Proceeding of ICGPSH 2025 Symposium: International Relations and Global Governance
DOI: 10.54254/2753-7048/2025.BO24531

The Impact of the WTO's Agreement on Subsidies and SCM on China

Jiaqi Xiao

Beijing Wuzi University, Beijing, China
18061010223@163.com

Abstract. The World Trade Organization (WTO)'s Agreement on Subsidies and Countervailing Measures (SCM Agreement) aims to regulate trade-distorting subsidies. Since China acceded to the WTO in 2001, this agreement has significantly shaped China's economic policies. This study examines how the SCM Agreement has influenced China's subsidy practices and the challenges China faces in reconciling its state-led industrial policies with multilateral trade rules. The research uses mixed methods to analyse WTO dispute settlement cases (e.g., solar panels, steel), Chinese policy documents, and economic data from 2001 to 2023. Key findings reveal that systemic tensions persist while the SCM Agreement has compelled China to reduce direct subsidies (e.g., a 40% decline in notified subsidies between 2015 and 2020) and shift toward innovation-driven growth (e.g., annual 25% increases in R&D tax incentives). Ambiguities in defining "non-actionable" subsidies (e.g., green industry support) and geopolitical competition (e.g., U.S. semiconductor CVDS) continue to fuel trade conflicts. The study concludes that China's adaptive strategies—shifting from direct subsidies to indirect fiscal measures—demonstrate both compliance with and resistance to WTO norms, emphasizing the necessity to modernize SCM frameworks to address contemporary industrial policies.

Keywords: WTO SCM Agreement, China's trade policy, subsidy reforms, trade disputes, industrial policy

1. Introduction

The World Trade Organization (WTO)'s Agreement on Subsidies and Countervailing Measures (SCM Agreement) serves as a cornerstone of global trade governance, explicitly prohibiting subsidies that distort free competition by granting "specific advantages" to domestic industries. State-led subsidies have long underpinned rapid industrialization for China, exemplified by initiatives like Made in China 2025 and the Dual Circulation Strategy.Since its accession to the World Trade Organization in 2001, China has encountered more than 50 disputes related to Subsidies and Countervailing Measures, predominantly instigated by the United States and the European Union, focusing on vital industries including renewable energy, semiconductors, and agriculture. These disputes underscore systemic clashes between China's state-capitalist model—prioritizing strategic industrial dominance—and the WTO's market-driven principles.

© 2026 The Authors. This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (https://creativecommons.org/licenses/by/4.0/).

DOI: 10.54254/2753-7048/2025.BO24531

This tension prompts essential inquiries regarding China's capacity to harmonize its developmental objectives with adherence to WTO regulations, especially in the context of intensifying geopolitical rivalries. The SCM Agreement's enforcement mechanisms, including countervailing duties (CVDs) and dispute settlement rulings, have shaped China's economic trajectory. This paper explores how the SCM framework has driven China's policy reforms, the financial and geopolitical compliance challenges, and implications for global trade governance. By analysing legal disputes, subsidy reforms, and contemporary conflicts such as the EU's anti-subsidy investigation into China's electric vehicle sector, this study contributes to debates on the adaptability of WTO rules to state-directed economic models.

2. Legal framework of the SCM agreement and China's early compliance challenges

2.1. Subsidy classification under the SCM agreement and China's early practices

The SCM Agreement establishes a rigorous classification system, categorizing subsidies into prohibited and actionable subsidies. Prohibited subsidies, such as export subsidies outlined in Article 3 of the agreement, directly distort international trade and are strictly banned. Actionable subsidies refer to those causing adverse effects to other members, which may trigger countervailing measures under Article 5 if specific conditions are met.

Certain subsidy practices conflicted with SCM rules during China's early economic development. For instance, to boost exports and support state-owned enterprises (SOEs), China utilized direct cash grants to exporters and preferential loans to SOEs. While these measures accelerated industrial growth, they violated SCM provisions.

A significant instance is the 2012 U.S. countervailing duty (CVD) case concerning Chinese solar photovoltaic modules. The World Trade Organization determined that China's land-use concessions and tax incentives for solar manufacturers represented actionable subsidies. The U.S. imposed $1.5 billion in CVDs, exposing China's reliance on trade-distorting industrial policies and failing to meet SCM transparency requirements. This case underscored China's insufficient integration of international rules into its subsidy policymaking, leading to recurring trade challenges.

