

**MARKET BENCHMARKS AND GOVERNMENT MONOPOLY:
THE CASE OF LAND AND NATURAL RESOURCES UNDER
GLOBAL SUBSIDIES REGULATION**

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ABSTRACT

Government provision of land and natural resources has provoked major trade disputes over the issue of subsidies. Yet, how to identify the existence of a subsidy when the government is the sole or predominant provider—a common phenomenon due to the government control of natural resources in many countries—remains unsettled under the law of the World Trade Organization. At the heart of the controversy is the issue of benchmarking. Since the normal benchmark of domestic market prices cannot be properly utilized when the market price *is* the government monopoly price, it becomes necessary to resort to alternative benchmarks. Although the WTO Appellate Body (“AB”) has articulated certain principles and made some suggestions, what has prevailed in practice is the use of external market prices as the benchmark in identifying a subsidy in the country of provision. This approach, however, disregards the most basic source of comparative advantage of a trading nation: its natural endowment.

This Article makes several contributions. First, it traces the drafting history of relevant WTO rules and attempts to discover the

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rationale of an abandoned proposal that would have completely changed the legal landscape on the issue of government monopoly and subsidies. Second, it systemically examines WTO benchmarking jurisprudence, which has evolved through multiple cases involving Canadian softwood lumber, Indian minerals, Indonesian timber, and Chinese land. Third, it highlights the concept of resource rent and analyzes how the treatment of resource rent in the system of public ownership might affect the application of WTO subsidy regulation. Finally, it proposes the alternative of constructing domestic market benchmarks on the basis of optimal use of natural resources via economic modeling, which may have broad implications for dealing with the special problem of subsidization in China.

TABLE OF CONTENTS

1. Introduction	579
2. Government Monopoly under WTO Subsidy Regulation	581
2.1. <i>SCM Rules and Government Monopoly</i>	581
2.1.1. <i>The Circularity Problem</i>	582
2.1.2. <i>Draft SCM Article 14(e): A Mystery</i>	584
2.2. <i>Benchmarking Jurisprudence under Article 14(d)</i>	587
2.2.1. <i>US–Softwood Lumber (IV): Canadian Timber</i>	587
2.2.2. <i>US–AD/CVD (China): Chinese Land</i>	591
2.2.3. <i>US–Carbon Steel (India): Indian Iron Ore and</i>	
<i>Coal</i>	594
2.2.3.1. <i>Iron Ore Supplied by NMDC</i>	595
2.2.3.2. <i>Mining Rights for Iron Ore and Coal</i>	596
2.2.4. <i>US–Coated Paper (Indonesia): Indonesian</i>	
<i>Timber</i>	597
2.2.5. <i>The State of Benchmarking Jurisprudence under</i>	
<i>Article 14(d)</i>	599
3. Selection of Alternative Benchmarks	602
3.1. <i>Evaluation of Existing Alternative Benchmarks under</i>	
<i>Article 14(d)</i>	602
3.2. <i>Constructing Domestic Benchmarks on the Basis of</i>	
<i>Production Costs: The Question of Rent</i>	606
3.2.1. <i>Production Costs and Resource Rent</i>	606
3.2.2. <i>Resource Rent and Its Effect on Trade</i>	608
3.2.3. <i>Tax Equivalent of Resource Rent: The Case of</i>	
<i>Government Monopoly</i>	610
3.2.4. <i>A Normative Perspective: Comparative</i>	
<i>Advantage Based on Systemic Differences</i>	613
3.2.5. <i>Application of the Theories</i>	616
3.2.5.1. <i>Canadian Timber</i>	616
3.2.5.2. <i>Indonesian Timber</i>	618
3.2.5.3. <i>Indian Minerals</i>	618
3.2.5.4. <i>Chinese Land</i>	619
3.2.5.5. <i>Summary</i>	621
3.3. <i>Constructing Domestic Benchmarks on the Basis of</i>	
<i>Optimal Use of Resources: A Different Alternative</i> ..	622
3.3.1. <i>Constructing Domestic Benchmarks in Light of</i>	
<i>the SCM Objectives</i>	622
3.3.2. <i>Benchmarking via Economic Modeling: Example</i>	
<i>of Land Pricing in China</i>	626
3.3.2.1. <i>Non-Optimal Use of Land in China</i> ..	626

3.3.2.2. <i>Developing Economic Models to Estimate the Proper Price of Industrial Land</i>	629
3.3.2.3. <i>Special Implications for Dealing with Subsidization in China</i>	631
3.3.2.4. <i>The Role of Economics in Alternative Benchmarking</i>	636
4. <i>Conclusions</i>	639

1. INTRODUCTION

Market benchmarking is at the heart of subsidy disciplines of the World Trade Organization. Under the WTO Agreement on Subsidies and Countervailing Measures (“SCM”), a subsidy is deemed to exist only if a government’s financial contribution confers to the recipient a “benefit,” the existence of which is to be identified by comparing it to a chosen benchmark.¹ For governmental provision of equity, loans, loan guarantees, and goods or services, the basis for comparison is the marketplace; that is, what the recipient could have obtained in the market without the government contribution at issue—a counterfactual situation. Despite the inherent difficulty in constructing counterfactuals, WTO adjudicators have established a set of legal positions on market benchmarking.²

In one area, however, the legal position on benchmarking remains largely unsettled. That is where the government is the sole provider, or monopolistic supplier, of goods or services. In such a situation, the market price *is* the price charged by the government, hence that price cannot logically be the basis for comparison. The question of how to construct the benchmark in such a situation has arisen in several WTO cases involving, respectively, government-owned timber, minerals, and land.³ Notably, while the position of the WTO Appellate Body has shifted between the two cases it has reviewed, the benchmark positions taken by WTO panels in the other cases were not appealed, which means similar rulings may be rejected or modified by the Appellate Body in future cases.

This Article seeks to analyze the benchmarking problem in the context of government monopoly over the provision of natural resources, including timber, minerals, and land. The Article focuses on natural resources, rather than all products and services provided by government monopoly, for the following reasons: Unlike manufactured goods or services, land and other fixed natural

¹ Agreement on Subsidies and Countervailing Measures art. 1, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1869 U.N.T.S. 14 [hereinafter SCM].

² See *SCM Agreement – Article 14 (Jurisprudence)*, WTO ANALYTICAL INDEX: GUIDE TO WTO LAW AND PRACTICE, https://www.wto.org/english/res_e/publications_e/ai17_e/subsidies_art14_jur.pdf. [<https://perma.cc/THR7-2WFF>] (describing methods used by the investigating authority to calculate subsidy amounts).

³ See generally *supra* Part 2.2.

resources are the “natural endowment” of a nation, thus representing the most basic type of comparative advantage in trade. Besides, the price of natural resources typically carries rent, which merits special consideration. Furthermore, government pricing of natural resources is typically linked to the public policies on environmental protection and sustainable development. In short, the special characteristics of land and natural resources warrant special consideration in benchmarking.

At the outset, it is necessary to recognize that the notion of a market benchmark is a legal construct of WTO subsidy disciplines. It assumes the existence of a fully competitive market, in which prices are determined by supply and demand, free from government intervention. It further assumes that there is one market price for the good or service at issue that is objectively determinable. In reality, no such ideal market exists, and no single market price can be objectively determined.⁴ Indeed, from an economic perspective, it is doubtful that the existing WTO regulation is ever capable of identifying government subsidization in any meaningful sense.⁵ Recognizing the legal nature of the benchmarking enterprise, however, should not lead to the conclusion that all benchmark decisions are *ad hoc* or inherently arbitrary. Rather, it should help us realize that each judgment on benchmarking embodies a policy choice—it reflects the vision of the adjudicators on the role of the government in the national economy and the proper reach of global governance. This realization should in turn inspire us to explore ways to improve the legal construct of the market benchmark, so it will serve the world trade system in a more secure and predictable manner. While this Article focuses on the government provision of natural resources, hopefully the analysis herein can also shed light on benchmarking in a broader context, that is, government monopoly in the provision of all products and services.

⁴ See Andrew Lang, *Governing ‘As If’: Global Subsidies Regulation and the Benchmark Problem*, 67 CURRENT LEGAL PROBS. 135–68 (2014) (discussing the inherent indeterminacy of market benchmarks); Wentong Zheng, *The Pitfalls of (Perfect) Market Benchmarks: The Case of Countervailing Duty Law*, 19 MINN. J. INT’L L. 1–54 (2010) (critiquing the market benchmark approach in US countervailing duty law).

⁵ See Alan O. Sykes, *The Questionable Case for Subsidies Regulation: A Comparative Perspective*, 2 J. LEGAL ANALYSIS 473, 474 (2010); see also Alan O. Sykes, *The Limited Economic Case for Subsidies Regulation*, E15 INITIATIVE (Mar. 2015), <http://e15initiative.org/publications/the-limited-economic-case-for-subsidies-regulation/> [https://perma.cc/6HZR-5Y2W].

The Article will proceed as follows: Part II introduces the subject of government monopoly and WTO subsidy regulation. It will review relevant SCM rules, the drafting history thereof, and the major WTO cases establishing SCM benchmark jurisprudence, and highlight unresolved issues concerning the government provision of natural resources. Part III proposes two alternative approaches to benchmarking in the case of government monopoly of natural resources. One is the construction of domestic benchmarks based on production costs, applying the basic economic theory of rent to the cost of production in natural resources. The other is the construction of domestic benchmarks on the basis of optimal use of natural resources, requiring the use of economic modeling to estimate the proper prices for the efficient allocation of natural resources. Part IV sets out the key conclusions of this study.

2. GOVERNMENT MONOPOLY UNDER WTO SUBSIDY REGULATION

2.1. *SCM Rules and Government Monopoly*

The SCM Agreement establishes WTO's comprehensive disciplines on government subsidies. Under the SCM Agreement, a subsidy is deemed to exist when there is "a financial contribution" or "any form of income or price support" by the government, and "a benefit is thereby conferred."⁶ The "financial contribution" by a government is specified to be: (i) a government practice that involves a direct transfer or potential direct transfer of funds or liabilities (e.g., grants, loans, equity infusion, and loan guarantees); (ii) government revenue otherwise due is foregone (e.g., tax incentives); (iii) government provisions of goods or services other than general infrastructure, or government purchases of goods; (iv) government entrusting or directing a private body to carry out any type of functions illustrated in (i) to (iii).⁷

The issue of subsidy by government monopoly falls generally under type (iii), that is, where the government is the sole provider

⁶ SCM, *supra* note 1, art. 1.1.

⁷ *Id.* The SCM definition of subsidy has been criticized as being too narrow. See Gary Horlick & Peggy A. Clarke, *Rethinking Subsidy Disciplines for the Future: Policy Options for Reform*, 20 J. INT'L ECON. REV. 673-703 (2017).

of goods or services other than general infrastructure.⁸ For the government provision of goods or services to be a subsidy, it must confer “a benefit” to the recipient. The identification and calculation of such “benefit” is to be made by following the guidelines set out in SCM Article 14(d):

(d) the provision of goods or services or purchase of goods by a government shall not be considered as conferring a benefit unless the provision is made for *less than adequate remuneration*, or the purchase is made for more than adequate remuneration. *The adequacy of remuneration shall be determined in relation to prevailing market conditions for the good or service in question in the country of provision or purchase (including price, quality, availability, marketability, transportation and other conditions of purchase or sale).*⁹

Thus, whether the government provision of goods or services confers a benefit is to be determined by reference to “prevailing market conditions” in the country of provision. In other words, the prevailing market conditions in the country of provision should be the benchmark for measuring the adequacy of remuneration received by the government.

2.1.1. *The Circularity Problem*

A problem arises, however, when the government is the sole provider of the good or service in question. In that case, it would be circular to compare the remuneration received by the government with the market price prevailing in that country for the good or service in question, as the market price is the price charged by the sole government provider.

It should be noted that government monopoly in the provision of goods or services is a common phenomenon in the modern world. Under the laws of many countries, the state owns all the natural resources within its territory, hence the government (national or subnational) is the sole provider of natural resources. Such countries range from developed economies such as Canada and

⁸ When the government is the sole purchaser of goods or services, it is monopsony.

⁹ SCM, *supra* note 1, art. 14(d) (emphasis added).

Australia,¹⁰ to developing economies such as Mexico, Brazil and India,¹¹ to former centrally-planned economies such as China, Vietnam and Mongolia.¹² With respect to services, government monopoly is quite common in postal services, public utilities, and telecommunications, although some of these services may qualify as “general infrastructure,” and hence may be excluded from the definition of financial contribution under SCM Article 1.1.

It should also be noted that the concern over monopoly is typically the high prices that a monopoly may charge, not low prices resulting from government subsidies. In international trade, the chief concern has been that a government import monopoly may mark up the price of an imported product to protect domestic producers of like product. To prevent such markups, the General Agreement on Tariffs and Trade (GATT) imposes certain limits on the margin a government import monopoly may charge on imports.¹³ Although an export monopoly may also mark up the

¹⁰ About 89% of Canada’s land is Crown land, which is owned by either federal or provincial governments. See V.P. Neimanis, *Crown Land*, CAN. ENCYCLOPEDIA, <https://www.thecanadianencyclopedia.ca/en/Article/crown-land> [<https://perma.cc/95AJ-DTBU>] (last updated Dec. 16, 2013) (“Less than 11% of Canada’s land is in private hands; 41% is federal crown land and 48% is provincial crown land.”). Ownership of Australia’s mineral natural resources vests with its states and territories. Andrew D. Mitchell & Jessica Casben, *Natural Resources and Energy Regulation in Australia: The Energy White Paper Context*, in EMERGING ISSUES IN SUSTAINABLE DEVELOPMENT: INTERNATIONAL TRADE LAW AND POLICY RELATING TO NATURAL RESOURCES, ENERGY, AND THE ENVIRONMENT 3, 9–10 (Mitsuo Matsushita & Thomas Schoenbaum eds., 2016). Thus, the states and territories regulate access to these resources and set costs for access and exploitation (on private lands as well as public lands). *Id.*

¹¹ Ownership of all-natural resources is vested in the nation, as stipulated in Article 27 of the Constitution of Mexico. Similarly, mineral resources and many other natural resources are “property of the Union,” as specified in Article 20 of the Constitution of Brazil. While ownership structure is more complex in India, “there can be no private ownership of natural resources, and any involvement by the private sector is limited to exploration, prospecting and exploration of these resources for specified time periods.” R.V. Anuradha & Piyush Joshi, *Natural Resources Regime in India: Impact on Trade and Investment*, in EMERGING ISSUES IN SUSTAINABLE DEVELOPMENT: INTERNATIONAL TRADE LAW AND POLICY RELATING TO NATURAL RESOURCES, ENERGY, AND THE ENVIRONMENT 60 (Mitsuo Matsushita & Thomas Schoenbaum eds., 2016).

¹² See XIANFA [CONSTITUTION] arts. 9, 10 (1982, as amended) (China); HIẾN PHÁP NƯỚC CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM [CONSTITUTION] art. 53 (2013) (Viet.); MONGOL ULSIN ÜNDSÉN HҮЛІ [CONSTITUTION] art. 6 (1992) (Mong.).

¹³ See General Agreement on Tariffs and Trade art. II:4, Oct. 30, 1947, 61 Stat. A-11, 55 U.N.T.S. 194 [hereinafter GATT] (limiting the margin that an import monopoly may charge to the level of tariff findings); *id.* art. XVII:4(b) (imposing an obligation to report “the import mark-up” by an import monopoly on products not subject to tariff bindings).

prices of exports so as to protect domestic users and to reduce supply to foreign users, there is no specific GATT rule regulating the pricing of exports by government monopolies.¹⁴ GATT does obligate all state trading enterprises, including import and export monopolies established or authorized by the government, to act in accordance with the nondiscrimination principle in their trading activities,¹⁵ but the obligation is very difficult to enforce due to the lack of transparency in the operation of state enterprises. In any event, GATT regulation of a government monopoly is limited to trading activity and does not extend to subsidies.¹⁶

By contrast, the concern with government monopoly under the SCM Agreement is that the government monopoly may charge too low a price for its goods or services. The SCM Agreement, however, fails to address the situation of government monopoly specifically. As a result, in order to avoid the circularity problem under Article 14(d), it becomes necessary to construct the benchmark in determining the adequacy of government prices. But how should such a benchmark be constructed? Should it be based on the price that a private monopoly would charge, or the price the government could receive in a fully competitive market? Should the cost of the government provision be considered? Before examining how WTO adjudicators have approached the problem, it is enlightening to review the solution once contemplated by the drafters of the SCM Agreement.

2.1.2. Draft SCM Article 14(e): A Mystery

It turns out that the drafters of the SCM Agreement did consider the situation of government monopoly in the provision of goods or services, as well as that of government monopsony in purchasing

¹⁴ See Havana Charter for an International Trade Organization art. 31(1)(a), Mar. 24, 1948, U.N. Doc. E/CONF.2/78 (recognizing these effects of export monopoly). The lack of GATT rules on export monopoly pricing is not surprising, given the lack of commitments on export tariff bindings generally under GATT.

¹⁵ GATT, *supra* note 13, art. XVII:1(a).

¹⁶ In fact, GATT Article II:4 (concerning import monopoly) states that its provision "shall not limit the use by contracting parties of any form of assistance to domestic producers . . ." *Id.* art. II:4. Moreover, GATT Ad Article XVII effectively excludes the "privileges granted [by government] for the exploitation of national natural resources but which do not empower the government to exercise control over the trading activities of the enterprise in question" from the nondiscrimination obligation of state trading enterprises. *Id.* Ad art. XVII:1(a).

goods or services and offered a definitive answer. The initial draft of SCM Article 14, when it first appeared in late 1990 during the Uruguay Round negotiations, contained substantially the same provisions as the current Article 14, plus one additional paragraph (e).¹⁷

The draft Article 14(e) provides:

(e) When the government is the sole provider or purchaser of the good or service in question, the provision or purchase of such good or service shall not be considered as conferring a benefit, unless the government discriminates among users or providers of the good or service. Discrimination shall not include differences in treatment between users or providers of such goods or services due to normal commercial considerations.¹⁸

Thus, Article 14(e) took the position that government monopoly and monopsony should not be considered as providing a subsidy, so long as the government did not discriminate between domestic and foreign buyers or sellers. Today, such a position might seem rather radical, especially in light of the SCM jurisprudence on government monopoly subsequently developed under Article 14(d), as will be discussed below.

