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Subsidizing Technology Competition: China's Evolving Practices and International Trade Regulation

Cover Page Footnote
Subsidizing Technology Competition: China’s Evolving Practices and International Trade Regulation

Weihuan Zhou† & Mandy Meng Fang††

Abstract: This article contributes to the growing debate about industrial policies and subsidies, the adequacy of the rules of the World Trade Organization (WTO), and future international negotiations of industrial subsidies, using China’s practices in the high-tech sector as an illustration. Through a review of China’s industrial policies in the high-tech sector including the 14th Five-Year Plan (2021-2025), we show China’s entrenched commitments and ambitions towards indigenous innovation, technology independence, and global leadership in key and emerging technologies especially in strategic sectors. However, we challenge the mainstream view that the existing WTO rules are inadequate to deal with Chinese subsidies. Based on a detailed analysis of the general subsidy rules and the relevant China-specific rules, we argue that the current rules create no hurdle to tackling the major types of technology subsidies in China. Any perceived deficiencies are not China-specific and can only be addressed by WTO Members via negotiations. If such negotiations are desirable, then governments should seek to leverage the impacts of the pandemic and the global (ab)use of subsidies to generate the political will needed. Drawing on existing proposals for the reform of WTO subsidy rules, we develop some general principles and approaches to facilitate future negotiations emphasizing the need to focus on targeting trade-distortive subsidies rather than China, to balance between strengthening subsidy rules and preserving policy space, to follow economic guidance and data while accommodating political considerations, and most innovatively, to shift from the ‘one-size-fits-all’ approach to a country-specific approach through a scheduling method whereby an Industrial Subsidy Schedule is created to record policy objectives, subsidy commitments, and exceptions of each nation.


INTRODUCTION

Technological competition is one of the most defining elements in United States-China trade tensions. China is unwaveringly committed to a new growth model based on promoting technological capability and indigenous innovation, especially in strategic sectors. However, the United States has considerable concerns about China’s approaches to technological advancement and the growing challenges that China’s achievements and ambitions pose to United States’ interests and
values.\textsuperscript{1} As a result, the Trump Administration responded with a series of measures including Section 301 tariffs on a massive list of Chinese products,\textsuperscript{2} the ban on the supply of US technology, hardware, and software to China’s tech giant Huawei,\textsuperscript{3} the ‘China Initiative’ to enforce laws against technology theft in all US states, export controls over ‘foundational’ and ‘emerging’ technologies, and restrictions on the funding of joint research and development (R&D) activities with China.\textsuperscript{4} However, China’s reactions have been firmly defensive and proactive making continuous efforts to strengthen, refine, and upgrade policy priorities and strategies in support of technology-based economic development and digital transformation.

The race for global technological supremacy by the world’s two largest trading nations has profound and far-reaching implications for international trade regulation. The two-year-long bilateral trade war, with technological competition being one of the underlying drivers,\textsuperscript{5} has amply demonstrated the United States’

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\textsuperscript{5} See generally MARIANNE SCHNEIDER-PETSINGER ET AL., US–CHINA STRATEGIC COMPETITION: THE QUEST FOR GLOBAL TECHNOLOGICAL LEADERSHIP,
shift in trade policy to unilaterality when tackling China-related problems and the catastrophic damage that shift has inflicted on multilateralism.6 The United States-China Phase One trade deal does not address the systemic issues—particularly China’s industrial policies, subsidies and state-owned enterprises (SOEs)—that are at the core of China’s technological development practices.7 As of this writing, it remains to be seen whether the Biden Administration will take a more moderate and constructive approach towards China and multilateral cooperation under the World Trade Organization (WTO).8

The COVID-19 outbreak has imposed unprecedented pressure on governments to leverage their policy tools to ameliorate the pandemic’s effects on their citizens. In the pursuit of economic nationalism, governments have resorted to a wide spectrum of trade, monetary and fiscal measures—such as export restrictions, stimulus packages and subsidies—while paying little attention to the impact that these measures have on trade partners.9

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For China, technology becomes even more crucial for economic recovery and continuous growth, which requires deploying more resources to promote R&D and build new enabling infrastructure in strategic sectors. These initiatives will strengthen China’s commitment to technological advancement and propel its pursuit towards global leadership in technology and innovation, thereby further intensifying strategic competition between the United States and China.\(^\text{10}\)

Many experts and observers have rightly called upon governments to combat the pandemic through collective action.\(^\text{11}\) However, the pandemic is not the root cause of the US-China economic relations crisis or international trade problems generally. Many fundamental problems predate COVID-19 and will persist after it.\(^\text{12}\) When it comes to technological rivalry, one of United States’ top concerns has been China’s State-led development model and the provision of significant and extensive subsidies along with other forms of support to create national champions in the high-tech sector.\(^\text{13}\) Although subsidies are used widely by governments for various policy goals and constitute an essential policy tool to stimulate economic recovery during the pandemic,\(^\text{14}\) there seems to be a shared concern, as highlighted in a series of US-EU-Japan joint statements about China’s industrial policies and subsidies due to their size, complexity, and growing global

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\(^{10}\) See generally ALEX CAPRI, HINRICH FOUNDATION, STRATEGIC US-CHINA DECOUPLING IN THE TECH SECTOR (2020).


impact. Therefore, it is reasonable to anticipate that such policies and subsidies will remain central to the heightening US-China technology competition and international trade rulemaking.

This article makes several contributions to the ongoing debate about China’s industrial policies and subsidies, the adequacy of existing WTO rules, and future international negotiations of industrial subsidies. Although we use China’s high-tech sector as an illustration, our discussions and observations may be applied to other Chinese industries and subsidies. Likewise, our proposals for future negotiations of subsidy rules are generally applicable at multilateral and sub-multilateral levels.

Section I provides an overview of the evolution of China’s industrial policies in pursuit of technological advancement and innovation with a focus on the current policies and latest major developments. It shows China’s entrenched commitments and growing ambitions towards “indigenous innovation,” technology independence, and global leadership in key and emerging technologies, especially in strategic sectors. This section sets the necessary background for a more detailed analysis of China’s major subsidies in the high-tech sector and the adequacy of existing WTO rules to address them.

Section II expounds the typical types of China’s technology subsidies and the key legal criteria for determining whether such subsidies may be captured under the WTO Agreement on Subsidies and Countervailing Measures (ASCM).

Contrary to the dominant view that ASCM rules have significant

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deficiencies in addressing Chinese subsidies, we argue that these rules do not create any substantive obstacle to tackling the major types of subsidies being applied in China’s high-tech sector. Further, in the few circumstances where difficulties may arise, they occur in relation to all WTO Members and are not China-specific. Arguably, China’s WTO-plus obligations have provided not only additional tools to address the difficulties in tackling Chinese subsidies, but also rules that are broad enough to constrain Chinese government intervention in the economy generally. Therefore, WTO Members should be encouraged to increasingly leverage the existing rules when dealing with Chinese subsidies. Meanwhile, WTO Members should note that the ASCM is not the sole source of discipline to address State-led market distortions in China.

Section III engages in the discussion of reforms by reviewing the major proposals in scholarship and developing some general principles and approaches for future negotiations of industrial subsidies. If reforms to the existing subsidy rules are desirable, they can only be undertaken by WTO Members via negotiations. The widespread use of industrial subsidies during the pandemic created a golden opportunity for governments to rethink the issues of subsidies and generate the political will needed for international cooperation to further develop the subsidy rules. We argue that the negotiations need to (1) focus on addressing trade-distortive subsidies in all economies involved as opposed to being disproportionately focused on China and (2) achieve a balance whereby future subsidy regulations would not unduly constrain governments’ capacities to use subsidies for legitimate regulatory goals. Most importantly, we call for the creation of country-specific commitments and exceptions via a scheduling approach, like what has been applied in relation to tariff concessions and commitments on trade in services. That is, each WTO Member should have an Industrial Subsidy Schedule that: (1) records the sectors in which subsidies exist, or may need to be granted, (2) the policy objective(s) and magnitude of the subsidies, (3) any upper limit and phase-down or phase-out periods of existing subsidies, and (4) any foreseeable exceptions.

18 See WTO, UNDERSTANDING THE WTO 9 (5th ed. 2015) (“The WTO was born out of negotiations, and everything the WTO does is the result of negotiations.”).
This approach would facilitate negotiations as it responds to countries’ different regulatory priorities and economic, political, and social situations and constraints in terms of the use of subsidies, the level of support, etc. especially in the (post-)pandemic era.

Section IV concludes by reiterating the need to rethink the efficacy of existing WTO rules in dealing with Chinese subsidies and to develop new and feasible approaches to the industrial subsidy negotiations.

I. CHINA’S HIGH-TECH POLICIES

This section reviews briefly the evolution of China’s industrial policies in the high-tech sector. There is no internationally agreed definition of ‘high-tech sector’. Like other countries, China developed its own high-tech industries, development goals, supportive policy instruments, and guidance for policy implementation.

‘Technology modernization’ formed an integral element of China’s national policy for economic reform and development as early as 1963, which was subsequently incorporated into the well-known Economic Reform and Opening-Up policy in 1978. In 1995, China developed the ‘technology modernization’ strategy to underscore the vital importance of science and education to economic growth (i.e., Ke Jiao Xing Guo), which marked the beginning of national policies consistently prioritized scientific

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and technological advancement. The Ninth Five Year Plan (1996—2000) set out seven key technological areas that have been refined in subsequent national policies in light of new challenges, opportunities and priorities. The Tenth Five Year Plan (2001—05) expanded the scope of strategic sectors and emphasized technologies of critical importance to national economy and security and the promotion of their commercial application. The National Medium- and Long-Term Science and Technology Development Plan for 2006–20, issued by the State Council in 2005, further refined the strategic sectors and put forward, for the first time, “indigenous innovation” as a national strategy that aimed to develop China’s own intellectual property rights and innovative capability. These policy objectives were subsequently reaffirmed in China’s Eleventh Five Year Plan (2006-10). The Twelfth Five Year Plan (2011–15) launched the innovation-based growth model and upgraded the policy priorities in the high-tech sector with an emphasis on fostering “indigenous innovation” and technological advancement in an updated list of priority sectors.

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technology; biology; high-end equipment manufacturing; new energy; new materials; and new-energy automobile.32

Like many other countries, the Chinese government played a critical role developing its high-tech sector.33 The pursuit of the policy goals envisaged in the Five Year Plans led to the creation of different science and technology programs,34 and supportive measures in various forms like massive investment funds, policy loans, loan guarantees, preferential tax, and government procurement policies, and export promotion. By the end of the Thirteenth Five Year period, China became a global leader in many emerging technologies ranging from high-speed railways and NEVs, to 5G networks and artificial intelligence.35

The COVID-19 outbreak strengthened China’s commitment to technological advancement and innovation as an essential approach to economic recovery and continuous growth. For example, a series of initiatives were rolled out, including the promotion and commercialization of major technology projects to revitalize economic growth, the expansion of financial support for high-tech sectors,36 and most notably, the commitment to build

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33 See generally Michele Di Maio, Industrial Policies in Developing Countries: History and Perspectives, in INDUSTRIAL POLICY AND DEVELOPMENT: THE POLITICAL ECONOMY OF CAPABILITIES ACCUMULATION 108–43 (Mario Cimoli et al. eds., 2009).
34 Key programs at the early stage of development included, for instance, the so-called ‘863’, ‘973’, ‘Spark’ and ‘Torch’ programs. See generally Margaret McCuaig-Johnston & Moxi Zhang, China Embarks on Major Change in Science and Technology (U. of Alta., Occasional Paper Series No. 2, 2015). More recent programs included, for example, the National Natural Science Fund, the Major Science and Technology Projects, the National Key R&D Programs, the Technology Innovation Guidance Fund, and the Bases and Talents Program. These programs are aimed at systematically reshaping the entire national funding system for science, technology and innovation. See 国务院关于印发深化中央财政科技计划（专项、基金等）管理改革方案的通知 [Notice on Deepening the Reform Plan of Central Fiscal Measures on Technology (Funds)] (promulgated by the State Council, Jan. 7, 2015) www.most.gov.cn/tpxw/201501/t20150106_117285.htm.
35 See Zenglein & Holzmann, supra note 29, at 9–10.
new infrastructure (hereinafter New Infrastructure Initiative). The New Infrastructure Initiative originated from the Central Economic Work Conference in December 2018, which endorsed the importance of “promoting the revolution of manufacturing skills and the update of essential tech-supportive equipment, accelerating and expanding the commercialization of 5G, and strengthening artificial intelligence, industrial internet, and internet of things.” The Initiative will play a significant role in China’s ambition to become a superpower in science, technology, and innovation.

The New Infrastructure Initiative is being implemented through a new investment and development model underpinned by diversified investment sources, suggesting a departure from State-led investment in traditional infrastructure. In the short term, however, it is likely that central and local governments and state entities will remain important players in the Initiative. This has become evident in implementation actions adopted at both national and local levels. For example, some major projects at the central level involved China Mobile’s RMB 100 billion investment in 5G, State Grid’s RMB 181 billion investment in ultra-high-voltage power facilities, and China Southern Power Grid’s RMB 25 billion investment in concentrated charging stations in the southern region of China over the coming four years.

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39 See generally REBECCA ARCESATI ET AL., MERCATOR INST. FOR CHINA STUDIES, CHINA’S DIGITAL PLATFORM ECONOMY: ASSESSING DEVELOPMENTS TOWARDS INDUSTRY 4.0 8 (2020).
43 (央企发力万亿新基建 不走“四万亿”老路) [State-Owned Enterprises Force Trillions of New Infrastructure, Not to Follow the “Four Trillion” Old Road], CAIJING.COM.CN (Mar. 21, 2020), http://finance.eastmoney.com/a/202003211426920955.html (China).
Local governments have also swiftly localized the Initiative and developed implementation strategies. Here examples include Beijing’s three-year plan focusing on the construction in six core sectors and 30 key projects; Shanghai’s three-year plan to invest RMB 270 billion in four priority sectors; and Guangdong’s massive construction plan injecting RMB 5.9 trillion in 1,230 projects prioritizing high-speed railway, ultra-high voltage grid, 5G, and new energy. Notably, private companies are playing an increasing role. Some of China’s tech giants, such as Alibaba and Tencent, pledged investments of billions of RMB in cloud infrastructure, artificial intelligence, and other technologies.

On March 11, 2021, China’s National People’s Congress adopted the Fourteenth Five Year Plan (2021–25) and the 2035

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46 (上海市推进新型基础设施建设行动方案 2020-2022 年) [Action Plan for Accelerating the Construction of New Infrastructure in Shanghai (2020-2022)] (promulgated by Shanghai People’s Mun. Gov’t, Apr. 29, 2020) http://stcsm.sh.gov.cn/zwgk/ghjh/20200603/a4c074e101374866a619424aae7a3fbd.html (China). The four priority sectors in Shanghai’s plan are: (1) new internet, (2) new infrastructure, (3) new platforms, and (4) new terminals.


Long-Term Goals. As anticipated, this blueprint emphasizes technology and innovation as a critical element in the pursuit of technological independence and global competitiveness, which in turn serves the overarching goals of modernization and economic development. While the blueprint maintains the list of the strategic industries contemplated in MIC 2025 and the Thirteenth Five Year Plan, it also highlights the vital importance of foundational research in many frontier areas. Those areas include new generations of artificial intelligence, quantum computing, integrated circuits, neuroscience, gene and biotechnology, clinical medicine and health, aerospace, and deep land and deep-sea technology. These policies and objectives will lead to more government support, including the wide spectrum of subsidies mentioned above and discussed in more detail in Section II.

