LEGAL AND ECONOMIC ANALYSIS OF US ANTIDUMPING RULES ON GLOBAL OVERCAPACITY AS A PARTICULAR MARKET SITUATION

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ABSTRACT

With the increasing importance of global overcapacity as a pressing international trade issue, this study analyses whether market distortions caused by overcapacity can be adequately addressed within the framework of the antidumping (hereinafter "AD") system from legal and economic perspectives. The new AD proceeding rule of the United States clarifies global overcapacity as one of the "particular market situations (hereinafter "PMS")" that may distort production costs, thereby allowing the United States Department of Commerce (hereinafter "DOC") to adjust the production cost upward in establishing constructed value. Legally, this paper analyses whether such cost adjustments are compatible with the Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade 1994, particularly under Article 2.2.1.1, which emphasizes the use of exporters' actual records unless compelling reasons justify otherwise. Economically, this study assesses the global steel overcapacity problem, its market impacts, and whether it can be reliably treated as a PMS. Furthermore, it

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evaluates the methodology used by the DOC to quantify overcapacity-induced distortions in input costs. While overcapacity can contribute to market distortions, its treatment as a PMS must be carefully scrutinized legally and economically, and any cost adjustment must rely on robust and transparent empirical methods.

KEYWORDS: *WTO Anti-Dumping Agreement, overcapacity, particular market situation, market distortions, constructed normal value*

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I. INTRODUCTION

On 25 March 2024, the United States Department of Commerce (hereinafter "DOC") issued a new regulation governing the application of the particular market situation (hereinafter "PMS") provisions in antidumping (hereinafter "AD") duty proceedings. [1] Since the Trade Preferences Extension Act (hereinafter "TPEA") of 2015 incorporated the notion of PMS in two contexts of the 1930 Tariff Act as amended (hereinafter "the Act"), the regulation provided specific guidance for the first time, clarifying the definition of PMS and factors to be considered for evaluating PMS allegations. It is particularly noteworthy that the regulation highlights the "overcapacity" [2] of significant input into the production of subject merchandise as the foremost example of particular market situations that contribute to distortions in the cost of production (the so-called cost-based

[1] *See generally* Regulations Improving and Strengthening the Enforcement of Trade Remedies Through the Administration of the Antidumping and Countervailing Duty Laws, 89 Fed. Reg. 20,766 (Mar. 25, 2024).

[2] Pursuant to the new regulation, overcapacity is defined as a circumstance with considerably more supply than demand in international markets. However, there appears to be no explicit consensus on the definition of "overcapacity," often mixed with the term "excess capacity." Cassels (1937) regard "excess capacity" as the gap between capacity output (the lowest point on the total average cost curve) and actual output. World Trade Organization (WTO) Appellate Body (AB) also interprets "excess capacity" as "unused capacity." J. M. Cassels, *Excess Capacity and Monopolistic Competition*, 51(3) Q. J. ECON. 426, 427 (1937); Sherzod Shadikhodjaev, *Steel Overcapacity and the Global Trading System*, 16(2) ASIAN J. WTO & INT'L HEALTH L. & POL'Y 179, 181 (2021).

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PMS).[3] Such a PMS finding allows the DOC to adjust the production cost upward when establishing the constructed value (hereinafter "CV") as a basis of normal value.[4] This regulation is, therefore, expected to provide a solid basis to enable the calculation of higher dumping margins through the finding of cost distortions by overcapacity alone or in conjunction with other situations. Indeed, this method is likely more effective than the traditional functioning of AD or countervailing duty (hereinafter "CVD") measures in terms of duty rates or countries involved.[5] Countries have often relied on AD and CVD measures to counter the influx of low-priced imports caused by overcapacity, but these instruments are constrained by their legal design. CVDs, for example, apply only to subsidizing countries, raising controversy over their potential extension to "transnational subsidies."[6] Because overcapacity frequently concerns major inputs of the subject merchandise, authorities may also need to pursue upstream subsidy investigations, though these are rare in practice due to evidentiary difficulties.[7] Finally, within the AD framework, where "dumping" essentially denotes price discrimination across national markets,[8] it is difficult to establish dumping unless overcapacity results in clear price differentials between domestic and export sales.

The DOC emphasized that the PMS provisions were designed to address "subsidized" production costs,[9] and its new rules on PMS reflect an intention to correct the effects of certain subsidies through AD law rather than CVD law.[10] Given that government interventions have been widely

[3] As will be explained in Section II, the term particular market situation [hereinafter PMS] appears in two distinct statutory contexts under the US Tariff Act of 1930 as amended: (1) a situation that prevents or does not allow a proper comparison between domestic or third-country sales prices and (constructed) export prices and (2) a situation that contributes to the distortion of the cost of materials and fabrication or other processing of any kind, such that the cost of production of subject merchandise does not accurately reflect the cost of production in the ordinary course of trade. The new regulation refers to the former as a "sales-based PMS" and the latter as a "cost-based PMS," and clarifies that overcapacity falls within the cost-based PMS. Regulations Improving and Strengthening the Enforcement of Trade Remedies Through the Administration of the Antidumping and Countervailing Duty Laws, 89 Fed. Reg. at 20,839.

[4] 19 U.S.C. §1677b(e).

[5] Daniel Ikenson, *Tariffs by Fiat: The Widening Chasm Between U.S. Antidumping Policy and the Rule of Law*, 896 POL'Y ANALYSIS CATO INST. 1, 12-13 (2020).

[6] Transnational subsidies refer to "a subsidy granted to a benefit recipient manufacturing the product at issue outside the country of the granting government." For detailed analysis, see generally Victor Crochet & Vineet Hedge, *China's "Going Global" Policy: Transnational Production Subsidies Under the WTO SCM Agreement*, 23(4) J. INT'L ECON. L. 841 (2020).

[7] For a detailed explanation on the complexity of disciplining input subsidies within the framework of the countervailing duty [CVD] law, see Kyounghwa Kim, *Complexity of Disciplining Input Subsidies Under the Countervailing Duty Law: A Focus on the US and the WTO*, 59(3) J. WORLD TRADE 431, 436-44 (2025).

[8] *See* JACOB VINER, DUMPING: A PROBLEM IN INTERNATIONAL TRADE 3 (1st ed. 1923).

[9] Regulations Improving and Strengthening the Enforcement of Trade Remedies Through the Administration of the Antidumping and Countervailing Duty Laws, 89 Fed. Reg. at 20,789.

[10] The new regulation provides a non-exhaustive list of cost-based PMS, which include owning or

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regarded as a major cause of overcapacity,[11] the inclusion of overcapacity in cost-based PMS provisions appears consistent with other intervention-driven situations. However, whether overcapacity alone constitutes a PMS that justifies higher CV calculations requires closer scrutiny, given its distinct features. Overcapacity often results from both structural factors, such as subsidies and government action, and market dynamics, including demand fluctuations and high exit costs.[12] Considering these mixed causes, it remains uncertain to what extent overcapacity truly distorts production costs in the ordinary course of trade, and even if it is deemed a PMS, questions persist as to when and how it precisely affects input prices.

With these questions in mind, this paper analyses whether overcapacity can be considered a cost-based PMS—as characterized by the DOC—and whether market distortions caused by overcapacity can be properly addressed within the framework of the AD system from both legal and economic perspectives. Section II provides an overview of the DOC's new AD regulation on PMS, with a particular focus on "overcapacity", and assesses the economic feasibility of treating overcapacity as a PMS. To this end, it explains the economic effects and global trends of steel overcapacity, along with an analysis of what evidence may support the finding of PMS for "overcapacity", focusing on the DOC's anti-dumping practice. Section III offers both legal and economic evaluations of whether market distortions caused by overcapacity can be properly addressed within the framework of the AD system—that is, the legal possibility of addressing cost distortions caused by overcapacity under the law of the World Trade Organization (hereinafter "WTO"), i.e., the Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade 1994 (Anti-Dumping Agreement, hereinafter "ADA"), as well as the economic feasibility of the PMS valuation methodology applied in the DOC's practice. Section IV concludes by providing implications for whether the anti-dumping system

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controlling the predominant producer of a significant input used in the production of subject merchandise, intervening in the input market, limiting exports of such input, imposing export taxes on such input, etc. *See id.* at 20,839.