It appears that the provision of Article 14(e) was derived from proposals made by the United States in the negotiating group on Subsidy and Natural Resources-Based Products.¹⁹ The nondiscrimination requirement in Article 14(e) targeted government's two-tier pricing in natural resource sectors. Two-tier pricing occurs when the government owns or controls the production of natural resources and provides them to domestic manufacturers at below world market prices.²⁰ For example, PEMEX, Mexico's state-owned oil and gas monopoly, sold its products to domestic producers at lower prices than those charged

¹⁷ GATT Secretariat, Group of Negotiations on Goods, *Negotiating Group on Subsidies and Countervailing Measures: Draft Text by the Chairman*, GATT Doc. MTN/GNG/NG10/W/38/Rev.2, at 23 (Nov. 2, 1990) [hereinafter *1990 Draft SCM Text*].

¹⁸ *Id.*

¹⁹ See THE GATT URUGUAY ROUND: A NEGOTIATING HISTORY (1986-1992) 502-3, 942 n. 736 (Terence Stewart ed., 1993).

²⁰ *Id.* at 501.

to foreign customers.²¹ Such two-tier pricing was considered to result in a form of subsidy to domestic producers.

The negotiation record shows that Mexico opposed Article 14(e) as drafted and proposed adding the phrase "within its territory" after "unless the government discriminates," so that the nondiscrimination requirement would apply to domestic producers only.²² Obviously, Mexico's proposal would have defeated the purpose of preventing two-tier pricing. Nonetheless, the rationale provided by Mexico for its proposal is noteworthy. According to Mexico,

[Draft Article 14(e) means that] countries endowed with natural resources renounce their comparative advantages, or otherwise that they be exposed to the application of countervailing measures in their export markets. This means that National Treatment is applied beyond the territory of contracting parties, which is fundamentally inconsistent with this basic GATT concept.²³

The reference to comparative advantage based on natural-resource endowment may have reflected the thinking behind the main sentence of Article 14(e). Except for this reference by Mexico, no other explanation can be found in the negotiation records regarding the rationale behind Article 14(e).²⁴

Article 14(e) was deleted in the Draft SCM Agreement of December 20, 1991 (the Dunkel Draft), apparently as a result of Mexico's opposition.²⁵ Other than the issue of two-tier pricing, the negotiation records do not contain any discussion on the provision of Article 14(e).

In subsequent WTO practice, the position taken in Article 14(e) has neither been discussed, nor followed. Yet, Article 14(e) is not merely a historical note for WTO scholars. As the discussion below will show, the general idea of Article 14(e) has the support of basic

²¹ *Id.*

²² GATT Secretariat, Trade Negotiations Committee, *Subsidies and Countervailing Measures: Communication from the Permanent Delegation of Mexico*, GATT Doc. MTN.TNC/W/38 (Nov. 26, 1990).

²³ *Id.*

²⁴ My research in this regard consists of exhaustive reading of relevant negotiation records publicly available and interviews with staff of the WTO Secretariat who were involved in, or otherwise familiar with, the Uruguay Round negotiations of the SCM Agreement.

²⁵ THE GATT URUGUAY ROUND: A NEGOTIATING HISTORY, *supra* note 19, at 503.

economic theories and can shed light on the question of how government monopoly should be dealt with under SCM Article 14(d).

2.2. *Benchmarking Jurisprudence under Article 14(d)*

To date, the issue of benchmarking in the provision of goods by government monopoly (or near monopoly) has arisen in several major WTO disputes, all involving government-owned natural resources. SCM jurisprudence on the issue has evolved considerably. Below is an overview of the key findings on the issue in these cases.

2.2.1. *US–Softwood Lumber (IV):*²⁶ *Canadian Timber*

The *Softwood Lumber* dispute between the United States and Canada is one of the most complex and enduring trade disputes in modern history. Over the past decades, the conflict has generated multiple rounds of litigation at NAFTA and the WTO.²⁷ After the DSB adopted the Appellate Body’s decision in *Softwood Lumber (IV)*, the two governments reached a negotiated settlement in 2006, but the settlement expired in October 2015.²⁸ In April 2017, the United States began imposing new countervailing duties (CVD) on

²⁶ Appellate Body Report, *United States–Final Countervailing Duty Determination with Respect to Certain Softwood Lumber from Canada*, WTO Doc. WT/DS257/AB/R (adopted Feb. 17, 2004) [hereinafter AB Report, *Softwood Lumber IV*].

²⁷ For an overview of the multiple litigations, see Jeffrey L. Dunoff, *The Many Dimensions of Softwood Lumber*, 45 ALTA. L. REV. 319, 320 (2007).

²⁸ The settlement was reached in September 2006 for seven years and was extended for two years until October 2015. See *Softwood Lumber Agreement Between the Government of Canada and the Government of the United States of America*, Can.-U.S., Sept. 12, 2006, http://www.international.gc.ca/controls-controles/softwood-bois_oeuvre/other-autres/agreement-accord.aspx?lang=eng [<https://perma.cc/8TQ8-YZBV>]; *Agreement between The Government of Canada and The Government of The United States of America Extending the Softwood Lumber Agreement between The Government of Canada and The Government of The United States of America, as Amended*, Can.-U.S., Jan. 23, 2012, <https://treaty-accord.gc.ca/text-texte.aspx?id=105335&lang=eng> [<https://perma.cc/BPM7-ZG24>].

softwood lumber from Canada.²⁹ In November 2017, Canada initiated another WTO case against the US CVD on softwood lumber,³⁰ which is currently pending.

The central issue in this lengthy dispute is quite simple: whether the Canadian government subsidized lumber producers through its stumpage programs. The difference of opinion between the United States and Canada is rooted in the difference in their respective forest systems. In Canada, 94% of the forestland is owned and managed by government (Crown land), and only 6% is privately owned.³¹ The government charges “stumpage fees” for harvesting timber on Crown land, which are assessed by an administrative body. In setting the stumpage fees, the government may consider lumber prices, revenue needs, and other policy goals such as job creation and sustainable forest management.³² By contrast, in the United States, most of the forestland is privately owned and the stumpage prices are determined by the market through auctions. From the US perspective, Canada has been subsidizing lumber producers with below-market stumpage fees, and it is therefore justified in levying CVD on softwood lumber from Canada. Denying the existence of any subsidy in its stumpage system, Canada has challenged the US CVDs at both NAFTA and WTO forums. Thus far, none of the forums have found that the Canadian stumpage programs provided a subsidy.

US–Softwood Lumber (IV) is the first WTO case that dealt with the issue of benchmarking in a situation where the government

²⁹ See Press Release, U.S. Dep’t of Commerce, U.S. Dep’t of Commerce Issues Affirmative Preliminary Countervailing Duty Determination on Softwood Lumber from Canada (Apr. 24, 2017), <https://www.commerce.gov/news/press-releases/2017/04/us-department-commerce-issues-affirmative-preliminary-countervailing> [<https://perma.cc/4N3D-TPWU>].

³⁰ See Request for Consultations by Canada, *United States–Countervailing Measures on Softwood Lumber from Canada*, WTO Doc. WT/DS533/1 (Nov. 30, 2017). A WTO panel was composed on July 6, 2018. See Constitution of the Panel Established at the Request of Canada, *United States–Countervailing Measures on Softwood Lumber from Canada*, WTO Doc. WT/DS533/3 (July 9, 2018).

³¹ Provincial and territorial governments own about 90% of the public forestland, while the federal government about owns 4%. See Gov’t of Can., *Forest Land Ownership*, NAT’L RESOURCES CAN., www.nrcan.gc.ca/forests/canada/ownership/17495 [<https://perma.cc/7CZM-ELBK>] (last modified Jan. 18, 2019).

³² See, e.g., R. Q. Grafton, R. W. Lynch & H. W. Nelson, *British Columbia’s Stumpage System: Economic and Trade Policy Implications*, in 24 CANADIAN PUBLIC POLICY—ANALYSES DE POLITIQUES S41–S50 (Supp. S2 1998) (describing how stumpage prices were set in British Columbia) [hereinafter Grafton et al., *BC’s Stumpage System*]; see also Dunoff, *supra* note 27, at 321.

dominates the market. In imposing CVDs on Canadian softwood lumber, the US Department of Commerce (“USDOC”) used adjusted US stumpage prices as the benchmark to determine the “benefit” conferred by Canadian stumpage programs. According to the United States, although there were private stumpage prices in Canada, all such prices were distorted due to the predominant position of the Canadian government in the timber market; as a result, there were no market-determined prices in Canada that could be used as benchmarks for Canadian stumpage fees. In the WTO dispute, Canada challenged the US benchmarking decision as inconsistent with SCM Article 14(d). The Panel agreed with Canada, finding that because the US acknowledged the existence of private stumpage market in Canada, “the resort to US prices as the benchmark for the determination of benefit on grounds that private prices in Canada were distorted is inconsistent with Article 14(d).”³³

On appeal, the Appellate Body reversed the Panel’s finding. The interpretive focus was on the second sentence of Article 14(d), which states that “[t]he adequacy of remuneration [for the government] shall be determined in relation to prevailing market conditions for the good or service in question in the country of provision”³⁴ In interpreting this provision, the Appellate Body established several legal positions. First, the Appellate Body construed the phrase “in relation to” as to “imply a broader sense of ‘relation, connection, reference;’” consequently, an investigating authority is permitted to use as a benchmark “something other than private prices in the market of the country of provision” so long as it can demonstrate that “the benchmark chosen relates or refers to, or is connected with, the conditions prevailing in the market of the country of provision.”³⁵ In short, by interpreting the phrase “in relation to” broadly, the AB opened the door for the investigating authority to reject domestic prices in the country of provision as a benchmark under Article 14(d).³⁶

³³ Panel Report, *United States–Final Countervailing Duty Determination with Respect to Certain Softwood Lumber from Canada*, ¶ 7.64, WTO Doc. WT/DS257/R (Aug. 29, 2003) [hereinafter Panel Report, *Softwood Lumber IV*].

³⁴ SCM, *supra* note 1, art. 14(d).

³⁵ AB Report, *Softwood Lumber IV*, *supra* note 26, ¶ 89.

³⁶ According to Horlick, the AB made a “grave error” by “permitting cross-border comparisons, which should be anathema in CVD cases” and the AB’s interpretation effectively deleted the phrase “in the country” from Article 14(d), which phrase had been insisted on by Mexico in the SCM negotiations. Gary N. Horlick, *An Annotated Explanation of Articles 1 and 2 of the WTO Agreement on Subsidies and Countervailing Measures*, 8 GLOBAL TRADE & CUSTOMS J. 297, 299 (2013).

Second, the Appellate Body indicated three specific circumstances in which an investigating authority may reject domestic prices in the country of provision under Article 14(d): (i) where the government is the only supplier of the particular goods in the country; (ii) where the government administratively controls all of the prices for those goods in the country; and (iii) where private prices in the country are distorted because of the predominant role of the government in the market as a provider of the same or similar goods.³⁷ According to the Appellate Body, the third situation is where the government has such a predominant role in the market that private suppliers will align their prices with government prices for the same or similar goods; in other words, where the government effectively acts as a “price-setter” and private suppliers are “price takers.”³⁸

Third, the Appellate Body suggested two possible alternative benchmarks that may be used in determining the adequacy of remuneration for government-provided goods. They are “proxies that take into account prices for similar goods quoted on world markets,” and “proxies constructed on the basis of production costs.” The AB emphasized, however, that when using an alternative benchmark, an investigating authority is under the obligation to ensure that the benchmark “relates or refers to, or is connected with, prevailing market conditions in the country of provision, and must reflect price, quality, availability, marketability, transportation and other conditions of purchase or sale, as required by Article 14(d).”³⁹

Finally, regarding the alternative benchmark used by the USDOC in this particular case, the Appellate Body cautioned that “it would be difficult, from a practical point of view, for investigating authorities to replicate reliably market conditions prevailing in one country on the basis of market conditions prevailing in another country.”⁴⁰ The AB ultimately concluded that it was unable to complete the legal analysis of whether the USDOC determination of benefit is consistent with Article 14(d), because there were insufficient factual findings or undisputed facts in the record.⁴¹

³⁷ AB Report, *Softwood Lumber IV*, *supra* note 26, ¶¶ 98, 103.

³⁸ *Id.* ¶ 99.

³⁹ *Id.* ¶ 106.

⁴⁰ *Id.* ¶ 108.

⁴¹ *Id.* ¶ 122.

Consequently, the case did not result in a finding that the Canadian stumpage programs provided subsidies to lumber producers.

Despite the lack of resolution of the dispute at hand, *Softwood Lumber (IV)* established new benchmarking jurisprudence under Article 14(d). Where the government has a predominant role in the provision of goods or services, an investigating authority is permitted to reject market prices in the country of provision and to use an alternative benchmark to make the benefit determination, provided that the alternative benchmark is “connected with” prevailing market conditions in the country of provision. What constitutes such a connection, however, remains to be determined on a case-specific basis.

2.2.2. *US-AD/CVD (China)*:⁴² *Chinese Land*

In this dispute, China challenged the USDOC determinations in four concurrent antidumping and countervailing duty investigations as inconsistent with WTO law.⁴³ In two of the CVD investigations, the USDOC found that the Chinese government’s provision of land-use rights to the producers was for less than adequate remuneration, and hence constituted countervailable subsidies. In its benefit determinations, the USDOC rejected all land prices in China as being distorted by the government and instead used land prices in Thailand as the benchmark.⁴⁴

In China, all land is publicly owned, and no private ownership of land is permitted. Such public ownership consists of state ownership and collective ownership. All urban land and mineral resources are state-owned, whereas most rural land is collectively

⁴² Appellate Body Report, *United States-Definitive Antidumping and Countervailing Duties on Certain Products from China*, WTO Doc. WT/DS379/AB/R (adopted Mar. 25, 2011) [hereinafter AB Report, *US-AD/CVD (China)*].

⁴³ The products involved in these AD/CVD investigations were: circular welded carbon quality steel pipe, certain new pneumatic off-the-road tires, light-walled rectangular pipe and tube, and laminated woven sacks. Panel Report, *United States-Definitive Antidumping and Countervailing Duties on Certain Products from China*, ¶ 2.1, WTO Doc. WT/DS379/R (Oct. 22, 2010) [hereinafter Panel Report, *US-AD/CVD (China)*].

⁴⁴ *Id.* ¶¶ 10.165–10.167; see also Laminated Woven Sacks from the People’s Republic of China, 72 Fed. Reg. 67893, 67909 (Dep’t of Commerce Dec. 3, 2007) (preliminary affirmative countervailing duty determination); Certain New Pneumatic Off-the-Road Tires from the People’s Republic of China, 72 Fed. Reg. 71360, 71369 (Dep’t of Commerce Dec. 17, 2007) (preliminary affirmative countervailing duty determination).

owned by the farmers residing thereon.⁴⁵ For state-owned land, the government may “grant” land-use rights to private entities for a fee, and the land-use rights so granted can be sold in the secondary market. The state may also “allocate” land for use by state-owned entities for a nominal fee, but the allocated use rights are not transferrable until full fees for land-use rights are paid. Collective-owned land does not have transferable use rights and can only be used for the benefit of the members of the collectives. The government, however, may convert collective-owned land into state-owned land through requisition upon payment of compensation to the collective owners. Transferable land-use rights may be granted through auction, bidding, or by agreement with buyers. Where the grant is made by agreement, the fee charged may not be lower than the minimum price set by law.⁴⁶ The government grants land-use rights according to planned purposes for land use (such as residential, commercial, and industrial) and may charge different fees for different purposes of use.

According to China, the USDOC acted inconsistently with SCM Article 14(d) by rejecting in-country prices and using Thai prices as the benchmark for China’s land-use rights. China claimed that private prices exist in the secondary market for land-use rights in China, and that the term “prevailing market conditions,” as interpreted by the Appellate Body in *Softwood Lumber IV*, does not refer to a “pure market” or a “market undistorted by government intervention.”⁴⁷ Furthermore, China argued that the Thai benchmark, 3000 km away, bore no relationship to prevailing market conditions in China.⁴⁸ China additionally submitted that, because land is not traded across borders and because its value is significantly determined by its location and by the applicable legal regime, it is impossible to “replicate reliably” the prevailing market conditions for land in one country by referring to land values in another country, which has its own physical, social, political, and economic environment.⁴⁹

The United States countered that USDOC’s use of an out-of-country benchmark in this case is justified under Article 14(d) as

⁴⁵ XIANFA [CONSTITUTION] arts. 8, 9 (1982) (China).

⁴⁶ Law of the People’s Republic of China on the Administration of Urban Real Estate (1994, as amended), art. 13.

⁴⁷ Panel Report, *US-AD/CVD (China)*, *supra* note 43, ¶ 10.69.

⁴⁸ *Id.* ¶ 10.169.