II. INTERNATIONAL REGULATIONS OF SUBSIDIES

Subsidies are one of the most perplexing and controversial areas of international trade regulation. The current WTO rules on subsidies have undergone nearly eight decades of development and remain underdeveloped and problematic according to prevailing views of today. The multilateral negotiations leading to the subsidy rules’ creation and eventually the ASCM’s conclusion in the Uruguay Round, have essentially revolved around a few major competing interests, including on the one hand, protecting the value of tariff concessions and


50 Id. § 3.2, ch. 1.


disciplining trade-distortive subsidies, and on the other hand, the widespread and persistent need to use subsidies. The fundamental challenge has been determining how to strike a balance between the regulation of ‘bad’ subsidies and the preservation of governments’ rights to use ‘good’ subsidies in their pursuit of policy objectives.

This challenge reflects both the standard economics on trade policies and the political bargain in trade negotiations. Trade economists have convincingly shown that subsidies are generally more efficient policy instruments to address domestic externalities or non-trade policy objectives because they target a problem’s source more directly, as compared to tariffs and quotas. This is known as the Specificity or Targeting Rule derived from the well-established Theory of Distortions and Welfare. Accordingly, economists have cautioned against excessive discipline on subsidies that would cause governments to resort to second-best instruments and have instead reiterated the need for international

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rules to distinguish between ‘bad’ and ‘good’ subsidies.\textsuperscript{58} Generally speaking, ‘bad’ subsidies would inflict welfare losses on trading partners and the world economy as a whole, whereas ‘good’ subsidies genuinely serve non-protectionist, trade-unrelated regulatory goals, regardless of their side-effects on trade.\textsuperscript{59}

Although trade negotiators are usually knowledgeable about the above economic principles, they are constrained by internal politics and tend to succumb to the pressures of influential constituents.\textsuperscript{60} Consequently, the WTO subsidy rules are not so much concerned about the welfare effects of subsidies as about the impact on competing producer interests.\textsuperscript{61} The political compromise embodied in the ASCM largely came out of the insistence of the United States on stricter subsidy rules on the one hand, and the resistance of the EU and others (mainly developing countries) to over-regulation and encroachment on policy space on the other hand.\textsuperscript{62} The ASCM reached a middle ground by, \textit{inter alia}, limiting the scope of subsidies and addressing the extraterritorial effects of the covered subsidies.\textsuperscript{63} Only two types – export subsidies and local content subsidies – are prohibited.\textsuperscript{64} Domestic subsidies are generally ‘actionable’ only (as opposed to ‘prohibited’), meaning that Members may take actions to address the adverse effects of these subsidies.\textsuperscript{65} The other important element of this compromise was a category of ‘non-actionable’ subsidies—including certain subsidies for R&D, environmental


\textsuperscript{59} However, whether a subsidy produces net welfare gains is often ambiguous and difficult to assess as governments tend to subsidize for political reasons without regard to the welfare effects of the subsidy. JACKSON, supra note 53, at 281–82.

\textsuperscript{60} This observation essentially stems from Public Choice theory. \textit{See generally} Weihuan Zhou, \textit{In Defence of the WTO: Why Do We Need a Multilateral Trading System?} 47 LEGAL ISSUES ECON. INTEGRATION 1, 9 (2020).

\textsuperscript{61} See, e.g., MAVROIDIS, supra note 54, at 193–94; Sykes, supra note 53, at 501–19.

\textsuperscript{62} See Stewart, supra note 54, at 833–84.

\textsuperscript{63} See ASCM, supra note 17, arts. 1–6.

\textsuperscript{64} \textit{Id.}

\textsuperscript{65} \textit{Id.}
protection, and regional development—which were permitted and exempted from countervailing actions on a provisional basis for five years.\textsuperscript{66} However, this category expired as WTO Members failed to reach a consensus to renew it by December 31, 1999.\textsuperscript{67}

R&D subsidies warrant more observation given their relevance to this article. The Uruguay Round negotiations started with a disagreement between proponents of making R&D subsidies non-actionable (e.g., the EU, Canada, Switzerland, Japan and Nordic Countries) and the United States, which opposed the idea of non-actionability in general and regarded R&D subsidies as being particularly susceptible to abuse.\textsuperscript{68} The US changed its position at a later stage of the negotiations due to a domestic policy shift to promoting subsidization of R&D activities under the Clinton Administration since 1993.\textsuperscript{69} However, this shift did not fundamentally change the overall position of the US, which continued to push for stricter discipline on trade-distortive subsidies including confining the scope and magnitude of R&D subsidies and retaining the flexibility to apply countervailing measures to those beyond the agreed limits.\textsuperscript{70} The final compromise was the incorporation of a carefully-crafted list of conditions on R&D subsidies, the provisional application of non-actionability, and other requirements such as notification.\textsuperscript{71} The inclusion of R&D subsidies in the non-actionable category aligns with economic guidance that subsidies tend to be the optimal means to correct market failures in R&D activities by bringing such activities to the socially optimal level, which in turn generates positive spillovers economy-wide. However, the non-actionability conditions were designed to meet the needs of developed economies, particularly the United States, and did not accommodate the interests of developing economies.\textsuperscript{72} This explains why developing countries opposed the extension of the

\textsuperscript{66} Id. arts. 8, 31.
\textsuperscript{67} WTO, Committee on Subsidies and Countervailing Measures, Minutes of the Special Meeting Held on 20 December 1999, G/SCM/M/22 (Feb. 17, 2000).
\textsuperscript{68} See Stewart, supra note 54, at 904–14.
\textsuperscript{70} Id. at 52–54.
\textsuperscript{71} See ASCM, supra note 17, art. 8.
\textsuperscript{72} See Kleinfeld & Kaye, supra note 69, at 51–52.
non-actionable category unless the conditions could be modified to provide room for them to pursue developmental goals.\textsuperscript{73} The call for improvement of the applicability of non-actionable subsidies, including R&D subsidies, for economic development has continued in the Doha Round negotiations.\textsuperscript{74} The expiry of non-actionable subsidies means that there currently is no distinction between “good” and “bad” subsidies based on policy objectives underlying the grant of a subsidy under the ASCM.\textsuperscript{75}

As noted earlier, there have been growing concerns about the effectiveness of WTO subsidy rules in dealing with Chinese subsidies effectuated by ambitious industrial policies. One of the latest criticisms come from Bown and Hillman, who identified many shortcomings in the ASCM to address Chinese subsidies, including the definition of subsidies, the difficulties of satisfying the relevant evidentiary burden, and lack of notification and retrospective remedies.\textsuperscript{76} But Bown and Hillman’s analysis has two major shortcomings. First, they did not provide a detailed discussion of specific types of Chinese subsidies and the potential issues in applying the existing rules to these subsidies in light of the case law. Second, they did not distinguish between deficiencies specific to China and those generally applicable to all WTO Members. In discussing the existing rules applicability to China’s subsidies in the high-tech sector below, we argue that these rules have provided sufficient flexibility to address these subsidies. Most of the potential challenges in the application of these rules are not China-specific, but applicable to all WTO Members. Therefore, linking these challenges exclusively to China’s subsidies or characterizing them as “China-specific problems” is highly questionable and would not help resolve these problems in future negotiations.

\textsuperscript{73} WTO, Committee on Subsidies and Countervailing Measures, Minutes of the Regular Meeting Held on 1-2 November 1999, WTO Doc. G/SCM/M/24 (Apr. 26, 2000). For a more detailed discussion of the various views, see Sadeq Z. Bigdeli, \textit{Resurrecting the Dead? The Expired Non-Actionable Subsidies and the Lingering Question of \lq\lq Green Space\rq\rq}, 8 \textit{MANCHESTER J. INT’L ECON.} L. 2, 8–9 (2011).

\textsuperscript{74} For a review of the proposals for reforming subsidy rules by WTO Members, see Siqi Li & Xinquan Tu, \textit{Reforming WTO Subsidy Rules: Past Experiences and Prospects}, 54 \textit{J. WORLD TRADE} 853, 854–867 (2020).

\textsuperscript{75} See also WOLFGANG MULLER, WTO \textit{AGREEMENT ON SUBSIDIES AND COUNTERVAILING MEASURES: A COMMENTARY} 7–8 (2017).

\textsuperscript{76} See Bown & Hillman, \textit{supra} note 53, at 567–72.
As noted in Section I, China’s pursuit of technological advancement involved wide-ranging supportive policy instruments including different forms of subsidies. It is both unrealistic and unnecessary to cover all these instruments and subsidies in this article. Instead, we will consider typical and major examples to facilitate a discussion of the efficacy of the existing WTO rules which include not only the general rules contemplated in the ASCM but also the China-specific rules codified in the Protocol on the Accession of China\textsuperscript{77} (hereinafter Accession Protocol) and the Report of the Working Party on the Accession of China\textsuperscript{78} (hereinafter Working Party Report).

A. Definition of Subsidies

The ASCM does not cover all government actions or measures that may have the effect of distorting trade but only a closed list of subsidies.\textsuperscript{79} For a measure to be a covered subsidy, it must constitute a “financial contribution” (or “any form of income or price support”) that is provided by a government, a “public body,” or a “private body entrusted or directed,” to exercise relevant government functions, and confers a “benefit” to the recipient concerned.\textsuperscript{80} Bown and Hillman did not take issue with all these legal elements but focused on the limited scope of covered subsidies and the law on the meaning of “public body.”\textsuperscript{81} For completeness, we will consider each of these elements below.

1. Financial contributions — direct transfer of funds. — Article 1.1(a)(1) of the ASCM encompasses three types of “financial contributions”: (1) direct transfer of funds; (2) foregoing or non-collection of government revenue otherwise due; and (3) provision of goods or services (other than general infrastructure) or purchase of goods. Although the coverage of “financial contributions” was intended to be exhaustive and

\textsuperscript{77} WTO, Protocol on the Accession of the People’s Republic of China, WTO Doc. WT/L/432 (Nov. 23, 2001) [hereinafter Accession Protocol].


\textsuperscript{79} See ASCM, supra note 17, art. 1.

\textsuperscript{80} Id.

\textsuperscript{81} See Bown & Hillman, supra note 53, at 567–72.
arguably to avoid “a purely effect-based concept of subsidies,”\textsuperscript{82} it has been interpreted and applied in a flexible and broad manner. Indeed, in one of the earlier disputes under the ASCM, the Appellate Body observed that “financial contribution” covers “a wide range of transactions” “through which something of economic value is transferred by a government.”\textsuperscript{83} This broad interpretation can apply to Chinese subsidies in the high-tech sector.

“Direct transfer of funds” covers not only measures such as grants, loans, and equity infusion, but also “potential direct transfers of funds or liabilities,” such as loan guarantees.\textsuperscript{84} These measures and their variations have been found to constitute a “financial contribution” in a range of cases. Identified measures include, \textit{inter alia}, grant payments,\textsuperscript{85} non-commercial loans,\textsuperscript{86} debt-for-equity swaps and debt rescheduling by way of interest/debt reductions, deferrals, and forgiveness,\textsuperscript{87} equity infusion,\textsuperscript{88} transfers of equity interests or shares,\textsuperscript{89} and any other forms leading to “an accrual of financial resources” and other

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\textsuperscript{82} Appellate Body Report, \textit{United States – Measures Affecting Trade in Large Civil Aircraft (Second Complaint)}, WTO Doc. WT/DS353/AB/R (adopted Mar. 23, 2012), ¶ 613 [hereinafter \textit{US — Aircraft (2nd complaint)}] (holding that “[s]ubparagraphs (i)-(iv) exhaust the types of government conduct deemed to constitute a financial contribution”). See also Muller, \textit{supra} note 75, at 62, 74; MAVRODIS, \textit{supra} note 54, at 202–03, 215–16.
\textsuperscript{84} See ASCM, \textit{supra} note 17, art. 1.1(a)(1)(i).
\textsuperscript{86} Id.
\textsuperscript{87} Panel Report, \textit{Korea — Measures Affecting Trade in Commercial Vessels}, WT/DS273/R (adopted Apr. 11, 2005), ¶¶ 7.336–7.339, 7.411–7.413. In the panel’s view, while “interest reductions and deferrals are similar to new loans” and “interest/debt forgiveness is comparable to a cash grant”, debt-for-equity swaps are “a combination of equity infusion and debt forgiveness”. See also \textit{US — Aircraft (2nd complaint)}, \textit{supra} note 82, ¶ 615.
\textsuperscript{88} See \textit{US — Aircraft (2nd complaint), \textit{supra} note 82, ¶ 622–24 (involving joint venture arrangements whereby funds were provided by U.S. National Aeronautics & Space Administration and U.S. Department of Defense in exchange for some kind of return, such as scientific and technical information (from Boeing)).
\textsuperscript{89} Panel Report, \textit{European Communities and Certain Member States — Measures Affecting Trade in Large Civil Aircraft}, WTO Doc. WT/DS316/R (adopted June 1, 2011), ¶ 7.1291 [hereinafter \textit{EC — Aircraft}].
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financial claims that improve the financial position of the recipient.\textsuperscript{90}

The sub-category of “potential direct transfers of funds or liabilities” typically involves “a legally binding promise” or “an obligation to make a direct transfer of funds which, \textit{in and of itself}, is claimed and capable of conferring a benefit on the recipient that is separate and independent from the benefit that might be conferred from any future transfer of funds.”\textsuperscript{91} However, it does not cover measures that merely create the possibility of transfer of funds when pre-defined conditions have been fulfilled.\textsuperscript{92} This suggests that this type of government actions must involve an undertaking to transfer funds upon the fulfillment of pre-defined conditions.

Finally, it is worth noting that the term “direct” does not require a transfer of funds to be made by a government \textit{directly} but merely that a government, through its practice, has been involved in such a transfer, according to the Appellate Body in \textit{US – Carbon Steel (India)}.\textsuperscript{93} There, the Appellate Body rejected India’s claim that the provision of a loan through an affiliated entity to a public body was not a “direct” transfer of funds merely due to the involvement of an intermediary or intervening agency.\textsuperscript{94} It also clarified that the funds transferred do not have to be “drawn from government resources or result in a charge on the public account.”\textsuperscript{95}

Contrary to widespread concerns about the potential difficulties in identifying Chinese subsidies on the basis that they may be provided in a sophisticated and opaque manner,\textsuperscript{96} some of


\textsuperscript{91} See \textit{EC — Aircraft}, supra note 89, ¶¶ 7.302, 7.304, 7.733, 7.1495 (emphasis in original).


\textsuperscript{94} Id. ¶ 4.93–4.94.

\textsuperscript{95} Id. ¶ 4.96.

\textsuperscript{96} See Bown & Hillman, supra note 53, at 563–70. Also see supra note 15; Mark Wu, “The “China, Inc.” Challenge to Global Trade Governance”, (2016)57(2) HARV. INT’L L.J. 261, 269–84.
the major subsidies in the technology sector fall squarely within the category of direct transfer of funds. For example, to boost the growth of the NEVs industry, both central and local governments have provided a range of financial support, mainly in the form of direct payments to NEV manufacturers (including R&D grants in the sector) and consumers, and loans from State banks. Between 2009 and 2017, the total support in the industry was estimated to be RMB 390 billion ($58.3 billion). While the forms and amounts of these subsidies have been reviewed and adjusted regularly in response to changing needs, the sector’s overall support is likely to grow.


99 See, e.g.,《关于开展私人购买新能源汽车补贴试点的通知》[The Notice on Launching Pilot Subsidies for Private Purchases of New Energy Vehicles], (issued by the Ministry of Finance of China, May 31, 2010), www.mof.gov.cn/gp/xsgkm/jjss/201006/t20100602_2499641.html (China). For instance, subsidies for plug-in hybrid vehicles and pure electric vehicles can be RMB 50,000 and RMB 60,000 per car.