[11] Global Forum on Steel Excess Capacity [hereinafter GFSEC] explains that government subsidies for steel production led to excess capacity, encouraging investments in new plants even when existing production exceeds market demands, or allowing inefficient plants to remain operational. The Organization for Economic Cooperation and Development [hereinafter OECD] analysis shows that steel companies in non-OECD economies benefited from an average of 10.7 times more subsidies per crude steel production capacity unit than those in OECD countries. Furthermore, the subsidies explicitly target "capacity extension", "new investment", and "capital equipment." For more details, see ANTHONY DE CARVALHO & RODRIGO PAZOS, GLOBAL FORUM ON STEEL EXCESS CAPACITY (GFSEC): STEEL EXPORTS, TRADE REMEDY ACTIONS AND SOURCES OF EXCESS CAPACITY 5 (2024). GFSEC, established in 2016 and facilitated by the Organization for Economic Co-operation, is an international platform to develop and implement collective solutions to combat the challenges of excess capacity and to enhance the efficiency of the steel market. *See* GFSEC, https://www.steelforum.org/ (last visited Mar. 20, 2025).

[12] LUCAS C. BRUN, OVERCAPACITY IN STEEL: CHINA'S ROLE IN A GLOBAL PROBLEM 20-21(2016).

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can serve as a relevant instrument to effectively tackle the issue of overcapacity.

II. OVERCAPACITY AS A PMS: US PMS RULES AND ECONOMIC OVERVIEW

A. DOC's New Regulation and Practices Concerning PMS

The TPEA of 2015 added the concept of PMS in two contexts of the Act. Firstly, Section 504(a) of the TPEA defined "situations in which the administering authority determines that the particular market situation prevents a proper comparison with the export price or constructed export price" as a situation outside the ordinary course of trade.[13] Although the normal value, in principle, shall be the price at which the foreign like product is first sold for consumption in the exporting country in the ordinary course of trade, the DOC may use a CV if home market sales are all outside the ordinary course of trade.[14] Second, Section 504(c) of the TPEA added a PMS provision in the definition of CV, that is, if "a particular market situation exists such that the cost of materials and fabrication or other processing of any kind does not accurately reflect the cost of production in the ordinary course of trade," the DOC "may use another calculation methodology under this subtitle or any other calculation methodology."[15] Accordingly, the TPEA amendment is noteworthy in two respects: it increases the DOC's options for relying on a CV as a basis of normal value and enhances the DOC's ability to establish a greater extent of a CV.

The DOC first applied the PMS provision in an administrative review (2014-2015) of the AD duty order for oil country tubular goods (hereinafter "OCTG") from South Korea in April 2017.[16] In this case, the DOC found that a PMS exists in Korea that distorts the OCTG costs of production, based on the collective impact of Korean imports of hot-rolled coil (hereinafter "HRC") from China, strategic alliances, Korean HRC subsidies, and government involvement in the Korean electricity market.[17] In particular, the DOC attributed the increase in HRC imports from China to significant

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[13] 19 U.S.C. §1677 (15).
[14] 19 U.S.C. §1677b(a)(4).
[15] 19 U.S.C. §1677b(e).
[16] While the antidumping [hereinafter AD] duty rate for an individual firm was originally calculated as 29.76%, it was later modified to 3.63% without applying the PMS provision in the United States Department of Commerce's [hereinafter DOC] re-determination following the remand by the Court of International Trade. Regarding the numerical effect of PMS on dumping margins, see Kyounghwa Kim & Jaeyoun Roh, *US Anti-Dumping Practices Evolving Against Market Economies*, 21(4) WORLD TRADE REV. 479, 493 (2022).
[17] Memorandum from James Maeder, Senior Dir., Off. I, Antidumping & Countervailing Duty Operations to Ronald K. Lorentzen, Acting Assistant Sec'y for Enf't & Compliance 40 (Apr. 10, 2017) (on file with U.S. Dep't of Com.).

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overcapacity in Chinese steel production, driven by prevalent distortions and interventions, and determined that these cheaper imports, along with Korean government subsidies for domestic HRC production, distorted Korean market prices of HRC, the primary input into OCTG production.[18] Having found that a PMS exists for the production costs for OCTG, the DOC made an upward adjustment to respondents' reported costs for HRC by the CVD rate found for domestic HRC producers in the final determination in hot-rolled steel flat products from Korea.[19] The DOC has increasingly determined the existence of PMS that distorts input prices in various AD investigations and reviews, with most of these cases significantly addressing overcapacity as a critical element of their PMS findings.[20] Furthermore, the DOC started to increase the CV by quantifying the impact of global overcapacity on the price of imported HRC using regression analysis.[21]

In the absence of specific guidance for evaluating PMS allegations, the DOC's determinations on PMS were often challenged in courts. While the US Court of International Trade (hereinafter "CIT") and the Court of Appeals for the Federal Circuit (hereinafter "CAFC") acknowledged that the DOC has the legal authority to choose the appropriate method for identifying PMS and subsequent adjustments, they provided some noteworthy guidance. First of all, the PMS finding must be supported by substantial evidence.[22] In several AD cases involving steel products from South Korea, the CIT ruled that the DOC failed to substantiate how factors other than the impact of Korean HRC subsidies—contribute to the existence of a PMS and distort production costs. Regarding the impact of Chinese HRC imports, the CIT criticized the DOC for its analytical deficiencies, pointing out their failure to quantify the effect on Korean HRC and the consensus that Chinese steel overcapacity affects the entire world, not specific to the Korean steel market.[23] The CAFC affirmed the decisions made by the CIT. It found that, although the AD law does not obligate the DOC to quantify the distortion precisely, such quantification could be substantial evidence supporting a PMS.[24] Especially, the CAFC emphasized that a "particular" market

[18] *Id.*
[19] *Id.*
[20] Ikenson, *supra* note 5, at 11.
[21] The DOC appears to use the regression analysis to take into account the distortive effect of overcapacity since late 2019. The use of regression analysis is first found in the final determination of the administrative review of the AD duty order for Welded Carbon Steel Standard Pipes and Tubes from India in January 2020. *See* Memorandum from James Maeder, Deputy Assistant Sec'y for Antidumping & Countervailing Duty Operations to Jeffrey I. Kessler, Assistant Sec'y for Enf't & Compliance 63-69 (Jan. 9, 2020) (on file with U.S. Dep't of Com.) [hereinafter Memorandum from James Maeder to Jeffrey I. Kessler].
[22] *See, e.g.*, Husteel Co. v. United States, No. 18-00169, slip op. at 22 (Ct. Int'l Trade Jan. 3, 2020); Nexteel Co. v. United States, No. 17-00091, slip op. at 14-16 (Ct. Int'l Trade Jan. 2, 2019); Nexteel Co. v. United States, No. 18-00083, slip op. at 9-16 (Ct. Int'l Trade May 18, 2020).
[23] Nexteel Co. v. United States, No. 18-00083, slip op. at 13 (Ct. Int'l Trade May 18, 2020).
[24] Nexteel Co. v. United States, 28 F.4th 1,226, 1,234 (Fed. Cir. 2022).

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situation must be "particular" to producers of the subject merchandise, indicating that an ongoing global phenomenon by itself does not signify a departure from the "ordinary course of trade."[25] In that regard, although low-priced Chinese steel could contribute to a PMS, the CAFC determined that the evidence did not demonstrate enough particularity for this circumstance to form a PMS independently.[26]

Reflecting on the decisions by US courts, the DOC introduced a new regulation that defines a PMS and provides specific guidance on the process, from PMS findings to cost adjustments necessary for determining a CV. Above all, the DOC clarifies that a PMS is defined as either a situation that "prevents or does not allow a proper comparison" between domestic or third-country sales prices and (constructed) export prices—the so-called sales-based PMS—[27]or a situation that "contributes to the distortion of the cost of materials and fabrication or other processing of any kind, such that the cost of production of subject merchandise does not accurately reflect the cost of production in the ordinary course of trade."—cost-based PMS.[28] The revised regulation emphasizes that although these two types of PMS may be related in some cases, they should be treated as distinct and independent matters.[29] Therefore, when overcapacity, for instance, is found to be a cost-based PMS, it is not necessarily required that this situation prevents a proper comparison between the domestic (or third-country) sales price and the (constructed) export price.[30]

The regulation explains that a market situation is "particular" if it impacts prices or costs for only certain parties or products in the subject country.[31] The DOC is required to consider all relevant information,

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[25] *Id.* at 1,234.