⁴⁹ See *id.* n.686 (citing the AB Report, *Softwood Lumber IV*, *supra* note 26, ¶ 108); see also *id.* ¶ 10.183.

interpreted by the Appellate Body in *Softwood Lumber IV*. According to the United States, the Chinese government not only ultimately owns all the land, but also exercises significant control over the supply side of the land market; as a result, land prices in both primary and secondary markets are distorted. Given the predominant role of the government in China's land market, the US claimed, it was necessary to use an out-of-country benchmark to measure the benefits at issue.⁵⁰ In defending the Thai benchmark, the US argued that the USDOC took into consideration several factors (comparable per capita GNI, population density, and types of land transactions) to ensure that Thai prices reasonably reflect prevailing market conditions in China. The US also submitted that due to limited information available it may not always be possible for investigating authorities to adjust all of the items listed in Article 14(d), but that should not preclude a Member from selecting a comparison price. If the bar for selecting the out-of-country benchmark is set so high that it requires the use of unavailable data, investigating authorities will be required to use in-country prices even where they contain the very subsidy that they are trying to measure, which would not capture the benefit of the subsidy due to the predominant role of the government.⁵¹

The Panel agreed with the United States. In the view of the Panel, based on the Appellate Body's reasoning in *Softwood Lumber IV*, the USDOC's finding that the government was the *sole* supplier of the good in question might have been sufficient for a conclusion that it could not use in-country prices for land as the benchmark. Yet, the Panel noted, the USDOC did not merely rely on the government ownership of land for its conclusion; instead, it also conducted an extensive analysis of the land-use market in China before concluding that land-use prices in China were not set in accordance with market principles.⁵² Satisfied with the USDOC's analysis, the Panel held that China did not establish that the USDOC had acted inconsistently with SCM Article 14(d) by rejecting in-country land-use prices as benchmarks for land-use rights in China.⁵³ As for the use of the Thai benchmark, the Panel held that Article 14(d) does not exclude, *a priori*, the possibility of determining

⁵⁰ *Id.* ¶ 10.71.

⁵¹ *Id.* ¶¶ 10.175–10.176.

⁵² *Id.* ¶ 10.77. Specifically, the USDOC found that land-use rights were still transferred via “closed-door” negotiations and not via public auctions, tenders or listings as required by law.

⁵³ *Id.* ¶¶ 10.78–10.82.

the existence and amount of benefit for subsidies in the form of provision of land on the basis of land prices in another country. Otherwise, according to the Panel, it would become impossible for the investing authority to determine the existence and amount of any benefit in situations such as were found to exist in China.⁵⁴ Furthermore, the Panel doubted that any adjustments to the Thai benchmark could be made to ensure a closer approximation of an undistorted land market in China, which is a counterfactual situation. In any event, the Panel found that China had not identified any specific adjustment that the USDOC was required to make.⁵⁵ The Panel thus concluded that China had failed to establish that the USDOC's use of the Thai benchmarks was inconsistent with Article 14(d).⁵⁶ China did not appeal the Panel's rulings on land-use rights.⁵⁷

2.2.3. *US–Carbon Steel (India)*:⁵⁸ *Indian Iron Ore and Coal*

In India, the government (states and federal) owns all mineral resources on behalf of the Indian public.⁵⁹ The government grants mining leases to companies (public or private) for the exploration and exploitation of the minerals in exchange for royalty payments. For more than a decade, the United States imposed countervailing duties on steel imports from India, alleging that the Indian steel producers were subsidized by the government provision of iron ore and coal.⁶⁰ More specifically, the USDOC found countervailable

⁵⁴ *Id.* ¶ 10.184.

⁵⁵ *Id.* ¶ 10.189.

⁵⁶ *Id.* ¶ 10.191.

⁵⁷ It is unclear why China decided not to appeal the Panel's rulings on land-use rights, considering that it successfully appealed all other major rulings of the Panel in this case.

⁵⁸ Appellate Body Report, *United States–Countervailing Measures on Certain Hot-Rolled Carbon Steel Flat Products from India*, WTO Doc. WT/DS436/AB/R (adopted Dec. 19, 2014) [hereinafter AB Report, *Carbon Steel (India)*].

⁵⁹ *Id.* ¶ 2.179; see also Panel Report, *United States–Countervailing Measures on Certain Hot-Rolled Carbon Steel Flat Products from India*, ¶ 7.73, WTO Doc. WT/DS436/R (July 14, 2014) [hereinafter Panel Report, *Carbon Steel (India)*].

⁶⁰ USDOC issued the first of the underlying determinations challenged in this case in 2001. See A. Ramanujan, A. Sharma & S. Seetharaman, *US–Carbon Steel (India): A Major Leap in Trade Remedy Jurisprudence*, in *WTO DISPUTE SETTLEMENT AT TWENTY: INSIDERS' REFLECTIONS ON INDIA'S PARTICIPATION* 235 (Abhijit Das & James J. Nedumpara eds., 2016).

subsidies in (a) the supply of high-grade iron ore by the National Mineral Development Corporation (NMDC), which is 98% owned by the government of India, and (b) the grant of “captive mining rights” by the Indian government, which allowed the steel producers the exclusive rights to mine iron ore or coal for their own use in the production of steel. In calculating the amount of benefits conferred, the USDOC rejected India’s domestic prices, and used the prices charged by Australian and Brazilian producers to Indian buyers, as the benchmarks. India brought this dispute in 2012, challenging the US countervailing measures as inconsistent with the SCM Agreement.

2.2.3.1. Iron Ore Supplied by NMDC

With respect to the supply of iron ore by NMDC, India challenged the USDOC’s determination that NMDC is a “public body” (i.e., a subsidy provider), and the USDOC’s selection of benchmarks in the benefit determination. On the issue of public body, the Appellate Body followed its prior ruling that a public body is an entity that “possesses, exercises, or is vested with governmental authority”⁶¹ and found that the USDOC’s public body determination was inconsistent with SCM Article 1.1(a)(1), because it failed to provide “a reasoned and adequate explanation” for the basis of its determination.⁶²

It was on the issue of benchmarking that the Appellate Body significantly developed its jurisprudence under Article 14(d). Recall that in *Softwood Lumber IV*, the Appellate Body had held that, where the government has a predominant position in the provision of goods or services, an investigating authority is permitted to reject in-country prices and use alternative benchmarks in the benefit determination. In this case, the Appellate Body clarified that “whether a price may be relied upon for benchmarking purposes under Article 14(d) is not a function of its source but, rather, whether it is a market-determined price reflective of prevailing market conditions in the country of provision.”⁶³ Accordingly, in considering in-country prices, an investigating authority may not stop at private prices, but must also assess prices of “government-

⁶¹ AB Report, *US-AD/CVD (China)*, *supra* note 42, ¶ 317.

⁶² AB Report, *Carbon Steel (India)*, *supra* note 58, ¶ 4.55.

⁶³ *Id.* ¶ 4.154.

related entities” other than the entity providing the financial contribution at issue.⁶⁴ If such government prices are market-determined, they will form part of the benchmarks. Moreover, the fact that governments may set prices in pursuit of public policy objectives, rather than profit maximization, does not mean that government prices must be discarded in determining a benchmark under Article 14(d).⁶⁵ Having established these positions, the Appellate Body found that the USDOC acted inconsistently with Article 14(d) by excluding NMDC’s prices from the benefit determination and by using Australian and Brazilian prices as the benchmarks for the iron ore supplied by NMDC.⁶⁶

2.2.3.2. Mining Rights for Iron Ore and Coal

With respect to the grant of the captive mining rights for iron ore and coal by the Indian government, the initial question was whether the grant of such rights constituted the provision of “goods” under Article 1.1. Considering the mining rights as “reasonably proximate” to the minerals extracted and enjoyed by the steel companies, the Appellate Body answered the question in the affirmative.⁶⁷

The issue then was whether the grant of mining rights conferred benefits to the steel companies, that is, whether the remuneration to the government was “less than adequate” under Article 14(d). Since the government of India received only royalties for the grant of the mining rights, the inquiry should logically focus on the adequacy of the royalty payments as compared with some benchmarks.⁶⁸ Yet, instead of assessing the adequacy of the royalties, the USDOC determined benefits by first constructing “a government price for iron ore and coal,” which included not only royalties but also the costs associated with the extraction of iron ore and coal incurred by

⁶⁴ *Id.* ¶ 4.151 note 740 (stating that the term “government-related entities” refers to “all government bodies (whether national or regional), public bodies, and any other government-owned entities for which there has not been a ‘public body’ determination.”).

⁶⁵ *Id.* ¶¶ 4.170, 4.287.

⁶⁶ *Id.* ¶¶ 4.290, 4.316–4.317.

⁶⁷ *Id.* ¶ 4.75.

⁶⁸ India made this argument and suggested that the adequacy of the royalties should be determined in comparison to royalty rates in other countries. *See id.* ¶ 4.324.

the steel companies, and then comparing the constructed government prices with the benchmarks chosen (i.e., the Australian and Brazilian prices charged to Indian buyers).⁶⁹ Oddly, even though the Appellate Body had rejected the USDOC's determination that NMDC is a public body, and even though there was no claim that any other recipients of the mining rights involved in this case were part of the government, the Appellate Body found that it was "permissible" under Article 14(d) to attribute the entire production costs of iron ore and coal plus profits to the Indian government.⁷⁰ It appears that the Appellate Body viewed this conclusion as a logical extension of its initial finding that the mining rights were proximate to the minerals extracted by the right holders. But these are two distinct matters. The AB's initial finding addresses the applicability of the SCM Agreement to the grant of mining rights, which is an entirely different issue from the calculation of remuneration to the government for the granting of these rights.

Its problematic finding on the calculation of remuneration notwithstanding, the Appellate Body ultimately disagreed with the USDOC's benefit determination with respect to the iron ore supplied by NMDC. The Appellate Body concluded that the USDOC's benefit determination is inconsistent with Article 14(d) because the USDOC failed to provide "a reasoned and adequate explanation" of the basis for its use of Australian and Brazilian prices as benchmarks for the iron ore.⁷¹ However, with respect to the provision of coal by the government through the grant of mining rights, the Appellate Body declined to find that the USDOC's use of Australian prices as the benchmark was inconsistent with Article 14(d), and the reason for this decision was not explained.⁷²

2.2.4. US-Coated Paper (Indonesia):⁷³ Indonesian Timber

This recent case bears a close resemblance to *Softwood Lumber (IV)*. As in Canada, most forestland (99.5%) in Indonesia is

⁶⁹ *Id.* ¶ 4.323.

⁷⁰ *Id.* ¶ 4.332.

⁷¹ *Id.* ¶¶ 4.316–4.317.

⁷² *Id.* ¶ 4.322.

⁷³ Panel Report, *United States–Antidumping and Countervailing Measures on Certain Coated Paper from Indonesia*, WTO Doc. WT/DS491/R (adopted Jan. 12, 2018) [hereinafter Panel Report, *Coated Paper (Indonesia)*].

government-owned.⁷⁴ The government charges royalty fees for licenses to harvest timber from government-owned land. The royalty fees are set administratively. The United States imposed countervailing duties on certain coated paper products from Indonesia, claiming that the Indonesian government subsidized the paper producers with cheap timber and logs.⁷⁵ In calculating “benefit” conferred by the supply of timber, the USDOC rejected in-country prices for timber as benchmarks, on the ground that there were no market-determined stumpage fees in Indonesia. Instead, the USDOC constructed the benchmark based on Malaysian log export price data from the World Trade Atlas, exclusive of shipments to Indonesia.⁷⁶

In the WTO proceeding, Indonesia challenged the USDOC’s rejection of in-country prices as the benchmark as inconsistent with SCM Article 14(d). In particular, Indonesia submitted that the royalty fees payable were for the right to use land, and not for the supply of standing timber, because most of the timber at issue was not pre-standing but was planted and harvested by the license holders in plantations they had built on government-owned land. As a result, Indonesia claimed, the government did not own the standing timber and had no control over the prices charged by the license holders in the timber market. That being the case, Indonesia argued, the royalty fees payable to the government do not constitute “remuneration” for the supply of timber.⁷⁷ The United States countered that the royalty fees were stumpage fees, because they were tied to the volume of wood harvested from the land, rather than the acreage leased.⁷⁸ Indonesia’s claims were rejected by the Panel. According to the Panel, the question of whether the government provided a good in the form of standing timber pertains to the finding of a financial contribution under SCM Article 1.1(a). Since Indonesia did not challenge the USDOC’s finding under

⁷⁴ See *id.* ¶¶ 7.40, 7.47 (the government’s market share in the market for standing timber was over 93% and its ownership of harvestable land in Indonesia was approximately 99.5%, with private forests accounting for just 6.27% of the total harvest during the period of investigation).

⁷⁵ The measure concerning logs was an export ban on logs imposed by the Indonesian government, which is beyond the scope of discussion in this Article.

⁷⁶ Panel Report, *Coated Paper (Indonesia)*, *supra* note 73, ¶ 7.48. According to the USDOC, it used log prices as the basis for stumpage benchmark because the market value of timber is derivative of the value of the downstream products. *Id.* n.108.

⁷⁷ *Id.* ¶ 7.42, ¶ 7.42 n.99.

⁷⁸ *Id.* ¶ 7.43.

Article 1.1(a), the Panel must assume the USDOC's finding on the existence of financial contribution was proper.⁷⁹ Citing the predominant market share of the Indonesian government in the timber market and the fact that royalty fees were administratively determined, the Panel concluded that the USDOC did not err in finding that there were no market-determined prices for timber in Indonesia.⁸⁰ In reaching this conclusion, the Panel essentially followed the AB's reasoning in *Softwood Lumber (IV)*.

Notably, the Panel did not examine whether the out-of-country benchmarks selected by the USDOC were proper under Article 14(d), since Indonesia's claims were limited to the USDOC's rejection of in-country prices as the benchmark.⁸¹

2.2.5. *The State of Benchmarking Jurisprudence under Article 14(d)*

The benchmarking jurisprudence concerning government monopoly has evolved considerably under Article 14(d). The principal position established in *Softwood Lumber IV*—when the government is the predominant supplier in the country, domestic prices can be assumed as distorted—was modified by the Appellate Body in *Carbon Steel (India)*. In the latter case, the Appellate Body explicitly cautioned against equating price distortion with government predominance. Instead, the Appellate Body held that government prices (including prices charged by all government bodies, public bodies, and SOEs) may be market-determined; thus, government prices other than the financial contribution at issue may *not* be excluded from the determination of market benchmarks, even if such prices were set in pursuit of public policy objectives rather than profit-maximization. This shift in the Appellate Body position appears to be nothing short of a fundamental change in its view of government's role in the market. It remains to be seen whether the AB's new position will take hold.⁸²

Having held that government prices may be market-determined, however, the Appellate Body did not specify how an investing

⁷⁹ *Id.* ¶ 7.45.

⁸⁰ *Id.* ¶ 7.61.

⁸¹ *See id.* ¶ 7.28.

⁸² Notably, the Panel in *Coated Paper (Indonesia)* followed the AB's position in *Softwood Lumber IV* rather than *Carbon Steel (India)*. *See supra* notes 74–81 and accompanying text. Indonesia did not appeal the Panel's decision.

authority should make the relevant assessment. Conceptually, to assess whether a government price is “market-determined,” it is necessary to first define the market. According to the Appellate Body, the term “market” refers to “the area of economic activity in which buyers and sellers come together and the forces of supply and demand affect prices”; “prevailing market conditions” in Article 14(d) “consist of generally accepted characteristics of an area of economic activity in which the forces of supply and demand interact to determine market prices.”⁸³ These definitions, while helpful, do not address some of the key questions concerning government monopoly. For example, when the government is the sole provider of a good in the country, is there a domestic “market” for the good? That is, do we recognize the existence of “market” between a single supplier and multiple buyers? What if two or more local governments compete in supplying the good or service in the country? Should we recognize such competition or should we treat all local governments as one provider for the purpose of Article 14(d)?⁸⁴ Does the existence of government monopoly or inter-governmental competition constitute “prevailing market conditions” for the good or service in question in the country of provision? Furthermore, if the government monopoly exports, thereby directly competing in the world market for the supply of the good or service in question, is the government export price then “market-determined”? The Appellate Body in *Carbon Steel (India)* seemed to think so.⁸⁵ But if such an export price is market-determined, does it also “relate to” the prevailing market conditions

⁸³ AB Report, *Carbon Steel (India)*, *supra* note 58, ¶ 4.150 (citing Appellate Body Report, *United States – Subsidies on Upland Cotton*, ¶ 404, WTO Doc. WT/DS267/AB/R/ (adopted Mar. 21, 2005) [hereinafter AB Report, *US-Upland Cotton*]).

⁸⁴ While the Appellate Body has clarified that investigating authorities “may be called upon to examine the conditions of competition” in determining whether government-related prices are market determined, it appears to have limited such examination to the competition between business entities, including both state-owned and private entities, but not competition between local governments. See Appellate Body Report, *United States – Countervailing Duty Measures on Certain Products from China*, ¶ 4.62, WTO Doc. WT/DS437/AB/R (adopted Jan. 16, 2015) [hereinafter AB Report, *US-CVD (China)*].

⁸⁵ In ruling against the USDOC for its rejection of NMDC’s export prices of iron ore as possible market benchmarks, the Appellate Body apparently considered it possible that NMDC’s export prices (which the Appellate Body had attributed to that of the government of India) were “market determined.” AB Report, *Carbon Steel (India)*, *supra* note 58, ¶ 4.290.

in the country of provision as required by Article 14(d)? These basic questions remain to be answered.

Meanwhile, it has been well settled that the government price for the financial contribution at issue cannot be used as the benchmark, as it would be “inherently circular” if the very government price that investigating authorities are seeking to test were used as the benchmark itself.⁸⁶ For this situation, the Appellate Body has suggested certain alternative benchmarks under Article 14(d), including proxies based on prices in world markets, constructed prices based on production costs, the export price of the government monopoly for like product, and the import price of foreign like product. In addition, the Panel in *US-AD/CVD (China)* has accepted the use of unadjusted foreign market prices as the benchmark for government provision of land in China.