102 《关于完善新能源汽车推广应用财政补贴政策的通知》[Notice on Fiscal Policies for the Popularization and the Application of New Energy Vehicles] (issued by the Ministry of Finance of China, Apr. 23, 2020), www.gov.cn/zhengce/content/2020-04/23/content_5505502.htm (China). Notably, the detrimental impacts of US – China trade war on China’s NEV industry, together with the outbreak of COVID-19, have propelled Chinese central government to extend some of the existing NEV subsidies, which
Another longstanding example is the massive industrial investment funds that the Chinese government directed competent national authorities and local governments to establish for eligible enterprises in priority sectors since the 1980s. Over time, these funds have targeted start-ups or technology-oriented small and medium sized entities to promote indigenous innovation, as well as the creation of national champions. By the end of 2013, 343 such funds with a total value of around RMB 270 billion had been created. The scale and amount of the funds continued to otherwise would lapse in the end of 2020 to the end of 2022. See Jianhua Zhao, Why does China Extend New Energy Vehicle Subsidies?, PEOPLE.CN (Apr. 26, 2020), http://auto.people.com.cn/n1/2020/0426/c1005-31688105.html.


grow explosively since 2014, especially after the launch of MIC 2025. Major examples include the National Integrated Circuit Investment Fund (2014) (IC Fund), the Advanced Manufacturing Industry Investment Fund (2016), and more recently the National Manufacturing Industry Transformation and Upgrading Fund (2019). All of these funds were created under the leadership of the relevant central authorities, particularly the Ministry of Finance (MOF) and the Ministry of Industry and Information Technology (MIIT), supported by State banks and followed by the creation of similar funds by local governments. The funds were provided to select enterprises in the relevant sectors mainly by way of equity injection, loans, and loan guarantees. The IC Fund, for example, was initially supported by a State-directed loan of RMB 30 billion from the China Development Bank in addition to equity infusion from the MOF.

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and other government entities.\footnote{See Press Release, China Dev. Bank Capital, The Establishment of the National Integrated Circuit Investment Fund and Its Management Company (www.cdb-capital.com/GKJR/dynamic/1708111400611?pid=x=1); For the shareholding of the Fund, see, Li Na, The Second Tranche of the National Big Fund was Established and Where RMB 200 Billion will Go, YICAI (Oct. 28, 2019), www.yicai.com/news/100380063.html.} Between 2014 and 2018, the first tranche of the fund invested over RMB 100 billion in 74 projects and 52 IC companies, with nearly 80 percent of the investment coming from equity injection,\footnote{See OECD Semiconductor Report, supra note 105, at 51–54.} and contributed significantly to creating a handful of the world’s leading IC firms.\footnote{Focus on the Outline of the Second Tranche of the Big Fund and Possible Priority Areas for Investment, YICAI (Mar. 19, 2020, 8:40 PM), www.yicai.com/news/100556598.html; Sarah Dai, China completes second round of US$29 billion Big Fund aimed at investing in domestic chip industry, SOUTH CHINA MORNING POST (July 26, 2019, 12:46 PM), www.scmp.com/tech/science-research/article/3020172/china-said-complete-second-round-us29-billion-fund-will.} The fund recently completed its second tranche capital raising of over RMB 200 billion, which will focus on investing in home-grown chips for advanced materials and equipment, and emerging technology infrastructure like 5G.\footnote{See ASCM, supra note 17, art. 3.} Given the broad scope of “direct transfer of funds,” there is little doubt that these funds constitute “financial contributions” under Article 1.1(a)(1)(i) of the ASCM.

Notably, some of the subsidies in the form of “direct transfer of funds” may constitute export subsidies, one of the two types of prohibited subsidies.\footnote{See ASCM, supra note 17, art. 3.} China’s use of export credits to promote exports of high-tech goods offers a good illustration. In practice, such measures have been employed by most major economies—through financial support like loans—to assist domestic exporters selling goods and services to foreign buyers.\footnote{See Kristen Hopewell, Power transitions and global trade governance: The impact of a rising China on the export credit regime, 13 REGUL. & GOVERNANCE 1, 4–5 (2019); James Nedumpara & Pankhuri Sharma, Treatment of Export Credits in WTO Dispute Settlement and Domestic CVD Proceedings, 1, 7–9 (Ctr. for WTO Stud., Working Paper No. CWS/WP/200/7, Mar. 2013), http://wtocentre.iift.ac.in/workingpaper/Export%20Credit%20CWS%20WP.pdf.} In China, export credit policies have become a major form of support for high-tech firms and exports since the early 2000s, including loan support for the export of high-tech products.
contemplated in the Catalogue of High and New Tech Products and the Catalogue of Chinese New and High-Tech Export Products,\(^{118}\) and preferential loans, buyer credit, or export credit insurance, for specific products or projects such as telecommunications,\(^{119}\) and NEVs.\(^{120}\) Such measures are widespread at both central and local levels,\(^{121}\) making China one of the world’s largest providers of export credits.\(^{122}\) These measures obviously constitute a “financial contribution” and fall within the ambit of items (j) and (k) of ASCM’s illustrative list of export subsidies, although the extent to which the ASCM leaves

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\(^{121}\) For a recent example of local export credit policy, see Shanghai Federation of Industry and Commerce Signed Strategic Cooperation with Shanghai Exim Bank and Shanghai Sinosure, CHINA BUSINESS TIMES (Apr. 26, 2021), http://www.acfic.org.cn/gd_gsl_362/shshflgd/202104/20210426_256972.html.

space for using export credit remains controversial. However, to the extent that such policy space may cause insufficiencies in the current subsidy rules in dealing with trade-distortive export credit policies, the insufficiencies apply to all WTO Members.

2. Financial contributions — foregoing or non-collection of government revenue otherwise due — A financial contribution may be granted if a government foregoes or does not collect “revenue that is otherwise due.” To date, the WTO case law has predominantly concentrated on tax revenues. A major case on this issue is US – FSC which concerned the exemption of a foreign sales corporation’s (FSC) export-related foreign-source income from US income tax. The Appellate Body observed that a determination of “otherwise due” requires a comparison between “the revenues due under the contested measure and revenues that would be due in some other situation” based on “the rules of taxation of each Member”. The Appellate Body upheld the panel’s finding that the US government had not collected the revenue that it was entitled to collect under its own general rules of taxation. In the compliance proceedings of this dispute, the Appellate Body further clarified that the fact that “a government does not raise revenue which it could have raised” is not, in itself, 

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123 For instance, one major controversy concerns the exemption of export credits permitted under “an international undertaking on official export credits” from being treated as an export subsidy under item (k). In practice, this exemption points to the OECD Arrangement on Officially Supported Export Credits. However, it remains debatable as to whether WTO Members may still take countervailing actions against such export credits; See generally Dominic Coppens, How Much Credit for Export Credit Support under the SCM Agreement?, 12 INT’L ECON. L.J. 63, 63 (2009); Nedumpara and Sharma, supra note 117; A related, ongoing debate has been whether China’s export credits comply with the conditions contemplated in the OECD Arrangement. This would require a separate and detailed study on the specific Chinese measures, which seems lacking in the existing literature and falls outside of the scope of this article; See e.g., EXP.-IMP. BANK OF THE U.S., supra note 122, at 40–44 (the report identified major Chinese export credit measures during 2019 without assessing their compliance with the OECD Arrangement); Gregory Shaffer et al., Can Informal Law Discipline Subsidies?, 18 J. INT’L ECON. LAW 711, 725-729 (2015) (observing that the OECD Arrangement has served as multilateral discipline of export credit policies and may be effective in constraining the practices of all countries including China).

124 See ASCM, supra note 17, art. 1.1(a)(1)(ii).


126 Id. ¶ 90.

127 US — FSC, supra note 125, at ¶¶ 7, 95.
conclusive as to whether the revenue foregone is “otherwise due.” The appropriate benchmark for comparison must be identified and examined based on “the fiscal treatment of the relevant income for taxpayers in comparable situations.” Accordingly, the Appellate Body found that while foreign-source income of US citizens and residents was generally taxable, the contested measure exempted certain foreign-source income from tax amounting to foregoing revenue otherwise due. This legal test was refined in US – Aircraft (2nd complaint) where the Appellate Body explained that the comparison should involve “the tax treatment that applies to the alleged subsidy recipients and the tax treatment of comparable income of comparably situated taxpayers” in the jurisdiction concerned. The Appellate Body upheld the panel’s affirmative finding of foregoing of revenue otherwise due on the ground that the Washington State Business and Occupation Tax regime applied a lower tax rate to commercial aircraft and component manufacturers compared to the rates applicable to general manufacturing, wholesaling, and retailing activities in the state. Finally, if a government does not collect the tax revenue in full at the time that it normally would under the comparable benchmark, that would also amount to foregoing of revenue otherwise due as the government effectively gives up the entitlement to “enjoy the cash available to it and earn interest on it.”

Preferential tax treatment is a well-known source of government support in China’s high-tech sector. For example, China’s new Corporate Income Tax Law 2008 provides for a reduced tax rate of 15 percent (as opposed to the standard rate of 25 percent) for High-New Technology Enterprises (HNTEs), and

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129 Id. ¶¶ 90–92.  
130 Id. ¶¶ 98–105.  
132 Id. ¶¶ 816–31.  
permissible reductions of costs and expenses for the R&D of new technology, products, and design more generally. To qualify as an HNTE, an entity must undertake R&D in one of the priority high-tech sectors and satisfy a list of conditions including ownership of the proprietary IP rights of the core technology used in its production of goods or services. The law also directs local governments to provide other forms of tax preferences for newly-established HNTEs in designated regions. The Shanghai Pudong New Zone, for instance, provides for a tax exemption for the first two years of operation of HNTEs and a reduced tax rate of 12.5 percent for the following three years. More recently, similar tax incentives were extended to the services sector to stimulate investment in so-called Advanced Technology Services.

136 These sectors are consistent with the national policy plans discussed in Section II and may continue to change accordingly. The most updated criteria can be found in Gaoxin Jishu Qiye Rending Guanli Banfa (高新技术企业认定管理办法) [The Measures on the Administration of the Qualification of High-New Technology Enterprises], (issued by the Ministry of Science and Technology, the Ministry of Finance and the State Taxation Administration on Jan. 29, 2016), www.most.gov.cn/tztg/201602/t20160204_123994.htm. Gaoxin Jishu Qiye Rending Guanli Gongzuo Zhiyin (高新技术企业认定管理工作指引) [The Guidance on the Administration of the Qualification of High-New Technology Enterprises], (issued by the Ministry of Science and Technology, the Ministry of Finance and the State Taxation Administration June 22, 2016), www.chinatax.gov.cn/n810341/n810755/c2200380/content.html.
138 Corporate Income Tax Law on People’s Republic of China, supra note 135, art. 57. For clarifications made by the State Taxation Administration on the application of this provision, visit www.chinatax.gov.cn/chinatax/n810341/n810765/n812176/n812748/c1193020/content.html. The designated regions include four Special Economic Zones in Shenzhen, Zhuhai, Shantou, Xiamen and Hainan, and the Shanghai Pudong New Zone.
Enterprises (ATSEs). Qualif"ed services include, inter alia, software development and technical support, IC design and test platform, information system and maintenance, business operation, and data-related services. Like HNTEs, ATSEs are eligible for a reduced tax rate of 15 percent and reductions of expenses associated with the education and training of employees. Applying the WTO case law above, these tax incentives may be easily found to constitute “foregoing of government revenue otherwise due.” The benchmark for comparison would be the Chinese tax rules (e.g., corporate income tax rate and deductions) applicable to other entities in the same or comparable industries. Such industries may include those which produce the same or similar goods or services or more broadly, the entire manufacturing sector. To the extent that the reduced tax rate and favorable tax reductions are not applicable to the

140 Guanyu Zai Fuwu Maoyi Chuangxin Shidian Diqu Tuiguang Jishu Xianjin Xing Fuwu Qiye Suodeshui Youhui Zhengce De Tongzhi (关于在服务贸易创新发展试点地区推广技术先进服务企业所得税优惠政策的通知) [Notice on the Application of Corporate Income Tax Incentives for Advanced Technology Service Enterprises in Pilot Areas for Innovative Development of Service Trade] (issued by the Ministry of Finance, the State Taxation Administration, the Ministry of Commerce, the Ministry of Science and Technology and the National Development and Reform Commission Nov. 10, 2016), www.chinatax.gov.cn/n810341/n810755/c2399212/content.html. The initial 15 pilot areas include Tianjin, Shanghai, Shenzhen, Hangzhou, Hainan, Wuhan, Guangzhou, Chengdu, Suzhou, Weihai, Harbin New Zone, Jiangbei New Zone, Liangjiang New Zone and Guian New Zone. Guanyu Jiang Jishu Xianjin Xing Fuwu Qiye Suodeshui Zhengce Tuiguang Zhi Quangguo Shishi De Tongzhi (关于将技术先进服务企业所得税政策推广至全国实施的通知) [The Notice on the Nationwide Application of Corporate Income Tax Incentives for Advanced Technology Service Enterprises] (issued by the Ministry of Finance, the State Taxation Administration, the Ministry of Commerce, the Ministry of Science and Technology and the National Development and Reform Commission Nov. 2, 2017), www.chinatax.gov.cn/n810341/n810755/c2908867/content.html.


144 See US — Aircraft (2nd complaint), supra note 82, ¶¶ 816–31.
comparably situated entities, the tax incentives for HNTEs and ATSEs constitute “financial contributions.” This analysis applies to other tax preferences for the selected high-tech sectors.

In addition, it is worth noting that duty and tax exemptions or remissions for exported products are excluded from being treated as a financial contribution in the form of foregoing of government revenue otherwise due.145 Therefore, value-added tax (VAT) rebates are generally permitted under ASCM—as long as the level of rebates does not go beyond the corresponding VAT rates—and have been widely used by WTO Members.146 This exception does not apply to import duty exemptions.147 However, a duty drawback scheme—that is, an import duty remission for inputs imported for the production of goods destined for export—falls within the exception provided that the remission does not exceed the import duty actually levied.148 VAT rebates and duty drawbacks have been a major component of China’s export promotion policies.149 Recently, China made some adjustments to its VAT rebate scheme by increasing the rebate rates for eligible exports in general150 and allowing high-tech firms to use excess input VAT credits.151 Since the rebate rates are not in excess of the

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145 ASCM, supra note 17, art. 1.1(a)(i)(ii) n.1.
151 Guanyu 2018 Nian Tuihuan Bufen Hangye Zengzhii Shui Liu Di Shuie Youguan Shuishou Zhengce De Tongzhi (关于年退换部分行业增值税留抵税额有关税收政策的通知) [Notice on Refunds to Excess VAT Credits in Certain Industries in 2018], (issued by Ministry of Finance and State Taxation Administration June 27, 2018),
current VAT rate (13 percent), the Chinese VAT scheme remains immune from the subsidy rules. Nonetheless, it should be noted that such policies are subject to the WTO non-discrimination rules (e.g., GATT Articles I and III). In *China – Value-Added Tax on Integrated Circuits*, for example, China had to cease its discriminatory application of VAT rebates for domestic enterprises in the software and IC industry, allegedly affecting around $2 billion worth of US exports to China. Thus, while the ASCM largely leaves out VAT rebate policies from its coverage, there are other rules that may be applied to restrain the use of such policies. In this regard, the WTO dispute settlement mechanism has proved effective in restraining China’s use of subsidies in the high-tech sector and hence should continue to be used for that purpose. To the extent that VAT rebates may distort trade and hurt trading partners, it is for WTO Members to decide whether more discipline would be desirable via negotiations. The current lack of discipline on VAT rebates under the ASCM was agreed on by WTO Members and does not cause a deficiency problem specific to China.