[26] *Id.* at 1,237.

[27] The new regulation provides four examples of circumstances that may prevent the proper comparison of sales prices for the subject merchandise, including the imposition of an export tax on the subject merchandise. The DOC also emphasizes that the key question is whether a PMS prevents comparison market prices from serving as the basis of "normal value" for purposes of comparison with export or constructed export sales, not the extent to which the PMS may affect comparison market prices or whether the PMS affects both comparison market and export market prices evenly.

[28] Regulations Improving and Strengthening the Enforcement of Trade Remedies Through the Administration of the Antidumping and Countervailing Duty Laws, 89 Fed. Reg. at 20,837.

[29] *Id.* at 20,794.

[30] Prior to the regulatory amendment, it was generally understood that the PMS introduced into Section 771(15) of the Tariff Act through the 2015 Trade Preferences Extension Act (TPEA) ("ordinary course of trade") and the PMS added to Section 773(e) ("constructed value") constituted a single, integrated concept. This interpretation is also reflected in the US Court of International Trade's [hereinafter CIT] view that, in order to establish the existence of a PMS, the agency must demonstrate both (i) the presence of distortive conditions in the market and (ii) that such distortions prevent a proper comparison with the export price or constructed export price. The new regulation, however, clarifies that sales-based PMS and cost-based PMS are distinct concepts. As a result, when the DOC seeks to rely on a cost-based PMS to adjust constructed value, it is no longer required to show that the alleged PMS prevents the proper comparison of domestic and export prices. *See* Husteel Co. v. United States, No. 18-00169, slip op. at 22 (Ct. Int'l Trade Jan. 3, 2020).

[31] Regulations Improving and Strengthening the Enforcement of Trade Remedies Through the

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including "(i) the size and nature of the market situation; (ii) the volume of merchandise potentially impacted by the price or cost distortions resulting from the market situation; and (iii) the number and nature of the entities potentially affected by the price or cost distortions resulting from a market situation."[32] However, the DOC may reach the "particularity" of a certain situation when the same or similar market situation exists in multiple countries.[33] It appears to contradict the standpoint of US courts, which did not consider a persistent global trend alone as a deviation from the "ordinary course of trade."[34]

The regulation illustrates twelve non-exhaustive examples of what constitutes a cost-based PMS, with overcapacity recognized as the foremost example.[35] Examples are all linked with actions or inactions of a government, government-controlled entity, or other public entities that contribute to price distortions of a significant input into the production of subject merchandise. Besides the examples, the DOC determines a cost-based PMS by examining

> (1) whether there is a circumstance or a set of circumstances that may have affected production costs of the subject merchandise or costs or prices of inputs, (2) whether the cost of materials and fabrication or other processing of any kind was not in accordance with market principles or distorted, thus failing to reflect production costs in the ordinary course of trade, and (3) whether the circumstance or set of circumstances contributed to the distortion in the production cost of subject merchandise.[36]

One key aspect of this evaluation is the principle of "more likely than not," whereby the DOC must weigh all information on record to determine whether it is more likely than not that the situation contributed to cost or price distortions.[37] The sources of information may vary, including prior anti-dumping investigations or administrative reviews of the same or similar merchandise, detailed reports from foreign governments, or independent international or academic institutions.[38]

Lastly, the regulation provides guidance on how to reflect the impact of cost-based PMS in calculating a CV. If it is impossible to quantify the cost

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Administration of the Antidumping and Countervailing Duty Laws, 89 Fed. Reg. at 20,793.
[32] *Id.* at 20,839.
[33] *Id.*
[34] Nexteel Co. v. United States, 28 F.4th at 1,234.
[35] Regulations Improving and Strengthening the Enforcement of Trade Remedies Through the Administration of the Antidumping and Countervailing Duty Laws, 89 Fed. Reg. at 20,839-40.
[36] *Id.* at 20,838.
[37] *Id.*
[38] *Id.*

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distortions accurately, the DOC may use any reasonable method based on the record information to address them.[39] However, if it deems these adjustments inappropriate, it may still decide not to make any adjustments.[40] The regulation does not specify what reasonable methods should be used to quantify the cost distortions.

B. Economic Overview of Steel Overcapacity[41]

To assess whether overcapacity may, from an economic perspective, constitute a PMS that prevents prices from accurately reflecting those in the ordinary course of trade, it is essential first to examine the theoretical framework that explains the underlying causes of overcapacity. Taking steel as an example, there is no doubt that excessive steelmaking capacity has significant negative impacts on the steel industry. It is often linked to surges in steel exports from countries with excess capacity, which lead to oversupply in international markets. The oversupply depresses steel prices, reduces market share, and lowers capacity utilization rates for domestic steel producers operating under market conditions.[42] Regardless of the source of the excess capacity, it consistently undermines steel producers' profitability on a global scale.[43] The direct impact on profitability occurs through increased costs and reduced prices. Low capacity utilization rates resulting from excess capacity prevent the full realization of economies of scale, leading to higher unit costs and lower profitability.[44]

Globally, the effect of excess capacity is transmitted through trade, causing import surges and market share losses for domestic producers competing with imports.[45] When steel demand eventually slows, excess capacity becomes evident as steel prices plunge and steel firms incur losses. A common reaction by the government would be to sustain unviable firms through subsidies such as bailouts and cash grants.[46] It keeps inefficient capacity in the marketplace that would otherwise shut down. When this happens, steel producers in the affected economies look to export markets to sell their surplus steel, driving down prices and profitability.[47]

Before we identify and evaluate the market-distorting impacts of overcapacity, it is crucial to differentiate between cyclical and structural

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[39] *Id.* at 20,839.
[40] *Id.*
[41] This section was written based on ANTHONY DE CARVALHO ET AL., GLOBAL FORUM ON STEEL EXCESS CAPACITY (GFSEC): IMPACTS OF GLOBAL EXCESS CAPACITY ON THE HEALTH OF GFSEC STEEL INDUSTRIES (2024).
[42] *Id.* at 5-6.
[43] *Id.* at 5.
[44] *Id.*
[45] *Id.* at 6.
[46] *Id.* at 5.
[47] *Id.*

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factors that cause it. Cyclical overcapacity occurs due to variability in demand. [48] During economic downturns, factories may have more productive capacity than the market demand supports, leading to excess capacity. This type of overcapacity happens when firms idle their facilities while waiting for economic recovery. Structural overcapacity, on the other hand, is seen as a result of overinvestment in industrial steelmaking facilities.[49] In China, for example, structural overcapacity in the steel sector persists due to subsidies and financial incentives from provincial and local governments. Those subsidies, including government grants to struggling firms or below-market-rate loans from state banks, maintain inefficient or loss-making capacities in the market and encourage new investments that wouldn't occur without these subsidies and weak market conditions.[50] As those subsidies create non-market excess capacity, the resulting trade is frequently regarded as "unfair," which explains why the DOC's new regulation specifically identified "overcapacity" as the primary example of a PMS that distorts an input market in the ordinary course of trade.

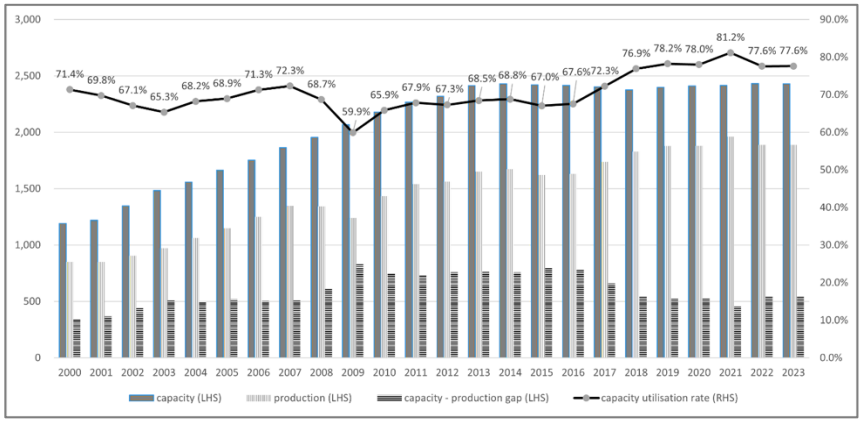
Building upon the theoretical framework concerning the causes of overcapacity, the subsequent analysis turns to global trends in steel overcapacity by examining the gap between capacity and production (hereinafter "excess capacity") and the gap between production and use (hereinafter "excess supply"). We also explore the relationship between these trends and US steel import unit values.