The AB has emphasized that any alternative benchmark under Article 14(d) must reflect prevailing market conditions in the country of government provision. But it has not clarified how the alternatives it suggested or accepted actually met that standard in a given situation.⁸⁷ As for pure foreign market prices as the alternative, the AB has not had a chance to examine such use directly under Article 14(d).⁸⁸ Nonetheless, the AB has explicitly cautioned against such use, stating that as a practical matter it would be very difficult for the investigating authority to “replicate reliably” market conditions prevailing in one country on the basis of market conditions prevailing in another country.⁸⁹

⁸⁶ *Id.*, ¶ 4.166.

⁸⁷ There is also an unexplained inconsistency in the AB rulings on the use of import prices of foreign like product. *See supra* text accompanying notes 71–72.

⁸⁸ Recall that in *Softwood Lumber IV*, the AB was unable to address this issue due to the lack of sufficient information on the record. In *US-AD/CVD (China)*, China did not appeal the relevant Panel ruling. And in *Coated Paper (Indonesia)*, Indonesia did not request the Panel to examine whether the foreign prices used by the US as benchmarks were WTO-consistent, nor did it launch an appeal to the Panel report.

⁸⁹ AB Report, *Softwood Lumber IV*, *supra* note 26, ¶ 108.

3. SELECTION OF ALTERNATIVE BENCHMARKS

3.1. *Evaluation of Existing Alternative Benchmarks under Article 14(d)*

In accordance with Article 14(d), the benchmark used to assess the adequacy of remuneration for the government provision of good or service must be “in relation to” prevailing market conditions for the good or service in question “in the country of provision”, and such prevailing market conditions include price, quality, availability, marketability, transportation and other conditions of purchase or sale. As previously discussed, the Appellate Body has interpreted the phrase “in relation to” broadly so as to open the door for the use of out-of-country benchmarks when the government holds a predominant position in the domestic market.⁹⁰ Yet, the door is not so widely open as to allow any tenuous or fictitious connection to pass muster, since the AB also cautioned that it would be very difficult for the investigating authority to “replicate reliably” market conditions prevailing in one country on the basis of market conditions prevailing in another country.⁹¹ Arguably, “reliable replication” is the standard the AB had in mind when it interpreted “in relation to” to allow the possibility of using out-of-country benchmarks under Article 14(d). “Reliable replication” of domestic market conditions, of course, is a very high standard for any out-of-country benchmarks.

To date, five alternative benchmarks have been suggested or accepted by WTO adjudicators under Article 14(d). Of these, the Appellate Body has suggested the following four: (i) proxies constructed on the basis of production costs; (ii) proxies that take into account world market prices for similar products; (iii) export prices of the government monopoly in a different transaction (not involving the financial contribution at issue); and (iv) import prices of foreign like product. The Panel in *US-AD/CVD (China)* has accepted the fifth (v): market prices of like product in a third country. Of these five alternatives, two are purely out-of-country prices (i.e., proxies based on world market prices and prices in a

⁹⁰ See *supra* text accompanying notes 35–36.

⁹¹ AB Report, *Softwood Lumber IV*, *supra* note 26, ¶ 108.

third country) and the other three each have a certain degree of connection with domestic market conditions.

In theory, the choice among all possible benchmarks in a given case should be the one that can most accurately reflect (i.e., replicate) market conditions prevailing in the country of provision. Although in practice the benchmark selection in each case is necessarily fact-specific, it is nonetheless possible to evaluate the five alternatives according to the degree of their apparent connectivity with the in-country market conditions:

- Export prices of the government monopoly for like product in transactions other than the financial contribution at issue. This alternative seems to have the support of the AB in *Carbon Steel (India)* with respect to the iron ore exported by NMDC. There are, however, some conceptual difficulties associated with this choice. Technically, the standard for the benchmark under Article 14(d) is that it reflects (or replicates) the market conditions *in the country of provision*. The pricing of exports, in contrast, reflects the supply and demand conditions in *the world market*.⁹² While the export price of the government provider should also reflect the conditions of domestic production, without examining the conditions of domestic production, one cannot know whether such export price (in the transactions other than the financial contribution at issue) is itself “subsidized” by the government provider. Logically, if the export price of a government monopoly is accepted as the benchmark reflecting domestic market conditions, the in-country prices of the government monopoly must also be recognized as market-determined.⁹³ It is unclear whether the AB has embraced this position.
- Proxies constructed based on production costs. This alternative was suggested by the AB in *Softwood Lumber*

⁹² See Appellate Body Reports, *Canada–Renewable Energy/Canada–Feed-in Tariff Program*, ¶ 5.169, WTO Doc. WT/DS412/AB/R; WT/DS426/AB/R (adopted 24 May 2013) [hereinafter AB Reports, *Canada–Renewable Energy*] (stating “the definition of the relevant market is central to, and a prerequisite for, a benefit analysis under Article 1.1(b) of the SCM Agreement.”).

⁹³ See, e.g., *The Four Types of Market Structures*, QUICKONOMICS, <https://quickonomics.com/market-structures/> [<https://perma.cc/LTG8-533Y>] (explaining that in a standard economy analysis, monopoly is one of the four basic types of market structures: perfect competition, monopolistic competition, oligopoly, and monopoly).

IV. Production costs of a good are expenses incurred in manufacturing the good, including the costs of labor, raw materials, manufacturing overhead and a normal profit margin. The costs are typically incurred in the country of production and can be ascertained from the actual production data. A cost-based benchmark, therefore, is capable of reflecting the prevailing market conditions in the country of provision. One potential problem with this method arises when the government also dominates the supply of one or more inputs for the good in question, in which case the use of another alternative may be required. For whatever reason, this suggestion of the AB has not been adopted in practice.

- The import price of foreign like product. This was accepted by the AB in *Carbon Steel (India)* as the benchmark for coal provided by the Indian government. Assuming the import transaction is at arm's length, the actual price paid by the domestic firm for the imports must relate to the market conditions in the importing country, such as price, quality, and availability of the good in question. However, if all else is equal, it would be difficult to understand why the domestic firm would be willing to pay more for imports than the cheaper price charged by the government provider. Furthermore, it is questionable whether one or two import transactions can be considered to reflect the "prevailing" market conditions in the importing country for the good in question, since the domestic market is still dominated by the government provider.⁹⁴ Unfortunately, the AB in *Carbon Steel (India)* did not provide any explanation for its acceptance of this alternative.
- Proxies based on world market prices for like products. This alternative was suggested by the AB in *Softwood Lumber IV* but has not been adopted in practice. There are, however, some conceptual difficulties associated with this alternative. For one thing, if the good in question is sold at the world market price, there will be no way of knowing whether the pricing of the good has

⁹⁴ If the imports were numerous and substantial, then the government provider would have to compete with the imports in its domestic market. In that case, the government would no longer have a monopoly and there should be a market price for the good in question in the country of provision.

benefitted from the very government subsidy under investigation. For another, if the good is sold at a price lower than world market prices, using the world market price as the benchmark will deny any comparative advantage the country of provision might have in the good in question.⁹⁵

- The price of like product in a foreign country. This was the US approach with respect to Canadian timber, Indonesia timber, and Chinese land. This approach was accepted by the Panel with respect to Chinese land but has not been examined by the AB in any specific case.⁹⁶ As a result, the US approach has prevailed in practice. Compared to world market prices, prices in a foreign country market are even less likely to be connected with to market conditions in the country of provision. Using such foreign prices as the benchmark without adjustment deprives the country of provision of any comparative advantage it may have in the good in question.

In sum, of the above five alternatives, “proxies constructed on the basis of production costs” appears to be the one that is most capable of reflecting in-country market conditions.⁹⁷ While this approach has not been adopted in practice under the SCM Agreement, the cost of production has been considered appropriate

⁹⁵ *But see* AB Report, *US-AD/CVD (China)* *supra* note 42, ¶¶ 500-501 (accepting the proxy constructed on the basis of interest rates in 33 lower-middle-income countries as the benchmark for commercial loans in China under Article 14(b)). The text of Article 14(b), however, is different from Article 14(d): “[A] loan by a government shall not be considered as conferring a benefit, unless there is a difference between the amount that the firm receiving the loan pays on the government loan and the amount the firm would pay on a comparable commercial loan which the firm could actually obtain on the market.” SCM, *supra* note 1, art. 14(b). Note that this text does not limit the benchmark for loans (“a comparable commercial loan . . .”) to what is available in the domestic market. *Id.*

⁹⁶ *See supra* note 88 and accompanying text.

⁹⁷ Conceptually, constructing benchmarks on the basis of cost of production is to be distinguished from the notion of defining the existence of a benefit by the cost to the government. It has been well established that the existence of a benefit does not depend on the cost to the government, but on whether the recipient of a government financial contribution is made better off as compared to the conditions in the marketplace. *See* Appellate Body Report, *Canada-Measures Affecting the Export of Civilian Aircraft*, ¶¶ 154-156, WTO Doc. WT/DS70/AB/R (adopted Aug. 4, 2000) [hereinafter AB Report, *Canada-Aircraft*] (finding defining the term “benefit” in terms of cost to the government is at odds with the plain meaning of Article 1.1(b) of the SCM).

as the benchmark for conducting the benefit analysis in the context of agricultural subsidies examined under the Agreement on Agriculture, in cases where domestic prices are distorted by government-administered prices.⁹⁸

3.2. *Constructing Domestic Benchmarks on the Basis of Production Costs: The Question of Rent*

Having concluded that a production-cost based proxy is the most preferable among the five alternative benchmarks discussed above, we now turn to the construction of such a proxy for the provision of natural resources. Unlike other goods and services, the prices of natural resources typically include “resource rent.”⁹⁹ The effect of resource rent on trade was discussed extensively in the US-Canada softwood lumber dispute under the US-Canada Free Trade Agreement, based on the testimony of Dr. William D. Nordhaus.¹⁰⁰ The thesis, however, has not been examined in WTO dispute proceedings. This section will focus on the question of how resource rent should be treated in the construction of benchmarks based on production costs.

3.2.1. *Production Costs and Resource Rent*

Production costs of natural resources are costs incurred in the entire process of making the resources available to the market. For

⁹⁸ See DOMINIC COPPENS, WTO DISCIPLINES ON SUBSIDIES AND COUNTERVAILING MEASURES: BALANCING POLICY SPACE AND LEGAL CONSTRAINTS 288–89 (2014) (citing AB Reports in *Canada-Dairy* and in *EC-Export Subsidies on Sugar*).

⁹⁹ See WTO, WORLD TRADE REPORT: TRADE IN NATURAL RESOURCES 77 (2010), https://www.wto.org/english/res_e/booksp_e/anrep_e/wtr10-2c_e.pdf [<https://perma.cc/4RPY-Y3FX>] (distinguishing between different types of rents and defining resource rent); see also *Total Natural Resource Rents*, WORLD BANK, <https://data.worldbank.org/indicator/NY.GDP.TOTL.RT.ZS> [<https://perma.cc/4A7F-74XG>] (showing that the World Bank calculates total natural resources rents as a percentage of GDP in all countries and economies for the year of 1970 and 2016, respectively).

¹⁰⁰ See FTA, *Certain Softwood Lumber Products from Canada: Decision of the Panel on Remand*, FTA Doc. USA-CDA-1992-1904-01 (Dec. 17, 1993) [hereinafter *Decision of the Panel on Remand*] (discussing extensively Dr. Nordhaus’ testimony and his co-authored empirical study on the effect of stumpage on timber harvest in British Columbia).

minerals, for example, production costs should include all expenses incurred for the exploration and extraction of the minerals, such as labor, materials, equipment, general overhead, and fees paid to the owner of the resources, plus a normal profit.

When the government is the owner of a natural resource, it typically grants the right to extract the resource—in the form of license or lease—to a party, which may be a private firm or a government-owned entity. In return for granting the right, the government may charge fees, known as royalties (for minerals), stumpages (for timber in North America), or simply use fees (for land in China).

The fees collected by the government as the owner of land and other natural resources represent a form of economic rent. In economics, rent is payment for a factor of production (land, labor, capital) in excess of the total costs (including a normal profit) necessary to bring that factor into production. Economic rent is the surplus value or return in excess of normal profit.¹⁰¹ For natural resources, rent is measured as the difference between the price at which a resource can be sold and the costs associated with its production, including a normal return.¹⁰² More specifically, resource rent consists of differential or Ricardian rent and scarcity rent.¹⁰³ Differential or Ricardian rent arises due to the differences in the productivity of land (to be further discussed below); scarcity rent arises when demand exceeds supply due to natural and legal limitations on the supply of the resources.¹⁰⁴

Conceptually, resource rent is the payment to the owner by virtue of ownership alone, not including returns on any investment the owner has made to improve the land or to make the resources available for production. In short, rent contains no productive value. Fees collected by the government owner are not necessarily all rent. Depending on the specific situation, the fees may also cover the costs of government investment in the resource project, or they

¹⁰¹ See WORLD TRADE REPORT: TRADE IN NATURAL RESOURCES, *supra* note 99 (defining different types of rents, including economic rent).

¹⁰² K.J. McKenzie & J.M. Mintz, *The Tricky Art of Measuring Fossil Fuel Subsidies: A Critique of Existing Studies*, 4 U. OF CALGARY SPP RES. PAPERS, no. 14, Sept. 2011, at 14 (defining rent).

¹⁰³ See WORLD TRADE REPORT: TRADE IN NATURAL RESOURCES, *supra* note 99 (identifying three types of rent: differential or Ricardian rent, scarcity rent, and quasi-rent, and noting that differential rent and scarcity rent relate to the innate characteristics of natural resources, whereas quasi-rent applies to entrepreneurial skills).

¹⁰⁴ *Id.*

may cover investment costs only. In the latter case, the government forgoes the rent it could otherwise charge.

Under SCM Article 14(d), all fees paid to the government for the right to access natural resources have been treated as *remuneration* to the government for the provision of resource products.¹⁰⁵ The remaining issue is to determine whether such remuneration is *adequate*. While it may not be difficult to calculate the costs of government investment, it is unclear how the *adequacy* of resource rent should be measured.

3.2.2. Resource Rent and Its Effect on Trade

According to the classical Ricardian theory, rent arises from the difference in the productive capacity of land: The least productive land in cultivation for a produce (e.g., corn) does not carry rent. The price of corn is set by the labor and capital necessary to produce corn in the worst land. All other parcels of land carry rent, as they require less labor and capital to produce the same quantity of corn, with the highest rent going to the best land in cultivation. Thus, it is the price of corn that determines the rent available, not the other way around. And the price of corn is determined by the demand for corn and the supply of corn from the least productive land that carries no rent. According to Ricardo, because the price of commodities is regulated by the margin of production, rent does *not* enter the price of commodities.¹⁰⁶

Modern economic theories have modified Ricardian rent theory.¹⁰⁷ It is uncontroversial, however, that Ricardian theory applies to land with a single use. Examples of such land include

¹⁰⁵ See AB Report, *Carbon Steel (India)*, *supra* note 58, ¶ 4.74 (holding that the government's grant of mining rights is reasonably proximate to the use or enjoyment of the minerals by the beneficiaries of those rights).

¹⁰⁶ See DAVID RICARDO, *ON THE PRINCIPLES OF POLITICAL ECONOMY AND TAXATION* 46 (Batoche Books, 2001) (1817).

¹⁰⁷ For example, in the view of neoclassical economists, Ricardian theory is based on the assumption that land has only one use and that there is a fixed supply of land; however, in most circumstances land has alternative uses, and each piece of land has an opportunity cost which equals the (extra) rent that can be obtained in its most profitable alternative use. That being the case, the rent of land for corn is not determined solely by the demand for corn, but also by the price of potatoes if growing potatoes is the most profitable alternative use for the land. In that sense, rent enters the price of product. See ALAN W. EVANS, *ECONOMICS, REAL ESTATE, AND THE SUPPLY OF LAND* 12–14 (2004) (comparing Ricardian theory with neoclassical rent theory).

mineral-land and timberland. In addition, where the land use is restricted by the government, such as residential or industrial use, the Ricardian theory also applies.¹⁰⁸ We note that the several WTO disputes discussed herein all involve the situation of single-use land.

The relevant question here is the effect of resource rent on trade. Under Ricardian theory, the price of the product is determined by the demand for the product and the supply of the least productive land that carries no rent. When the product is traded across the border, the demand for the product becomes the total global demand, and the least productive land for the supply of that product is also to be determined on a global basis. Thus, rent does not enter the price of the product. It should be noted, however, that from the perspective of the producer, rent to be paid to the owner is part of her production cost, and hence enters the price of her products. However, the producer's perspective does not address the question of how rent arises and what determines the available rent of a given piece of land.¹⁰⁹

Logically, if rent does not enter price, it cannot affect trade. But what happens when the owner does not collect all the resource rent available? In that event, the uncollected rent will go to the producer. Would the producer increase production or lower prices as a result of this rent sharing? In the case of resource products, because the supply is limited by nature (and by conservation laws), the producer is unable to produce more than what is available.¹¹⁰ With a fixed supply, the producer cannot expect to sell more by lowering prices. Hence, the producer will have no incentive to sell below the market price, which is determined by the global demand and the supply of the least productive land globally. While the uncollected rent by the owner will benefit the producer financially, it will not change the price and quantity of the resource product sold to the market by the

¹⁰⁸ *Id.* at 11, 17–19 (discussing the relevance of Ricardian rent theory to the planning controls over land in modern Britain, concluding that the price of land is determined by demand when the supply of land for each use is fixed within the planning system).

¹⁰⁹ See generally Frank T. Carlton, *Price and Rent*, 26 Q.J. ECON. 523–527 (1912) (discussing how differential rents arise).

¹¹⁰ The producer may be able to increase production by improving technological capacity, in which case the producer will earn quasi-rent, which is separate from the resource rent owed to the owner.

producer.¹¹¹ In other words, the uncollected rent by the owner has no market-distorting effect on trade in the resource product.¹¹²

If resource rent does not distort trade, then there should be no issue of *adequacy* of such rent under Article 14(d). Consequently, the rent charged by the government for providing natural resources—to the extent they represent rent in single-use land—should be excluded from the benefit determination under Article 14(d).