2.2. Economic data reflecting early compliance challenges

Table 1: Proportion of manufacturing sector in SCM-Related disputes, 2001–2015

Period	Number of SCM-Related Disputes	Proportion Targeting Manufacturing Sector
2001 - 2015	23	78%

Sources: WTO (2021), Annual Review of Subsidy Notifications; WTO (2016), Trade Policy Review: China.

The data above(Table 1) highlights China's significant compliance challenges in manufacturing subsidies during 2001–2015. Over nearly two decades of external reform, China transitioned from a centralised, planned economy with import substitution policies to a more decentralised, market-driven, and export-oriented regime[1].

Ambiguities in the SCM Agreement's definition of "public interest" subsidies further fueled conflicts. China often framed SOE support as essential for national development, while other members viewed such subsidies as trade-distorting. This interpretive gap complicated China's

DOI: 10.54254/2753-7048/2025.BO24531

defence in disputes and increased trade friction. China must align its subsidy policies more closely with international norms to mitigate conflicts.

3. SCM-driven economic and institutional reforms

3.1. Subsidy policy reforms and their outcomes

In accordance with SCM regulations, China embarked on significant structural reforms following 2015. In 2016, the Ministry of Finance eliminated 226 subsidy programs, thereby expediting compliance efforts [2]. By 2020, China's notified subsidies had decreased by 40% (WTO, 2021)[3].

Concurrently, China reoriented fiscal support toward R&D-intensive sectors, leveraging exemptions under SCM Article 8. Since 2015, R&D tax incentives grew by 25% annually, spurring innovation. By 2022, patent applications surged 62%[4], signaling a shift from quantitative expansion to innovation-driven growth.

3.2. Controversies and limitations of reforms

While China's reforms to align with SCM rules have yielded progress, they have also sparked debates. Critics argue that subsidies have merely shifted forms—from direct grants to equity investments and tax breaks—while retaining market-distorting effects.

The shift from direct financial support to equity infusions and tax incentives, while diminishing explicit price manipulation, may nonetheless disrupt competitive dynamics. Equity investments could provide firms with disproportionate financial backing, enabling them to dominate markets and marginalize competitors. Tax relief might lower production costs, allowing subsidized firms to undercut prices and undermine fair competition. On the surface, these tools appear less disruptive to market pricing signals. However, altering corporate balance sheets and cost structures creates more entrenched "asymmetric competitive advantages." Furthermore, firms buoyed by state equity or tax incentives may overexpand, neglecting core competitiveness and market demand. This could exacerbate overcapacity and market distortions in the steel and renewable energy industries.

The limitations of these reforms lie in their narrow focus on subsidy mechanisms. At the same time, deeper institutional issues remain unaddressed, such as the governance of state-owned enterprises (SOEs) and market access barriers. These structural flaws risk undermining the efficacy of subsidy reforms, preventing them from achieving their intended goals. Consequently, China must deepen institutional reforms, refine market mechanisms, and clarify subsidy boundaries under evolving SCM norms to enhance economic efficiency and global competitiveness.

4. Geopolitical tensions and contemporary compliance challenges

4.1. Impact of the U.S.-China trade war on scrutiny of China's subsidies

The full-scale U.S.-China trade war from 2018 to 2023 intensified U.S. scrutiny of China's subsidy policies. During this period, the U.S. aggressively deployed investigative tools to identify alleged "hidden subsidies" to restrict China's industrial advancement.

In December 2017, the Trump administration's National Security Strategy of the United States[5] explicitly labeled China as a "strategic competitor," a stance reinforced by the U.S. Department of Defense's 2018 National Defense Strategy[6]. The Biden administration's October 2022 National Security Strategy[7] described China as a "competitor with growing capability to reshape the international order."[8] Utilizing domestic legislation, specifically Section 301 of the

DOI: 10.54254/2753-7048/2025.BO24531

Trade Act of 1974, the United States initiated inquiries alleging that China has been offering "covert subsidies" through state-directed financial mechanisms [9]. A prominent target was China's $47 billion National Integrated Circuit Industry Investment Fund, which the U.S. claimed granted unfair advantages to Chinese semiconductor firms in global markets[10].

These measures were not standalone but rather interconnected with specific legislative initiatives such as the CHIPS and Science Act enacted by the Biden administration, which provides subsidies for semiconductor manufacturing in the United States while simultaneously limiting China's access to advanced chip technologies [11]. This legislation exemplifies the weaponization of the SCM framework to suppress China's semiconductor industry under the guise of national security.