Figure 1 illustrates a consistent annual increase in steelmaking capacity since 2000, reaching its peak in 2014. Alongside this trend, production has also steadily risen, except during the financial crisis of 2008-2009. Nonetheless, as the growth rate of capacity has outpaced that of production, excess capacity reached a peak of 829 million metric tons (hereinafter "mmt") in 2009 and remained at a high level of the gap above 700 mmt until 2016. Since 2018, capacity has decreased slightly, while production has continued to rise. This has led to a consistent increase in the capacity utilization rate, which grew from 76.9% in 2018 to 81.2% in 2021. Although the extent of excess has fluctuated over different periods, excess capacity has been a persistent issue since 2000.

[48] BRUN, *supra* note 12, at 20-21. Also see Bruce A. Blonigen & Wesley W. Wilson, *Foreign Subsidization and Excess Capacity*, 80(2) J. INT. ECON. 200, 200-01 (2010).
[49] BRUN, *supra* note 12, at 22-23.
[50] DE CARVALHO ET AL., *supra* note 41, at 9.

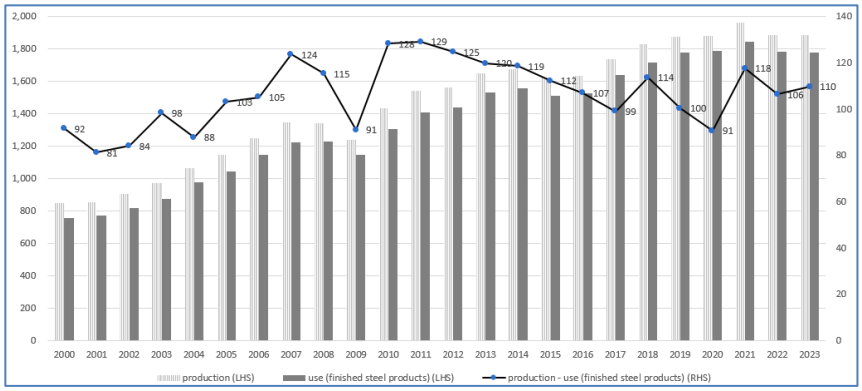
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FIGURE 1: Trend of Steel Overcapacity



Note: The unit of capacity and production are million metric tons (LHS), and that of capacity utilization rate is % (RHS).
Source: Written by authors based on data of A. De Carvalho & M. Nakamizu, *Latest Developments in Steelmaking Capacity and Outlook Until 2026*, Organization for Economic Co-operation and Development Report, 1-57 (2024).

FIGURE 2: Trend of Apparent Steel Use and Steel Production



Note 1: The unit is mmt.
Note 2: Data for the years 2000 to 2003 are from the Steel Statistical Yearbook 2004; for 2004 to 2013 from the Steel Statistical Yearbook 2014; and for 2014 to 2023 from the Steel Statistical Yearbook 2024.
Source: Written by authors using data from steel statistical yearbooks for use, and A. De Carvalho & M. Nakamizu, *Latest Developments in Steelmaking Capacity and Outlook Until 2026*, Organization for Economic Co-operation and Development Report, 1-57 (2024) for production.

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Figure 2 shows that the apparent steel use for finished steel products (hereinafter "demand") and production exhibit nearly identical trends.[51] Both demand and production rose until peaking in 2014, after which they experienced a decline in 2015 and 2016. Following 2017, demand resumed its upward trajectory but began to decline again after 2021. Excess supply varied between 80 and 130 mmt, with a peak exceeding 120 mmt between 2010 and 2014. This trend was similar to the highest level of excess capacity during this period.

Excess capacity has been a persistent phenomenon since 2000 although its extent has varied over time. This trend can be seen as part of the ordinary course of trade globally. If excess capacity is considered a PMS that distorts the input market in the ordinary course of trade, then there should be clear and established criteria for defining overcapacity and its relevant time period.[52] Furthermore, it is important to determine whether overcapacity is particular to producers, exporters, raw materials, or the market where the raw materials were manufactured during the period of investigation.

C. How Does the United States Recognize Overcapacity as a PMS? [53]

Steel overcapacity, despite its globally pervasive nature, has frequently been regarded in the United States as falling outside the ordinary course of trade.[54] The DOC has considered steel overcapacity to constitute a PMS for the following reasons. While the steel overcapacity crisis is a pervasive global problem, it manifests differently and uniquely at the national level. Significant changes in trade patterns, along with domestic policies and existing market forces, have combined to create a PMS in specific countries as a response to the overcapacity crisis. The DOC's determinations show that the factors defining the PMS are unique to specific countries and are linked by the distortive effects of the Chinese-led steel overcapacity crisis on their markets, as well as the government's actions taken in response to this crisis. To clarify, while Chinese subsidies and government intervention

[51] For the period from 2000 to 2023, use and production have a high correlation of 0.99.

[52] For example, the price of imported raw materials can immediately affect the prices of identical exported goods. However, as shown in Table A1, the price changes of imported raw materials may be reflected in the price changes of exported final goods with a certain time lag.

[53] This section was written based on documents related to petitioners' PMS Allegations and DOC's decisions. *See* Qualitative Submission from Roger B. Schagrin et al., Schagrin Associates, Counsel to Wheatland Tube Co., to Honorable Wilbur L. Ross, Jr., Sec'y of Com., U.S. Dep't of Com. 3 (Jan. 21, 2020) (on file with Schagrin Associates); Memorandum from Alex Villanueva, Senior Dir., Off. I, Antidumping & Countervailing Duty Operations to James Maeder, Deputy Assistant Sec'y for Antidumping & Countervailing Duty Operations 10 (July 10, 2019) (on file with U.S. Dep't of Com.); Particular Market Situation Allegation, Resubmitted Market Viability Allegation, and Supporting Information from Alan H. Price et al., Counsel to Independence Tube Corp. & Southland Tube, Inc. to Honorable Wilbur L. Ross, Jr., Sec'y Com., U.S. Dep't of Com. 21 (Dec. 21, 2018) (on file with Wiley Rein LLP).

[54] Ikenson, *supra* note 5, at 11.

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significantly contribute to the global excess capacity crisis, the responses of other governments to these distortions further exacerbate the problem, perpetuating a vicious cycle of continued expansion and maintenance of uneconomic capacity.

For example, in the cases of circular welded pipe (hereinafter "CWP") from India and Thailand, the existence of a PMS is supported similarly by substantial evidence on: (1) the significant global overcapacity in steel production; (2) the government subsidization of HRC[55] in response to overcapacity; (3) the imposition of antidumping and safeguard measures on HRC similarly imposed in response to overcapacity; and (4) domestic CWP producers' non-payment of any antidumping, countervailing duty, or safeguard duties imposed to address the price distortions and injury caused by global steel overcapacity.[56] These conditions collectively evidence that the prices of HRC are significantly distorted by non-market forces. Consequently, the global overcapacity crisis will manifest its distortive effects differently across different markets. The DOC's decision seems to assume that actively pursuing measures such as subsidization and trade remedies to support India and Thailand's steel producers may lead to further distortions unique to specific countries.[57]

Based on the DOC's "collective" approach to finding a PMS for various factors, including "overcapacity," it remains uncertain whether "overcapacity" alone can qualify as a PMS. The current practice, which regards trade remedy actions like AD or safeguards as strong evidence that proves the distortive effect of overcapacity caused by non-market factors, exhibits some logical flaws. While AD or safeguards may indicate that low-priced imports injured the domestic industry, they do not necessarily mean that "overcapacity" is the specific reason for increased import volumes, decreased import unit values, or decline in the sales, profits, or output of the domestic industry. If the imposition of AD or safeguard measures is used as evidence supporting the particularity of overcapacity, it could result in more frequent findings of PMS for "overcapacity" in all markets where trade remedy measures on imported HRC are in place during the period of

[55] Hot-rolled coil [hereinafter HRC], the primary input in the production of pipe and tube, should constitute eighty to ninety percent of the cost of producing pipe and tube. *See* Schagrin et al., *supra* note 53, at 5.