As noted above, depending on the specific situation, the fees charged by the government may consist of rent as well as a return on government investment in the resources (such as the expenditures on making the resources available).¹¹³ Since rent in single-use land is irrelevant to the benefit determination, the only issue is to determine whether the fees collected by the government cover its expenditures in full. If the fees are less than the government expenditure (also known as the case of negative rent¹¹⁴), there is presumably a benefit conferred.

3.2.3. Tax Equivalent of Resource Rent: The Case of Government Monopoly

When the government is by law the owner of all natural resources, its right to collect resource rent, whether as royalties or land-use fees, is no different from its power to collect taxes.¹¹⁵ Like

¹¹¹ See John E. Orchard, *The Rent of Mineral Lands*, 36 Q.J. ECON. 290–318 (1922) (explaining that mineral rent will go to either the owner of the land or the operator of the mine and that neither consumer nor laborer will share the rent); see also Grafton, Lynch, & Nelson, *supra* note 32 (demonstrating that BC's stumpage was not responsive to changes in the amount of available rent).

¹¹² This was essentially the same conclusion reached by the binational review panel in the US-Canada softwood lumber dispute. See *Decision of the Panel on Remand*, *supra* note 100.

¹¹³ It is suggested that in the case of minerals, part of the royalty paid to the owner is compensation for the depletion of minerals, which should be considered as assets and not economic rent because mineral-land, unlike agricultural land, cannot be replenished. See Orchard, *supra* note 111, at 294–96 (distinguishing rent of mineral land from agricultural land). Under this theory, the fees charged by the government should also cover the costs associated with resource depletion, including compensation for environmental damage caused by the production of resources.

¹¹⁴ For instance, where the government pays for a road to a mine in a remote area, which is otherwise uneconomical to explore.

¹¹⁵ See McKenzie & Mintz, *supra* note 102, at 13–14 (arguing that royalties are a fiscal instrument used to collect revenue from the oil and gas sector).

taxes, rent does not represent the value of any productive effort; instead, it is merely a fiscal instrument of the government to collect revenue based on its sovereign authority. Seen in this light, it would be a misnomer to call the resource rent collected by government as *remuneration* under Article 14(d), since the concept of remuneration implies compensation in exchange for work or services performed.¹¹⁶ Rather, for purposes of the SCM Agreement, it is conceptually more appropriate to treat government collection of resource rent as analogous to government collection of taxes.¹¹⁷

Government revenue “that is otherwise due is foregone or not collected” is one of the three types of financial contribution by government defined in SCM Article 1.1.¹¹⁸ Unlike the other two types of financial contribution—government transfer of funds and government provision of goods or services—there exists no *market* benchmark for determining whether a benefit is conferred by foregone government revenue. As the Appellate Body noted, “[a] Member, in principle, has the sovereign authority to tax any particular categories of revenue as it wishes. It is also free *not* to tax any particular categories of revenues.”¹¹⁹ The difficult task, therefore, is to identify a *defined, normative benchmark* for determining what is *otherwise due* in a given situation. The case law has so far established two general principles. First, the normative benchmark for determining government revenue otherwise due must be the rules established by each Member for itself.¹²⁰ Second, the normative benchmark must allow a comparison of the fiscal

¹¹⁶ See *Remuneration*, OXFORD LIVING DICTIONARIES, <https://en.oxforddictionaries.com/definition/remuneration> [<https://perma.cc/P3UQ-T5NY>] (defining remuneration as “Money paid for work or a service”).

¹¹⁷ However, to the extent that the fees charged by the government exceed the rent available and represent, instead, returns for government investment or services performed relating to the resources, it will be appropriate to treat such fees as “remuneration” falling under Article 14(d). It should also be noted that the Appellate Body has recognized the possibility that the same transaction may be characterized as different types of financial contribution under SCM Article 1.1. See AB Reports, *Canada–Renewable Energy*, *supra* note 92, ¶ 5.120.

¹¹⁸ SCM, *supra* note 1, art. 1.1.

¹¹⁹ Appellate Body Report, *United States–Tax Treatment for “Foreign Sales Corporations”*, ¶ 90, WTO Doc. WT/DS108/AB/R (adopted Mar. 20, 2000) [hereinafter AB Report, *U.S.–FSC*].

¹²⁰ See *id.* (“What is ‘otherwise due’ . . . depends on the rules of taxation that each Member, by its own choice, establishes for itself.”). For a critique on the benchmark for tax subsidies, see Sykes, *supra* note 5, at 5 (“The benchmark for the situation that would prevail ‘otherwise,’ however, is largely arbitrary and dependent on the form rather than the substance of government tax policies.”).

treatment of taxpayers in comparable circumstances. In other words, "like will be compared with like."¹²¹

The same principles should apply to the normative benchmark for determining resource rent otherwise due. Like in the tax situation, a Member has the sovereign authority to collect all the resource rent available in the country and is also free not to collect any of such rent. Whether to collect, and how much to collect, depends on the rules a Member establishes for itself. In other words, there can be no "external" benchmark for determining what is the resource rent otherwise due. The rules established by the Member, however, must allow a comparison of treatment of rent-payers in like circumstances. Because fixed natural resources are typically unique in their location and value, thus each carrying a different amount of rent, the only meaningful comparison of treatment will often be between rent-payers with respect to the same resource. Put differently, to the extent each piece of land carries its own rent, the normative benchmark for the rent otherwise due should be whatever amount of the fees the government sets to collect from any potential renters (users) of a particular piece of land.¹²² An example of such a benchmark is the royalty or use fees offered by the government to all bidders of a particular resource. Accordingly, when the government does not discriminate between users with respect to the fees payable for a resource, there would not be a case of foregone rent.

Interestingly, this conclusion echoes the basic idea of Draft SCM Article 14(e). As noted above, Draft Article 14(e) provides that "[w]hen the government is the sole provider . . . of the good or service in question, the provision . . . of such good or service shall not be considered as conferring a benefit, unless the government discriminates among . . . purchasers of the good or service."¹²³ Although its rationale remains unexplained, the wisdom of Article 14(e) can be confirmed, at least in the context of government provision of natural resources, by the tax equivalent theory.

¹²¹ Appellate Body Report, *United States–Tax Treatment for "Foreign Sales Corporations"—Recourse to Article 21.5 of the DSU by the European Communities*, ¶ 90, WTO Doc. WT/DS108/AB/RW (Jan. 14, 2002).

¹²² Strictly speaking, the amount of rent set by the government must be within the range of available rent from a particular resource. If the amount charged by the government exceeds the available rent (after covering the cost of government investment), the excess is technically not resource rent, but pure taxes.

¹²³ 1990 *Draft SCM Text*, *supra* note 17, at 23.

The tax-equivalent theory of resource rent is not only conceptually sound, but also is easy to implement. Unlike Ricardian or neoclassical rent theories, the application of which would require calculation of rent for each piece of land, under the tax-equivalent theory whether a benefit is conferred by the government provision of natural resources can be simply determined by applying the same principles of nondiscrimination as in the case of government taxation under SCM Article 1.1.

It should be cautioned here that the tax-equivalent theory applies only to the situation where the government is the sole or predominant provider of a natural resource in the country. Where the government is one of many providers of a resource in the country, it is merely a participant in the resource market, without the rent-charging power analogous to the power of taxation. In such a situation, the amount of rent available to the government is determined by the market. If the government foregoes that rent, it will have conferred a benefit within the meaning of Article 14(d).¹²⁴

3.2.4. *A Normative Perspective: Comparative Advantage Based on Systemic Differences*

In principle, the WTO does not interfere with the property ownership regime of its Members, as each country is entitled to choose its own political, social and economic systems under international law.¹²⁵ Accordingly, where a Member adopts a system of public ownership of natural resources, that choice should be accepted as a given under WTO law. In the system of public ownership of natural resources, the government is entrusted to manage the exploration, distribution, and conservation of the nation's natural resources. Compared to countries with primarily

¹²⁴ For example, the Appellate Body found that the government lease of an industrial site near Hamburg conferred a benefit on Airbus within the meaning of SCM Art. 1.1(b), based on the value of generally available industrial land in Hamburg, plus a certain premium for the location and customized features that was not included in the rent paid by Airbus. See Appellate Body Report, *European Communities and Certain Member States – Measures Affecting Trade in Large Civil Aircraft*, ¶¶ 989-990, WTO Doc. WT/DS316/AB/R (adopted June 1, 2011) [hereinafter AB Report, *EC-Large Civil Aircraft*].

¹²⁵ See generally G.A. Res. 2625 (XXV), Declaration on Principles of International Law Concerning Friendly Relations and Co-Operation among States in Accordance with the Charter of the United Nations (Oct. 24, 1970), <http://www.un-documents.net/a25r2625.htm> [<https://perma.cc/HQ5R-UUBB>].

private ownership of natural resources, the government in the public ownership system plays a much more extensive role in the resource sector. The normative question is whether such a role should be recognized as legitimate under the SCM Agreement.

In this regard, it is particularly instructive to quote Adam Smith, who famously described rent-seeking landlords in these words:

As soon as the land of any country has all become private property, the landlords, like all other men, love to reap where they never sowed, and demand a rent even for its natural produce. The wood of the forest, the grass of the field, and all the natural fruits of the earth, which, when land was in common, cost the laborer only the trouble of gathering them, come, even to him, to have an additional price fixed upon them. He must then pay for the license to gather them; and must give up to the landlord a portion of what his labor either collects or produces. This portion, or, what comes to the same thing, the price of this portion, constitutes the rent of land¹²⁶

Thus, in accordance with Adam Smith, it would be morally salutary that the government not seek rent from natural resources.¹²⁷ Instead, in a country where natural resources are publicly owned, the government should only manage the use of natural resources for the public interest.

From a normative perspective, when the government “foregoes” rent in a country of public ownership of natural resources, any price advantage the producer may gain from such “foregone” rent should be deemed a system-wide comparative advantage, rather than categorically trade-distorting. In a sense, the government management of a nation’s natural resources can be likened to government provision of public services. Wherever the government provides extensive public services, such as transportation, education and healthcare, businesses can benefit from the resulting

¹²⁶ ADAM SMITH, *Of the Component Parts of the Price of Commodities*, in THE WEALTH OF NATIONS (1776), <http://geolib.com/smith.adam/woncont.html> [<https://perma.cc/7CL9-ZBJU>].

¹²⁷ In this regard, the US government sets a remarkable example. Under the General Mining Act of 1872, US citizens can explore and extract valuable minerals on federal lands without paying royalties to the US government. For a defense of the system, see Andrew P. Morriss, Roger E. Meiners & Andrew Dorchak, *Homesteading Rock: A Defense of Free Access Under the General Mining Law of 1872*, 34 ENVTL. L. 745 (2004) (arguing that the attacks on the General Mining Act of 1872 misunderstand the statute’s incentives).

lowered costs of production.¹²⁸ As a result, the country with better public facilities and infrastructure enjoys a system-based comparative advantage.¹²⁹

It is important to note that government provision of “general infrastructure” is excluded from the definition of “financial contribution” under the SCM Agreement, and hence not subject to SCM disciplines. The rationale for this exclusion appears to lie in the general availability of infrastructure to all potential users,¹³⁰ which comports with the SCM principle that only specific government subsidies are objectionable.¹³¹ But, ultimately, the exclusion of general infrastructure from SCM disciplines is a matter of respecting the choices of individual Members in the system of public works that lay down the economic foundation of a country.¹³² Public ownership and government management of a nation’s natural resources is one such choice. Thus, so long as the government does not discriminate between purchasers (i.e., making the nation’s natural resources available to all potential users) its provision of the resources should not be targeted by SCM disciplines.¹³³ Interestingly, this again is the underlying notion of Draft Article 14(e).

¹²⁸ On the other hand, businesses may be subject to high taxes that are used to fund the government services.

¹²⁹ In this sense, government policy or regulatory regime becomes another “factor endowment”, albeit a man-made one. See Gilbert Gagné, *Policy Diversity, State Autonomy, and the US-Canada Softwood Lumber Dispute: Philosophical and Normative Aspects*, 41 J. WORLD TRADE 699, 715 (2007).

¹³⁰ See Panel Report, *European Communities and Certain Member States—Measures Affecting Trade in Large Civilian Aircraft*, WTO Doc. WT/DS316/R, ¶ 7.1036 (June 30, 2010) (defining the term “general infrastructure” as “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.”).

¹³¹ See SCM, *supra* note 1, art. 2. The assumption behind the notion of specificity is that any effect of generally available subsidies on international competitiveness will be counteracted by an offsetting movement in exchange rates. But it is unclear that generally available subsidies will not distort trade from an economic standpoint. See Alan O. Sykes, *The Economics of WTO Rules on Subsidies and Countervailing Measures* 4–5 (U. Chi. Law & Economics, Olin Working Paper No. 186, 2003); see also LUCA RUBINI, *THE DEFINITION OF SUBSIDY AND STATE AID: WTO AND EC LAW IN COMPARATIVE PERSPECTIVE* 360–64 (Oxford University Press, 2009) (discussing divergent economic views on the issue).

¹³² See RUBINI, *supra* note 131, at 364–66 (suggesting that the true rationale for the specificity requirement is one of political economy).

¹³³ Unfortunately, WTO jurisprudence has developed in the opposite direction. A natural resource, due to its inherent characteristics, is used typically by a limited group of enterprises or industries. Ignoring such inherent characteristics, WTO adjudicators have agreed with the United States that Canada’s

3.2.5. Application of the Theories

It is instructive to see how the application of the above theories might affect the benchmarking analysis in the four WTO cases discussed above.

3.2.5.1. Canadian Timber

The central interpretive issue in this ongoing dispute is whether the stumpage fees charged by the Canadian governments for the right to harvest timber are “less than adequate remuneration” within the meaning of Article 14(d). Recall that most of the timberland in Canada is owned by provincial, territorial or federal government, and that the government sets stumpage rates administratively, taking into account lumber prices, revenue needs and other policy goals, including job creation and sustainable forest management.¹³⁴ While the stumpage fees represent the resource rent of timberland, the fees actually collected by the government do not exactly match the amount of rent available. For example, according to a study on British Columbia’s stumpage system, during a 25-year period (1970–1994), the government of British Columbia collected more than the available rent in seven years, and less than the available rent in 18 years.¹³⁵ The study shows that by overcharging or undercharging, as compared to rent available, the stumpage system had a varying impact on the industry and on government policy goals.¹³⁶ For SCM purposes, only the situation of undercharging may raise concern: Does the collection of less than available rent constitute inadequate “remuneration” of the government under Article 14(d)?

Under Ricardian theory, rent does not affect the supply or price of timber, because the supply is limited by the number of trees

provision of timber and India’s provision of iron ore were *de facto* specific, even though there was no evidence of government discrimination between users. See Panel Report, *Softwood Lumber IV*, *supra* note 33, at ¶ 7.125; AB Report, *Carbon Steel (India)*, *supra* note 58, at ¶ 4.398.

¹³⁴ See *supra* text accompanying notes 31–32.

¹³⁵ See Grafton, Lynch, & Nelson, *supra* note 32, at S47 tbl.2.

¹³⁶ See *id.* at S48 (suggesting that rent overcharging may cause less than a desirable number of trees being cut, job losses in the industry and other consequences, whereas undercharging may lead to excess investments that ultimately reduce employment).

available to be cut (which is also subject to conservation regulations) and given the fixed supply the price is determined by the demand. The rent uncollected by the government will go to the producer of timber, but will not lower the timber price, as the producer cannot sell more timber by lowering the price. This is the very argument successfully made by Canada in the softwood lumber dispute under the US-Canada Free Trade Agreement.¹³⁷ The British Columbia study mentioned above suggests that the uncollected rent might have been used in several ways, including increased returns to the shareholders of lumber companies, higher wages to forestry workers, and increased capital investments and capacity in the industry beyond what is necessary to process the available timber.¹³⁸

Under the tax-equivalent theory, the stumpage fees charged by the Canadian government are in essence a special resource tax levied on timber harvesting. As in taxation, the government collects the stumpage revenue by virtue of its sovereign power, not by a claim to the remuneration for its services. Also, as in taxation, the government sets the rate of stumpage administratively, taking into account its public policy objectives. Thus, like the treatment of taxes under the SCM Agreement, whether the government has provided a financial contribution by foregoing its stumpage revenue “otherwise due” will depend on the comparison of the stumpage revenue received with the generally applicable stumpage rate set by the government for itself. So long as each government applies a single rate to all timber producers in its territory, as is apparently the case here, there is no revenue foregone, hence no subsidy can be found to exist under the SCM Agreement.

From the normative perspective, public ownership and government management of timber resources in Canada is part and parcel of its socio-economic system. If Canadian stumpage rates are generally lower than those prevailing in the United States, which has a very different ownership and market structure for timber resources, then Canada apparently has a system-based comparative advantage in timber trade.¹³⁹ This advantage is not fundamentally different from other system-based comparative advantages enjoyed by Canadian producers, such as its publicly funded national healthcare.¹⁴⁰

¹³⁷ See *Decision of the Panel on Remand*, *supra* note 100.

¹³⁸ Grafton, Lynch, & Nelson, *supra* note 32, at S46.

¹³⁹ See generally Gagné, *supra* note 129.

¹⁴⁰ For example, according to the Canadian government, Canada’s auto parts operations enjoy a 31.1% saving on total labor costs relative to their US

In sum, when applied to Canadian stumpage, each of the three theories analyzed in this section leads to the same conclusion: the Canadian stumpage system does not give rise to a financial contribution that confers a benefit within the meaning of the SCM Agreement.

3.2.5.2. Indonesian Timber

The same analysis for the application of the three theories can be made in the case of Indonesian timber. Compared to Canada's stumpage fees, the rent nature of Indonesia's royalty fees is even more pronounced, as the fees were charged to the license holders for growing timber on the government land.¹⁴¹ It is immaterial whether the rent was calculated based on the quantity of timber harvested or the acreage of forestland leased.