3. **Provision of goods or services (other than general infrastructure) or purchase of goods** — The third category of “financial contributions” concerns in-kind contributions in two forms: (1) the provision of goods or services to, and (2) the purchase of goods from, an enterprise by governments. While the former may “lower artificially the cost of producing a product by providing . . . inputs having a financial value”, the latter may “increase artificially the revenues gained from selling the product.” Goods or services may be provided through the grant of relevant rights leading to the use or enjoyment of the goods or services. 

www.chinatax.gov.cn/n810341/n810755/c3556358/content.html (The Notice provided that the ten strategic sectors identified in the MIC 2025 should be prioritized for the refund of excess VAT credits).

152 *Id.*


154 *Id.*

155 See ASCM, supra note 17, art. 1.1(a)(1)(iii).

156 See US — Soft Lumber IV, supra note 83, ¶ 53.
services. For example, in *US – Softwood Lumber IV*, the Appellate Body found that Canada’s provincial stumpage arrangements amounted to a provision of goods by giving the eligible enterprises the right to cut standing timber and enjoy exclusive rights over the timber harvested.\(^{157}\) It ruled that the term “provide” requires “a reasonably proximate relationship between the action of the government . . . and the use or enjoyment of the good or service by the recipient”, and also the government to “have some control over the availability of” the thing being provided.\(^{158}\) Applying this reasoning, in *US – Carbon Steel (India)*, the Appellate Body held that the grant of mining rights for iron ore and coal by the Indian government had a “reasonably proximate relationship” with “the use or enjoyment of the minerals by the beneficiaries of those rights.”\(^{159}\) In *US – Aircraft (2nd complaint)*, the Appellate Body ruled that the provision of goods or services may be “done gratuitously or in exchange for consideration,” and hence captured the provision of access to NASA/USDOD facilities, equipment, and employees in exchange for scientific and technical information produced by Boeing.\(^{160}\)

The provision of goods or services in the form of “general infrastructure” is explicitly excluded from the coverage of subparagraph (iii). Thus, a distinction must be made between “infrastructure of a general nature” and other infrastructure.\(^{161}\) In *EC – Aircraft*, the panel observed that “general infrastructure” refers to “infrastructure that is not provided to or for the advantage of only a single entity or limited group of entities, but rather is available to all or nearly all entities.”\(^{162}\) Therefore, even the provision of railroads or electrical distribution systems may fall within the ambit of subparagraph (iii) if they are made available only to a limited group of entities.\(^{163}\) Such limitations on access to or use of the infrastructure may arise in law—e.g., where the infrastructure is created for certain entities particular needs—or in effect—e.g., where although an explicit limitation is absent, only

\(^{157}\) *Id.* ¶¶ 68–76.

\(^{158}\) *Id.* ¶ 71.

\(^{159}\) See *US – Carbon Steel (India)*, *supra* note 93, ¶¶ 4.60–4.74.

\(^{160}\) See *US – Aircraft (2nd complaint)*, *supra* note 82, ¶¶ 616, 623–24.

\(^{161}\) See *US – Soft Lumber IV*, *supra* note 83, ¶ 60.

\(^{162}\) See *EC – Aircraft*, *supra* note 89, ¶ 7.1036.

\(^{163}\) *Id.* ¶ 7.1039.
certain entities have access to the infrastructure. Based on these observations, the panel found sufficient evidence to show that the facilities involved were created for use by Airbus although they were also intended to serve certain public policy goals and may be open for public use in the future.

The provision of production inputs, particularly land and electricity, at preferential rates has been prevalent in the Chinese high-tech sector. For example, in order to attract the world’s leading tech firms to establish research centres in the Guangxi Zhuang Autonomous Region, the local government currently provides land use right for free for the first three years and at half price for another two years. Similarly, to accelerate the growth of the Linyi High-Tech Zone in Shandong province, the local government offers a 15% discount of land use fees, preferential access to electricity, water, and other essential resources and facilities, amongst a variety of other supportive policies. In Hubei province, high-tech companies in the Guanggu Future Tech-City are entitled to discounted electricity rates leading to an annual cost saving of approximately RMB 150 million. The Guizhou provincial government recently reduced the electricity rate to RMB 0.35/Kilowatt hour for big data companies in Guian New Zone and for all 5G base stations in the region (in light of the New Infrastructure Initiative discussed in Section II) while the standard rate for industrial use is between RMB 0.48-0.64/Kilowatt hour.

164 Id. ¶ 7.1043.
165 Id. ¶¶ 7.1080–1084.
166 See, e.g., Mandy Meng Fang, A Crisis or An Opportunity? The Trade War between the US and China in the Solar PV Sector, 54 J. OF WORLD TRADE 103 (2020).
170 It is reported that Huawei, Apple and Tencent will establish their big data centres in Guian New Zone as planned. See New Infrastructure Brings New Development Opportunities for Big Data Industry in Guizhou, PEOPLE’S DAILY (Apr. 22, 2020),
There is little doubt that these measures are input subsidies in the form of provision of goods or services (i.e. electricity distribution and water allocation). Although these subsidies involve land and electricity generation and distribution, only selected industries, projects or companies are eligible for preferential access and discounted rates.\textsuperscript{171}

Another major form of input subsidies is the provision of input materials, such as steel, aluminum, and a range of raw materials and rare earths (e.g. bauxite, iron ores, coking coal) that are essential for the high-tech sector.\textsuperscript{172} The key concern here is related to the significant market distortions in these upstream industries which have long been subject to industrial policies and dominated by SOEs.\textsuperscript{173} However, as will be discussed in the subsections below, this concern is not so much about whether the provision of input materials constitutes a type of “financial contributions” but about (1) whether the input suppliers are “public bodies” and (2) whether these inputs are supplied at less than adequate remuneration so that a benefit is conferred on the downstream users in the high-tech sector. In practice, energy and

\textsuperscript{171} See Jin et al. supra note 169; \textit{New Infrastructure Brings New Development Opportunities for Big Data Industry in Guizhou}, supra note 170; 广西壮族自治区人民政府关于实施创新驱动发展战略的决定 [Decision on Implementing the Plan of Innovation Driven Development]; 临沂高新技术产业开发区招商引资的有关规定 [Regulations on the Business and Investment Invitation in Linyi High-Tech Industrial Development Zone]; \textit{Guizhou Autonomous Prefecture Issues Policy to Reduce the Cost of Electricity Generation for 5G Industry and Promote Industrial Development}, supra note 170.


\textsuperscript{173} OECD Aluminium Report, supra note 172; MORRISON & TANG, supra note 172, at 1–4.
material input subsidies have been some of the most frequent targets in countervailing actions against China.\textsuperscript{174} The other category of in-kind contributions under Article 1.1(a)(1)(iii) of the ASCM concerns governments’ purchase of goods. The case law has clarified that such purchases are usually for consideration\textsuperscript{175} and may involve a government acquiring things for its own use or for others to use, such as resale to end users of electricity.\textsuperscript{176} However, although the text of subparagraph (iii) does not include purchases of “services”, in \textit{US – Aircraft (2nd complaint)} the Appellate Body did not endorse the panel’s decision that the drafters of the ASCM intended to exclude purchases of services, thereby leaving this question open for discussion in future disputes.\textsuperscript{177}

Government procurement has been an important driver of indigenous innovation in China.\textsuperscript{178} A series of national policies and regulatory documents, which are also implemented through numerous local government policies, mandated or encouraged preferential government procurement of high-tech products and services supplied by qualified Chinese entities.\textsuperscript{179} The NEV


\textsuperscript{175} See \textit{US — Aircraft (2nd complaint)}, supra note 82, ¶ 620.


\textsuperscript{177} See \textit{US — Aircraft (2nd complaint)}, supra note 82, ¶ 620.


industry, for instance, has been a major beneficiary of such policies that set specific NEV purchase targets for government entities and public institutions at both national and local levels.\textsuperscript{180} One of the most recent policy developments is an opinion issued by the State Council which encourages government entities to increase purchases of innovative technologies, goods, and services from medium and small-sized tech firms in High-Tech Industrial Development Zones.\textsuperscript{181} It is anticipated that this policy will be implemented in the 168 high-tech zones currently listed by the Ministry of Science and Technology.\textsuperscript{182} Like government provision of goods or services, the major issue relating to the preferential public procurement of high-tech goods is not whether it constitutes a “financial contribution” but whether the purchases are made at more than adequate remuneration. Although the issue of whether government purchases of services may be treated as “financial contributions” remains unsettled, this lack of clarity does not create a problem that is specific to China, and any further development of the case law will apply to all WTO Members.

Moreover, it is worth noting that China is actively negotiating to join the WTO Agreement on Government Procurement which sets forth rules (e.g., non-discrimination) on government procurement activities that are not available under the

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\textsuperscript{180} About Issuing Government Agencies and Public Institutions’ Purchases of New Energy Vehicles (promulgated by the Government Offices Administration of the State Council, the Ministry of Finance, the Ministry of Science and Technology, the Ministry of Industry and Information Technology and the National Development and Reform Commission on July 14, 2014, www.caam.org.cn/chn/9/cate_9_9/con_5124489.html.


\textsuperscript{182} High-Tech Industrial Development Zone, MINISTRY OF SCIENCE AND TECHNOLOGY, www.most.gov.cn/gxjscykfq/.
existing WTO agreements. China proposed enhancing its market access commitments by broadening the scope of covered procurement to include goods and services sectors within strategic industries. These rules and commitments would provide additional, more specific discipline on China’s government procurement activities, thereby reducing the need to resort to the ASCM.

In addition, China is subject to an even broader WTO-plus obligation regarding the purchase and sale activities of SOEs and State-invested enterprises (SIEs). Section 6.1 of the Accession Protocol, as elaborated by paragraph 46 of the Working Party Report, requires the Chinese government to ensure that:

[A]ll state-owned and state-invested enterprises would make purchases and sales based solely on commercial considerations, e.g. price, quality, marketability and availability, and that the enterprises of other WTO Members would have an adequate opportunity to compete for sales to and purchases from these enterprises on non-discriminatory terms and conditions. In addition, the Government of China would not influence, directly or indirectly, commercial decisions on the part of state-owned or state-invested enterprises, including on the quantity, value or country of origin of any goods purchased or sold, except in a manner consistent with the WTO Agreement.

While this obligation has never been utilized before, hence its exact scope remains debatable, it seems to go beyond a mere non-discrimination rule and provide a more comprehensive restriction on the anti-competitive conduct of SOEs and SIEs including

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183 The Agreement on Government Procurement is a plurilateral agreement that applies to signatories only. For an official introduction of the agreement, see WTO and Government Procurement, WORLD TRADE ORG., www.wto.org/english/tratop_e/gproc_e/gproc_e.htm. For a discussion of the application of the relevant WTO rules on government procurement in China’s high-tech sector, see Chow, supra note 179, at 98–104.


185 See Working Party Report, supra 78, ¶ 46.
government purchases and sales of goods and services.186 Thus, the ASCM is not, nor is it intended to be, the sole source of discipline on government procurement and sales activities that may cause market distortions and adversely affect other WTO Members.

4. Income or price support — Article 1.1(a)(2) sets out a residual category, namely, “any form of income or price support” within the meaning of Article XVI of the GATT. While this category has further broadened the “range of government measures capable of providing subsidies,”187 its exact scope of coverage remains unsettled. In China – GOES, the panel rejected an effect-based approach to the determination of “price support.”188 The contested measure was the voluntary restraint agreements (VRAs) concluded under the US Steel Import Stabilization Act 1984 which restricted the volume of steel imports into the US market.189 China contended that the VRAs effectively raised domestic steel prices, thereby causing a transfer of wealth from steel purchasers to the US steel industry.190 The panel held that whether a government action constitutes a covered subsidy should be “determined by reference to the action . . . concerned, rather than . . . the effects of the measure on a market.”191 More specifically, the term “price support”, in the panel’s view, “does not include all government intervention that may have an effect on prices, such as tariffs and quantitative restrictions.”192 Rather, it concerns “direct government intervention in the market with the design to fix the price of a good at a particular level, for example, through purchase of surplus production when price is set above equilibrium” as opposed to “a random change in price merely being a side-effect of any form of

188 See generally Panel Report, China Countervailing and Anti-Dumping Duties on Grain Oriented Flat-rolled Electrical Steel from the United States, WTO Doc. WT/DS414/R (June 15, 2012).
189 Id. ¶¶ 7.35, 7.79.
190 Id.
191 Id. ¶ 7.85.
192 Id. ¶ 7.85.
government measure.” Since the VRAs did not involve direct control of price by the US government, the panel rejected China’s claim that they constituted a subsidy in the form of price support. To date, this ruling remains the only detailed consideration of the meaning of “income or price support.” Nevertheless, the effect-based approach to the determination of subsidies has been consistently rejected in other disputes. For example, in US – Export Restraints, the panel refused to treat export restraints as a “financial contribution” despite their potential trade-distorting effect.

We did not identify any measure that directly sets price or income levels in China’s high-tech sector. As a result of the case law above, measures that may cause price distortions indirectly may not be captured by this residual category. One such measure that has been hotly debated in recent years concerns China’s export restraints, mainly in the form of export quotas and taxes, on raw materials and rare earths. While these measures are apparently adopted to protect the security of exhaustible natural resources and the environment, they may cause domestic input prices to fall, thereby conferring a cost advantage on downstream entities in the high-tech sector, such as semiconductors and NEVs. Despite the potential price effects, export restraints do not amount to a government’s direct control of price in light of the panel decision in US – Export Restraints. Therefore, whether they may constitute a covered subsidy remains debatable.

However, as discussed above, the ASCM is not the sole source of discipline that may be employed to tackle trade-

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193 Id. ¶ 7.86 (emphasis added).
194 Id. ¶ 7.88.
196 See Bown & Hillman, supra note 53, at 568–69, 574.
197 《中国的稀土状况与政策》[Situations and Policies of China’s Rare Earth Industry], INFO. OFFICE OF THE STATE COUNCIL, (June 20, 2012), www.gov.cn/zhengce/2012-06/20/content_2618561.htm.
199 But see Jackson, World Trade and the Law of the GATT, supra note 54, at 383–84 (arguing that the negotiating history of GATT Article XVI:1 has suggested that the definition of subsidy may be broadly interpreted to cover indirect subsidies that increase the export of any products).
distortive export measures or price distortions. Under the general WTO rules, all export restrictions other than duties, taxes or other charges are prohibited under GATT Article XI:1. Anti-dumping duties have been routinely applied to address price distortions derived from the raw materials market affecting the price of final goods.  

In addition, China has undertaken two relevant WTO-plus obligations. Under Section 11.3 of its Accession Protocol, China agrees to “eliminate all taxes and charges applied to exports” except for a list of 84 tariff items subject to a bound export duty from 20 to 50 percent. Many raw materials, such as bauxite, coke, fluorspar, magnesium, silicon metal, zinc, and a wide spectrum of rare earths, are not included in the list and hence must not be subject to export taxes. This WTO-plus obligation has been applied to successfully challenge China’s export taxes on raw materials and rare earths in two consecutive disputes. This obligation significantly limited China’s policy space in using export taxes for legitimate regulatory goals, while other WTO Members are free to and do apply such taxes for similar goals.