[56] Companies are allowed to import material inputs without paying any duties, provided the downstream product made from such inputs is incorporated in exported merchandise in both India and Thailand.

[57] Excess capacity in steel production causes serious market distortions and contributes to the downturn in global steel markets, including significant price suppression, displaced markets, and unsustainable capacity utilization, resulting in slim margins, shutdowns, and lay-offs in the steel industry. The ongoing decline in steel demand, coupled with continued capacity expansions, is likely to place further pressure on country-specific steel markets and create incentives for government interventions which will further distort the production costs and prices for a wide range of steel products.

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investigation. While overcapacity can distort an input market, leading to prices that deviate from the ordinary course of trade, any conclusion regarding this distortion should be based on substantial evidence, rather than simply on trade remedy actions or other circumstances in the exporting country involved.

III. THE PRACTICE OF ADDRESSING OVERCAPACITY UNDER THE ANTIDUMPING REGIME: A LEGAL AND ECONOMIC EVALUATION

The TPEA of 2015 empowers the DOC with the authority to use an alternative calculation method for determining CV when the DOC finds certain distortions in the production costs of subject merchandise. Under the DOC's new regulation, overcapacity is at the forefront of the scenarios that allow for the alternative method. In contrast to the Act of the US, the ADA of the WTO lacks explicit provisions regarding cost or price adjustments and language such as "particular market situation" concerning the "calculation" of CV. This section will examine whether the US rules on "cost-based PMS" are compatible with the ADA provisions related to the establishment of CV. Specifically, we will assess whether and under what circumstances cost adjustments are allowed in establishing CV and whether market distortions caused by overcapacity can justify the adjustment of production costs such that those distortions do not reflect the production costs in the ordinary course of trade under Article 2.2.1.1 of the ADA.

A. "Reasonably Reflect Cost of Production" Under the First Sentence of Article 2.2.1.1 of the ADA

The WTO jurisprudence has not excluded the possibility of employing an alternative calculation method rather than relying on actual recorded costs for establishing a CV in light of specific circumstances outlined in Article 2.2.1.1. For instance, an investigating authority may rely on sources other than records kept by the exporter if either of two conditions is not met: such records are not in accordance with the generally accepted accounting principles of the exporting country or do not reasonably reflect the costs associated with the production and sale of the product under consideration.

One key issue is whether the recorded costs influenced by certain governmental actions, such as an export tax system or regulatory controls, reasonably reflect the production costs. In the *European Union — Anti-Dumping Measures on Biodiesel from Argentina* (hereinafter "*EU — Biodiesel (Argentina)*") case, the Appellate Body agreed with the panel's finding that the second condition in the first sentence of Article 2.2.1.1 requires a comparison between the recorded costs and the costs actually

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incurred by the producers.[58] This comparison aims to establish whether the records reasonably reflect the "actual" costs incurred, not to evaluate whether these recorded costs are more "reasonable" than the actual costs or whether they reflect hypothetical costs under different conditions.[59] Although records might be found not to reasonably reflect the production costs under certain circumstances, such as non-arm's length transactions, the panel and the Appellate Body noted that such a finding would concern the accuracy or reliability of such transactions.[60] The interpretation of "reasonably reflect the costs" as relating to the reasonableness of the records, not the costs themselves, was reaffirmed in the rulings in *Ukraine — Anti-Dumping Measures on Ammonium Nitrate* (hereinafter "*Ukraine — Ammonium Nitrate*") and *European Union — Cost Adjustment Methodologies and Certain Anti-Dumping Measures on Imports from Russia (Second complaint) (EU — Cost Adjustment Methodologies II (Russia))*.[61] Given that the DOC's cost adjustments, which reflect the impact of overcapacity on a significant input, are based on the assessment for the reasonableness of the recorded costs vis-à-vis hypothetical costs of the input in the market not influenced by overcapacity, it might not be appropriate to argue that exporters' records do not reasonably reflect production costs because of distortions by overcapacity in order to demonstrate that the second condition in the first sentence of Article 2.2.1.1 was not met.

B. "Normally" Under the First Sentence of Article 2.2.1.1 of the ADA

Although the two conditions outlined in the first sentence of Article 2.2.1.1 are fulfilled, it remains necessary to consider the possibility of relying on an alternative methodology based on the term "normally" in the same sentence. The Appellate Body in *Ukraine — Ammonium Nitrate* and *EU — Biodiesel (Argentina)* acknowledges that there are circumstances other than those in the two conditions where the obligation to use exporters' records does not hold.[62] While the panel in *Australia — Anti-Dumping Measures on A4 Copy Paper* considers the term "normally" to provide a separate basis and

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[58] Appellate Body Report, *European Union — Anti-Dumping Measures on Biodiesel from Argentina*, ¶ 6.65, WTO Doc. WT/DS473/AB/R (adopted Oct. 26, 2016) [hereinafter *EU — Biodiesel (Argentina)* Appellate Body Report].

[59] *Id.*

[60] Panel Report, *United States — Anti-Dumping Measures on Certain Oil Country Tubular Goods from Korea*, ¶ 7.197, WTO Doc. WT/DS488/R (adopted Jan. 12, 2018).

[61] Panel Report, *Ukraine — Anti-Dumping Measures on Ammonium Nitrate*, ¶¶ 7.89-90, WTO Doc. WT/DS493/R (adopted Sep. 30, 2019); Panel Report, *European Union — Cost Adjustment Methodologies and Certain Anti-Dumping Measures on Imports from Russia (Second complaint)*, ¶ 7.102, WTO Doc. WT/DS494/R (July 24, 2020).

[62] Appellate Body Report, *Ukraine — Anti-Dumping Measures on Ammonium Nitrate*, ¶ 6.87, WTO Doc. WT/DS493/AB/R (adopted Sep. 30, 2019); *EU — Biodiesel (Argentina)* Appellate Body Report, *supra* note 58, ¶ 6.18.

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the flexibility to disregard exporters' records, it does not clearly articulate the specific situations that would permit deviation from the obligation to use the exporters' recorded costs in calculating CV.[63] Instead, the panel indicates that to use the flexibility inherent in the term "normally," the investigating authority must confirm that the two conditions are met and nonetheless find a "compelling reason" distinct from those conditions.[64] In that regard, it is necessary to examine whether market distortions caused by overcapacity can become a "compelling reason" for disregarding the records kept by an exporter to the extent that the term "normally" would permit certain cost adjustments.

The phenomenon of overcapacity, whether observed globally, regionally, or within specific countries, stems from multifaceted causes that intertwine structural and market factors. As examined in Section II, overcapacity, which varies in extent, has been a long-standing issue and can be deemed a normal part of market conditions, depending on the case. In other words, one could argue that the overcapacity of an input at issue would affect the input market as a crucial market element, and consequently, the equilibrium price of the input under typical market economies would reflect the effects of overcapacity. Given that the word "normally" refers to "under normal or ordinary conditions; as a rule, ordinarily"; "in a normal manner, in the usual way,"[65] assessing a market distorted by "overcapacity" as not "normal and ordinary" necessitates thorough deliberation. To be specific, before determining that overcapacity prevailing in the market is not normal or in the ordinary course of trade, it is essential first to identify the non-market factors that contribute to the problematic overcapacity and evaluate the extent to which these factors affect the prices of the relevant input and how far the input market strays from normal conditions.