3.2.5.3. Indian Minerals

As owner of all mineral resources in the country, the Government of India grants the right to mine iron ore and coal to state-owned as well as private entities in exchange for royalty payments. For SCM purposes, the central interpretive issue should be whether the royalty payments received by the Indian government are *less than adequate remuneration* within the meaning of Article 14(d).

In theory, the royalties collected by the government represent the resource rent of mines, but in practice they typically do not match the amount of available rent in each mine.¹⁴² If the royalty collected by the government is less than the available rent from a given mine, then the remaining rent will go to the mining company.

counterparts, and lower costs of employee healthcare form the greatest part of these savings. See Gov't of Can., *Canada's Cost and Tax Advantages—Automotive* (2017), www.international.gc.ca/investors-investisseurs/assets/pdfs/download/factsheet-automotive-2017.pdf [<https://perma.cc/DAC7-RAD8>].

¹⁴¹ See Panel Report, *Coated Paper (Indonesia)*, *supra* note 73, at ¶ 7.42, n.99.

¹⁴² The typical mismatch between available rent and royalty charged is due to the fact that “[r]oyalty rates are set by government fiat—there is no market-determined royalty rate that is the analog of a market price.” McKenzie & Mintz, *supra* note 102, at 13.

While enriched by the rent, the mining company cannot increase the supply of minerals at will,¹⁴³ nor will it have the incentive to charge below-market prices given the fixed supply. Consequently, the rent shared by the mining company should not have market-distorting effect on trade in minerals. The issue of less than adequate remuneration would otherwise arise in the situation of negative rent (i.e., if the royalty collected is less than the government expenditure on the mine) whether in the form of investment or service. That situation, however, was not alleged in this case.

In essence, the royalty charged by the Indian government is a special resource tax. Thus, as long as the government applies the same royalty rate to all potential miners, there should be no *revenue foregone* within the meaning of the SCM Agreement. As the record shows, the government of India does not discriminate between potential miners with respect to the allocation of mining rights or payment of royalty.¹⁴⁴

3.2.5.4. Chinese Land

Compared to timber and minerals, land has certain unique features. First and foremost, land is not a tradable good. Unlike timber and minerals, which are commodities traded globally, there is no world market for land.¹⁴⁵ Also, unlike timber and minerals, land is a necessary input for all production activities. How these unique characteristics of land may affect trade has not been much discussed; rather, land has been treated in the same manner as all other tradable goods in SCM jurisprudence.¹⁴⁶

¹⁴³ The total supply of minerals is fixed by nature. While it is theoretically possible that the mining company may use the rent income to hire more labor or equipment to increase the production capacity, whether that is indeed the practice needs to be tested in each case.

¹⁴⁴ See Panel Report, *Carbon Steel (India)*, *supra* note 58, ¶ 7.201 (stating that India granted mining rights for iron ore on a first-come-first-served basis).

¹⁴⁵ Land, together with labor and money, are known as *fictitious commodities*, which do not behave in the same way as true commodities because they are not produced to be sold on a market. Unlike true commodities, the supply and demand for the fictitious commodities must be managed through the political process, that is, through the power of government. See KARL POLANYI, *THE GREAT TRANSFORMATION: THE POLITICAL AND ECONOMIC ORIGINS OF OUR TIME* 71-79 (Beacon Press, 2001) (1944).

¹⁴⁶ See, e.g., Panel Report, *US-AD/CVD (China)*, *supra* note 42; AB Report, *EC-Large Civil Aircraft*, *supra* note 124.

As previously discussed, in China, all transferable land is owned by the state and the government grants land-use rights in exchange for land-use fees. In practice, local governments control land use in their own jurisdiction within the broad parameters of national laws. Land use is divided into different categories according to planned purposes, such as industrial, commercial and residential, and the term of use varies depending on the category. The land-use fees may be set through auction or by agreement subject to certain minimum prices.

In contrast with the price of resource products such as timber and minerals, the price of land is all rent (unless the owner has made land improvements).¹⁴⁷ Due to the strict land-planning system in China, each piece of transferable land in the country is essentially land for a single use. Thus, according to Ricardian rent theory, the price of land-use right for a given piece of industrial land (to the extent it is all rent) is determined by the demand for the products of the land—say a gadget—and the supply of land that is the least desirable for producing the same gadget.¹⁴⁸ The desirability of the land for producing the gadget depends on factors ranging from local transportation and infrastructure, to labor quality and costs, to the macro economic and political environment in the country.

However, because land is not the final product in trade, the effect of land price on trade in gadgets might be somewhat different from the case of resource products. Compared to the production of timber or minerals, the supply of gadgets is likely to be limited more by capital and labor than by land. That being the case, when the government does not collect all the available rent from a given piece of land, the uncollected rent may enable the producer to increase production or lower prices. Whether this occurs has to be determined in each specific case. But to the extent it occurs, the rent of land foregone by the government may have an effect on trade.

From a normative perspective, however, the government in a country of public ownership of land is not supposed to seek rent, but to manage land use in the public interest. Thus, when the

¹⁴⁷ The price of resource products covers not only rent to the owner of the resource, but also the cost of labor and capital for producing the products.

¹⁴⁸ See Carlton, *supra* note 109, at 525 (“[D]ifferential rent, which is a measure of desirability, appears because of the existence of a demand for various products or goods coupled with the presence of land of varying grades of desirability With a given land supply, present or potential, and no change in industrial methods, differential rents increase and decrease as the demand for products varies.”).

government *foregoes* rent in such a country, any price advantage the producer may gain therefrom should be deemed as a system-wide comparative advantage.

Moreover, the case of China's land-use fees highlights the tax-equivalent theory of rent. As is well known, land-use fees are the functional equivalent of property tax in China, counting for one-fourth to one-third of total revenues for the local governments.¹⁴⁹ Thus, just as in the case of taxation, whether the land-rent foregone constitutes government revenue that is *otherwise due* within the meaning of SCM Article 1.1 depends on the generally applicable level of land-use fees set by the local government itself. If the government charges all users the same level of land-use fees for comparable land, there is no foregone revenue within the meaning of Article 1.1. Conversely, if the government charges a user land-use fees at a level lower than the generally applicable one, a case of foregone revenue may be established.

3.2.5.5. Summary

This section applies economic rent theories to the provision of natural resources by government monopolies, with the objective of identifying the trade-distorting potential of such provision. The resort to rent theories is warranted, given that the return (or "remuneration") for the government's grant of right to use natural resources typically consists of rent. In order to determine whether the "remuneration" to the government is adequate under SCM Article 14(d), it is necessary to understand how rent affects trade.

The key insights from the application of rent theories are:

(1) With respect to resource products, such as timber and minerals, the amount of rent uncollected by the government does not affect trade in the resource products. That is because the supply of a resource product is relatively fixed (i.e., limited by nature and conservation laws), and the price of the product is therefore set by the demand. Any rent uncollected by the government will go to the producer but will not increase the quantity or lower the price of the resource product.

¹⁴⁹ See Donald Clarke, *Has China Restored Private Land Ownership?*, FOREIGN AFF. (May 16, 2017), <https://www.foreignaffairs.com/Articles/china/2017-05-16/has-china-restored-private-land-ownership> [https://perma.cc/26E6-SQ8H] (discussing local government revenue breakdowns, portions of which come from land-use fees).

(2) With respect to land for industrial use, the rent uncollected by the government may affect trade if it has enabled the producer to increase production or lower prices. That is so because land is not a good in trade, but a factor of production for all industries. In a system of public ownership of land, however, whether the government collects rent or how much rent it decides to collect from state-owned land is a matter of public policy. Therefore, it is normatively inappropriate to deem the rent foregone in such a system as categorically trade-distorting. Whether the rent foregone is trade-distorting in a specific case can be determined rationally by applying the principle of nondiscrimination.

(3) Conceptually, rent is not “remuneration” because it is not compensation for labor or return on capital. Government’s right to collect rent is the same as government’s right to collect taxes. Technically speaking, therefore, rent should be treated as government revenue under SCM Article 1.1, rather than as remuneration for government provision of goods or services under Article 14(d). Whether the rent foregone is *otherwise due* can be determined by the same criteria for foregone tax revenue.

The one exception is the case of *negative rent*, that is, the amount of resource fees collected by the government is less than governmental expenditures on making the resources available for production. In such a case, a benefit can be identified within the meaning of Article 14(d), because the fees are *less than adequate remuneration* for the government investment.

3.3. *Constructing Domestic Benchmarks on the Basis of Optimal Use of Resources: A Different Alternative*

In addition to the five alternatives that have been suggested or accepted by the WTO adjudicators, it is also possible to construct domestic benchmarks based on specific policy objectives. This section explores such a possibility.

3.3.1. *Constructing Domestic Benchmarks in Light of the SCM Objectives*

Domestic benchmarks may be constructed in different ways, depending on one’s understanding of the objectives of WTO subsidy

discipline. Unlike most WTO agreements, the SCM Agreement does not have a preamble or provision setting forth its objectives, which reflects the lack of agreement among Members on this score.¹⁵⁰ The Appellate Body has described the object and purpose of the SCM Agreement as “[T]o strengthen and improve GATT disciplines relating to the use of both subsidies and countervailing measures, while, recognizing at the same time, the right of Members to impose such measures under certain conditions.”¹⁵¹ Yet this description says little about the rationale of WTO subsidy disciplines.

There are generally two schools of thought concerning the purpose of international regulation of government subsidies.¹⁵² One is the *injury-only school*, which focuses on the adverse effects of government subsidies on producers of other countries, thus seeing the purpose of international regulation as mainly to remedy such adverse effects. Indeed, the prohibited and actionable subsidies under the SCM Agreement are all based on their adverse effects on foreign producers.¹⁵³ This conception of SCM disciplines is producer-oriented, reflecting the traditional GATT approach to the regulation of international trade. In accordance with this conception, government subsidies are not objectionable unless they cause injurious effects to the producers of other Members. By contrast, *the anti-distortion school* focuses on the market-distorting potential of government subsidies broadly. From this perspective, the main purpose of international regulation is to ensure proper function of the market and to achieve economic efficiency on a global basis. This conception of the SCM discipline finds support in the overall objectives of the WTO, including “the optimal use of the world’s resources in accordance with the objective of sustainable development”, as stated in the preamble of the WTO Agreement.¹⁵⁴ Viewed through this lens, government subsidies are suspect of market-distorting measures unless proven otherwise.

¹⁵⁰ See M. Cartland et al., *Is Something Going Wrong in the WTO Dispute Settlement?*, 46 J. WORLD TRADE 979, 992 (2012); see also RUBINI, *supra* note 131, at 56–57.

¹⁵¹ AB Report, *Softwood Lumber IV*, *supra* note 26, ¶ 64.

¹⁵² See RUBINI, *supra* note 131, at 43 (describing the differences between the injury-only school and the anti-distortion school).

¹⁵³ See SCM, *supra* note 1, art. 4 (“prohibited subsidies,” which are assumed to cause adverse effects); *id.* arts. 5, 6.3 (“actionable subsidies,” which require proof of adverse effects).

¹⁵⁴ Marrakesh Agreement Establishing the World Trade Organization, Apr. 15, 1994, 1867 U.N.T.S. 154 [hereinafter the WTO Agreement].

How might these two schools of thought approach the task of constructing domestic benchmarks differently? In theory, the injury-only school, with its producer-oriented thinking, should find it quite appropriate to construct the domestic benchmark based on production costs. After all, the cost of production provides a fair basis for comparison between domestic and foreign producers. The anti-distortion school, on the other hand, would not care much about the cost of production. For this school, assessing the adequacy of remuneration for the government provision of natural resources does not involve the issue of rent – whether any rent foregone by the government may have a trade-distorting potential is not the concern. Instead, what matters is whether the price charged by the government for its resources is set at the right level for the optimal use of the resources. Compared to the injury-only school, the approach of the anti-distortion school will result in a more expansive reach of global governance at the expense of the domestic policy space.¹⁵⁵

This more expansive model of global governance appears to have the support of the United States. Not known for its love of global governance, the Trump administration has paradoxically endorsed this approach when it comes to protecting the interests of US domestic producers. According to Robert Lighthizer, the US Trade Representative, what the United States wants in trade is “a system that leads to greater market efficiency throughout the world,” which he described as “the underlying objective” of organizations like the WTO.¹⁵⁶ To achieve that objective, said Lighthizer, the United States will take steps to “discourage non-economic capacity all around the world.”¹⁵⁷

There is also reason to believe that the Appellate Body may agree with the anti-distortion school when it comes to benchmarking. After all, it is the AB that adopted “the marketplace” as the *sole* basis

¹⁵⁵ It has also been recognized that some government subsidies do not cause “trade injury,” but may harm the global commons by contributing to the depletion of scarce natural resources. Examples of such harmful subsidies include those to the production of fossil fuel and the fisheries sector, which are not disciplined by the SCM Agreement. See Horlick & Clarke, *supra* note 7 (discussing the negative externalities of subsidies).

¹⁵⁶ See Lighthizer, at APEC, *Says Defending U.S. Market Against Unfair Trade is Not Protectionism*, INSIDE US TRADE (May 21, 2017), <https://insidetrade.com/daily-news/lighthizer-apec-says-defending-us-market-against-unfair-trade-not-protectionism> [<https://perma.cc/AZ7C-HVGY>].

¹⁵⁷ See *id.* For a critique of presenting economic efficiency as the purpose of countervailing duty law, see Zheng, *supra* note 4, at 46–50.

for identifying a benefit under Article 14.¹⁵⁸ According to the AB, “the marketplace provides an appropriate basis for comparison in determining whether a ‘benefit’ has been ‘conferred’, because *the trade distorting potential* of a ‘financial contribution’ can be identified by determining whether the recipient has received a ‘financial contribution’ on terms more favourable than those available to the recipient on the market.”¹⁵⁹ Moreover, the AB has aimed for an undistorted-market benchmark rather than accepting the market-as-it.¹⁶⁰ Given this penchant, the AB may well be willing to accept benchmarks that are designed to identify and correct distortions in the subsidizing country.

It should be kept in mind that benchmarking and benefit determination under SCM Article 14 addresses the issue of whether a subsidy exists within the meaning of SCM Article 1.1. In the words of the AB, it is used to identify the “trade distorting potential” of a financial contribution. Whether such a potential has been realized (i.e., whether a subsidy has caused injury or other adverse effects to producers of other Members) requires further inquiries under the SCM Agreement.¹⁶¹ While a subsidy is disciplined by the WTO only when it is found to have caused adverse effects to foreign producers, the different conceptions of the SCM objectives can lead to different conclusions on whether a subsidy exists in the first place. Under the broad vision of the anti-distortion school, any financial contribution that is found to distort the domestic market can be deemed a subsidy within the meaning of SCM Article 1.1, irrespective of its impact on trade.

The challenge for implementing this broad vision lies in the design of benchmarks that will set a price level conducive to achieving the specific policy objective, based on prevailing domestic conditions. The subsection below discusses certain possibilities.

¹⁵⁸ Historically, an alternative benchmark used by the USDOC was “preferentiality”, which defines subsidy by examining whether the government provided more favorable treatment to some than to others within the same jurisdiction, rather than by comparing government’s provision of goods or services to the “market.” See Zheng, *supra* note 4, at 8–21 (tracing the history of evolution of market benchmarks under US law and WTO law).

¹⁵⁹ AB Report, *Canada–Aircraft*, *supra* note 97, ¶ 157.

¹⁶⁰ See Zheng, *supra* note 4, at 27.

¹⁶¹ See SCM, *supra* note 1, arts. 3, 5, 6, 15, 16.

3.3.2. *Benchmarking via Economic Modeling: Example of Land Pricing in China*

In contrast to the construction of benchmarks based on production costs, which gives rise to the issue of rent, the construction of benchmarks on the basis of optimal use looks to the efficient allocation of resources as the sole criterion. This benchmarking approach would entail the construction of a counterfactual situation in which resources are allocated efficiently, a task for which economic modeling is well suited. Below is an example showing how economic modeling might help discover the proper prices of industrial land use in China.

3.3.2.1. *Non-Optimal Use of Land in China*

Land use in China is divided into two general categories: agricultural land, which is mostly owned by the collectives of farmers, and urban construction land, which is owned by the state. Urban construction land is further divided into several categories, including residential, commercial, industrial, and comprehensive. The government controls land use according to planned purposes. In principle, collective-owned land may not be used for non-agricultural purposes, except when used by the members of the collective. The State may convert agricultural land into urban construction land upon paying compensation to the collective-owners. In recent decades, the conversion of large areas of agricultural land into urban construction land has enabled rapid urbanization and industrialization in China. The fast reduction in agricultural land, however, has prompted the government to impose strict restrictions on the expansion of urban construction land, as it views insufficient land for agriculture as a threat to China's food security.¹⁶²

One major problem in China's land use is inefficiency in the use of industrial land. According to official statistics, of the urban construction land supplied in 2016, 23.3% was allotted for industrial

¹⁶² The central government has set 1.8 billion *mu* (300 million acres) of farmland as the minimum ("red line") necessary to safeguard food security in China. See generally Zhang Zhilong, 'Red line' policy protects China's arable land, CGTN (Feb. 23, 2019), <https://news.cgtn.com/news/3d3d514d316b444f32457a6333566d54/index.html>.

use, 6.7% was allotted for commercial services, 14.1% was allotted for residential use, and 55.9% was allotted for infrastructure and other uses.¹⁶³ The prices of land-use rights diverged significantly among different types of uses. At the end of 2016, the average prices for comprehensive, commercial, residential, and industrial land were RMB3826/m², 6937/m², 5918/m², and 782/m², respectively.¹⁶⁴ While the prices of residential and commercial land have skyrocketed over time, the price of industrial land has risen only modestly.¹⁶⁵

The low price of industrial land can be attributed directly to China's industrial land policy and to the intense regional competition in the efforts to attract external investment.¹⁶⁶ To spur economic development in the 1990's, the government adopted the policy of offering cheap land as a major incentive for private investment in manufacturing and other production activities. In response, numerous industrial parks and economic development zones have sprung up on the outskirts of Chinese cities, turning China into the "world factory." Although the central government has subsequently taken steps to curb the overexpansion of industrial land, mandating that all industrial land-use rights must be granted through the market mechanism of "bid, auction, and listing" and that the minimum price for industrial land must not fall below the cost of land acquisition,¹⁶⁷ it has set the national standards for the minimum prices of industrial land at a very low level.¹⁶⁸ Meanwhile, local governments are in charge of land use, and have discretion

¹⁶³ MINISTRY OF LAND AND RES. (CHINA), 2016 ZHONGGUO GUOTU ZIYUAN GONGBAO [2016 REPORT ON CHINA'S LAND AND RESOURCES] 4 fig.7.