More broadly, China also undertakes to “allow prices for traded goods and services in every sector to be determined by market forces” under Section 9.1 of the Accession Protocol. Only a short list of exempted goods and services – which does not cover the strategic high-tech sectors – may be subject to government

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pricing or government guidance pricing.\textsuperscript{204} Apparently, this obligation has the potential to extend beyond “price or income control” to capture Chinese government intervention in all sectors, other than the few exemptions, where it affects prices directly or indirectly, although its exact scope of application will need to be tested in future disputes.\textsuperscript{205} Despite its potential, this obligation has never been utilized by WTO Members to challenge the allegedly wide-ranging activities of the Chinese government, including those through SOEs and SIEs that may have prevented prices from being determined by market forces. Therefore, while it is worthwhile for there to be further discussion about whether the ASCM may or should be expanded to apply to export restraints or other types of price-distortive measures that do not explicitly take the form of the covered subsidies, it is also important to recognize that the other WTO rules, particularly the broad China-specific obligations, already offer certain solutions to the challenges arising from State intervention and market distortions in China.

\textbf{B. Public Body}

The interpretation of what constitutes a “public body” under Article 1.1(a)(1) of the ASCM is critical to ensuring that only the conduct of governments is captured. In its landmark decision in \textit{US – Anti-dumping and Countervailing Duties (China)}, the Appellate Body developed a “function/authority-based” approach to the determination of “public body” while rejecting an “ownership-based” approach proposed by the US and applied by the panel to decide that China’s State-owned commercial banks were “public bodies” just because these entities were majority owned or controlled by the Chinese government.\textsuperscript{206} More specifically, the Appellate Body ruled that a “public body . . . must be an entity that possesses, exercises or is vested with governmental authority” to exercise governmental functions.\textsuperscript{207} Such authority may be established based on evidence showing “an explicit statutory delegation” or “a sustained and

\textsuperscript{204} See Accession Protocol, supra note 77, § 9.2; Annex 4.
\textsuperscript{205} See Zhou et al., supra note 186, at 1012–14.
\textsuperscript{206} See \textit{US — Anti-Dumping and Countervailing Duties (China)}, supra note 143, ¶¶ 277–78.
\textsuperscript{207} \textit{Id.}, ¶¶ 317–18.
systematic practice.” The existence of mere formal links between an entity and government, such as the government holding a majority interest in the entity, in itself is unlikely to be sufficient evidence. However, “where the evidence shows that the formal indicia of government control are manifold, and there is also evidence that such control has been exercised in a meaningful way, then such evidence may permit an inference that the entity concerned is exercising governmental authority.” In any event, the determination of whether an entity is a “public body” requires consideration of all relevant characteristics or features of the entity, its relationship with government, and must not be exclusively or unduly based on any single characteristic. While rejecting the panel’s interpretative approach, the Appellate Body upheld the panel’s ultimate finding that the Chinese State-owned commercial banks constituted “public bodies” based on evidence relating to (1) state ownership, (2) laws that mandate or request implementation or consideration of government policies, and (3) influence of the government or the Communist Party of China (hereinafter CPC or Party) on management and decision-making.

Most recently, the Appellate Body revisited the “function/authority-based” approach in detail in US – Countervailing Measures (China) (Article 21.5). This dispute arose out of the United States’ continued application of the “ownership-based” approach in finding that Chinese SOEs and SIEs providing inputs for the production of certain goods, including certain pipes, steel and aluminium products, wind power, and solar panels, were “public bodies” in a range of countervailing investigations. The panel found the US in breach of

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208 Id. ¶ 318.
209 Id.
210 Id.
211 Id. ¶ 319.
212 See id. ¶¶ 350, 355.
Article 1.1(a)(1) in the original proceedings.\textsuperscript{215} In the compliance proceedings, the US primarily relied on a Public Bodies Memorandum (accompanied by a CPC Memorandum) and China’s responses to the Public Body Questionnaire, which included evidence to support the “authority-based” approach.\textsuperscript{216} In addition to government ownership, the evidence included, \textit{inter alia}, China’s national industrial policies, the role of the Chinese government and the CPC in the firms’ management and governance, the provision of direct and indirect benefits to incentivize the firms to follow the policy directives, and the influence of these policies, government/Party role and incentives on the firms’ behaviour and activities.\textsuperscript{217} The Memorandum concluded that (1) all SOEs are “public bodies”; (2) SIEs may be subject to government industrial policies, hence exercising governmental functions; (3) entities with little or no formal government ownership may be controlled or influenced by the Chinese government in a meaningful manner; and (4) the control of the Party is equivalent to the control of the State.\textsuperscript{218} China’s core contention was that the United States’ authorities failed to apply the correct legal test. More specifically, China submitted that the “authority-based” test “require[s] a particular degree or nature of connection in all cases between an identified government function and the particular financial contribution at issue,” and hence cannot be satisfied by “an abstract review of China’s system of governance and state functions.”\textsuperscript{219} Both the compliance panel and the Appellate Body disagreed. The Appellate Body clarified that the focus of the test is on the entity concerned and its relationship with government as opposed to the conduct alleged to give rise to a “financial contribution” although evidence relating to conduct may be indicative of the underlying functions of the entity.\textsuperscript{220} Therefore, it is unnecessary to show that the entity is

\begin{itemize}
\item \textsuperscript{215} \textit{Id.} \textit{¶¶} 7.60–7.75.
\item \textsuperscript{217} \textit{Id.}
\item \textsuperscript{218} \textit{Id.} \textit{¶¶} 7.49–7.52; \textit{US — Countervailing Measures (Article 21.5 – China), supra note 213, ¶¶ 5.56-5.58.}
\item \textsuperscript{219} \textit{See US — Countervailing Measures (Article 21.5 – China), supra note 213, ¶¶ 5.65, 5.77–5.78.}
\item \textsuperscript{220} \textit{Id.} \textit{¶¶} 5.100–5.101.
\end{itemize}
“meaningfully controlled” by the government in the specific
conduct.221 Once an entity is found to be a “public body,” then all
its conduct “is directly attributable to” the government of the
Member concerned.222 Although the Appellate Body refused to
consider whether the Public Bodies Memorandum is in violation
of Article 1.1(a)(1),223 its decision suggested that evidence
showing a sufficient degree of government control of the activities
of an entity in general leading to the exercise of governmental
functions by the entity would satisfy the “authority-based” test.224

The “authority-based” test has been one of the most
criticized elements of the current subsidy rules.225 Many believe
that given China’s State-led economic model and the dominant
role of SOEs in economic activities, this test creates a substantial
hurdle to identifying “public bodies” and is consequently deficient
in tackling subsidies granted via SOEs.226 This issue is a major
ground for reforms of the subsidy rules proposed by the US-EU-
Japan joint statement227 and by Bown and Hillman.228

The “authority-based” approach is preferable to the
“ownership-based” approach.229 This is because under that
approach, the definition of “public body” does not overreach to
cover all SOEs or SIEs, regardless of whether an entity exercises
a public policy function as an agent of governments or purely
engages in commercial activities. Since public sectors remain
significant in many countries,230 an adoption of the “ownership-
based” approach may well cause an issue of over-inclusiveness
and attract the same degree of criticisms as its counterpart has
received. More importantly, the WTO tribunals’ application of the
“authority-based” approach is reasonably balanced by requiring

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221 Id. ¶ 5.103.
222 Id. ¶ 5.103 (emphasis in original).
223 Id. ¶¶ 5.121–5.126.
224 Id. ¶ 5.121–5.126, 5.245–5.248 (note that one Member of the Appellate Body
had a dissenting view on the legal test).
225 See, e.g., Michel Cartland, Gerard Depayre & Jan Woznowski, Is Something
Going Wrong in the WTO Dispute Settlement?, 46(5) J. WORLD TRADE 979, 1001–05
(2012).
226 Id.
228 See Bown & Hillman, supra note 53, at 567–74.
230 See OECD, State-Owned Enterprises as Global Competitors, supra note 7, 21–
26.
some evidence beyond ownership without imposing excessively high evidentiary standards. As the major evidence required under the “authority-based” approach, China’s industrial policies, directives, and other regulatory instruments as well as the involvement of the State/Party in corporate management and governance are widely documented and are readily accessible nowadays.231 In addition, China’s ongoing SOE reforms have explicitly classified certain entities as Public Welfare SOEs and Special Commercial SOEs to undertake governmental functions and have mandated the creation of a Party Committee in all SOEs to influence the decision-making of these entities.232 These recent developments provide more positive evidence to support findings of “public bodies.” In reality, investigating authorities in major jurisdictions have already collected abundant evidence and have often resorted to other relevant evidence collected by each other in countervailing investigations.233 Significantly, the Appellate Body’s ruling that the “public body” determination does not require one to show that the specific conduct of the entity concerned is “meaningfully controlled” by the Chinese government further reduced the evidentiary burden on investigating authorities. Therefore, the totality of the evidence identified above would be sufficient to establish a prime facie case which would be difficult for the Chinese government to rebut. In both disputes where the “authority-based” approach was developed and applied, the WTO tribunals did not disagree with the investigating authorities on the findings that the evidence on the record was sufficient to show China’s State banks and SOEs/SIEs providing inputs to manufacture were meaningfully controlled by the Chinese government to exercise governmental functions. Similarly, it would not be hard to establish that the investment funds discussed in sub-section A(i) are “public bodies”

231 China has made most laws, regulations and policies available online as part of its WTO obligations on transparency. See generally Henry Gao, ‘The WTO’s Transparency Obligations and China’ (2017)12(2) J. COMPAR. L.Q. 329. For discussions of the involvement of the State/Party in the management of SOEs, see Li-Wen Lin, ‘A Network Anatomy of Chinese State-Owned Enterprises’, 16(4) WORLD TRADE REV. 583 (2017).
232 See Zhou et al., supra note 186, at 984–86.
233 For discussions of trade remedy practices in different jurisdictions particularly in cases against China, see generally NON-MARKET ECONOMIES IN THE GLOBAL TRADING SYSTEM: THE SPECIAL CASE OF CHINA (James Nedumpara & Weihuan Zhou eds., 2018).
based on the majority ownership of the Chinese government, the relevant industrial policies, and other evidence showing that the funds are essentially government investment vehicles vested with the authority to promote the growth of the selected industries. In short, while one may continue to debate the legitimacy and efficacy of the “authority-based” test, the case law seems to have evolved in a direction that makes “public bodies” easier to prove than to defend.

C. Private Entities “Entrusted or Directed”

While the ASCM is primarily concerned with the conduct of governments, it does not ignore the possibility that Members may circumvent their obligations by making a financial contribution indirectly through a private entity. To prevent such circumvention, it provides that the conduct of a private entity may also constitute the provision of subsidies if it is “entrusted” or “directed” by governments to do so. The key interpretative issue, therefore, concerns the meaning of “entrustment” and “direction.” In US – DRAMs, the Appellate Body observed that these terms, respectively, involve the giving of responsibility to (entrustment) or exercise of authority over (direction) an entity, as a proxy of government, in both formal and informal ways “in order to effectuate a financial contribution.” Both terms require “a demonstrable link between the government and the conduct of the private body” and “a more active role [of the government] than mere acts of encouragement,” and hence do not cover any government intervention which may or may not lead to the conduct of the private entity. In this regard, the panel found that despite (1) the existence of a bailout policy seeking to prevent the

234 For example, the major shareholders of the first tranche of the IC Fund included the Ministry of Finance (25.95%), China Development Bank Finance (23.07%), China National Tobacco (14.42%), and Beijing E-Town International Investment and Development (7.21%), and China Mobile (7.21%). See Yanpeng Chen, The Second Tranche of the National IC Fund Continues to Focus on Semiconductors and May Attract More Than 1 Trillion Private Investment, SINA NEWS (June 16, 2020), https://finance.sina.com.cn/roll/2020-06-16/doc-iirczymk7375390.shtml.

235 ASCM, supra note 17, art. 1.1(a)(1)(iv).

236 See US — Softwood Lumber IV, supra note 83, ¶ 52.


238 Id. ¶¶ 112, 114.
financial collapse of Hynix and (2) the fact that the Korean government had some capacity to influence the private body creditors, the evidence did not demonstrate that the Korean government “availed itself of that capacity to entrust or direct” the creditors to participate in the bailout. The Appellate Body later overturned the panel’s finding on the ground that the panel examined individual pieces of evidence in isolation rather than the totality of the evidence. However, the Appellate Body did not consider whether the evidence before the panel, in its totality, was sufficient to substantiate “entrustment or direction.”

Subsequent decisions offer more guidance on the evidentiary standard for “entrustment” and “direction.” For example, in dealing with similar issues relating to the participation of private body creditors in the bailout of Hynix in *Japan – DRAMs (Korea)*, the Appellate Body dismissed the panel’s observation that entrustment or direction cannot be established if a financial transaction (such as a loan) is undertaken on commercial terms, although “the commercial unreasonableness of the financial transactions is a relevant factor.” Instead, the Appellate Body opined that a “government could entrust or direct a creditor to make a loan, which that creditor then does on commercial terms.” This suggests that the establishment of “entrustment” or “direction” does not rely on whether the financial contribution concerned confers a benefit. In the context of interpreting “public body” in *US – Anti-dumping and Countervailing Duties (China)*, the Appellate Body confirmed that like the term “public,” the term “private” also “encompass[es] notions of authority as well as of control.” As suggested by the Appellate Body in *US – Countervailing Measures (China) (Article 21.5)*, the major difference is that if conduct is carried out by a private entity, then it must be demonstrated that a “link” exists “between the government and that [specific] conduct” in the form

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240 See *US — DRAMs*, supra note 237, ¶¶ 141–58.
241 Id.
242 See *Japan – DRAMs (Korea)*, supra note 90, ¶ 138.
243 Id.
244 See *US — Anti-dumping and Countervailing Duties (China)*, supra note 143, ¶ 292.
of “entrustment or direction,” which is not required in the determination of “public body” as discussed above. 245 Accordingly, in US – Supercalendered Paper, the panel held that a measure that merely imposed a general obligation on an entity to provide electricity service did not amount to an “entrustment or direction” of the entity to provide such service to a specific customer at any given rate. 246 This ruling confirms that “entrustment or direction cannot be inadvertent or a mere by-product of governmental regulation” 247 and that additional evidence is needed to show the conduct concerned is entrusted or directed by a government.

The concern about the role of private entities in China has two major, related claims. The more extreme claim is that given the complicated web of relationships between the State, the Party, and firms in China, all firms may be influenced by the government. 248 This claim indicates that the entire Chinese economy is distorted by State intervention. While one cannot deny that such State/Party-Firm relationships or networks exist, evidence on the actual or even potential impact on the decisions of private firms is much less robust compared with the evidence of such impact on SOEs. 249 In contrast, recent studies tend to suggest the opposite. As leading China expert Nicholas Lardy has observed, with the increasingly significant role of private firms in the Chinese economy, “most markets are now competitive.” 250 Even with the recent resurgence of the role of the State and SOEs, State influence remains concentrated in selected sectors and private firms have continued to maintain financial performance and efficiency at levels considerably higher than those of SOEs. 251 Thus, it is unjustified to regard all business activities of private

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248 See Wu, supra note 117, at 264–65.
249 See, eg., Lin, supra note 231.
firms as being directed by the Chinese government. Rather, whether such activities are so directed or influenced must be established on a case-by-case basis. This view lends support to the interpretative approach developed by the Appellate Body requiring the demonstration of “entrustment” or “direction” of the specific conduct concerned.