A case in point is Huawei. U.S. sanctions, escalating since 2019, included supply chain restrictions based on unsubstantiated allegations that Huawei benefited from Chinese government subsidies, posing a national security threat. These measures severely hampered Huawei's global 5G deployment and disrupted China's broader telecommunications sector.

4.2. Disputes arising from ambiguities in SCM rules

Under the backdrop of contemporary industrial policies, ambiguities in the SCM Agreement have fueled numerous trade conflicts. China's renewable energy subsidies exemplify the limitations of SCM rules in addressing emerging industries.

China's 14th Five-Year Plan pledged substantial support for renewable energy, with investments totaling $260 billion [12]. Export subsidies, defined as governmental payments augmenting specific exports, may improve a nation's export competitiveness and balance of payments. However, the WTO deems such subsidies an "unfair" trade practice, likely triggering retaliatory measures[13]. While China's subsidies aim to accelerate renewable energy development, reduce reliance on fossil fuels, and advance sustainability goals, the EU alleges these measures distort the clean energy market and harm its domestic industries[14].

The EU invokes SCM Article 5 against detrimental subsidies, while China references Article 8's environmental exemptions, arguing its subsidies advance environmental protection and sustainable development.

The dispute stems from the SCM Agreement's ambiguous definition of "green subsidies." As nations emphasize environmental sustainability, renewable energy policies have surged. However, the SCM framework lacks explicit criteria to differentiate valid green incentives from trade-distorting measures, resulting in conflicting interpretations. This ambiguity complicates China's defence against EU allegations. China must demonstrate compliance with SCM rules, while the EU bears the burden of proving adverse impacts—a challenge in the absence of definitive guidelines. The resulting impasse exacerbates tensions, as in ongoing WTO disputes over wind and solar subsidies.

Beyond China-EU relations, the SCM Agreement's vagueness injects uncertainty into the global renewable energy sector. To foster equitable growth, modernizing the SCM framework is imperative. Among them, green subsidies are one area wherein the linkages between trade, sustainability and geopolitics manifest the most. The subsidy race between the Global North and South can be trade-distorting, which has resulted in numerous WTO disputes[15]. Clarifying "green subsidies" definitions and their permissible scope would mitigate trade conflicts and align multilateral rules with 21st-century climate imperatives.

DOI: 10.54254/2753-7048/2025.BO24531

5. Case study: subsidies in the Electric Vehicle (EV) industry

5.1. China's EV subsidy policies driving growth

Robust government subsidies have propelled the rapid rise of China's electric vehicle (EV) industry. From 2010 to 2022, China injected $29 billion[16] into EV manufacturers such as BYD and NIO. These subsidies provided critical funding for R&D, production, and market expansion, enabling China's new energy vehicle (NEV) sector to achieve explosive growth domestically and internationally. For instance, in the first half of 2019, China's NEV exports surged by 99.3% year-on-year to 5,569 units, outpacing the 67% growth in overall vehicle sales[17].

China prioritized infrastructure, establishing over 2.6 million charging stations by 2023, thus mitigating range anxiety and expediting EV adoption. These policies have yielded transformative results. According to the International Energy Agency (IEA), China accounted for 60% [18] of global EV production in 2023. Chinese firms like BYD and NIO are now leading in technological innovation, with breakthroughs such as BYD's Blade Battery and NIO's autonomous driving systems gaining global competitiveness.

Moreover, subsidies have catalyzed growth across the EV supply chain. Advancements in technology and production capacity have rapidly progressed in batteries, motors, and electronic controls. The rise of EVS has also spurred ancillary industries, including charging infrastructure operations and battery recycling, creating a thriving ecosystem.

5.2. EU anti-subsidy investigation and China's response

In 2023, the European Union (EU) launched an anti-subsidy investigation into China's electric vehicle (EV) industry, drawing global attention. The European Commission alleges that Chinese government subsidies for EVS violate Article 5 of the SCM Agreement, claiming they cause adverse effects on the EU's domestic EV sector.

The EU contends that low-interest loans and financial aids are actionable subsidies, allowing Chinese EV firms to undercut EU competitors by 15-30% in the European market [19].

China, however, maintains that its subsidies comply with the SCM framework. It asserts that EV industry support—aimed at advancing green mobility, reducing carbon emissions, and achieving sustainability goals—falls under Article 8's "non-actionable subsidies" for public interest.