¹⁶⁴ Based on data collected from 105 main urban areas in China. *See id.* at 5 fig.9.

¹⁶⁵ According to one study, from 2004 to 2015, the price of commercial land rose by 20 times, whereas the price of industrial land merely 5 times. *See Professor Zhou Lian: China's Urban Expansion*, GUANGHUA SCH. MGMT. (July 13, 2017), <http://english.gsm.pku.edu.cn/index/en/P9600690371377241735259.html?clipperUrl=1495/56296.ghm> [<https://perma.cc/AM6F-49AB>].

¹⁶⁶ *See, e.g.,* Yuzhe Wu et al., *Industrial Land Price and Its Impact on Urban Growth: A Chinese Case Study*, 36 LAND USE POL'Y 199, 199-209 (2014) (discussing attempts by local governments to attract foreign investment through a low industrial land price strategy).

¹⁶⁷ *See* State Council (China), Circular of the State Council on Issues concerning the Strengthening of Control over Land (Aug. 31, 2006).

¹⁶⁸ The government divided the urban land for industrial use into 15 classes according to geographic locations and set the minimum pricing standard for each class. *See* Ministry of Land and Natural Res. (China), Circular on National Standards for the Minimum Pricing of Industrial Land (Dec. 31, 2006).

over the allocation between different uses of urban land within their jurisdiction. Under the existing system, local officials have strong incentives to build factories, as industrial production creates jobs, generates stable tax revenues and boosts local GDP, which has been the chief criterion for evaluating their job performance.¹⁶⁹ The result has been intense inter-regional competition in the attempt to attract external investment, driving down the prices of industrial land towards the minimum level mandated by the central government.¹⁷⁰

The low pricing of industrial land has led to inefficient use of urban construction land, causing the destruction of agricultural land and the spread of industrial pollution to large sprawling areas surrounding Chinese cities. The expansive industrial land has also squeezed out available urban land for other uses, pushing up the prices of residential and commercial properties in major cities. Furthermore, overexpansion of industrial land has also contributed to production overcapacity in China.

In sum, industrial land in China is *not* priced at a level that achieves an optimal use of land resources and sustainable development. This problem is well known to the government. In its 2013 blueprint for deepening reform in China, the Communist Party offered a vision for building an ecological system, which specifically called for “raising the price of land for industrial use” and for the construction of “a comparative pricing mechanism” to identify the proper price ratio of industrial and residential land.¹⁷¹

¹⁶⁹ See Zhi Wang, Qinghua Zhang & Li-An Zhou, *To Build Outward or Upward? The Spatial Pattern of Urban Land Development in China* (Dec. 30, 2016), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2891975 [<https://perma.cc/GCX6-HVGU>] (studying the phenomenon that the fastest-growing Chinese cities have undergone outward expansion of urban land development with relatively low use intensity); see also Xiao Wang & Richard Herd, *The System of Revenue Sharing and Fiscal Transfers in China* 8 (OECD Economics Dept., Working Paper No. 1030, 2013) (showing that taxes on businesses accounted for more than half of the tax revenue of Chinese local governments in 2011).

¹⁷⁰ See Wu et al., *supra* note 166; see also Xialong Zhang et al., *Industrial Land Price Between China's Pearl River Delta and South Eastern Regions: Cooperation or Competition?* 61 *LAND USE POL'Y* 575, 575-586 (2017) (suggesting that the regional competition for attracting foreign investment by low land prices might have extended to adjacent regions in neighboring countries).

¹⁷¹ Central Committee of the Communist Party of China, *The Decision on Major Issues Concerning Comprehensively Deepening Reform*, para. 53; see also *The Decision on Major Issues Concerning Comprehensively Deepening Reforms in Brief*, *CHINA DAILY* (Nov. 15, 2013), http://www.china.org.cn/china/third_plenary_session/2013-11/16/content_30620736.htm [<https://perma.cc/MAQ6-CXM3>].

3.3.2.2. *Developing Economic Models to Estimate the Proper Price of Industrial Land*

To achieve the goal of optimal land use in China, it would be desirable to estimate the “right” price level for industrial land. In recent years, economists have engaged in studies on the relative pricing of industrial and residential land.¹⁷² Their research shows that the supply of land for industrial use in China is significantly higher than that in most other countries. In China, industrial land typically takes up 30–40%, and residential land merely 20–30%, of urban areas, whereas in other countries industrial land on average occupies 5–15%, and residential/commercial land 60–70%, of urban space.¹⁷³ Although countries with different systems and at different stages of economic development may adopt very different land use policies, land use planning is common in modern economies.¹⁷⁴ Thus, it is at least theoretically possible to estimate the rational price ratio between industrial and residential land for a specific Chinese city by reference to foreign cities of similar traits that are considered successful in achieving efficiency in land use.

The “oversupply” of land for industrial use in China corresponds to the low prices of industrial land. Utilizing data collected from different regions, economists have developed various models to estimate the proper price of industrial land in different locales. For example, based on an empirical study of 35 large and medium-sized Chinese cities, Cao and Wang calculated the equilibrium price of industrial land using the present value of annual rents derived from the estimated production function of the land.¹⁷⁵ From the equilibrium price of industrial land, the authors further calculated the equilibrium price ratio between industrial land and residential land in different parts of China. They estimated

¹⁷² For a survey of the various studies, see Song Zhao & Chao Li, *Review on Studies of the Industrial Land Market and Comparison of Industrial and Residential Land Prices*, 29 ZHONGGUO TUDI KEXUE [CHINA LAND SCI.] 4–10 (June 2015). See also Wu et al., *supra* note 166.

¹⁷³ See Zhao & Li, *supra* note 172, at 5.

¹⁷⁴ See generally *Land-Use Planning Systems in the OECD: Country Fact Sheets*, OECD (2017) http://www.oecd-ilibrary.org/urban-rural-and-regional-development/land-use-planning-systems-in-the-oecd_9789264268579-en [<https://perma.cc/W6UA-WXFV>] (containing a survey of 32 OECD countries and their land-use planning systems).

¹⁷⁵ See Qingfeng Cao & Jiating Wang, *Reasonable Ratio Between China's Industrial Land and Residential Land: An Empirical Study of 35 Large and Medium-Sized Cities*, 318 CAIJING KEXUE [FIN. & ECON.] 88–98 (2014).

that, for the period of 2003 to 2012, the average equilibrium price ratio of industrial versus residential land should be 0.43, whereas the average *real* price ratio of industrial over residential land was only 0.17, indicating the extent of underpricing of industrial land. The authors also found that the equilibrium price ratio of industrial versus residential land varied from city to city, depending on the specific production structure of the city. Generally, cities with large industrial bases (such as Tianjin and Shenyang) have a much higher ratio (above 0.6) than cities without such bases (such as Beijing and Shanghai, below 0.2).¹⁷⁶ One criticism of this study, however, is that the authors did not evaluate whether the pricing of residential land—the basis for comparison—is rational.¹⁷⁷ Indeed, other studies have detected structural deviations of land prices in China. The prices of residential land and commercial land tend to deviate positively from their theoretical value, as local governments rely heavily on the sale of residential and commercial land for local financing, which pushes up the prices; in contrast, the price of industrial land deviates negatively from its theoretical value because local governments compete with each other to attract external investment for industrial development, which drives down the prices.¹⁷⁸

While such studies may be further refined, they have presented a feasible approach to the construction of market benchmarks aiming at the efficient allocation of land resources in China. Adding strength to the method of identifying proper price ratios between industrial land and residential land is the new government policy to make all residential land-use rights freely renewable without preconditions.¹⁷⁹ The new policy, once enacted into law, will turn what are in essence fixed-term land leases into perpetual ownership, thus effectively restoring private ownership of urban land in China.¹⁸⁰ Following this development, prices of residential land-use rights will reflect the value of fully privatized urban land, which in

¹⁷⁶ *Id.* at 92.

¹⁷⁷ See Zhao & Li, *supra* note 172, at 7.

¹⁷⁸ See Bai Xue, *Fiscal Decentralization, Intergovernmental Competition and the Structural Deviation of Land Prices*, 276 CAIJING KEXUE [FIN. & ECON.] 49–57 (2011).

¹⁷⁹ See *China Mulls Law Revision on 70-Year Land Use Right of Properties: Premier*, CHINA DAILY (Mar. 15, 2017), http://usa.chinadaily.com.cn/business/2017-03/15/content_28567765.htm [<https://perma.cc/G3KB-69KV>] (reporting the statement of Premier Li Keqiang at a press conference that the land use rights for residential properties “can be renewed without application or preset conditions.”).

¹⁸⁰ See Clarke, *supra* note 149.

turn may provide a more reliable reference for calculating the proper prices of industrial land. For the purpose of benchmarking under Article 14(d), the approach has the most important virtue of being grounded in prevailing conditions in China. Aside from using actual data collected in China—such data have become readily available in recent years¹⁸¹—the economic models are built upon assumptions of certain systemic constraints, such as the segregation of the land market between urban and rural areas, and the government control on the aggregate supply of urban land. Although these constraints may constitute ultimate barriers to the efficient allocation of land resources,¹⁸² they cannot be overcome without fundamental reform of China’s economic system. Until such reform occurs, it is more appropriate to accept the systemic constraints as part of the “prevailing” market conditions within the meaning of Article 14(d).

Similar to land pricing in China, it should be possible to use economic modeling to construct domestic market benchmarks for natural resources provided by a government monopoly in any country, based on the policy objective of optimal use and considering relevant systemic constraints. In this regard, we note the extensive research undertaken by the WTO on trade in natural resources, which examined how markets can help to promote resource management and sustainable development.¹⁸³

3.3.2.3. *Special Implications for Dealing with Subsidization in China*

The approach of constructing domestic benchmarks via economic modeling can have broad implications for dealing with

¹⁸¹ See Wang Long & Yang Yang, *The Privilege of Power and Wealth: Evidence from China’s Urban Land Market* (Sept. 13, 2017) (unpublished manuscript), https://zoeyangyang.weebly.com/uploads/9/2/7/7/92771398/china_land.pdf [<https://perma.cc/83SN-FUZE>] (claiming the use of representative dataset of 316,320 transactions of land use rights from 2000 to 2016 in 2,300 countries of urban China, collected from websites of local land authorities and of the Ministry of Land and Resources).

¹⁸² See USDOC, *Memorandum on China’s Status as a Non-Market Economy* 107–15 (Oct. 26, 2017), <https://enforcement.trade.gov/download/prc-nme-status/prc-nme-review-final-103017.pdf> [<https://perma.cc/PP8N-PEXB>] (describing barriers to the efficient allocation of land resources).

¹⁸³ See generally WORLD TRADE REPORT: TRADE IN NATURAL RESOURCES, *supra* note 99.

the problem of subsidization in China. In recent years, grave concerns have been raised by the United States and others over the impact of China's state-led capitalism on global trade.¹⁸⁴ Chief among them is the extensive support the government provides to China's domestic industries, which allegedly has caused market distortions worldwide but cannot be effectively disciplined by the WTO rules.¹⁸⁵ Citing these concerns, the United States and the EU refused to terminate China's "nonmarket economy" (NME) status in their antidumping regimes by December 10, 2016,¹⁸⁶ the date on which the provisions concerning China's NME status were set to expire under China's Accession Protocol.¹⁸⁷ Treating China as NME allows an importing Member to use prices in a "market economy" country as the normal value to determine whether Chinese products are dumped (the surrogate country method), which has typically resulted in affirmative determinations with high dumping margins. The permission to treat China as NME in antidumping measures is one of the special rules of China's Accession Protocol that depart from the standard provisions of the WTO Agreement.¹⁸⁸ In response to their refusals to terminate its NME status, China filed WTO

¹⁸⁴ See, e.g., U.S. TRADE REPRESENTATIVE, 2017 REPORT TO CONGRESS ON CHINA'S WTO COMPLIANCE (2018), <https://ustr.gov/sites/default/files/files/Press/Reports/China%202017%20WTO%20Report.pdf> [<https://perma.cc/P84E-E69F>] [hereinafter USTR 2017 China Report]; Eliana Raszewski & Luc Cohen, U.S., EU, Japan Slam Market Distortion in Swipe at China, REUTERS (Dec. 13, 2017), <https://www.reuters.com/Article/us-trade-wto/u-s-eu-japan-slam-market-distortion-in-swipe-at-china-idUSKBN1E62HA> [<https://perma.cc/25RV-4BE3>].

¹⁸⁵ See USTR 2017 China Report, *supra* note 184, at 2; see also Mark Wu, *The "China, Inc." Challenge to Global Trade Governance*, 57 HARV. INT'L L.J. 261-324 (2016).

¹⁸⁶ See USDOC, *supra* note 182; see also Eur. Comm'n, *Commission Staff Working Document on Significant Market Distortions in the Economy of the People's Republic of China for the Purpose of Trade Defence Investigations* (Dec. 20, 2017) http://trade.ec.europa.eu/doclib/docs/2017/december/tradoc_156474.pdf [<https://perma.cc/N6RQ-K6BY>].

¹⁸⁷ WTO, Protocol on the Accession of the People's Republic of China, WTO Doc. WT/L/432, §§15(a) and 15(d) (Nov. 10, 2001) [hereinafter China's Accession Protocol] (§15(a)(ii) permits an importing Member to use a methodology "that is not based on a strict comparison with domestic prices or costs in China" if the relevant Chinese producer cannot clearly show that "market economy conditions" prevail in the industry; and §15(d) states that the provisions of §15(a)(ii) "shall expire 15 years after the date of accession", i.e., by December 10, 2016).

¹⁸⁸ See generally Julia Y. Qin, *'WTO-Plus' Obligations and Their Implications for the World Trade Organization Legal System: An Appraisal of the China Accession Protocol*, 37 J. WORLD TRADE 483, (2003) (identifying the numerous provisions in China's Accession Protocol that exceed the requirements of the multilateral WTO agreements).

complaints against the United States and the EU respectively.¹⁸⁹ The ongoing litigation promises to be one of the most significant disputes in WTO history.¹⁹⁰

These high-profile NME disputes, however, have detracted attention from another provision in China's Accession Protocol that allows a Member to treat China as an NME in anti-subsidy actions without any time limit. Section 15 of the Protocol states that "the SCM Agreement shall apply in proceedings involving imports of Chinese origin into a WTO Member" "consistent with" the provision of paragraph (b):

(b) 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 of terms and conditions prevailing outside China.¹⁹¹

Thus, the Protocol authorizes the importing Member to use external benchmarks in identifying subsidies in China under certain conditions. Similar to the NME antidumping provision, Section 15(b) recognizes, albeit implicitly, the possibility that "nonmarket economy" conditions may continue to exist in China after its WTO

¹⁸⁹ See Request for Consultations by China, *United States–Measures Related to Price Comparison Methodologies*, WTO Doc. WT/DS515/1 (Dec. 15, 2016); Request for Consultations by China, *European Union–Measures Related to Price Comparison Methodologies*, WTO Doc. WT/DS516/1 (Dec. 15, 2016).

¹⁹⁰ The stake in this litigation is apparently so high that the USTR warned that "a bad decision" in this case "would be cataclysmic for the WTO." Shawn Dannon, *Trump Trade Tsar Warns Against China 'Market Economy' Status*, FIN. TIMES (June 22, 2017), <https://www.ft.com/content/4d6ba03e-56b0-11e7-9fed-c19e2700005f> [<https://perma.cc/2BE2-XWG9>].

¹⁹¹ China's Accession Protocol, *supra* note 187, § 15(b) (emphasis added).

accession. But unlike the NME antidumping provision, Section 15(b) does not have a built-in expiration date.¹⁹²

To date, the importing Members have made little use of Section 15(b). Thanks to the AB's expansive interpretation of Article 14(d) in *Softwood Lumber IV*, the importing Members, especially the United States and the EU, the two major users of CVD against China,¹⁹³ have been able to resort to external benchmarks in calculating Chinese subsidies under SCM Article 14 without the help of Section 15(b).¹⁹⁴ This state of affairs, however, may soon change. For one thing, as discussed above, the AB's benchmarking jurisprudence has evolved. Following its holdings in *Carbon Steel (India)* that government prices may be market-determined even when they are set to achieve policy objectives,¹⁹⁵ the AB held in *US-CVD (China)* that "the selection of a benchmark for the purposes of Article 14(d) cannot, at the outset, exclude consideration of in-country prices from any particular source, including government-related prices other than the financial contribution at issue."¹⁹⁶ In addition, one should keep in mind that the AB has never directly examined the use of foreign country prices as the benchmark for government provision of goods or services under Article 14(d) in any specific case, but it did suggest a fairly high standard for such use: the benchmark based on foreign prices should be capable of "replicating reliably" the prevailing domestic

¹⁹² The rationale for the permanency of this provision is not provided in the accession documents. See generally Julia Y. Qin, *The Conundrum of WTO Accession Protocols: In Search of Legality and Legitimacy*, 55 VA. J. INT'L L. 369 (2015).