The other claim is that given the industrial policies and the significant involvement of the State in market activities in selected sectors, including the high-tech sector, private firms are incentivized to increase business activities in these sectors and even to grant financial or other support to certain firms or projects pursuant to the instructions of governments in exchange for business opportunities and other commercial benefits. This claim has merit if one considers China’s New Infrastructure Initiative and government-led investment funds in the high-tech sector which have promoted massive and growing private investment in the selected industries as discussed earlier. However, the possibility that private actors may be so incentivized does not necessarily mean they are acting in the interest of the government instead of their own in all cases. Maintaining a good relationship with governments, making an investment based on policy and regulatory developments, or running a short-term loss for long-term benefits are typical examples of reasonable commercial decisions. Such conduct is by no means conclusive as to whether a private entity exercises a governmental function. Again, an inquiry into whether the contested conduct is entrusted or directed by governments would be needed.

To this end, one may remain concerned about the State/Party’s “invisible hand” in the Chinese economy that may effectively influence private firms’ conduct similarly to how it influences State entities. However, whether the degree, breadth, and effectiveness of such influence is actually similar requires more solid empirical evidence. The Chinese government is significantly more inclined to use SOEs rather than private entities to implement policy objectives, hence the extensive support for

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253 It is estimated that the IC Fund (first tranche and second tranche) can lead to private investment exceeding RMB 1 trillion. See Chen, supra note 234.

254 See generally Milhaupt and Zheng, supra note 252.
the former to the detriment of the latter.\textsuperscript{255} This also suggests that the conduct of private entities must not be presumed to be entrusted or directed by governments. Accordingly, we submit that the current law on subsidies strikes a proper balance by including private entities as potential suppliers of subsidies while imposing a higher evidentiary standard for establishing that such entities actually act for the government as compared with the evidence required in establishing SOEs as “public bodies.” This balanced approach reasonably reflects the focus of WTO rules on the conduct of governments as opposed to that of corporate entities especially private ones.\textsuperscript{256} The more remotely an entity is related to a government, the higher the evidentiary standard should be in establishing that the conduct of the entity is attributable to the government. To the extent that this higher evidentiary standard makes it more difficult for a complainant to prove “entrustment” or “direction” than for a respondent to defend, the escalation is logical and the difficulty applies to all WTO Members as amply demonstrated in past disputes such as those involving Korea’s bailout of Hynix through private creditors.\textsuperscript{257} Therefore, even accepting that the current legal test creates certain problems due to the high evidentiary standard in identifying subsidies through private entities, the problems are not specific to China. If the Chinese government decides to further strengthen its “control” of or “influence” on private entities,\textsuperscript{258} it only provides more evidence for other countries to establish “entrustment” or “direction.”


\textsuperscript{257} See US — DRAMs, supra note 237, and our discussions above.

\textsuperscript{258} For example, a recent policy document released by the CPC emphasizes the need to strengthen the leadership of the Party on private entities. See Guanyu Jiaqiang Xin Shidai Minying Jingji Tongzhan Gongzuo De Yijian (关于加强新时代民营经济统战工作的意见) [Opinions on Strengthening the United Work of Private Economy in the New Era], General Office of the CPC Central Committee (Sept. 15, 2020), www.gov.cn/zhengce/2020-09/15/content_5543685.htm.
D. Benefits Conferred

A government action that constitutes a “financial contribution” or “price or income support” would not be regarded as a “subsidy” unless it has conferred a benefit to the recipient.259 In developing the legal test of “benefit conferred,” WTO tribunals have relied on Article 14 as an immediate context.260 In essence, Article 14 states that the calculation of benefit shall be based on the extent to which a financial contribution has been made “on terms more favourable than those available to the recipient in the market.”261 Accordingly, the test of “benefit conferred” focuses on the “recipient” or “benefit to the recipient” rather than the government/subsidy provider or “cost to government.”262 Thus, in EC – Aircraft, the mere fact that government investment in infrastructure exceeded its return on that investment, though relevant, was not determinative of whether a benefit was conferred.263 Rather, one needs to compare the situations with or without the government action, that is, whether the action made the recipient “better off” than it would have been in the absence of it.264 The benchmark for comparison is the marketplace such that the central inquiry is whether a financial contribution is provided “on terms more advantageous than those [that would have been] available to the recipient in the market” at the time the contribution is made.265 Therefore, for example, if the financial contribution is in the form of a government loan, then it would constitute a subsidy only if it has been granted on terms more favourable than those of a comparable commercial loan in the market at the time the loan is provided.266 This timing requirement means that “the determination of benefit . . . is an ex ante analysis

259 ASCM, supra note 17, art. 1.1(b).
262 Id. ¶¶ 154–56.
263 See Appellate Body Report, European Communities and Certain Member States — Measures Affecting Trade in Large Civil Aircraft, ¶¶ 980–81, WTO Doc. WT/DS316/AB/R (adopted June 1, 2011) [hereinafter EC — Aircraft].
264 See Canada — Aircraft, supra note 261, ¶ 157.
265 Id. EC — Aircraft, supra note 263, ¶ 706; US — Aircraft (2nd complaint), supra note 82, ¶ 636.
266 See EC — Aircraft, supra note 263, ¶¶ 834–35.
that does not depend on how the particular financial contribution actually performed after it was granted.” 267 The benchmark analysis requires consideration of all relevant evidence including, *inter alia*, “the terms that would result from unconstrained exchange in the relevant market” and/or the commercial rationality of the financial contribution concerned, that is, whether the contribution is made based on commercial considerations.268

One of the most controversial issues in the benefit/benchmark analysis concerns the determination of an appropriate benchmark, especially when a market is dominated or heavily influenced by governments.269 In *US – Softwood Lumber IV*, the US authority found that Canadian stumpage fees did not reflect competitive market prices and hence used external benchmarks to determine the magnitude of benefit under Article 14(d), which sets forth the guideline for assessing whether government provision/purchase of goods is made “less/more than adequate remuneration.”270 The Appellate Body ruled that while the private prices in arm’s length transactions in the market of provision provide the primary benchmark, such prices may be replaced by an alternative benchmark if they are distorted because the government plays a *predominant* role in providing those goods.271 In such circumstances, private suppliers would be induced to align their prices to the government price.272 However, government predominance in the market does not necessarily mean all prices are distorted; hence, whether that predominance has induced price alignment must be assessed on a case-by-case basis.273 The Appellate Body observed that alternative benchmarks may include the prices of similar goods in world markets (i.e., out-of-country benchmark) or proxies constructed

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267 Id. ¶ 706.
268 See Japan — DRAMs (Korea), supra note 90, ¶ 172.
270 Id. ¶ 90.
271 Id. ¶ 100.
272 Id. ¶ 102.
on the basis of production costs (i.e., constructed benchmark). \(^{274}\)

Where an alternative benchmark is employed, adjustments must be made to ensure the benchmark reflects the prevailing market conditions in the country of provision/purchase. \(^{275}\)

These rulings, which have been applied and further developed in subsequent cases discussed below, suggest that the benefit/benchmark test involves two major steps: (1) determining an appropriate benchmark, and if an external benchmark is employed, \(^{276}\) (2) making adjustments to that benchmark to ensure it reflects the prevailing conditions in the market of the subsidizing Member. These two steps may pose challenges for the establishment of “benefit conferred.”

The first step requires evidence to show that the primary benchmark, such as prices of final goods or inputs or commercial loan rates in the market of the subsidizing Member, is distorted and hence needs to be replaced with an external benchmark. This evidentiary requirement concerns whether the role of governments in the market is so significant as to render the primary benchmark distortive and unreliable. While governments do play such a significant role in some markets, their role is less significant in other markets. For example, in *US – Anti-dumping and Countervailing Duties (China)*, the WTO tribunal considered whether the provision of hot-rolled steel (HRS) inputs to certain Chinese HRS producers via SOEs conferred a benefit. \(^{277}\)

For the tribunal, the fact that the Chinese government accounted for 96.1% of HRS production in China was sufficient to justify the use of alternative benchmarks. \(^{278}\)

The tribunal also found that the interest rates for commercial loans in China were distorted based on the totality of the following evidence: (1) the government’s influence in the banking sector and on interest rates; (2) lending rates were largely undifferentiated and close to the government-set benchmark rate for most loans; (3) both domestic and foreign

\(^{274}\) Id. ¶ 106.

\(^{275}\) Id. ¶ 108.

\(^{276}\) Note that a constructed benchmark may involve the use of out-of-country cost information if the in-country production cost is found to be distorted due to government intervention in the relevant upstream market.

\(^{277}\) See *US – Anti-Dumping and Countervailing Duties (China)*, supra note 143, § VI.

\(^{278}\) Id. ¶¶ 454–58.
banks were subject to the same government controls; and (4) the dominant role of State-owned banks in lending activities while privately-owned banks only accounted for a very small percentage of total lending.\textsuperscript{279} In making these findings, the Appellate Body emphasized that it is price distortion that would allow the use of alternative benchmarks, not the role of the government \textit{per se}.\textsuperscript{280} It also clarified that the evidence required to prove such distortion may vary depending on the degree of government intervention and such intervention “does not refer exclusively to market shares, but may also refer to market power.”\textsuperscript{281}

These rulings suggest that in sectors in which private actors are more significant than State actors, more compelling evidence on market distortion would be needed. This would be the case in China’s high-tech sectors, such as semiconductors, NEVs, 5G, big data, AI, etc. in which private firms have been increasing both market shares and market power through myriads of investments.\textsuperscript{282} This market situation, compared with the situation in the industries dominated by State actors, such as steel, energy, and resources, would entail a higher burden in substantiating that the provision of goods or services or equity infusion by the private entities is based on distorted terms and conditions due to government influence. The potential difficulties in proving in-country price distortion may only increase if one considers the general position of the Appellate Body that the circumstances that

\textsuperscript{279} Id. ¶¶ 503, 508.

\textsuperscript{280} Id. ¶ 446.

\textsuperscript{281} Id. ¶¶ 443–44.

would permit the replacement of in-country private prices are “very limited” under the ASCM, and consequently, there were cases in which the use of an external benchmark was difficult to justify even when a government held a monopolistic position in the relevant market.

The second step requires adjustments be made to a selected external benchmark to reflect the prevailing market conditions in the subsidizing Member. This requirement is explicitly set out in Article 14(d) which contemplates certain factors for adjustments including price, quality, availability, marketability, transportation, and other conditions of purchase or sale of goods or services in the country of provision or purchase. Such adjustments are also required under the other sub-paragraphs of Article 14. For example, in US—Anti-dumping and Countervailing Duties (China), the Appellate Body held that for the purpose of Article 14(b) a benchmark may be employed if “loans in a given market and in a given currency are distorted by government intervention”; however, such a benchmark must be adjusted to approximate “a comparable commercial loan which the firm could actually obtain on the market”, taking into account factors “such as date of origination, size, maturity, currency, structure, or borrower’s credit risk.” The difficulties in making these adjustments relate to how to ensure they reflect the prevailing conditions of a market already so distorted by government intervention as to render the terms and conditions of private transactions in that market unreliable. In other words, if the use of an out-of-country benchmark is intended to remove the in-country market distortions, then making an adjustment to reflect the in-country market conditions may reintroduce such distortions into the benchmark, at least to some extent. In this regard, the Appellate Body explained that “prevailing market conditions” refer to the terms and conditions determined by

283 See e.g., US—Countervailing Measures (Article 21.5 – China), supra note 213, ¶ 5.137.
284 See Qin, supra note 269, at 587–606 (discussing the findings in US—Softwood Lumber IV, US—Anti-Dumping and Countervailing Duties (China), and US—Carbon Steel (India)).
285 ASCM, supra note 17, art. 14(d).
286 See US—Anti-Dumping and Countervailing Duties (China), supra note 143, ¶¶ 484–86.
market forces, which may include commercial activities of both private and government-related entities. This confirms that the adjustments would need to distinguish between market-based terms and conditions and those distorted by government intervention or even to establish a counterfactual market in the absence of such distortions. To make it even worse, the Appellate Body opined, in *US – Softwood Lumber IV*, that the adjustments must reflect and maintain the comparative advantage of the subsidizing Member so that countervailing measures are not imposed to “offset differences in comparative advantages between countries.” While this is an enlightening remark, it tends to make the legal requirements on the adjustments of benchmarks even more obscure and difficult to apply and may drag WTO Members into endless debate about what constitutes a comparative advantage, to what extent such an advantage may be created by governments, etc.

These challenges associated with the application of the benefit/benchmark test are, again, not specific to China but have arisen in disputes between other WTO Members, as demonstrated above. As far as China is concerned, these challenges may be addressed through China’s WTO-plus commitment under Section 15(b) of the Accession Protocol. That provision states:

> In proceedings under Parts II, III and V of the SCM Agreement, when addressing subsidies described in Articles 14(a), 14(b), 14(c) and 14(d), relevant provisions of the SCM Agreement shall apply; however, *if there are special difficulties in that application, the importing WTO Member may then use methodologies for identifying and measuring the subsidy benefit which take into account the possibility that prevailing terms and conditions in China may not always be available as appropriate benchmarks*. In applying such methodologies, where practicable, the importing WTO Member should adjust such prevailing terms and conditions before considering the use

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287 See *US — Carbon Steel (India)*, supra note 93, ¶¶ 4.150–51.
289 See Qin, supra note 269, at 613–15.
of terms and conditions prevailing outside China.\textsuperscript{290}

Although this provision has never been applied before, it arguably has the potential to considerably soften the legal requirements for the benchmark analysis, precisely in the two major steps.

In the first step, it provides the flexibility for investigating authorities to employ an external benchmark if they find it difficult to decide the magnitude of benefits by reference to the terms and conditions in the Chinese market. The scope of “special difficulties” is not circumscribed in any way, thereby leaving wide latitude for authorities to decide that such difficulties exist.\textsuperscript{291} For example, one may argue that given the massive government investment fund in a particular high-tech sector, it would be difficult to ascertain whether equity infusion by private entities is based on terms and conditions unaffected by the activities of governments. In any event, the evidentiary requirements under the test of “special difficulties” would be much less onerous than those under Article 14 of the ASCM.

In the second step, the obligation to adjust a selected benchmark is reduced to a non-obligatory best-endeavours requirement which merely encourages authorities to do so “where practicable.” Like in the first step, no matter how the term “practicable” is interpreted, it would be less onerous leaving room for investigators to exercise discretion. Applying the example above, if a “special difficulty” exists due to the involvement of the government investment fund in a high-tech sector, the same difficulty may be used to show that adjustments are not “practicable” as it is practically difficult to identify undistorted terms and conditions. Even in cases where China adduces sufficient evidence to show that such adjustments are practically doable, one would have to decide whether the best-endeavours language should otherwise be mandatory. Overall, it is argued that Section 15(b) of the Accession Protocol significantly relaxes the high standards developed by WTO tribunals in determining “benefits conferred”, thereby providing more flexibility for WTO

\textsuperscript{290} Accession Protocol, supra note 77, § 15(b) (emphasis added).
\textsuperscript{291} See Zhou et al., supra note 186, at 1015.
Members to tackle Chinese subsidies through countervailing actions.

E. Specificity

A subsidy that is not “prohibited” is not actionable or countervailable unless it is “specific” within the meaning of Article 2. This specificity requirement is intended to exclude subsidies that are “broadly available and widely used throughout an economy” from the ASCM. The provision is essentially concerned whether a subsidy is made available only to “certain enterprises” or “geographical regions” in law or in fact, with a focus on “limitations on eligibility.” Thus, a subsidy is de jure specific if the access to or eligibility for it is explicitly limited to certain enterprises. In contrast, if the eligibility is automatic based on objective criteria or conditions, then the subsidy is ostensibly non-specific. However, an ostensibly non-specific subsidy may be found to be, in fact, specific in a particular case. De jure specificity would usually rely on a written instrument whereas unwritten subsidies would typically trigger an inquiry into de facto specificity. To establish de facto specificity, one would need to demonstrate “a systematic series of actions pursuant to which financial contributions that confer a benefit have been provided to certain enterprises.” All evidence/factors relating to “specificity” and “non-specificity” must be considered.