Apart from the possibility of finding the particularity of overcapacity, the question remains whether such a finding can be a "compelling reason" for disregarding exporters' records and making an upward adjustment to the production costs. As noted above, the legal framework of the ADA provides little discipline to address market distortions artificially caused by governmental actions, and the WTO jurisprudence has not offered clarifications for applying the term "normal" in the first sentence of Article 2.2.1.1. Given some literature viewing that, by reflecting on changes in political, social, legal, and linguistic contexts that have occurred since the inception of a treaty, one can derive a more legitimate "evolutive" or

[63] Panel Report, *Australia — Anti-Dumping Measures on A4 Copy Paper*, ¶¶ 7.115-16, WTO Doc. WT/DS529/R (adopted Jan. 27, 2020). Also, see Weihuan Zhou & Delei Peng, *Australia — Anti-Dumping Measures on A4 Copy Paper*, 115(1) AM. J. INT'L L. 94, 98-99 (2021).
[64] Panel Report, *Australia — Anti-Dumping Measures on A4 Copy Paper*, ¶ 7.117, WTO Doc. WT/DS529/R (adopted Jan. 27, 2020).
[65] *Id.* ¶ 7.111.

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"evolutionary" interpretation,[66] the word "normally" will be understood differently concerning how much it allows for cost adjustments instead of relying on exporters' records, shaped by the political, social and other relevant contexts. The decision on whether the problem of overcapacity is a "compelling reason" would be made by the assessment of the extent to which the international community perceives market distortions caused by overcapacity as a serious issue and the establishment of a consensus on whether and how this matter can be addressed as a circumstance envisaged by the term "normally" in Article 2.2.1.1 of the ADA. More fundamentally, multilateral discussions would be needed on whether the framework of the ADA will extend to address market distortions caused by overcapacity and, if so, what criteria should be elaborated for determining a set of particular situations that would permit the exceptional calculation methodology.

C. Feasibility of Multiple Regression Analysis for Estimating Overcapacity Effect

As discussed in Section II, global overcapacity does not provide sufficient economic grounds to be regarded as a PMS in all circumstances. Nevertheless, the DOC's approach—namely, that its distortive effects may manifest differently across markets—remains, to some extent, persuasive. Once the investigating authority finds overcapacity as a PMS that distorts costs, the challenge is to accurately quantify the extent of this distortion. Beginning with the India case (A-533-502, POR 05/01/17 - 04/30/18), the DOC has adjusted margin rates using multiple regression as the PMS valuation methodology. These adjustments reflect the difference between actual and estimated values, derived from empirical analysis, which shows the effect of excess capacity on the average unit value of HRC imports. While using regression as a PMS valuation methodology is not problematic in itself, several issues are identified in the estimation methods employed. Unlike studies that establish the statistical significance of hypotheses—i.e., verify causal relationships between dependent and independent variables—through various robustness checks, the DOC seems to directly apply the coefficient values derived from empirical analysis to adjust production costs when a PMS is recognized, without providing a thorough demonstration. As coefficient values can vary based on the analytical approach used, meticulous attention must be paid to the methodology and data. Accordingly, this section examines whether the effect of overcapacity as a PMS on input prices can be properly quantified by evaluating the feasibility of the multiple regression methodology applied in the India case (A-533-502, POR 05/01/17–

[66] Gabrielle Marceau, *Evolutive Interpretation by the WTO Adjudicator*, 21(4) J. INT'L ECON. L. 791, 791 (2018); Laurie Durel, *Border Carbon Adjustment Compliance and the WTO: The Interactional Evolution of Law*, 27(1) J. INT'L ECON. L. 18, 22 (2024).

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04/30/18).

The DOC's PMS adjustment is based on a regression analysis whereby country-specific HRC import average unit values (hereinafter "AUVs") are regressed against global excess capacity ("Uneconomic Capacity"),[67] with standard Ordinary Least Squares (hereinafter "OLS") fixed effects, to estimate the effect of global excess capacity on prices of HRC at the national level.[68] The empirical analysis model is as follows:

The results of the OLS model used by petitioners:

$$\ln\left(\widehat{\text{Import AUV}}_{i,t}\right) = 9.82 - 0.59\ln(\text{Uneconomic Capacity}_t) + 0.15\ln(\text{Irone Ore}_t) + 0.38\ln(\text{Scrap}_t) - 0.21\ln\left(\text{Exchange Rate}_{i,t}\right) - 0.01\beta_5\ln\left(\text{CFCF}_{i,t}\right) - 0.15\beta_6\ln\left(\text{Aluminium}_{i,t}\right) - 0.07$$

The model yields statistically and economically significant results that can be applied to 2017 data to predict the 2017 Indian import AUV. Specifically, the model predicts that the Indian import AUV would have been $796.77 per metric ton if the global steel industry had operated at a utilization rate of eighty-five percent. This counterfactual AUV is 38.54% higher than the actual 2017 Indian import AUV of $575.12.

Est. Indian Import AUV ln($/MT)	Est. Indian Import AUV ($/MT)	Actual Indian Import AUV in 2017 ($/MT)	Percent Difference from Actual Import AUV (%)
F	*G = exponent(F)*	*H*	*= (G - H) / H*
6.68	$796.77	$575.12	38.54006%

Source: US Department of Commerce, Certain Welded Carbon Steel Standard Pipes and Tubes from India: Revised PMS Valuation Methodology; 2017-2018 (A-533-502), 22 March, 2019, at Exhibit 1.3.

[67] "Uneconomic Capacity" in a given year is the capacity in excess of the highest level of annual production ever experienced prior to that year. For the Indian case (A-533-502), since the highest level of crude steel production before 2017 was in 2014, 1,669.5 million metric tons produced globally in 2014 were used. *See* Revised PMS Valuation Methodology from Alan H. Price et al., Counsel to Independence Tube Corp. & Southland Tube, Inc., to Honorable Wilbur L. Ross, Jr., Sec'y of Com., U.S. Dep't of Com. Exhibit 1.3 (Mar. 22, 2019) (on file with Wiley Rein LLP) [hereinafter Revised PMS Valuation Methodology from Alan H. Price et al. to Honorable Wilbur L. Ross, Jr.].

[68] On the supply side, the model considers excess capacity ("Uneconomic Capacity," expected sign -), raw material prices ("Iron ore" & "Scrap," +), and exchange rate ("Exchange rate," -). On the demand side, the model includes Gross Fixed Capital Formation [hereinafter GFCF] (meaning that investment in non-financial assets, +) and "Aluminium prices" (substitute for steel, +). The variables of the supply side are statistically significant with expected signs, but those of the demand side are insignificant ("GFCF") or with opposite signs ("Aluminium"). Three commodity metal prices ("Iron ore," "Scrap," and "Aluminium") are highly correlated.

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Economic analysis of supply and demand requires accounting for the fact that the price and quantity of a good are simultaneously determined. That is, price and quantity are determined in equilibrium between supply and demand.

Supply Equation: **Price** = *f*(**Quantity**, Price of inputs, Exchange rates, Other supply-side factors)
Demand Equation: **Quantity** = *f*(**Price**, Price of Substitutes, Macroeconomic Demand, Other demand- side factors)

In the context of simultaneous supply and demand equations, economic theory posits that endogeneity bias is a potential concern. Wooldridge (2020) [69] demonstrates that applying OLS to simultaneous equations typically results in biased and inconsistent estimators, suggesting instead the use of instrumental variables as the leading method for estimating such models. Nonetheless, in the *Revised PMS Valuation Methodology*,[70] the petitioners argue for the appropriateness of the OLS model in estimating the PMS adjustment. They claim a standard empirical test for endogeneity bias reveals no statistically significant endogeneity. However, this does not fully address potential biases, especially in simultaneous equations where structural relationships are complex. OLS is generally recognized as the Best Linear Unbiased Estimator (hereinafter "BLUE") only when there is no endogeneity issue. In simultaneous equations, this assumption is often violated, making OLS potentially biased. Therefore, while OLS might be applied if all of its assumptions are met, the presence of endogeneity necessitates the consideration of alternative estimation methods. To substantiate the petitioner's argument, it is necessary to ensure the robustness of the empirical results. This involves including all relevant covariates to mitigate omitted variable bias and rigorously validating the instruments utilized in the 2SLS estimation.