¹⁹³ As of the end of 2017, of the total of 129 CVD measures against China initiated by WTO members, 68 were initiated by the United States and 12 by the EU. Source: WTO, *Subsidies and Countervailing Measures*, www.wto.org/english/tratop_e/scm_e/scm_e.htm [https://perma.cc/9FZX-V3Q8].

¹⁹⁴ Although the United States observed that Section 15(b) of China's Accession Protocol confirms the permissibility of using out-of-country benchmarks to measure a benefit in CVD measures against China, it has not invoked Section 15(b) in any of its CVD investigations against China or in any WTO litigation. See Panel Report, *US-AD/CVD (China)*, *supra* note 42, ¶¶ 10.9-10.12, 10.26, 10.70. Like the United States, the EU has routinely resorted to external benchmarks to calculate China subsidies. For example, regarding land-use rights, the EU has used land prices in Taiwan as the benchmark. See Commission Implementing Regulation (EU) 1379/2014 of Dec. 16, 2014, Imposing a Definitive Countervailing Duty on Imports of Filament Glass Fiber Products from China, 2014 O.J. L367/22; Commission Implementing Regulation (EU) 2017/366 of Mar. 1, 2017, Imposing Definitive Countervailing Duties on Imports of Crystalline Silicon Products from China, 2017 O.J. L56/1.

¹⁹⁵ See *supra* text at notes 63-65.

¹⁹⁶ AB Report, *US-CVD (China)*, *supra* at note 84, ¶ 4.64.

market conditions.¹⁹⁷ In light of this standard, it may be only a matter of time before the surrogate country methods are successfully challenged under Article 14(d).¹⁹⁸ Moreover, should the United States and the EU lose their case in the ongoing NME disputes, they may well decide to utilize Section 15(b) of the Protocol so as to continue levying special duties on imports from China. Indeed, to the extent that the United States and the EU attribute low prices of Chinese products to “market distortions” by direct and indirect government subsidies, their complaints should be addressed by WTO subsidy disciplines rather than by the antidumping regime.¹⁹⁹

When invoking Section 15(b), the importing Member would be required to prove the existence of “special difficulties” in the application of SCM Article 14 to China, and then to make adjustments to the prevailing terms and conditions in China *before* considering the use of terms and conditions prevailing outside China. Although the latter requirement is qualified by the phrase “where practicable”, it remains the treaty obligation of the importing Member to make a good faith effort to adjust prevailing terms and conditions in China. This required step—adjusting prevailing terms and conditions in China—is the same as constructing domestic benchmarks for China.

It is suggested here that using economic modeling to construct domestic benchmarks based on the criterion of optimal allocation of resources in China is one desirable approach to making the adjustments required by Section 15(b). Normatively, this approach is fully consistent with the WTO objectives of the optimal use of the world’s resources and sustainable development. Politically, the approach is desirable for at least two reasons. First, benchmarks constructed on the basis of the optimal allocation of resources in China may help guide Beijing to deepen market-oriented economic reforms, which is also an official objective of the Chinese government.²⁰⁰ Second, using constructed domestic benchmarks instead of surrogate country prices, which is inherently arbitrary,

¹⁹⁷ See *supra* text at note 40.

¹⁹⁸ For example, it is difficult to see how the USDOC’s use of land prices in the greater Bangkok area as the benchmark for land 3000 km away in China’s Shandong Province could have been upheld, had China appealed the Panel ruling on land-use rights in *US-AD/CVD (China)*.

¹⁹⁹ For a recent study of the legal problems involved in the use of alternative benchmarks in anti-subsidy measures against China, see generally SOPHIA MÜLLER, *THE USE OF ALTERNATIVE BENCHMARKS IN ANTI-SUBSIDY LAW: A STUDY ON THE WTO, THE EU AND CHINA* (2018).

²⁰⁰ See *supra* note 171.

would lend more legitimacy to CVD measures taken under Section 15(b). Due to the permanency of this country-specific derogation from the SCM rules (for which no rationale was articulated) and the lack of detailed provisions for its application, the recourse to Section 15(b) can be easily abused in CVD proceedings. Requiring the construction of a domestic benchmark as a necessary step in the application of Section 15(b) could help curb such potential abuses.

3.3.2.4. *The Role of Economics in Alternative Benchmarking*

This Article has proposed two approaches to the construction of benchmarks where the government has a (near) monopoly in the provision of natural resources: (i) proxies based on production costs excluding resource rent; and (ii) proxies based on the optimal use of resources via economic modeling. Both approaches require the use of economics instead of relying purely on legal reasoning in the interpretation of SCM Article 14(d).

Given the economic rationale of trade disciplines, it is not surprising that economics should play a role in the interpretation and application of WTO rules. Indeed, economic analysis has entered WTO dispute settlement in a variety of ways.²⁰¹ One prominent example is *US-Upland Cotton*, in which Brazil used econometric modeling to establish its claim that US cotton subsidies caused “significant price depression” of world cotton prices within the meaning of SCM Article 6.3(c).²⁰² In that case, the AB recognized that economic modeling is “likely to be an important analytical tool” in the construction of a counterfactual (i.e., where world prices of cotton would have been in the absence of US subsidies to cotton), and that “[t]he relative complexity of a model and its parameters is

²⁰¹ See generally Joost Pauwelyn, *The Use, Non-Use and Abuse of Economics in WTO and Investment Litigation*, in *WTO LITIGATION, INVESTMENT ARBITRATION, AND COMMERCIAL ARBITRATION* 169 (Huerta-Goldman, Romanetti & Stirnimann eds. 2013); Chad Bown, *The WTO Secretariat and the Role of Economics in Panels and Arbitrations*, in *THE LAW, ECONOMICS AND POLITICS OF RETALIATION IN WTO DISPUTE SETTLEMENT* 391–445 (Bown & Pauwelyn eds. 2010); *Thematic Essay: Quantitative Economics and the WTO Dispute Settlement*, in *WTO, WORLD TRADE REPORT* (2005) 171–211, www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report05_e.pdf [<https://perma.cc/95SQ-X3S2>].

²⁰² AB Report, *US-Upland Cotton*, *supra* note 83.

not a reason for a panel to remain agnostic about them.”²⁰³ While economics has not yet entered into benchmarking exercises, the AB nonetheless has made an explicit call for the use of economic theory and empirical evidence in determining the existence of a benefit under the SCM Agreement. Reversing the Panel’s benefit determination in *US–Large Civil Aircraft*, the AB explained its decision in these words:

We recognize that a panel confronted with a measure of the kind at issue here may have intuitions as to the consistency of the measure with the market, based on economic theory. However, we would expect that in such circumstances the panel would *at least explain the economic rationale or theory that supports its intuition*. The Panel in this case did not do so. *More importantly, we are of the view that a panel should test its intuitions empirically, especially where the parties have submitted evidence as to how market actors behave.*²⁰⁴

In light of the above, it is reasonable to expect that the AB would welcome the explanation of rent theories with respect to the construction of cost-based proxies and would be open to the use of economic modeling to construct counterfactuals in estimating the proper prices of natural resources for their optimal use. The benefit of relying on economics in the application of SCM rules seems clear. Subject to necessary caveats and limits,²⁰⁵ the use of economics may enhance the acceptance of WTO rulings by affected parties and the general public, thereby contributing to the legitimacy of the WTO dispute settlement system.

The question is whether the resort to economics, as proposed herein, is feasible in practice. With respect to the application of rent theory, it would be up to the subsidizing country to propose the application. To do so, the subsidizing country could engage an expert economist to expound the basic theory of economic rent in the relevant legal proceedings, just as Canada successfully did in the *Softwood Lumber* litigation under the US–Canada Free Trade

²⁰³ AB Report, *United States–Upland Cotton* (21.5), ¶ 357, WTO Doc. WT/DS267/AB/RW (adopted June 20, 2008).

²⁰⁴ AB Report, *United States–Measures Affecting Trade in Large Civil Aircraft* (Second Complaint), ¶ 643, WTO Doc. WT/DS353/AB/R (adopted March 23, 2012) (emphasis added).

²⁰⁵ See Pauwelyn, *supra* note 201 (identifying five core caveats and limits: economics must be filtered through legal criteria; methodological discipline; keeping it simple; due process; and avoiding or disclosing value judgments).

Agreement.²⁰⁶ In the event rent calculation is desired,²⁰⁷ it would be necessary to provide empirical data to support the calculation.²⁰⁸ Major CVD target countries, such as China and India, all have many well-trained economists and technicians that can help with the task.

The construction of benchmarks via economic modeling, in comparison, may present a greater challenge. Unlike rent theory, which is largely uncontroversial, economic models are built upon certain assumptions that may be unrealistic or inaccurate, thus exposing the models to disagreement. Politically, it can be difficult to convince CVD investigating authorities to adopt a new approach, when their existing methodologies continue to serve their purposes. But if their current approach, especially the surrogate country method, is found to be WTO-inconsistent, they may become amenable to adopt new ones. The question then is technical capability. The investigating authority would require specialists to engage in the economic modeling of foreign subsidizing countries. For the top CVD users (the United States, the EU, Canada, and Australia²⁰⁹), however, such technical capability should not be an issue.²¹⁰

In the event that a case is brought to WTO dispute settlement, whether by a member suing a subsidizing government directly at the multilateral forum or by a subsidizing country challenging a

²⁰⁶ The testimony of Dr. Nordhaus on the thesis of economic rent was critical to the determination by the binational panel in this case. See *Decision of the Panel on Remand*, *supra* note 100.

²⁰⁷ Rent calculation is not necessary if the tax-equivalent theory of rent is accepted.

²⁰⁸ Rent calculation can be complex, but it is technically feasible. See, e.g., Grafton, Lynch, & Nelson, *supra* note 32, at S47 tbl.2 (Available and Captured Rent in Wood Products Industry, British Columbia, 1970–1994).

²⁰⁹ From January 1, 1995 to December 31, 2017, a total of 486 CVD investigations were initiated by WTO members, of which 219 were initiated by the United States, 79 by the EU, 65 by Canada and 28 by Australia. Source: WTO, *Subsidies and Countervailing Measures*, www.wto.org/english/tratop_e/scm_e/scm_e.htm [https://perma.cc/3Q8Y-UVNC].

²¹⁰ For example, the International Trade Administration (ITA) of USDOC, the US agency in charge of calculating foreign subsidies, employs more than 2,000 staff, including an army of trade specialists, economists, accounting and financial experts, and business and industry analysts, and has offices in charge of individual countries and regions, such as China and the EU, which possess expertise in specific jurisdictions. See generally International Trade Administration, <https://www.trade.gov/jobs/> [https://perma.cc/H3RB-JM35]; International Trade Administration Concordance, <https://www.trade.gov/concordance.asp> [https://perma.cc/8WDA-SZ63].

CVD measure, panels and the AB would have available to them all the requisite professional assistance. The WTO Secretariat employs a number of economists and trade specialists for research,²¹¹ who can assist the adjudicators in examining economic evidence and assessing the quality of economic analysis and models. In addition, the WTO may engage external experts to advise in specific disputes.²¹²

In sum, using economics in the construction of alternative benchmarks is technically viable at both national and WTO levels. Ultimately, it would depend on the willingness of the members to adopt the approach.

4. CONCLUSIONS

Government provision of natural resources has provoked major trade disputes over the issue of subsidies. Yet, how to identify a subsidy where the government is the sole or predominant supplier remains unsettled under WTO law, due to controversy over benchmarking. To avoid circularity in reasoning (where the domestic market price is the government monopoly price), it is necessary to resort to alternative benchmarks in the situation. Although the Appellate Body has articulated certain principles and made some suggestions, what has prevailed in practice is the use of external market prices as the benchmark to identify subsidies in the country of provision. Relying on this approach, the United States has found countervailable subsidies in the provision of timber in Canada based on US timber prices, of land in China based on land prices in Thailand, of minerals in India based on prices of Australian and Brazilian producers, and of timber in Indonesia on the prices of timber from Malaysia.

²¹¹ As of December 31, 2017, of the total 620 posts (excluding management) at the WTO Secretariat, 37 were at the Economic Research and Statistics Division. Source: WTO, *Overview of the WTO Secretariat*, www.wto.org/english/thewto_e/secre_e/intro_e.htm [<https://perma.cc/R6XB-7QV8>].

²¹² See Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU) art. 13, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 2, 1869 U.N.T.S. 401 (providing dispute settlement panels with the right to seek information and technical advice from any individual and any relevant source and to consult experts on technical matters raised by a party).

The approach of using external benchmarks to identify subsidies in the provision of natural resources, however, is fundamentally flawed, as it disregards the most basic source of comparative advantage of a trading nation—its natural endowment. Legally, this approach was accepted once by the panel in the case of Chinese land but has never been endorsed by the Appellate Body. Instead, the AB has cautioned that it would be difficult in practice to “replicate reliably” market conditions prevailing in one country based on market conditions prevailing in another country. The “replicate reliably” standard, arguably, is the one suggested by the AB for the use of an alternative benchmark under SCM Article 14(d), which provides that the “adequacy of remuneration” to the government provider “shall be determined in relation to prevailing market conditions for the good or service in question in the country of provision.” In order to meet this standard, it would be necessary to construct the alternative benchmark based on domestic conditions.

The question remains as to the specific approach to the construction of such a benchmark. Applying the economic theory of resource rent and considering the generally accepted policy objective of optimal use of natural resources, this Article has proposed two alternatives: the construction of benchmark on the basis of production costs excluding resource rent, and the construction on the basis of optimal use via economic modeling. The key conclusions are as follows:

(1) Among the several alternative benchmarks suggested by the WTO adjudicators, a proxy constructed on the basis of production costs is the most appropriate. That is because production costs (including costs of labor, capital, raw materials, overhead and a normal profit margin) typically incur within the country, and as such, can most reliably reflect the prevailing market conditions in the country of provision.

In the context of constructing a cost-based benchmark for the provision of natural resources, it is necessary to recognize the issue of resource rent. The price of resource products typically includes resource rent. Unlike components of production costs, resource rent does not represent any human effort; instead, it arises purely from natural endowment. According to Ricardian theory, because the supply of natural resources is limited by nature, the price of resource products, and correspondingly the amount of rent available from a resource, is determined by the market demand only. Thus, resource rent is not part of the production costs for the government provision of natural resources and should be excluded from a cost-based

benchmark. Calculation of resource rent in each case, however, can be complex.

(2) Conceptually, it is more appropriate to characterize resource rent uncollected by the government as “foregone government revenue” under SCM Article 1.1, than as “inadequate remuneration” for the provision of goods under SCM Article 14(d). When the government is by law the owner of all natural resources within its territory, its right to collect resource rent is not fundamentally different from its power to collect taxes. Like taxes, rent does not represent the value of any productive effort; instead, it is merely a fiscal instrument of the government to collect revenue based on its sovereign authority. Thus, when the government does not collect all the resource rent available, it should be deemed as a situation of “government revenue that is otherwise due is foregone or not collected” within the meaning of SCM Article 1.1(a)(1). Accordingly, whether the foregone rent confers a benefit should be determined in the same manner as foregone tax revenue. As in the case of tax revenue, there can be no market benchmark or external benchmark for determining what is the resource rent “otherwise due.” Instead, the benchmark has to be a standard set by the government itself, subject only to the principle of nondiscrimination.

From a normative perspective, in a system of public ownership of natural resources, the government is entrusted to manage the use of resources in the public interest. So long as the government does not discriminate among users, any resource rent “foregone” by the government will benefit the users in the same way as other public services provided by the government, such as infrastructure, education or healthcare. Instead of being man-made advantages, the advantage derived from the resource rent foregone by the government arises purely from the nation’s natural endowment.

Interestingly, the above analysis merely confirms the wisdom of draft Article 14(e) of the SCM Agreement contemplated during the Uruguay Round negotiations. Aimed at the natural resource sector, Article 14(e) set forth a broad principle: “When the government is the sole provider or purchaser of the good or service in question, the provision or purchase of such good or service shall not be considered as conferring a benefit, unless the government discriminates among users or providers of the good or service.” It is unfortunate that this provision, originally proposed by the United States, was deleted from the final draft of the SCM Agreement without much discussion.

(3) As an alternative to the cost-based benchmark, which gives rise to the issue of rent, domestic benchmarks can be constructed on the basis of the optimal use of natural resources. The idea is to construct a counterfactual situation in which the in-country price of the government monopoly is set at a level to achieve the optimal use of natural resources and sustainable development. The construction of such a counterfactual would require the use of economic modeling, an approach that has already been embraced by the Appellate Body in the application of the SCM Agreement. The various models developed by Chinese economists to estimate the proper price level of industrial land in China offer a good example of this approach. Using domestic data and accepting certain domestic systemic constraints, the models were able to identify the distortion of land prices in different locales in China. In contrast to external market prices, the price benchmarks produced by this approach are intrinsic to the country of provision.

Compared to the cost-based approach, benchmarking based on optimal use is more aggressive in exerting the authority of global governance, as it aims at identifying and correcting market distortions within the subsidizing country. This more aggressive approach can have broad implications for addressing the problem of subsidization in China. For countries complaining about the extensive role of the Chinese government in the economy, the use of this approach would lend more legitimacy to their unilateral CVD measures against China, especially if such measures are taken pursuant to the special provisions of China's Accession Protocol. For China, the external pressure from the world trading system could be leveraged to push for further domestic reform, leading to more efficient allocation of resources at home.

In the final analysis, both benchmarking approaches proposed herein are consistent with the letter and spirit of WTO regulation, and either of them would lead to a more reasonable application of the SCM Agreement than that currently prevailing. Grounded in basic economic theory and methodology, these new approaches are capable of producing results that would be accepted as generally fair and objective, thereby enhancing security and predictability in international trade relations.