292 ASCM, supra note 17, art. 2.3 (deeming export subsidies and local content subsidies “specific”).
294 See US — Anti-Dumping and Countervailing Duties (China), supra note 143, ¶ 368.
295 ASCM, supra note 17, art. 2.1(a).
296 Id. art. 2.1(b).
297 Id. ¶ 367.
299 Id. ¶ 4.141.
“Certain enterprises” include “an enterprise or industry or group of enterprises or industries.”301 While an enterprise refers to a firm or business, an industry generally “relates to producers of certain products.”302 A subsidy is specific if eligible beneficiaries are limited to “certain enterprises,” regardless of whether similar subsidies are also granted to certain other enterprises.303 In US–Anti-dumping and Countervailing Duties (China), for example, the Appellate Body upheld the panel’s finding that the provision of State loans by the Chinese government to the off-the-road (OTR) tires industry was specific based on the following evidence: (1) the Eleventh Five-Year Plan which set forth an overarching initiative to support the auto parts industry; (2) the foreign investment regime which categorized certain relevant projects in the industry as “encouraged”, thereby directing government support for those projects; and (3) corresponding planning documents at local levels which explicitly mandated the grant of policy loans to such projects.304 This finding of specificity was not affected by the fact that these planning documents and the “encouraged” category also encompassed other selected industries or projects to which policy loans and other types of subsidies were granted by central and local governments.305

Therefore, it would not be difficult to establish that many of China’s high-tech subsidies discussed above are de jure specific. The relevant national policy documents, such as the Five-Year plans, MIC 2025, and their implementing regulatory instruments at both national and local levels, explicitly set out the priority sectors and projects and the development goals and direct the provision of a variety of financial contributions to these sectors. For instance, these policies have led to the creation and continuous expansion of the government investment funds to which only enterprises in the selected sectors are eligible. Likewise, the preferential tax treatment for HNTEs and for R&D activities in general, as discussed in Section III.A(2) above, is also specific.

301 ASCM, supra note 17, art. 2.1.
302 See US—Anti-Dumping and Countervailing Duties (China), supra note 143, ¶ 373.
303 See EC—Aircraft, supra note 263, ¶ 949.
304 See US—Anti-Dumping and Countervailing Duties (China), supra note 143, ¶¶ 386–400.
305 Id.
While eligibility for the preferential treatment is assessed based on certain criteria and conditions, one of the criteria explicitly requires an applicant to undertake R&D in one of the priority high-tech sectors. Where such preferential treatment is applied at local levels, it may be regionally specific.

Regional specificity concerns the eligibility for a subsidy being limited to “certain enterprises” in a designated geographical region. This type of specificity merely requires that a subsidy be limited to a designated region without the need to establish further that it is also limited to a subset of enterprises within the region. Thus, a national subsidy provided to a region is specific even though it is made available to all enterprises in the region. In contrast, a subsidy granted by a local government to enterprises throughout its jurisdiction—i.e., not limited to a specific segment of the local jurisdiction—would not be regionally specific. Thus, to the extent that China’s high-tech subsidies are provided by a local government to enterprises in the selected sectors in its entire jurisdiction, such subsidies would be enterprise/industry-specific, not regionally specific.

Complexities may arise where the designated area is a segment of a local jurisdiction. In US — Anti-dumping and Countervailing Duties (China), the panel considered the provision of land-use rights to certain enterprises in an Industrial Park within the jurisdiction of a local government in China (the Huantai County). It ruled that a designated geographical region may encompass “any identified tract of land within the jurisdiction of a granting authority” and hence the Industrial Park. However, the panel observed that the subsidy is not specific just because the land was physically located in the designated area. Further evidence was required to show that the land-use rights in the area constituted a “distinct regime” for the provision of that financial contribution compared with the general provision of land-use rights.

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309 Id. ¶¶ 9.140–9.144, 9.156.
rights by the local government in its jurisdiction. In this regard, the panel suggested that the subsidy may not be regionally specific if “all purchasers of land-use rights throughout the jurisdiction of the granting authority paid exactly the same below-market price for land.”\(^{310}\) As shown in Section III.A(3), industrial parks, high-tech zones, and the like are widespread in local jurisdictions in China. According to the case law discussed above, the fact that these zones constitute designated areas and that subsidies are provided to these areas is insufficient to prove regional specificity. A further step must be taken to show that a subsidy program provided to such a segment of a jurisdiction is distinct. In practical terms, this program would be distinct if it is only available to the designated area or offers preferential terms and conditions compared to those provided to enterprises outside the area. This further step would not be a hurdle to establishing that China’s high-tech subsidies are regionally specific. For example, the provision of land-use rights and energy inputs to designated areas by local governments is typically based on preferential rates compared to the standard rates applicable in the relevant jurisdictions. This has to do with the fact that these areas are created to fulfill the policy objectives and mandates envisaged by the central government and more specifically to promote the growth of the priority sectors within the jurisdictions according to local strengths and advantages. Thus, these subsidies constitute a distinct regime and are regionally specific.

Where there is no written instrument, difficulties may arise in establishing \textit{de facto} specificity. The case law requires the demonstration of “a systematic series of actions” pointing to “the existence of an unwritten ‘subsidy programme.’”\(^{311}\) Recall that the \textit{US — Countervailing Measures (China)} dispute involved the provision of production inputs such as HRS by Chinese SOEs to downstream industries for less than adequate remuneration. Due to the lack of any written instrument creating such a subsidy program, the US authority found these alleged subsidies to be \textit{de facto} specific in a range of countervailing investigations.\(^{312}\)

\(^{310}\) \textit{Id.} \(\|$ 9.158-9.160.\)

\(^{311}\) See \textit{US — Countervailing Measures (China)}, supra note 298, \(\|$ 4.141; \textit{US — Countervailing Measures (Article 21.5 – China)}, supra note 213, \(\|$ 5.233.\)

\(^{312}\) See \textit{US — Countervailing Measures (China)}, supra note 298, \(\|$ 4.148.\)
these findings were endorsed by the panel in the original proceedings, the Appellate Body rejected the panel’s ruling that the consistent provision of the relevant input by the SOEs was sufficient to show the existence of “a systematic series of actions.”\(^\text{313}\) However, the Appellate Body was unable to complete the analysis for lack of factual findings, leaving the issue of \emph{de facto} specificity unresolved.\(^\text{314}\) In the compliance proceedings, the Appellate Body, in upholding the findings of the compliance panel, elaborated that \emph{de facto} specificity cannot be established merely based on “repeated transactions” but requires an assessment of how such transactions have constituted “a systematic subsidy programme.”\(^\text{315}\) In its findings of \emph{de facto} specificity, the US authority merely requested information on the industry providing the relevant input and the number of recipients for three and four years respectively, without explaining how such information substantiated the existence of an unwritten subsidy programme.\(^\text{316}\) Only during the compliance proceedings had the US adduced additional evidence relating to various Chinese policy mandates leading to the provision of the relevant input for nearly 50 years. Both the compliance panel and the Appellate Body regarded the additional evidence as “an \emph{ex post} rationale” and refused to accept it.\(^\text{317}\) In any event, the Appellate Body stressed that the existence of such policy mandates, in itself, would not suffice and “a reasoned and adequate explanation” must be provided to show the existence of “a systematic subsidy programme.”\(^\text{318}\)

Thus, compared with \emph{de jure} specificity, the showing of \emph{de facto} specificity requires a higher evidentiary standard and level of analysis. This in turn makes it more difficult for investigating authorities to tackle hidden or unwritten subsidies through countervailing measures. Although this difficulty applies to all WTO Members, China’s longstanding practice of using SOEs to supply input at low costs to selected sectors has

\(^{313}\) Id. ¶¶ 4.148–4.151.  
\(^{314}\) Id. ¶¶ 4.152–4.157.  
\(^{315}\) See \emph{US — Countervailing Measures (Article 21.5 – China)}, supra note 213, ¶¶ 5.231–5.233.  
\(^{316}\) Id. ¶ 5.237.  
\(^{317}\) Id. ¶¶ 5.240–5.241.  
\(^{318}\) Id. ¶¶ 5.219, 5.240.
understandably generated considerable concerns. However, one may argue that at the end of US – Countervailing Measures (China), the Appellate Body was no longer concerned about the sufficiency of evidence after the US had provided the additional information in the compliance proceedings. Such information was not accepted by the WTO tribunals simply because it did not form the basis of US findings of de facto specificity in its countervailing investigations. In contrast, the remaining concern of the Appellate Body seems to be the lack of “a reasoned and adequate explanation” that links the various policy documents to the existence of an unwritten subsidy program. Admittedly, more guidance is needed to fully understand the degree of explanation required. As far as China’s high-tech sector is concerned, it would not be unreasonably difficult to offer such an explanation. The relevant evidence would include the existence of numerous policy documents that explicitly direct all governments to support the selected high-tech sectors, the dominant role of SOEs in the critical upstream industries, and the wide-ranging subsidies granted to these SOEs to enable them to supply lower-priced input for production. In reality, authorities may well utilize the ambiguities and hence flexibilities left by the US – Countervailing Measures (China) decision to treat the provision of production input by Chinese SOEs for less than adequate remuneration as being specific. Such practice has been widely adopted in

319 For instance, Chinese SOEs have provided stable supply of alumina, a key input to electronics products, at below-market or even below-cost prices to local companies. See OECD Aluminum Report, supra note 172, at 93. Chinese steel SOEs also have received government subsidies over the years, which have enabled them to supply low-priced steel products to downstream industries, such as high-end equipment manufacturing. See Yibo Zhao (赵毅波), Zhaoyibo Ju Kui Bao Gang Niannei Huo 17 Yi Zhengfu Buzhu Fenzhi Cheng Duangi Nei Zishen Niukui Wuwang (巨亏包钢年内获 17 亿政府补助 分析称短期内自身扭亏无望) [Profits-Losing BaoSteel Received RMB 1.7 Billion Government Subsidies and Analysis Points Out the Lack of Chance in Stop Losing on Its Own], SINA FINANCE (Dec. 30, 2015), http://finance.sina.com.cn/chanjing/gsnews/2015-12-30/doc-ifxmxst0778361.shtml.


numerous countervailing investigations against China. More often than not, authorities have also resorted to concurrent anti-dumping actions to address the market distortion and adverse impact caused by Chinese subsidies on domestic industries.

In addition, one may argue that the source of the distortions lies in the subsidies and preferential treatment provided to SOEs which enables them to supply production input for less than adequate remuneration. Therefore, one way to deal with the subsidies to downstream industries would be to address the source of the problem, that is, to push China to reduce or remove the subsidies to SOEs. In this regard, Section 10.2 of China’s Accession Protocol allows WTO Members to deem Chinese subsidies to SOEs as being “specific” if the SOEs “are the predominant recipients of such subsidies or . . . receive disproportionately large amounts of such subsidies.” Given the dominant role of SOEs in the upstream industries mentioned above and the large amount of subsidies they receive, this WTO-plus commitment would mean that any subsidies provided to SOEs in these sectors would be “specific.” More broadly, as discussed in Section III.A(3), paragraph 46 of the Working Party Report requires Chinese SOEs and SIEs to make purchases and sales solely based on commercial considerations. It may be argued that the longstanding and consistent practice of Chinese SOEs and SIEs selling input to selected downstream industries for less than adequate remuneration precluded them from making reasonable returns that would generally be expected in commercial transactions. This obligation, therefore, provides an extra tool to address the problem concerned without the need to resort to the ASCM and thereby avoids the potential difficulties in establishing de facto specificity.

F. Concluding Remarks

In summary, the ASCM does not cover all kinds of government actions, especially those which may be regarded as indirect subsidization. However, the scope of “financial

322 See generally NON-MARKET ECONOMIES IN THE GLOBAL TRADING SYSTEM: THE SPECIAL CASE OF CHINA, supra note 233.
323 Id.
324 See Qin, supra note 321, at 890–91.
contributions” is apparently broad enough to capture the major subsidies in China’s high-tech sector. Government measures, such as export restraints, VAT rebates, regulatory preferences or incentives, that seem to fall outside the reach of the ASCM are used widely in the high-tech and other industries across many jurisdictions and may cause market distortions detrimental to trading partners.\footnote{325}{See generally OECD Semiconductor Report, \textit{supra} note 105; OECD Aluminum Report, \textit{supra} note 172.} Other existing WTO rules, including China’s WTO-plus obligations, should be employed to tackle these measures and distortions more directly. Likewise, contrary to the dominant view that the existing WTO rules are inadequate to tackle Chinese subsidies, the other major legal conditions (i.e., public body, entrusted or directed private body, benefits conferred and specificity) which must be satisfied for a financial contribution to be actionable or countervailable are not so difficult to establish either. Where difficulties may arise when trying to establish these conditions, they generally apply to all WTO Members.\footnote{326}{One may remain concerned about the high evidentiary burden that may result from China’s non-transparent system. However, this whole section has shown that China’s major high-tech subsidies are not provided in such a non-transparent manner as widely observed and hence are not so difficult to challenge under the ASCM and other WTO rules including China-specific rules. In addition, one should also note that Article 13.1 of WTO’s \textit{Understanding on Rules and Procedures Governing the Settlement of Disputes} requires a disputing party to provide information requested by the panel promptly and fully. \textit{See Understanding on Rules and Procedures Governing the Settlement of Disputes} art. 13.1, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 2, 1869 U.N.T.S. 401. This may permit the panel to draw an adverse inference if such information is not provided in the required manner. We thank Simon Lester for this insight.} If anything, China’s WTO-plus obligations have provided important additional discipline on Chinese subsidies, and market-distortive behaviour and conduct more broadly, leaving significantly less policy space for China. Since these extra rules have been strikingly under-utilized to date, the claim that the current rules are inadequate is unpersuasive and misleading. Finally, where new and better rules may be needed, they can only be created by WTO Members through negotiations, not by WTO tribunals through adjudication.

\textbf{III. FUTURE OF INTERNATIONAL SUBSIDY REGULATION}

As an essential policy tool, industrial subsidies were on the rise before the pandemic and have become even more crucial
as governments around the globe pursue economic recovery.\textsuperscript{327} There is, therefore, a growing and imminent need for governments to find a way to address the detrimental effects of subsidies on trade and avoid tit-for-tat subsidization. There are at least three options. One is for each government to unilaterally reduce or remove the pandemic-induced subsidies as they become dispensable. This option, however, will unlikely affect subsidies less related to the pandemic such as those in high-tech industries. The second option would be for governments to challenge these subsidies at the WTO. While this option may cover all industrial subsidies regardless of whether they are pandemic-related, it may not be effective in the absence of a functioning Appellate Body as losing parties may simply ‘appeal into the void,’ which would gradually disincentivize governments from resorting to the dispute settlement mechanism.\textsuperscript{328} There is, therefore, an urgency for WTO Members to revive the Appellate Body. In the case of China, the dispute settlement mechanism proved effective in enforcing compliance and influencing domestic policymaking and even prompted gradual and systematic adjustments of China’s complex regulatory regime.\textsuperscript{329} However, if the other major players continue to abuse the right of appeal to avoid binding decisions and implementation, it will become increasingly difficult to use the system to push China to reduce or remove trade-distortive subsidies.\textsuperscript{330} The third option is negotiation which may start

\begin{footnotesize}
\begin{enumerate}
\item See generally ZHOU, supra note 153.
\item For example, the US, in two recent cases, ‘appealed into the void’ a panel ruling against the trade war tariffs it imposed on China and another panel ruling against its anti-subsidy tariffs on softwood lumber originated in Canada, both of which were found in breach of WTO rule. See Statements by the United States at the October 26, 2020, DSB Meeting, U.S. MISSION TO INTERNATIONAL ORGANIZATIONS IN GENEVA (Oct. 26, 2020), https://geneva.usmission.gov/2020/10/26/statements-by-the-united-states-at-the-october-26-2020-dsb-meeting/. Notification of an Appeal by the United States under Article 16 of the Understanding on Rules and Procedures Governing the Settlement of Disputes, United States — Countervailing Measures on Softwood Lumber from Canada, WTO Doc. WT/DS533/5 (Sept. 29, 2020). The EU recently appealed the panel’s findings against its
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among major economies to lay the groundwork for more inclusive negotiations at the multilateral level. To do so, governments will need to leverage the impacts of the pandemic and the global (ab)use of subsidies to generate sufficient political will for change. Despite the difficulties in such negotiations and the time they may take, this is the only way to address any perceived deficiencies in the current subsidy rules. Thus, the rest of this section, seeks to develop some general principles and approaches for future negotiations of industrial subsidies after a brief discussion of the major proposals in the literature.