In Table 1, "Steel Consumption" was omitted from the OLS analysis, which suggests the presence of potential omitted variable bias, thereby leading to biased estimation results. This implies that the exclusion of relevant variables may result in omitted variable bias, rendering the estimation results biased. Specifically, when both the primary independent variables, "Uneconomic Capacity" and "Steel Consumption," exhibit negative coefficient signs, and production and consumption are presumed to be positively correlated, the exclusion of "Steel Consumption" from the analysis could bias the coefficient of "Uneconomic Capacity" toward a more

[69] JEFFREY M. WOOLDRIDGE, INTRODUCTORY ECONOMETRICS: A MODERN APPROACH 534 (7th ed. 2020).
[70] *See* Revised PMS Valuation Methodology from Alan H. Price et al. to Honorable Wilbur L. Ross, Jr., *supra* note 67, at 6-7.

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negative value. In other words, the omission of the "Steel Consumption" variable may lead to an overestimation of the negative coefficient of "Uneconomic Capacity." Consistent with this conjecture, Table 1 demonstrates that the OLS results, which exclude the "Steel Consumption" variable, show a larger negative coefficient for "Uneconomic Capacity" compared to the 2SLS results that include the "Steel Consumption" variable.

TABLE 1: Regression Results for Petitioner's Model: OLS and 2SLS Version

Variables	**Fixed Effects OLS**	**Fixed Effects 2SLS**
All variables in natural logs	***Coefficient and (Standard Error)***	
Uneconomic Capacity	-0.5886***	-0.5260***
	(0.0398)	(0.0216)
Iron Ore Price	0.1548***	0.1154***
	(0.0330)	(0.0341)
Scrap Price	0.3754***	0.3584***
	(0.0499)	(0.0460)
Exchange Rate Index	-0.2087***	-0.2252***
	(0.0472)	(0.0455)
Gross Fixed Capital Formation (hereinafter "GFCF")	-0.0077	*Used as instrument*
	(0.0315)	
Aluminum Price	-0.1521**	*Used as instrument*
	(0.0770)	
Steel Consumption	*n/a*	-0.0661*
		(0.0340)
Constant	9.8183***	8.5466***
	(0.9565)	(0.2815)
India Fixed Effect	-0.0673	0.0884
Observations	377	377
R-squared	0.896	

Note: *** p<0.01, ** p<0.05, * p<0.1. Standard errors in parentheses. Fixed effects for other countries not shown.
Source: US Department of Commerce, Certain Welded Carbon Steel Standard Pipes and Tubes from India: Revised PMS Valuation Methodology; 2017-2018 (A-533-502), 22 March, 2019, at Exhibit 1.2.

However, when "Steel Consumption" is included, it may become an endogenous variable and could be correlated with the error term, as indicated by $cov(steel\ consution_{i,t}, \varepsilon_{i,t}) \neq 0$. This violates the assumptions of the OLS regression model, rendering the OLS estimator no longer unbiased and BLUE.

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To address these issues, using a proxy for "Steel Consumption" for OLS regression or applying 2SLS with an instrument variable for "Steel Consumption" can be a potential solution. First, in the results using a proxy variable, the proxy for demand, "GFCF," is not statistically significant, and the price of a steel substitute, "Aluminium Price," shows a statistically significant result with the opposite sign (-) instead of (+). In particular, "Aluminium Price" exhibits a high correlation with "Iron Ore" and "Scrap," which causes multicollinearity issues.[71] "GFCF" and "Aluminium Price" do not effectively serve their roles as proxy variables. Therefore, as Wooldridge (2020) suggested, using 2SLS with instrument variables may be the best approach. When applying 2SLS, the instrument variables for "Steel Consumption" should be highly correlated with "Steel Consumption" but uncorrelated with $u_{i,t}$.[72] "GFCF," "GDP growth," "Aluminium price," "Brent crude oil price," and "Motor vehicle sales" are used as the instrument variables. Among them, "Aluminium price" is not an appropriate instrument variable because it shows a high positive correlation of 0.75 with the dependent variable "AUV,"[73] which violates the exogeneity condition of a valid instrument, $Cov(z, u) = 0$.

The 2SLS model used by the petitioner:

$$\begin{aligned}
&\ln(\text{Consumption}_{i,t}) \\
&= \pi_0 + \pi_1 \ln(\text{Uneconomic Capacity}_t) + \pi_2 \ln(\text{Irone Ore}_t) \\
&+ \pi_3 \ln(\text{Scrap}_t) \\
&+ \pi_4 \ln(\text{Exchange Rate}_{i,t}) \\
&+ \boldsymbol{\pi_5 \ln(\text{CFCF}_{i,t}) + \pi_6 \text{GDP growth}_{i,t} + \pi_7 \ln(\text{Alumimum}_{i,t})} \\
&+ \boldsymbol{\pi_8 \ln(\text{Brent}_t) + \pi_9 \ln(\text{Vehicles}_{i,t})} + \alpha_{1,i} + u_{i,t} \\
&\ln(\text{Import AUV}_{i,t}) \\
&= \beta_0 + \beta_1 \ln(\widehat{\text{Consumption}}_{i,t}) + \beta_2 \ln(\text{Uneconomic Capacity}_t) \\
&+ \beta_3 \ln(\text{Irone Ore}_t) + \beta_4 \ln(\text{Scrap}_t) + \beta_5 \ln(\text{Exchange Rate}_{i,t}) + \alpha_i \\
&+ u_{i,t}
\end{aligned}$$

To ensure more accurate estimations of "Uneconomic Capacity" for

[71] Prices for iron ore, scrap, crude oil, and aluminium are highly correlated. The inclusion of multiple highly correlated explanatory variables does not bias the results but makes the model somewhat unwieldy from a practical perspective. First, correlated explanatory variables complicate interpretation because the coefficients must be interpreted in the context of each other. Second, a high correlation between explanatory variables creates a problem known as multicollinearity. While multicollinearity does not bias the results, it inflates the variance of the estimators, making statistical inference less efficient. *Id.* at 7.

[72] WOOLDRIDGE, *supra* note 69, at 509.

[73] The raw correlation between import average unit values [hereinafter AUVs] and the global commodity aluminium price is 0.75. *See* Revised PMS Valuation Methodology from Alan H. Price et al. to Honorable Wilbur L. Ross, Jr., *supra* note 67, at 8.

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direct use in margin rate adjustments, it is crucial to focus on both the precision of empirical methods and the data used. Although the same methodology was applied to cases of India (CWP, A-533-502, POR 05/01/2017 – 04/30/2018), Thailand (CWP, A-549-502, POR 03/01/2019 – 02/28/2020), and Korea (OCTG, A-580-870, POR 9/1/2017 to 8/31/2018), the sample countries used were different. This is noteworthy because, in *the final issues and decision memo,*[74] the DOC made three changes[75] to the methodology for calculating the PMS adjustment, as initially used in *the Preliminary Results*. The first change involved regressing domestic HRC prices from eight countries, including India, instead of using imported HRC AUVs from thirty-eight countries, including India. The regression analysis, based on this OLS model, where the dependent variable is the domestic prices for eight countries, including India, resulted in an estimated regression coefficient for uneconomic capacity of -0.4338. Based on this result, the DOC increased HRC costs by 10.30% to account for the cost-based PMS that existed in India during the POR, which is a decrease compared to the 18.55% applied in *the Preliminary Results.*[76] In Table 2, each of the three cases utilizes different sets of sample countries, which appear to affect all estimation results in distinct ways. The arbitrary selection of sample countries may result in significant variability in the adjusted margin rates. Therefore, careful consideration is needed to avoid potential biases and distortions arising from this arbitrary inclusion.

[74] *See* Memorandum from James Maeder to Jeffrey I. Kessler, *supra* note 21, at 65.

[75] The DOC has made three changes to how the PMS adjustment factor was calculated and used in *the Preliminary Results*: (1) using a regression of domestic HRC prices from eight countries, including India, instead of imported HRC AUVs from thirty-eight countries, (2) relying on available domestic HRC prices instead of calculating a counterfactual Indian HRC import AUV for 2017, and (3) determining the PMS adjustment factor based on a capacity utilization rate of eighty percent, instead of eighty-five percent.

[76] Memorandum from James Maeder, Deputy Assistant Sec'y for Antidumping & Countervailing Duty Operations to Jeffrey I. Kessler, Assistant Sec'y for Enf't & Compliance 9 (July 10, 2019) (on file with U.S. Dep't of Com.).