From a compliance perspective, China must demonstrate that its subsidies align with SCM rules by providing evidence of their environmental and public welfare objectives and proving they cause no material injury to EU industries. Conversely, the EU bears the burden of substantiating its claims with empirical data. The resolution of this dispute will shape the future of the Chinese and European EV industries and redefine the global EV market landscape amid intensifying green-tech competition. For instance, it may influence the direction of technological R&D in both regions, prompting firms to prioritise breakthroughs in battery innovation or autonomous driving to gain a competitive edge. Additionally, the outcome could trigger supply chain realignments worldwide, as countries and enterprises adjust sourcing strategies to adapt to potential shifts in trade policies and standards.

6. Conclusion

The SCM Agreement has necessitated China's transformation of its subsidy framework, transitioning from explicit trade-distorting practices to support mechanisms centered on innovation.

DOI: 10.54254/2753-7048/2025.BO24531

However, tensions persist due to the agreement's rigid definitions, geopolitical competition, and China's strategic prioritisation of technological self-reliance. While China has adapted by leveraging SCM exemptions for R&D and green industries, its hybrid approach—combining market tools with state influence—challenges the WTO's market-centric ethos.

This study underscores the need for WTO modernization to address regulatory gaps in governing green and digital subsidies. Balancing domestic priorities with multilateral compliance requires greater transparency and participation in shaping global trade norms for China. Future research should explore how emerging economies navigate the evolving SCM landscape, particularly in sectors critical to the green transition. Ultimately, China's SCM dynamics reflect a broader struggle to reconcile state sovereignty with the demands of global economic governance.

References

[1] Huang, J. , Rozelle, S. , & Chang, M. (2001). Agricultural trade policy reforms and rural poverty in China. In China and the WTO: Accession, policy reform, and poverty reduction strategies (pp. 45–78). China Financial & Economic Publishing House.
[2] Ministry of Finance (MOF). (2016). Circular on Abolishing 226 Subsidy Programs. Beijing: Ministry of Finance.
[3] World Trade Organization (WTO). (2021). Subsidy Notifications by China. Geneva: World Trade Organization.
[4] National Bureau of Statistics (NBS). (2022). China Statistical Yearbook. Beijing: China Statistics Press.
[5] The White House. (2017, December). National Security Strategy of the United States of America.
[6] U. S. Department of Defense. (2018, January 22). 2018 National Defense Strategy.
[7] The White House. (2022, October 12). FACT SHEET: The Biden-Harris Administration's National Security Strategy.
[8] Jiang, D. (2025). Prospects and Outlook for U. S. Economic Policy and China-U. S. Economic and Trade Relations. People's Tribune Academic Frontiers, pp. 2-14.
[9] Gong, H. (2019). On the WTO Compliance of Implementing "Countermeasures" in the China-U. S. Trade War: With a Case Study of China's Response to U. S. Section 301 Measures. Economic and Trade Law Review, 1, pp. 32-47.
[10] China Semiconductor Industry Association (CSIA). (2021). China Semiconductor Industry Development Report. Beijing: CSIA.
[11] Peterson Institute for International Economics (PIIE). (2023). US-China Tech Decoupling: Costs and Consequences. Washington, DC: PIIE.
[12] BloombergNEF. (2022). Global Renewable Energy Investment Trends. New York: Bloomberg Finance LP.
[13] Zhang, Y. (2018). International Trade Theory and Practice (p. 141). People's Posts and Telecommunications Press.
[14] Luo, C. (University of International Business and Economics). (2020). Identification and Application Issues of Export Performance-Based Subsidies under the SCM Agreement, https://d. wanfangdata. com. cn/thesis/D02112449
[15] Maanyaa Anand (2025), Linkages between Sustainability, Trade, and Geopolitics: The Green Subsidies Dilemma, Bridging Technology and Development for Sustainable Innovation and Geopolitical Dynamics. Page 303-324
[16] Ministry of Finance (MOF). (2022). EV Industry Subsidy Audit Report. Beijing: Ministry of Finance.
[17] Yuan, B. (2020). Research on the Development of China's New Energy Vehicle Industry in the Post-Subsidy Era. Reg. Econ. Rev. , 3, 58-64.
[18] International Energy Agency (IEA). (2023). Global EV Outlook 2023. Paris: IEA.
[19] European Commission (EC). (2023). Anti-Subsidy Investigation on Chinese Electric Vehicles. Brussels: European Commission.