Existing proposals for the reform of WTO subsidy rules largely reflect the competing interests between strengthening the current rules and preserving policy space. One major proposal calling for more onerous discipline is the latest US-EU-Japan joint statement released on 14 January 2020. Amongst others, the joint statement proposes to expand the list of prohibited subsidies, specify the circumstances in which external benchmarks may be used for the determination of “benefit conferred,” and reverse the Appellate Body’s “authority/function-based” approach to “public body.” We have discussed why the current laws on the use of external benchmarks and the determination of “public body” are not inadequate to address Chinese subsidies in the high-tech sector in Section III. This discussion is applicable to subsidies in other Chinese industries. As regards the proposed prohibited subsidies, the joint statement is concerned about only a few selected types of subsidies: unlimited guarantees, subsidies aiming to rescue an insolvent enterprise or to finance an enterprise in sectors or industries in overcapacity, and certain direct forgiveness of debt. The fundamental problem in this proposal is the lack of any rationale for the treatment of the selected subsidies more strictly than other subsidies. This problem has to do with the fact

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anti-dumping actions against Russia. See Notification of an Appeal by the European Union, European Union — Cost Adjustment Methodologies and Certain Anti-Dumping Measures on Imports from Russia (Second Complaint), WTO Doc. WT/DS494/7 (Sept. 1, 2020). These abuses would undermine the effectiveness of the system and incentivize other major players like China to do the same to avoid unfavorable decisions.

331 See 2020 Joint Statement, supra note 15; see also Robert Howse, Making the WTO (Not So) Great Again: The Case Against Responding to the Trump Trade Agenda Through Reform of WTO Rules on Subsidies and State Enterprises, 23(2) J. INT. ECON. LAW 371 (2020).

332 Id.
that the joint statement targets China and hence some of the Chinese subsidies that have attracted considerable criticisms.\textsuperscript{333} As such, this proposal has ignored many other equally or even more controversial subsidies in the economies of other WTO Members including the parties to the joint statement. Another major problem of this proposal is the lack of consideration of the policy space needed for governments to use the named subsidies for legitimate regulatory goals. Future negotiations will need to address subsidies in the economies of all negotiating parties in ways that strike a balance between further regulation of subsidies and protection of legitimate use of subsidies.

In contrast, proposals of developing countries in the Doha round have gone in the opposite direction calling for more policy space by reintroducing non-actionable subsidies.\textsuperscript{334} More recently, China’s proposal on WTO reforms also sought to reinstate and expand the coverage of non-actionable subsidies as a way to curb the abuse of countervailing measures.\textsuperscript{335} In line with these proposals, leading commentators put forward recommendations for developing an improved mechanism to provide sufficient room for the application of subsidies for environmental,\textsuperscript{336} R&D,\textsuperscript{337} and other legitimate goals, particularly those envisaged under the pre-existing non-actionable scheme.\textsuperscript{338} These proposals speak strongly to the importance of maintaining flexibility for the use of subsidies in pursuit of legitimate regulatory goals and the need to broaden the scope of permitted subsidies.\textsuperscript{339}

Drawing on our discussions so far, we put forward three general principles for future negotiations of subsidy rules. First, the negotiations must not be disproportionately focused on China

\textsuperscript{333} Id.
\textsuperscript{334} See Li & Tu, supra note 74, at 854–67.
\textsuperscript{335} See Communication from China, China’s Proposal on WTO Reform, WTO Doc. WT/GC/W/773 (May 13, 2019).
\textsuperscript{337} See generally MASKUS, supra note 58; Matthew Kennedy, The Adverse Effects of Technological Innovation under WTO Subsidy Rules, 19(4) WORLD TRADE REV. 511 (2020) (showing how subsidies for technological innovation may be subject to more challenges under the current rules).
\textsuperscript{338} See generally RUBINI, supra note 58.
\textsuperscript{339} But see Gary Horlick & Peggy A. Clarke, Rethinking Subsidy Disciplines for the Future, E15INITIATIVE (Jan. 2016) (proposing that non-actionable subsidies must be narrowly defined and subject to clear boundaries).
and instead must focus on addressing trade-distortive subsidies in all economies involved. Given the widespread use of industrial subsidies, a China-focus would be perceived by China as discriminatory treatment, thereby adding unnecessary complexities to the already difficult negotiations and undermining the chances of reaching a positive outcome.

Second, the negotiations need to strike a balance between tightening the regulation of subsidies and maintaining the flexibility to use subsidies for legitimate policy objectives. As mentioned in Section III and argued in detail elsewhere, the Theory of Distortions and Welfare provides well-established economic guidance for how to achieve this balance. In essence, the theory establishes that for trade liberalization to remain welfare-enhancing, trade rules must allow governments the freedom to address their own domestic externalities or non-protectionist policy goals. However, the theory suggests that the policy instruments that governments employ to achieve a chosen goal would need to be regulated. In this regard, the theory ranks different policy instruments according to their economic efficiency and develops the Targeting Rule whereby the efficiency of an instrument enhances as it tackles the chosen objective more closely. This general rule is subject to the by-product costs associated with the use of an optimal instrument. For instance, while direct subsidization tends to be an optimal means to address domestic externalities on many occasions, it may become sub-optimal as the costs of disbursement may outweigh the efficiency gains generated by the use of subsidies as opposed to other means. These propositions suggest that one way to distinguish “good” and “bad” subsidies, from an economic perspective, would be to inquiry into whether a chosen subsidy targets a given objective directly at the source and if not, why a sub-optimal subsidy is adopted, taking into account the effectiveness of the subsidies in pursuing the objective and their by-product costs. For example, if the externality concerns the lack of consumption of certain goods or an objective to stimulate that consumption, then

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a subsidy to consumers would be generally more efficient than other types of subsidies. Where the externality concerns an inefficient capital market or an objective to promote finance for R&D, then a direct subsidization (e.g., in the form of tax incentives) in the capital market would be preferable. Overall, the significance of the theory lies in the distinction between policy objectives and policy instruments and the emphasis on regulating the latter while leaving room for consideration of the effectiveness and reasonable availability of less efficient means. In doing so, the theory also offers a way to discipline protectionist use of subsidies without unduly impairing the capacity of governments to use subsidies for legitimate goals.342

Third, while the negotiations should generally follow the economic guidance above, they need to pursue an outcome that is politically achievable. In subsidy negotiations, as shown in Section III, governments may be more concerned about the impacts of a foreign subsidy on their domestic industries than the welfare effects of the subsidy. Recently, two major proposals have stressed the need to target subsidies with negative spillover effects from a global perspective.343 To do so, however, governments will need to be provided with sufficient data and other information to assess the actual or potential global welfare effects of numerous types of subsidies. And even if such data is made available, governments would be likely to remain more concerned about the impacts of subsidies on domestic industries as opposed to their global welfare effects. In addition, just like negotiations in other areas of trade, future subsidy negotiations will necessarily leave some trade-distortive subsidies un-addressed or under-addressed for political reasons. Taken together, the above means that reforms of subsidy rules will be affected by political considerations, although it is advisable for negotiators to follow the economic guidance and data and will only progress incrementally.

Considering the principles above, we propose the following general approaches to future negotiations of industrial

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342 For a detailed discussion on this point, see Zhou, supra note 60.
subsidies. Governments should be allowed to choose their own policy objectives but should be asked to provide information about the objective(s) behind an existing or potential subsidy. In this regard, Article 25.3(iii) of the ASCM already requires WTO Members to do so in their notifications of subsidies, which could be used as a basis for the negotiations. The identification of policy objectives is necessary for a discussion about whether a subsidy is the optimal means to pursue a given objective and if not, whether it is because an optimal subsidy is not reasonably available so that a different type of subsidy is needed. This discussion will also involve consideration of the impact of a subsidy on trading partners, its global welfare effects, and political implications for both subsidizing and affected foreign countries. Through this approach, the outcome of negotiations would reflect a balance which allows room for governments to use economically preferable and politically feasible subsidies for any preferred objectives while at the same time reducing the impacts of these subsidies on trading partners.

To enhance the achievability of a political compromise, it is necessary for the negotiations to deviate from the conventional approach to the regulation of industrial subsidies whereby all governments are subject to the same set of rules on, *inter alia*, prohibited and non-actionable subsidies and the conditions for the use of non-actionable subsidies including the magnitude of such subsidies. Instead, the negotiations must recognize that each country has different regulatory priorities/needs and different economic, political, and social situations and constraints in terms of the use of subsidies, the level of support, etc. especially in the post-pandemic era. While the conventional approach may still be used to set out rules that are generally applicable, it must be supplemented by an approach that allows country-specific commitments and exceptions. For this purpose, the negotiations should adopt a scheduling approach to produce an Industrial Subsidy Schedule for each country. This approach is nothing new to the WTO and has already been adopted in negotiations of tariff concessions and commitments in trade in services, although it may
be more complex for subsidy negotiations. An Industrial Subsidy Schedule should set out the sectors that may require subsidization, the objective(s) that a subsidy serves, the magnitude of subsidies (which may include an upper limit and/or a phase-down or phase-out period), and any foreseeable circumstances in which similar or new subsidies may need to be re-introduced or the magnitude may need to be increased. To give effect to the schedule, a provision will need to be added to the ASCM to require governments not to grant subsidies that go beyond their scheduled commitments. A provision on renegotiation of the commitments or modification of schedules would also be desirable.

In addition, governments should have the right to use subsidies for legitimate policy objectives that are commonly accepted. This requires an additional provision in the ASCM to explicitly allow recourse to the general exceptions and security exceptions set out in GATT Articles XX and XXI. This provision may simply reproduce Article 3 of the Agreement on Trade-Related Investment Measure which states: “All exceptions under GATT 1994 shall apply, as appropriate, to the provisions of this Agreement.” This addition is important and necessary as it would ensure that the exceptions are consistently applied to different kinds of policy instruments and would incentivize governments to use subsidies, as opposed to less efficient and more trade-restrictive means, such as quantitative restrictions and tariffs, for these regulatory goals.

Finally, it is worth noting that our proposals are not intended to cover all aspects of future negotiations on industrial subsidies. For example, there is a need for discussions about how to measure negative cross-border spill-over effects of subsidies


345 See Charnovitz, supra note 336 (noting that Article XX does not apply to the ASCM as per the mainstream view); Howse, supra note 331, at 374 (observing that a breach of the ASCM cannot be justified by the legitimate goals contemplated in Article XX).

and develop international rules on competitive neutrality, and for an improvement of subsidy notifications and transparency. Our purpose is to contribute to the ongoing discussions of how best to re-invigorate and facilitate international cooperation on the regulation of industrial subsidies.

CONCLUSION

For decades, the multilateral trading system played a critical role in promoting international cooperation on trade policymaking, dispute resolution, and made significant contributions to maintaining peace and prosperity for the international community. Amongst other factors, China’s rise has caused growing concerns about whether the system is effective and should remain relevant. These concerns led to dramatic trade policy changes in the United States, with the United States taking unilateral actions against China and strangulating multilateral cooperation while in the meantime calling for reforms of the WTO. While the outbreak of COVID-19 intensified the crisis in the multilateral trading system, none of these China-related concerns are caused by the pandemic and will not subside with it.

China’s economic growth relied heavily on industrial policies and subsidies which have been increasingly applied to foster China’s technological capability, indigenous innovation, and global competitiveness. US unilateral actions have proven to be futile and will remain so if the purpose is to fundamentally change China’s economic model or curb its technological advancement. Like all other countries, China should and has every right to upgrade its economic growth model and promote innovation and digital transformation. Whether China has done so in ways that violate its international obligations must be assessed by WTO tribunals based on evidence and detailed legal examination rather than by unsubstantiated allegations. Likewise, whether new rules may be needed to deal with China requires a careful assessment of the existing rules and jurisprudence, and

347 See, e.g., DRAPER ET AL., supra note 343 (proposals for negotiations of industrial subsidies among G20 members).

eventually must be determined by all WTO Members via negotiations. Both the negotiation of new rules and the adjudication of trade disputes require a functional system for international cooperation which China has consistently advocated for.\textsuperscript{349} Therefore, it is reasonable to anticipate that only through the multilateral approach, rather than unilateral actions, may one effectively address so-called ‘China issues,’ including industrial policies and subsidies. Fortunately, there seem to be some positive signs of moves in this direction under the Biden Administration.\textsuperscript{350}

Although China’s industrial policies and subsidies have been at the core of the US’s concerns and global trade policy debate, such policies are widely used by all economies for a variety of domestic regulatory goals. Both the application of the current WTO rules on subsidies and the development of new rules in the future must strike a balance between regulating trade-distortive subsidies and protecting policy space for the legitimate use of subsidies. In this regard, one must note that China’s WTO obligations have extended significantly beyond the general WTO rules and have the potential to constrain Chinese industrial subsidies and government intervention in the economy more broadly. The efficacy of most of these China-specific rules has remained untested to date. Yet, the view that the current rules are inadequate to tackle Chinese subsidies has (unjustifiably) dominated the international trade community.

Using China’s subsidization in the high-tech sector as an illustration, we have challenged this dominant view by showing that even the general WTO rules on subsidies do not create any substantive hurdles to tackling the major types of Chinese technology subsidies. Where difficulties may arise in a few circumstances, these are not specific to China but generally apply to all WTO Members. In addition, the China-specific rules are


drafted in a broad manner so as to provide not only flexibilities to overcome these difficulties but also extra tools to constrain other modes of state intervention that may adversely affect the interests of China’s trading partners. Given China’s good record of compliance with WTO rulings, one should be optimistic about using the dispute settlement system to push China to reduce or remove subsidies and other WTO-illegal laws and practices. This, however, will be difficult to achieve in the absence of a functional Appellate Body.\textsuperscript{351} Although we have focused on technology subsidies in this paper, our discussions and observations may be applied to other industrial policies and subsidies in China.

Faced with the widespread and increasing use of industrial subsidies triggered by the pandemic, policymakers, scholars, and other stakeholders have been developing mechanisms for international cooperation. To contribute to this discussion, we put forward some general principles and approaches for future negotiations of industrial subsidies emphasizing the need to target trade-distortive subsidies rather than China, to balance between strengthening subsidy rules and preserving policy space, to follow economic guidance and data while accommodating political considerations, and most innovatively, to shift from the ‘one-size-fits-all’ approach to a country-specific approach through a scheduling method whereby an Industrial Subsidy Schedule is created to record policy objectives, commitments, and exceptions of each nation. Our recommendations are not intended to be exhaustive, but to develop ideas that may facilitate international cooperation on industrial subsidies.

\textsuperscript{351} See Howse, supra note 330.