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TABLE 2: Comparison of Empirical Analysis Results

	A-533-502 (India)	A-549-502 (Thailand)	A-580-870 (Korea)
POR	05/01/2017 – 04/30/2018	03/01/2019 – 02/28/2020	9/1/2023 – 8/31/2024
Product	CWP	CWP	OCTG
Coefficients of "Uneconomic Capacity"	-0.5886	-0.4354	-0.5647
Adjusted margin rate	38.54%	21.34%	7.22%
Analysis period	2008-2017	2010-2019	2014-2023
Country sample	38 countries	30 countries	52 countries
Observations	377	300	520

Source: Wiley Rein LLP, Certain Welded Carbon Steel Standard Pipes and Tubes from India: Revised PMS Valuation Methodology (A-533-502), 22 March, 2019; Schagrin Associates, Circular Welded Carbon Steel Pipes and Tubes From Thailand: Particular Market Situation Allegation – Quantitative Submission (A-549-502), 4 January, 2021; Schagrin Associates, Oil Country Tubular Goods from the Republic of Korea – Particular Market Situation Allegation (A-580-870), 18 February, 2025.

IV. CONCLUSION

The issue of overcapacity troubles all countries, whether they contributed to it or not. By designating "overcapacity" as a key example of cost-based PMS in the new regulation, the DOC aims to incorporate longstanding structural overcapacity issues—particularly in the steel industry—within the scope of AD regime. The new regulation allows the DOC make upward adjustments to the cost of production when certain distortions—such as overcapacity driven by government policies—are found to deviate from the ordinary course of trade.

From a legal perspective, the regulation potentially stretches the limits of WTO-consistent interpretation under the ADA. Article 2.2.1.1 mandates the use of exporters' actual records if such records are in accordance with generally accepted accounting principles and reasonably reflect production costs. WTO jurisprudence has consistently held that recorded costs must be assessed for their accuracy rather than their hypothetical "reasonableness" under undistorted market conditions. Therefore, treating government-induced overcapacity as a justification to deviate from these records raises important compatibility concerns under current WTO rules. The ambiguity surrounding the term "normally" in Article 2.2.1.1 may offer some interpretive leeway, but it also demands a "compelling reason" beyond the

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two explicit exceptions. Whether overcapacity can qualify as such a reason depends on broader international consensus and clearer legal guidance.

Economically, overcapacity undeniably affects global prices and trade flows. However, the causes of overcapacity are multifaceted, stemming from both structural and cyclical factors. While government intervention plays a key role, distinguishing its effects from natural market fluctuations remains complex. The DOC's collective approach toward finding cost-based PMS, which emphasizes that distortive effects may manifest differently across markets, remains, to some extent, convincing. However, without substantiating the particularity of each situation and establishing criteria for defining "overcapacity" and its relevant period, such an approach risks overgeneralization concerning PMS findings for overcapacity alone. In particular, considering the exporting country's AD or safeguard measures on an input market—the HRC market in the cases examined in this paper—as supportive evidence for finding that a PMS exists risks the abusive application of the PMS regulations. If the investigating authority finds a PMS for "overcapacity" and trade remedy measures in the exporting country combined, it may result in a ripple effect of imposing higher AD duty rates on all finished or semi-finished products using the input deemed to be cost-distorted.

Critically, the DOC's empirical approach—particularly its use of multiple regression analysis to estimate the effect of global excess capacity on HRC prices—faces methodological challenges. The omission of key variables such as steel consumption, potential endogeneity issues, and inconsistencies in sample country selection weaken the robustness and reliability of the estimated cost adjustments. The paper emphasizes the importance of adopting more rigorous econometric practices, such as 2SLS with valid instrument variables, and cautions against relying on coefficient estimates without thoroughly considering statistical validity and the underlying assumptions of the model. Ultimately, while the DOC's new rule provides greater flexibility to address cost distortions in AD cases, its application to overcapacity raises significant legal and economic concerns. Without clearer WTO guidance and robust empirical validation, the use of overcapacity as a standalone basis for PMS findings could lead to disputes and undermine the predictability of the multilateral trading system. Going forward, multilateral dialogue would be essential to determine whether and how global market distortions like overcapacity should be addressed within the WTO framework, and what legal and methodological standards should govern such efforts.

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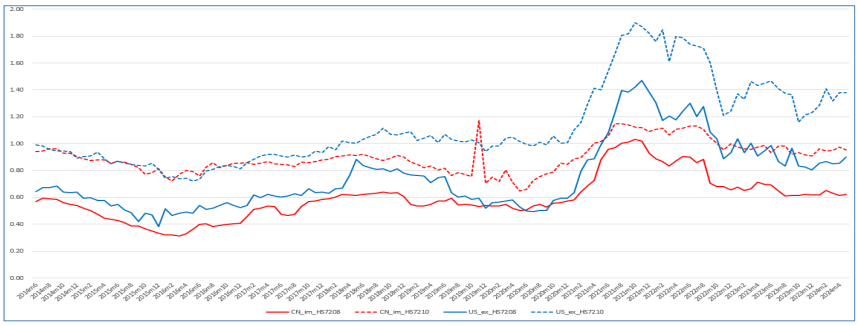
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APPENDIX

The import unit price trends of HS7208[77] and HS7210,[78] which have the highest Korean import volumes from China, were compared with the export unit price trends of HS7208 and HS7210, which have the highest Korean export volumes to the United States.[79] The import unit prices from China and the export unit prices to the United States for HS7208 and HS7210 exhibit very similar patterns of change.

FIGURE A1: Comparison of Import and Export Unit Price for HS7208 & HS7210



Source: made by authors based on the data of Korea International Trade Association (hereinafter "KITA") K-stat.[80] Note: The unit price is calculated as the value divided by the weight (unit: $/kg).

The unit prices of HS7208 and HS7210 imported from China to Korea and exported from Korea to the United States exhibit a high correlation, occurring in the same month or with a one-month lag. HS7208 demonstrates a stronger correlation than HS7210. In contrast, when comparing the import unit price of HS7208 from China with the export unit price of HS7306[81] to the United States, there is a high correlation of approximately 0.9 with a lag of five to six months. The unit price of HS7208 imported from China aligns most closely with the unit price of HS7306 five to six months later, suggesting that changes in the price of HS7208 are reflected in HS7306 after

[77] The product belonging to HS 7208 is Flat-rolled products of iron or non-alloy steel, of a width of six hundred millimetres or more, hot-rolled, not clad, plated, or coated.
[78] The product belonging to HS7210 is Flat-rolled products of iron or non-alloy steel, of a width of six hundred millimetres or more, clad, plated or coated.
[79] Out of the HS72 import and export values in 2023, HS7208 and HS7210 account for forty-seven percent of the imports from China and fifty-nine percent of the exports to the United States.
[80] KOREA INT'L TRADE ASS'N (KITA) K-STAT, https://stat.kita.net/stat/kts/ctr/CtrItemImpExpList.screen (last visited Mar. 20, 2025).
[81] The products belonging to HS 7306 are other tubes, pipes, and hollow profiles (for example, open seam or welded, riveted or similarly closed) of iron or steel.

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five months. Similarly, comparing the import unit price of HS7210 from China with the export unit price of HS7306 to the United States reveals a high correlation of approximately 0.81 to 0.82, with a lag of three to five months.

TABLE A1: Correlation Comparison of Unit Price Between Import from China and Exports to the United States

lagged month	HS7208	HS7210	HS7208 (IM) vs HS7306 (EX)	HS7210 (IM) vs HS7306 (EX)
-6	0.65	0.65	0.46	0.48
-5	0.71	0.70	0.51	0.53
-4	0.76	0.73	0.57	0.58
-3	0.82	0.75	0.62	0.62
-2	0.87	0.78	0.68	0.66
-1	0.91	0.80	0.73	0.70
0	0.94	**0.82**	0.77	0.74
1	**0.95**	0.81	0.82	0.78
2	0.94	0.79	0.85	0.80
3	0.91	0.76	0.88	0.81
4	0.88	0.73	0.89	**0.82**
5	0.84	0.68	**0.90**	0.81
6	0.80	0.64	**0.90**	0.80

Source: made by authors based on data from KITA. Note: the monthly unit price (in $/kg) is used to estimate the correlation for the period from June 2014 to May 2024.

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