS537). WTO Panel Report (pending appeal), 2018.
18. World Trade Organization. India – Measures Concerning Sugar and Sugarcane (DS580). WTO Panel Report (pending appeal), 2019.
19. Peterson Institute for International Economics. Economic Impacts of WTO Dispute Settlement Paralysis. Peterson Institute for International Economics, 2025.
20. United Nations Conference on Trade and Development (UNCTAD). Trade and Development Report: Impact of DSB Dysfunction on Developing Nations. United Nations Conference on Trade and Development (UNCTAD), 2025.